Options and issues discussion paper
Central Gulf of Alaska rockfish program
North Pacific Fishery Management Council
October 2009

Introduction

At its June 2009 meeting, the Council adopted a suite of elements and options for developing a new Central Gulf of Alaska rockfish program to replace the existing pilot program, which is set to expire after the 2011 fishing season. Since June, staff has been preparing a preliminary EA/RIR/IRFA for the proposed development of the new rockfish program. Staff mailed that document to the Council during the week of September 21st. In that mailing staff included a letter informing the Council that it in addition to the draft analysis, it would provide the Council with this document analyzing certain aspects of the alternatives.

This paper includes analyses of the following issues for Council consideration:

- proposed allocations to harvesting sectors and their members, as well as the proposed allocations shore based processors.
- proposed allocations to former participants in the pilot program trawl entry level fishery (including shore based processors that participated in that fishery)
- proposed shortraker and rougheye rockfish allocations,
- rollover of unused halibut PSC from the rockfish fishery cooperatives to other Gulf trawl fisheries,
- proposed changes in management of Pacific cod and sablefish.

Trawl catcher processor and trawl catcher vessel allocations

The Council has adopted for analysis a variety of elements and options for defining allocations under the program. These include provisions defining allocations to sectors, general eligibility and qualified catch histories for license holders, general eligibility and qualifying processing histories for processors, eligibility and allocations for license holders and processors that participated in the entry level fishery in the pilot program. In all cases, the allocations would include primary rockfish species (Pacific ocean perch, northern rockfish, and pelagic shelf rockfish), secondary species (which may include shortraker rockfish, rougheye rockfish, thornyhead rockfish, Pacific cod, and sablefish), and halibut PSC.

Primary rockfish species allocations to each sector would be based on the aggregate allocations to its sector members. These allocations within a sector are based on retained catch (excluding landings processed into meal) of vessels using an eligible license in the sector during the qualifying years. Different years could be used for each species by each license for determining the allocation to maximize the allocation attributable to that license. There are four different year combinations:

- 1996-2002 with each license dropping its 2 lowest years,
- 1998-2006 with each license dropping its 2 lowest years,
- 1998-2006 with each license dropping its 4 lowest years, and
- 2000-2006 with each license dropping its 2 lowest years.

Permanent LLP licenses used by a vessel to make a targeted landing of CGOA rockfish during the applicable qualifying period are eligible for the program. All in-season rockfish harvests made using an eligible LLP license would be counted toward that license's allocation. Under an option, a permanent license that was not used in the fishery could be eligible for the program, if the vessel to which that permanent license is assigned had targeted rockfish landings using an interim license that was later withdrawn, provided the permanent license has been continuously assigned to the vessels since December 31, 2003. The history of the rockfish targeting vessel would then be assigned to the permanent license eligible under this provision. A analysis of this option will be provided at the December 2009 Council meeting.

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3 Program eligibility (CP – all and CV – all)

The eligibility for entry into the cooperative program is one targeted landing of POP, Northern rockfish or PSR caught in CGOA during the qualifying period using a CGOA trawl LLP license.

Option: In addition, the following participants would be eligible to enter the program:
those persons whose vessel had one targeted landing of POP, northern rockfish or PSR caught in CGOA during the qualifying period with interim trawl CGOA license that was later determined to be an invalid trawl CGOA endorsement, but who acquired a valid CGOA trawl license prior to December 31, 2003, which has been continuously assigned to the vessel with the target landing since acquired until the date of final Council action.

4 Qualified catch (CP – all and CV – all)

4.1 Basis for the allocation to the LLP license holder is the catch history of the vessel on which the LLP license is based and shall be on a fishery-by-fishery basis. The underlying principle of this program is one history per license. In cases where the fishing privileges (i.e., moratorium qualification or LLP license) of an LLP qualifying vessel have been transferred, the allocation of harvest shares to the LLP shall be based on the aggregate catch histories of (1) the vessel on which LLP license was based up to the date of transfer, and (2) the vessel owned or controlled by the LLP license holder and identified by the license holder as having been operated under the fishing privileges of the LLP qualifying vessel after the date of transfer. (Only one catch history per LLP license.)

Option: For licenses qualified based on catch of a vessel using an interim license, the basis for the allocation will be the catch history of such vessel, notwithstanding the invalidity of the interim Central Gulf trawl LLP endorsement under which the vessel operated during the qualifying period. History allocated under this provision shall be assigned to the LLP license.

4.2 Catch history will be the history during the following qualifying period:

1) 1996-2002 (drop two) Alt. 2
2) 1998-2006 (drop two or four)
3) 2000-2006 (drop two)

4.3 Qualified target species history is allocated based on retained catch (excluding meal) during the rockfish target fishery. Different years may be used (or dropped) for determining the history of each of the three rockfish species

7 Sector allocations (CP – all and CV – all)

7.1 Target rockfish species

Catch history is determined by the sector's qualified catch in pounds as a proportion of the total qualified catch in pounds.

Sector allocations of target rockfish species are based on individual qualified vessel histories applying any applicable drop year provision at the vessel level.

Full retention of the target rockfish species required

7.2 Secondary species
Secondary species history is allocated based on retained catch of the species while targeting rockfish over retained catch in all fisheries.

7.2.1 Except as provided below, history will be allocated to each sector for the following secondary species:
sablefish,
shortraker rockfish
rougheye rockfish,
thornyhead rockfish, and
Pacific cod.

7.2.3 Except as otherwise provided below, secondary species allocations will be based on: The sector's average annual percentage of retained catch of the secondary species by the rockfish target fisheries during the qualifying period. For each qualifying year calculate the sector's retained catch of the species in the target rockfish fisheries divided by the retained catch of all CGOA fisheries. Sum these percentages and divided by the number of qualifying years. The calculated average annual percentage is multiplied by the secondary species TAC for that fishery year and allocated to each sector in the cooperative program.

7.2.4 Exceptions:
For the catcher processor sector, Pacific cod history will be managed by MRA of 4 percent.
For shortraker and rougheye:
For the CP sector, a shortraker allocation of the TAC will be:
Option 1a: 30.03 percent
Option 1b: 50 percent
To be managed as a hard cap, and a rougheye allocation of 58.87% of the TAC, to be managed as a hard cap.
Option 2: shortraker and rougheye will be managed with a combined MRA of 2%.

For the CV sector, shortraker and rougheye should be managed with a combined MRA of 2 percent. If harvest of shortraker by the CV sector reaches 9.72% of the shortraker TAC, then shortraker should go on PSC status for that sector.

Option: Manage Pacific cod and sablefish under a modified MRA.

Participants must retain all allocated secondary species and stop fishing when cap is reached.

7.3 Prohibited species (halibut mortality)
Allocation to the rockfish cooperative program will be based on historic average usage, calculated by dividing the total number of metric tons of halibut mortality in the CGOA rockfish target fisheries during the qualifying years by the number of years. This allocation will be divided between sectors based on the relative amount of target rockfish species allocated to each sector (e.g., the sector's share of total qualified catch).

Primary rockfish allocations

Table 1 shows the allocations to the trawl catcher processor sector and the trawl catcher vessel sector for the 4 different year qualification combinations. Overall, more recent qualifying year combinations results in higher allocations for the trawl catcher vessel sector. For example, the estimated allocation to the trawl catcher vessel sector for Pacific ocean perch using 1996-2002 is 48 percent, while the estimated allocation using 2000-2006 is 61 percent. This change in the distribution between the sectors may be explained, in part, by the number of catcher processors participating in the fishery in recent years. Since 2000, no more than 7 catcher processors have participated in the fishery in any year.

Using the 1996 – 2002 (drop 2) qualifying years, the trawl catcher vessel sector would be allocated 58 percent of the northern rockfish fishery, 48 percent of the Pacific ocean perch fishery, and 44 percent of the pelagic shelf rockfish (in each case, after the allocation to the entry level fishery and the ICA). Applying these allocation percentages to the 2009 TAC yields an allocation of 1,279 metric tons for northern rockfish, 3,898 metric tons for Pacific ocean perch, and 1,462 for pelagic shelf rockfish. The trawl catcher processor sector would be allocated the remainder, 42 percent of the northern rockfish fishery, 52 percent of the Pacific ocean perch rockfish fishery, and 56 percent of the pelagic shelf rockfish fishery. Again, applying these percentages to the 2009 TAC for these rockfish species yields an allocation of 929 metric tons for northern rockfish, 4,148 metric tons for Pacific ocean perch, and 1,842 metric tons for pelagic shelf rockfish.

The qualifying year options 1998-2006 (drop 2) and 1998-2006 (drop 4) resulted in allocations that are almost identical to one another. As seen in Table 1, the difference in the allocations was roughly 1 percent or less depending on the species. Looking specifically at 1998-2006 (drop 2), the trawl catch vessel sector would be allocated 61 percent of the northern rockfish fishery, 56 percent of the Pacific ocean perch fishery, and 55 percent of the pelagic shelf rockfish fishery. For the trawl catcher processors, the allocations would be 39 percent for northern rockfish, 44 percent for Pacific ocean perch, and 45 percent for pelagic shelf rockfish. Applying the 2009 TAC to these allocations, the catcher vessels would be allocated 1,348 metric tons of northern rockfish, 4,494 metric tons of Pacific ocean perch, and 1,826 metric tons of pelagic shelf rockfish. Catcher processors would be allocated 860 metric tons of northern rockfish, 3,552 metric tons of Pacific ocean perch, and 1,478 metric tons of pelagic shelf rockfish.

Under the 2000-2006 (drop 2) qualifying year option, the trawl catcher vessel sector would be allocated 61 percent of the northern rockfish fishery, 61 percent of the Pacific ocean perch fishery, and 63 percent of the pelagic shelf rockfish fishery. Catcher processors would be allocated 39 percent of the northern rockfish fishery, 39 percent of the Pacific ocean perch fishery, and 38 percent of the pelagic shelf rockfish fishery.

Table 1. Sector participation, qualified landings, allocation percent, and 2009 allocation of Central Gulf of Alaska rockfish

Qualifying year	Species	Sector	Vessel count	Total qualifying landings (mt)	Allocation percent	Allocation using 2009 TAC* (mt)
1996-2002 (drop 2)	All	CP	19	39,564	n/a	6,919
		CV	52	39,207	n/a	6,639
	Northern rockfish	CP	18	7,746	42.1	929
		CV	50	10,661	57.9	1,279
	Pacific ocean perch	CP	18	22,559	51.6	4,148
		CV	52	21,200	48.4	3,898
	Pelagic shelf rockfish	CP	19	9,258	55.8	1,842
		CV	52	7,346	44.2	1,462
1998-2006 (drop 2)	All	CP	16	48,006	n/a	5,891
		CV	53	63,823	n/a	7,667
	Northern rockfish	CP	16	11,157	38.9	860
		CV	53	17,488	61.1	1,348
	Pacific ocean perch	CP	16	27,604	44.2	3,552
		CV	53	34,918	55.8	4,494
	Pelagic shelf rockfish	CP	16	9,245	44.7	1,478
		CV	53	11,417	55.3	1,826
1998-2006 (drop 4)	All	CP	16	40,960	n/a	5,835
		CV	53	55,173	n/a	7,723
	Northern rockfish	CP	16	10,208	39.9	881
		CV	53	15,373	60.1	1,327
	Pacific ocean perch	CP	16	22,605	43.2	3,472
		CV	53	29,772	56.8	4,574
	Pelagic shelf rockfish	CP	16	8,147	44.8	1,481
		CV	53	10,028	55.2	1,823
2000-2006 (drop 2)	All	CP	10	31,885	n/a	5,269
		CV	43	49,988	n/a	8,289
	Northern rockfish	CP	10	8,369	38.9	859
		CV	43	13,133	61.1	1,349
	Pacific ocean perch	CP	9	18,145	39.4	3,169
		CV	42	27,921	60.6	4,877
	Pelagic shelf rockfish	CP	10	5,370	37.5	1,240
		CV	43	8,934	62.5	2,064

Source: Alaska Department of Fish and Game for CV data and WPR for CP data

* Note that a 100 mt ICA was deducted for northern rockfish, and pelagic shelf rockfish TAC, while 200 mt ICA was deducted from Pacific ocean perch TAC

After a sector's allocation is determined, allocations would be made to eligible LLP license holders within the sector. Table 2 shows the numbers of eligible LLP licenses in the trawl catcher vessel and trawl catcher processor sectors in the different rockfish fisheries and simple statistics concerning their allocations between sector members including allocations based on the 2009 TACs.

Table 2. Mean, median, and four largest allocations by Central Gulf of Alaska rockfish species

Qualifying Year	Species	Sector	Vessel count	Mean allocation (%)	Median allocation (%)	Average of four largest allocations (%)	Allocation using 2009 CQ (mt)		
							Mean	Median	Average of four largest allocations
1996-2002 (drop 2)	Northern rockfish	CP	18	5.6	4.8	11.2	52	44	104
		CV	50	2.0	1.2	7.0	26	16	89
	Pacific ocean perch	CP	18	5.6	3.5	13.4	230	147	555
		CV	52	1.9	1.5	4.5	75	59	174
	Pelagic shelf rockfish	CP	19	5.3	3.9	14.9	97	73	274
		CV	52	1.9	1.4	6.4	28	21	94
1998-2006 (drop 2)	Northern rockfish	CP	16	6.3	1.9	16.6	54	16	143
		CV	53	1.9	1.3	7.5	25	17	101
	Pacific ocean perch	CP	16	6.3	2.8	17.4	222	100	617
		CV	53	1.9	1.7	4.8	85	77	214
	Pelagic shelf rockfish	CP	16	6.3	4.2	17.7	92	63	262
		CV	53	1.9	1.4	6.6	34	25	120
1998-2006 (drop 4)	Northern rockfish	CP	16	6.3	2.1	16.1	55	18	141
		CV	53	1.9	1.4	6.8	25	19	91
	Pacific ocean perch	CP	16	6.3	3.5	16.6	217	120	577
		CV	53	1.9	1.9	4.5	86	87	206
	Pelagic shelf rockfish	CP	16	6.3	4.7	16.9	93	70	251
		CV	53	1.9	1.5	6.1	34	27	111
2000-2006 (drop 2)	Northern rockfish	CP	10	10.0	10.6	18.9	86	91	162
		CV	43	2.3	2.2	7.8	31	29	105
	Pacific ocean perch	CP	9	11.1	14.1	19.9	352	447	631
		CV	42	2.4	2.3	4.8	116	110	233
	Pelagic shelf rockfish	CP	10	10.0	7.0	19.7	124	87	244
		CV	43	2.3	1.9	6.6	48	39	136

Source: Alaska Department of Fish and Game for CV data and WPR for CP data
* Note: Assumes no processor allocation of harvest shares

The distribution of catcher processor and catcher vessel allocations in the different rockfish fisheries for the qualifying year combinations are shown in Figure 1 through Figure 4, respectively. Allocations are aggregated into groups of four to maintain confidentiality, with vessel groupings made in descending order from the largest estimated allocation to the smallest allocation. The last and smallest groupings contains between 4 and 7 estimated allocations, since at least 4 persons' activities must be included under confidentiality rules. The estimated allocation shown for each 4-vessel group is the average allocation to members of that group. Allocations are shown as shares of the total allocation to the respective sector. Each legend shows the total number of vessels that would receive an allocation in each fishery. Because allocations are averages, it is possible, particularly in the groupings with the largest allocation, that the largest allocation to a single vessel is significantly different from the average of those four vessels.

Comparing the distributions of catcher processor allocations using the different qualifying year options, the most obvious difference is the increase in the size of the highest four allocations as more recent qualifying years are used. As seen in Figure 1, the four largest allocations average approximately 20 percent of total allocation for the species, with the remaining allocations average approximately 4 percent or less for each species. The four largest allocations using the 1998-2006 year combination (Figure 3 and Figure 4) average between 11 percent and 15 percent of the total allocation (depending on the species), while the four largest allocations using 1996 to 2002 (Figure 2) average between 16 percent and 18 percent of the total allocation depending on the species. Looking at the smallest allocations, using the 1996-2002 option, approximately 6 participants in the sector would receive allocations that average less than 2 percent of the sector's northern rockfish and Pacific ocean perch, while approximately 7 participants in the sector would receive allocations that average less than 1 percent of the sector's pelagic shelf rockfish. Under the 1998-2006 options, 4 participants would receive allocations that average less 1 percent for each of the rockfish species.

Figure 1. Allocations of catcher processors by Central Gulf of Alaska rockfish species, 2000-2006 (drop 2)

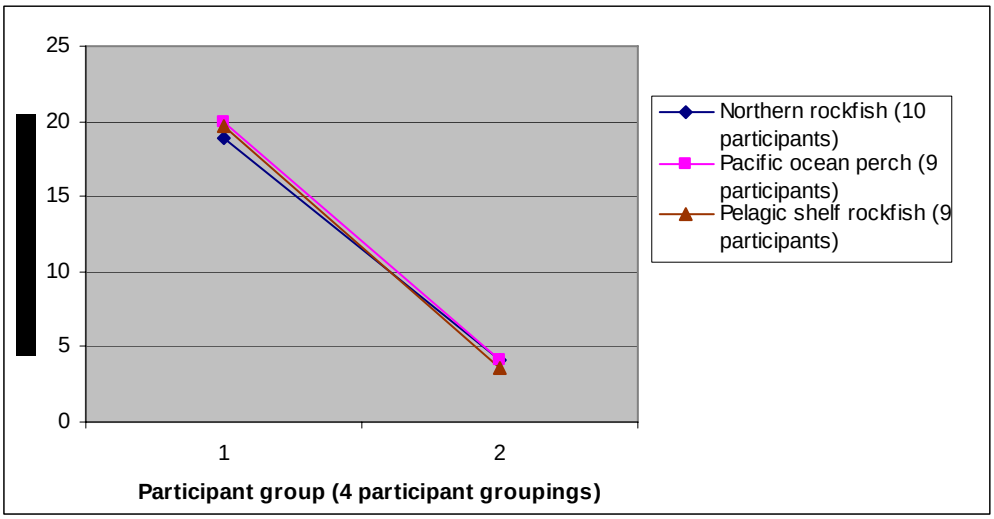


Figure 2. Allocations of catcher processors by Central Gulf of Alaska rockfish species, 1996-2002 (drop 2)

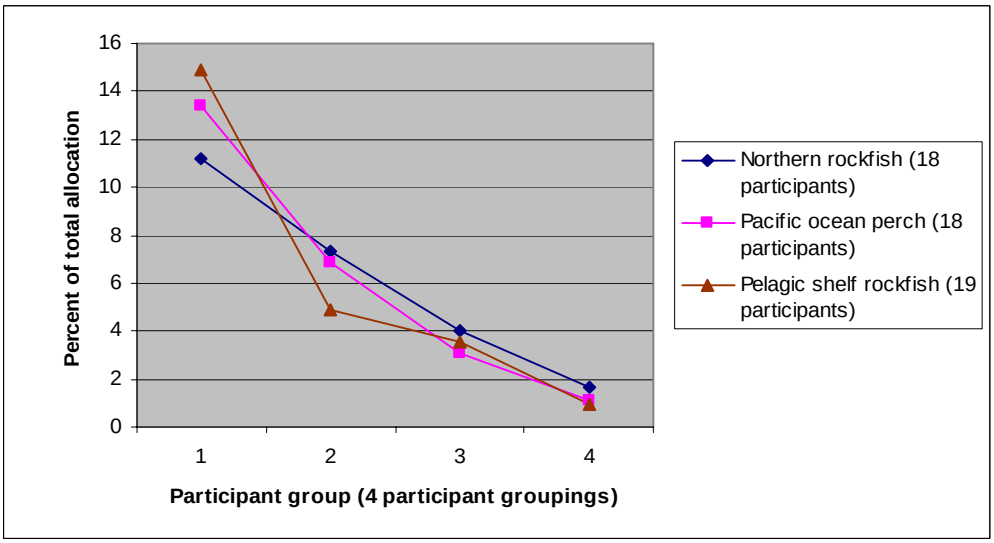


Figure 3. Allocations of catcher processors by Central Gulf of Alaska rockfish species, 1998-2006 (drop 2)

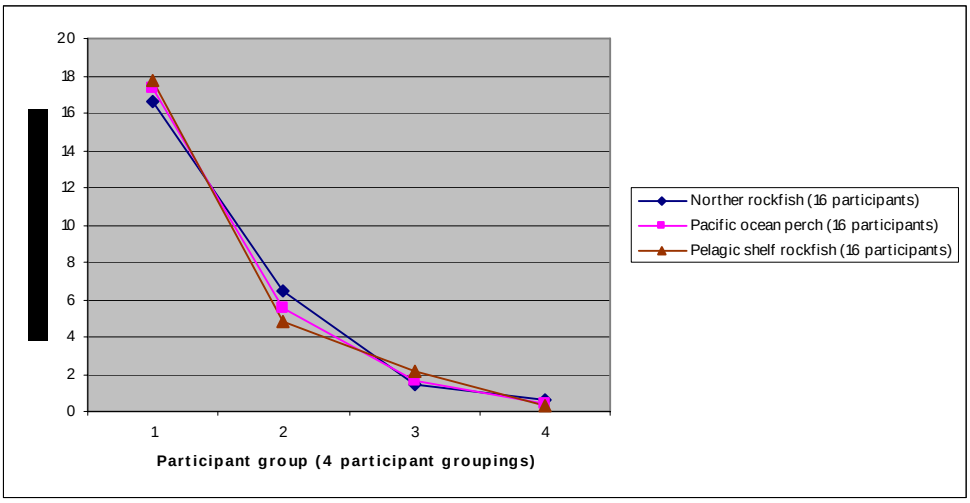
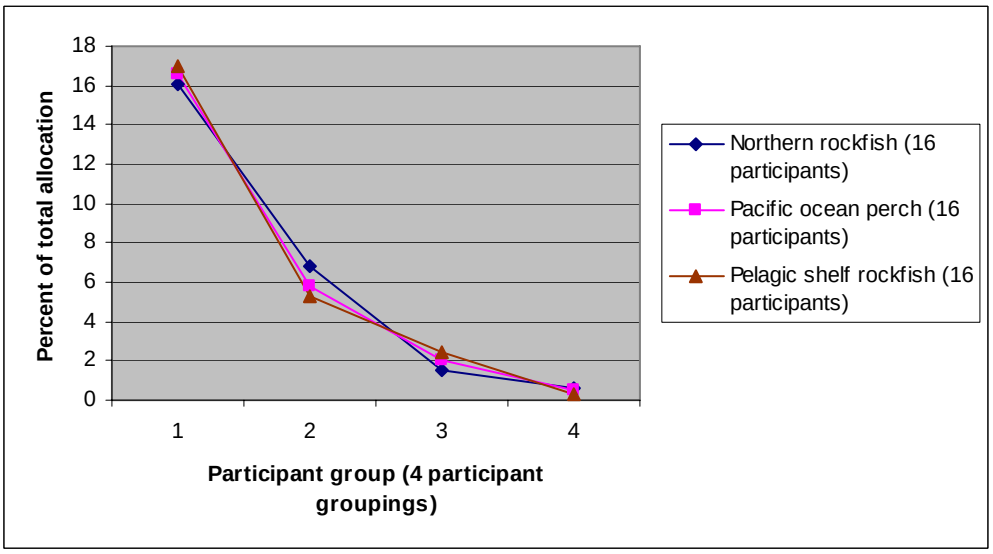


Figure 4. Allocations of catcher processors by Central Gulf of Alaska rockfish species, 1998-2006 (drop 4)



The distribution of catcher vessel share allocations in the different target fisheries are shown in Figure 5 through Figure 8. Unlike the allocation distribution of the catcher processors, allocations to catcher vessels are more evenly distributed across participants. The allocation distributions of the four different qualifying year combinations maintain a fairly consistent pattern. The four largest allocations for northern rockfish average between 7 and 8 percent for each of the different year combinations, slightly less than 5 percent for Pacific ocean perch, and between 6 and 7 percent for pelagic shelf rockfish. Looking at the smallest allocations, between 4 and 7 participants would receive average allocations of each rockfish species well below 1 percent under each of the 4 different year combinations.

Figure 5. Allocations of catcher vessels by Central Gulf of Alaska rockfish species, 2000-2006 (drop 2)

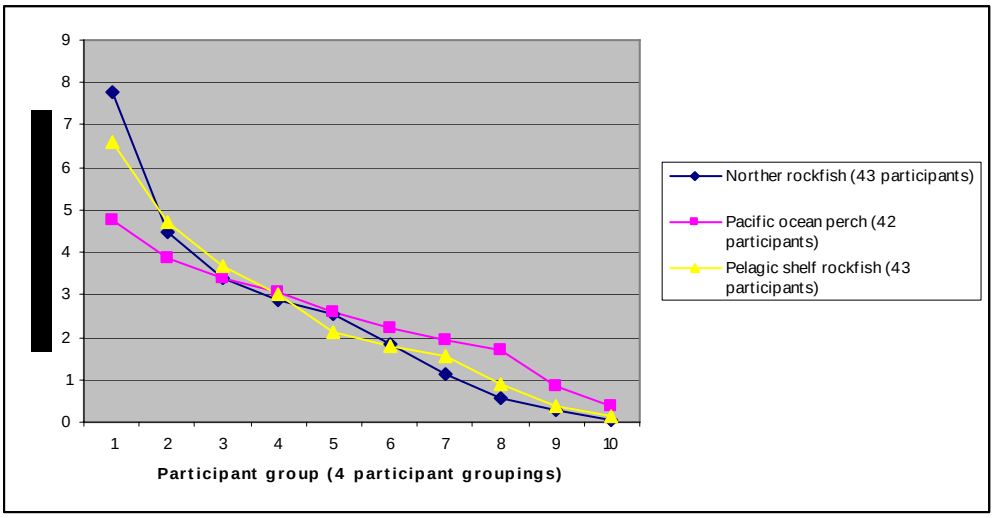


Figure 6. Allocations of catcher vessels by Central Gulf of Alaska rockfish species, 1996-2002 (drop 2)

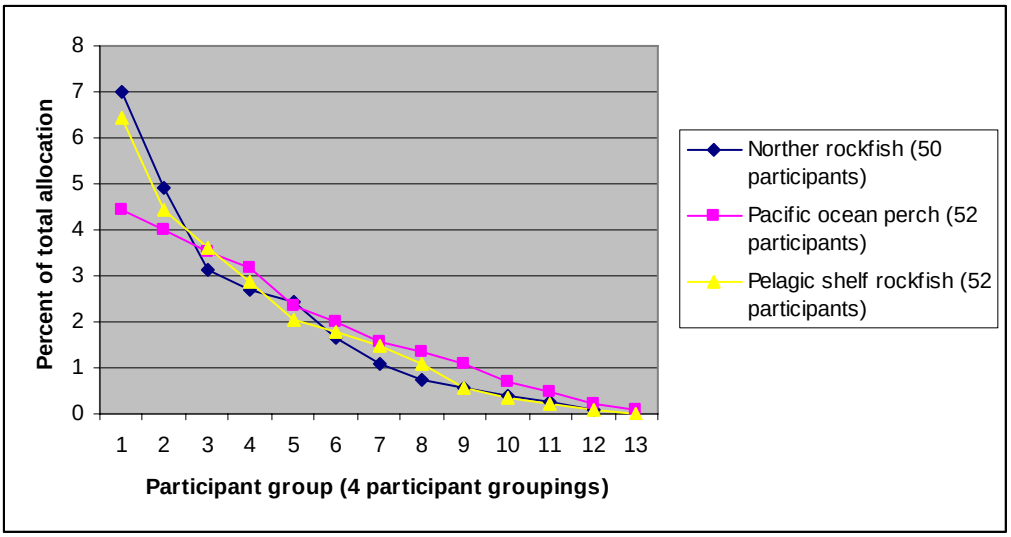


Figure 7. Allocations of catcher vessels by Central Gulf of Alaska rockfish species, 1998-2006 (drop 2)

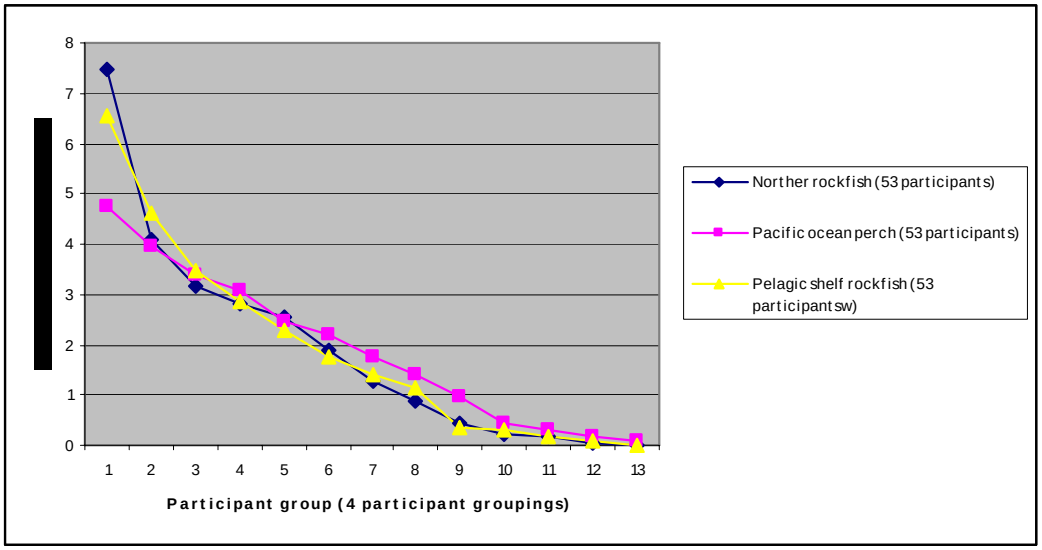
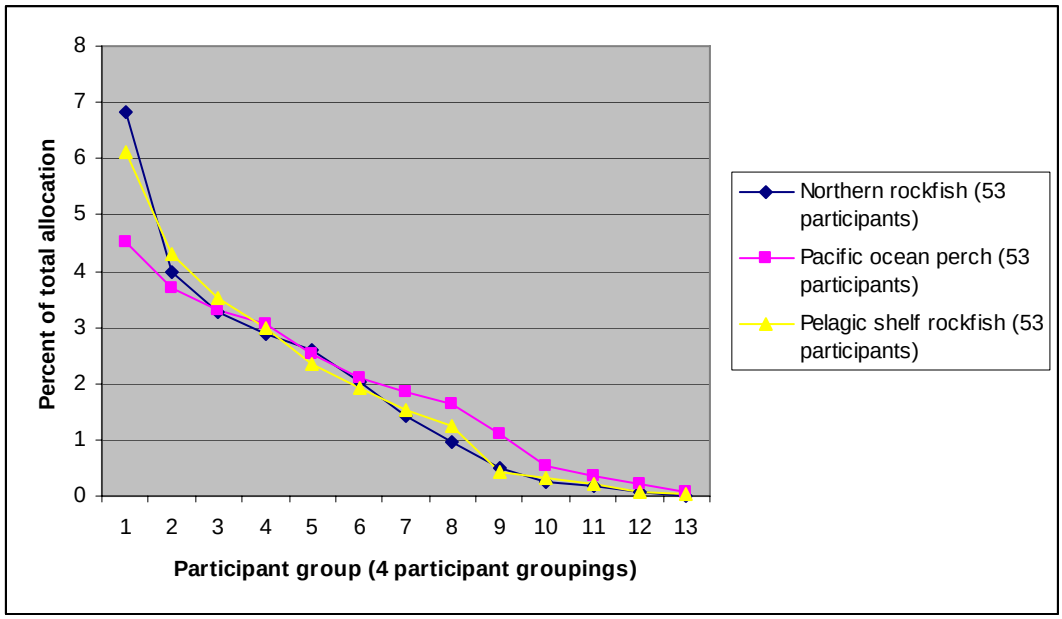


Figure 8. Allocations of catcher vessels by Central Gulf of Alaska rockfish species, 1998-2006 (drop 4)



Sector allocations of secondary species

In addition to the rockfish allocations, allocations would be made to the catcher processors sector and catcher vessel sector for secondary species that are typically harvested when harvesting rockfish. The allocations of secondary species would be based on catch of the secondary species while targeting rockfish. Specifically, the allocation would be a portion of the TAC equal to the average annual percentage of the total retained catch of the secondary species made by the sector. In other words, a sector would be allocated the average of its annual retained catch from the rockfish fishery divided by total retained catch from the CGOA during the qualifying years. The

annual allocation to the sector would this percentage times the annual TAC for that secondary species. Table 3 shows the portion of each secondary species TAC that would be allocated to the different sectors, assuming that all qualified participants join a cooperative (i.e., the maximum allocation to the sector). Comparison of target rockfish ex vessel and wholesale prices with ex vessel and wholesale prices for the secondary species show that these species typically sell for substantially higher prices than target rockfish. Under the LLP, participants in the rockfish fisheries typically boosted revenues by intentionally catching secondary species (as permitted by MRAs).

Table 3. Secondary species allocation by sector

Qualifying Year	Species	Sector	Retained catch (mt)	Average percent	Allocation using 2009 CQ (mt)***
1996-2002	Pacific cod	CP	617	0.2	55
		CV	4,401	2.0	481
	Sablefish	CP	1,924	4.5	226
		CV	2,524	5.9	296
	Shortraker/rougheye	CP	2,574	44.5	511
		CV	261	4.4	50
	Thornyhead rockfish**	CP	641	17.1	147
		CV	323	8.2	70
1998-2006	Pacific cod	CP	982	0.4	85
		CV	8,157	3.3	774
	Rougheye rockfish*	CP	2,391	37.3	311
		CV	285	7.0	58
	Sablefish	CP	2,231	4.0	199
		CV	3,676	6.5	324
	Shortraker rockfish*	CP	2,554	43.9	138
		CV	271	5.0	16
	Thornyhead rockfish	CP	1,129	23.6	203
		CV	386	7.8	67
2000-2006	Pacific cod	CP	585	0.3	78
		CV	7,022	3.8	907
	Rougheye rockfish*	CP	1,700	34.7	289
		CV	226	7.8	65
	Sablefish	CP	1,575	3.5	176
		CV	3,066	6.8	343
	Shortraker rockfish*	CP	1,863	43.2	136
		CV	212	5.3	17
	Thornyhead rockfish	CP	954	26.5	228
		CV	281	7.9	68

Source: Alaska Department of Fish and Game for CV data and WPR for CP data

* Prior to 2005, shortraker and rougheye rockfish were managed in the Central Gulf under an aggregate TAC, as a result, in years prior to 2005 aggregate shortraker and rougheye catch were used in the catch calculation

** Prior to 1998, thornyhead rockfish were managed Gulfwide so 1996 and 1997 catch were omitted from this calculation

*** Assumes all qualified participants join a cooperative

Catcher processors allocations of Pacific cod are relatively small, ranging from a low of 0.2 using 1996-2002 years to high of 0.4 percent using 1998-2006 years, while allocations to the catcher vessels would be substantially larger ranging from 2 percent using 1996-2002 to 3.8 percent using 2000-2006. Given the historic low harvest of Pacific cod by catcher processors in the rockfish fishery, the Council when developing the pilot program, chose to manage the Pacific cod for the

catcher processors under a revised MRA of 4 percent – a level substantially lower than the 20 percent Pacific cod MRA under the LLP. This lower MRA is intended to allow for reasonable Pacific cod retention by catcher processors, without constraining their harvests of primary rockfish allocations.

Sablefish allocations to the catcher vessel sector range from 5.9 percent using 1996-2002 years to 6.8 percent using 2000-2006 years. For the catcher processor sector, allocations of sablefish would range from a low of 3.5 percent using 2000-2006 years to a high of 4.5 percent using 1996-2002 years. Under all of the options, the catcher processor sector would receive a larger allocation of thornyhead rockfish compared to the catcher vessel sector. The estimated catcher processor allocations range from a low of 17.1 percent using 1996-2002 years to a high of 26.5 percent using 2000-2006 years. For catcher vessel sector, the allocations range from a low of 7.8 percent using 1998-2006 years to a high of 8.2 percent using 1996-2002 years.

Sector allocations of shortraker rockfish and rougheye rockfish

Three options are under consideration for managing shortraker rockfish in the catcher processor sector. Two of these options would manage shortraker as an allocated secondary species, with allocations of either 30.03 percent or 50 percent. The third option would combine shortraker rockfish and rougheye rockfish managing those species using a maximum retainable allowance percentage of 2 percent. Catcher vessel sector participants are subject to a 2 percent MRA applicable to aggregate retention of shortraker rockfish and rougheye rockfish. In addition, if the sector's harvest of shortraker rockfish reaches 9.72 percent of the TAC, that species would go on PSC status for the sector, under which any retention is prohibited.

Estimation of allocations of shortraker rockfish and rougheye rockfish under the options requires some interpretation as historical management of these species affects the information. Prior to 2005, shortraker rockfish and rougheye rockfish were managed based on an aggregate TAC, with relatively limited distinction of catch by species. So, for qualifying years prior to 2005, history is credited to both species based on aggregate catches of the two species. This results in the 1996-2002 qualifying year option allocation is the same for both species, while the 1998-2006 and 2000-2006 qualifying year options distinguish allocations of the two species based on catch differentials for the two in 2005 and 2006. Allocations for the catcher vessels are relatively small compared to the catcher processor sector ranging from 4.4 percent of both species using 1996-2002 qualifying years to a high of 7.8 percent for rougheye rockfish and 5.3 percent of shortraker rockfish using 2000-2006 qualifying years. For catcher processors, allocations ranged from a 34.7 for rougheye rockfish and 43.2 percent for shortraker rockfish using 2000-2006 qualifying years to a high of 44.5 percent based on aggregated catches in the 1996-2002 qualifying years.

Several factors should be considered in assessing the various allocation options. Both the process followed by the Council in the development of pilot program allocations and the performance of the fishery under those allocations shed light on these factors. During development of the original rockfish pilot program, the Council first considered allocation of shortaker rockfish and rougheye rockfish based solely on aggregate catches of the two species during the qualifying period. Each sector would then receive an allocation for each species by applying its share of the historic aggregate catch of the two species to each of the two species TACs. Based on that calculation, the catcher processor sector would receive approximately 60 percent each TAC, while the catcher vessel sector would have received approximately 6 percent of each TAC. Although the species were historically managed under an MRA, managers expressed concern that catches of shortraker exceeded rougheye catches, while shortraker stocks were less abundant. To address potential

pressure on the shortraker stock, the Council also considered an option to credit only 75 percent of the catch history of the catcher processors sector in determining its allocation, effectively reducing the allocations to approximately 45 percent of the combined TACs. In considering this allocation, the Council expressed concern that the relatively high history based allocation of these species could leave the stocks vulnerable, if other catches increased in other fisheries under the MRAs.[1]

In part, to avoid possible overharvests, the Council elected to use more precise and limiting management allocating catcher processors 30.03 percent of the Central Gulf shortraker TAC and 58.87 percent of the Central rougheye TAC. Each catcher processor cooperative receives a percentage of each of those allocations equal to its percentage of the sector's primary rockfish species quota shares. Sector members that choose to fish in the limited access fishery do not receive an allocation. Instead, limited access participants in the current rockfish pilot program are limited by a maximum retainable amount of combined shortaker rockfish and rougheye rockfish equal to 2 percent of catch of primary rockfish, the same MRA percentage applicable to catcher vessels in the current rockfish pilot program.

Under the pilot program rules, allowable catches of shortaker and rougheye by catcher processors in the program differs with catcher processor sector choices of whether to enter a cooperative or fish in the limited access fishery (see Table 4 and Table 5). Generally, catcher processors are permitted to retain more shortaker rockfish and rougheye rockfish, if they join cooperatives. So, maximum retained catch by the sector would be permitted, if all catcher processors chose to join cooperatives. Yet, since discards are permitted by participants in the limited access, it is possible that total catches of shortraker rockfish and rougheye rockfish could be greater if a large number of catcher processors chose to join the limited access, and participants in the limited access have substantial discards. Since all catcher vessels in the program are subject to an aggregate MRA that limits only retained catch and does not distinguish catch by species, no such difference in allowable retention arises in that sector.

In the first year of the rockfish pilot program, catcher processors participated in both cooperatives and the limited access fishery. The choice of some catcher processors to participate in the limited access fishery reduced the permitted retained catch of the two species by over 150 metric tons. Yet, some catcher processors are reported to have been reluctant to join cooperatives because of the potential that the constraining shortaker and rougheye rockfish allocations would limit their ability to harvest primary species. Included in the proposed action is an option to increase the allocation of shortraker to cooperatives from 30.03 percent to 50 percent or to manage shortraker and rougheye rockfish under a combined MRA of 2 percent for catcher processors fishing in a cooperative. This change in the management of shortraker and rougheye rockfish could eliminate any perceived constraint these species' allocations could have on the harvest of the primary species.

Notwithstanding the reluctance of some catcher processors to join a cooperative, during each of the first two years of the pilot program, total catch of shortraker and rougheye in the limited access was approximately 10 metric tons less than the amount that could be retained under the MRA– substantially less than would have been permitted had these catcher processors elected to participate in cooperatives. In the first year of the program catcher vessels harvested less than 10

[1] In most fisheries (other than the primary rockfish fisheries) the MRA of aggregate shortaker rockfish/rougheye rockfish is 7 percent.

percent of the maximum amount permitted by their MRA, but in the second year the sector's catches increase to almost one-third of the amount permitted by the MRA. Overall, catches of both species in the rockfish fisheries during the first two years of the pilot program were less than historical catches (see Table 6). In addition, catches in the first two years of the program were a relatively smaller portion of the total allowable catch, although the distribution of that catch between the two sectors varied across years.

Table 4. Maximum permitted catches and actual catch of shortaker and rougheye rockfish in 2007

shrtrkrrgheye 2007

		Catcher processor	Catcher vessels	Total
Maximum permitted catches under various co-op membership scenarios	Maximum sector shortraker allocation	106*	NA	
	Maximum sector rougheye allocation	360*	NA	
	Maximum sector catch of MRA shortraker and rougheye - aggregate	192**	204	
	Maximum retained catch of shortraker and rougheye			669
Maximum permitted catches under first year co-op memberships	Allocation of shortraker to cooperatives	60		
	Allocation of rougheye to cooperatives	203		
	Maximum MRA catch of shortraker and rougheye - aggregate	41	204	
	Maximum retained catch of shortraker and rougheye			508
Catches in the first year	Total catch of shortraker by cooperatives	44	9	
	Total catch of rougheye by cooperatives	11	10	
	Total catch of shortraker and rougheye by limited access	32		
	Total catch of shortraker and rougheye			106

Sources: NMFS Catch Accounting data and cooperative reports

Notes: MRA amounts assume that allocations of primary species are harvested in their entirety. MRAs limit only retained catch, so maximum catch under an MRA excludes potential discards. Total catch amounts include discards and retained catch.

* Maximum allocation to cooperatives, if all catcher processors join a cooperative.

** Maximum possible MRA catch, if all catcher processors join the limited access fishery.

Table 5. Maximum permitted catches and actual catch of shortaker and rougheye rockfish in 2008

shrtrkrrgheye 2008

		Catcher processor	Catcher vessels	Total
Maximum permitted catches under various co-op membership scenarios	Maximum sector shortraker allocation	95.0*	NA	
	Maximum sector rougheye allocation	491.0*	NA	
	Maximum sector catch of MRA shortraker and rougheye - aggregate	123.8**	132.5	
	Maximum retained catch of shortraker and rougheye			718.5
Maximum permitted catches under second year co-op memberships	Allocation of shortraker to cooperatives	48.0		
	Allocation of rougheye to cooperatives	251.0		
	Maximum MRA catch of shortraker and rougheye - aggregate	61.9	132.5	
	Maximum retained catch of shortraker and rougheye			493.4
Catches in the second year	Total catch of shortraker by cooperatives	28.7	32.0	
	Total catch of rougheye by cooperatives	6.9	15.0	
	Total catch of shortraker and rougheye by limited access	54.4		
	Total catch of shortraker and rougheye			106.2

Source: NMFS Catch Accounting data

Notes: MRA amounts assume that allocations of primary species are harvested in their entirety. MRAs limit only retained catch, so maximum

* Maximum allocation to cooperatives, if all catcher processors join a cooperative.

** Maximum possible MRA catch, if all catcher processors join the limited access fishery.

During the first two years of the pilot program, rockfish fishery catches of shortraker rockfish were half of their historic levels (see Table 6, Table 7 and Table 8). While rockfish fishery catch of shortraker declined in 2007 and 2008, overall catches of shortraker rockfish in the Central Gulf was down in 2007, but then increased in 2008. In 2008, catch of shortraker outside the rockfish fishery was more than double the catch attributed to the rockfish fisheries. Prior to 2007, catch of shortraker in the rockfish fishery exceeded catches from other fisheries. Whether this increase in shortraker catches by vessels outside the rockfish fishery will persist is not known. Yet, the possible increasing shortraker catches of vessels outside the rockfish fishery should be considered in determining an appropriate allocation to program participants.

Table 6. Total allowable catches and total catches of shortraker rockfish and rougheye rockfish in the Central Gulf rockfish fisheries (2005-2008)

Year	Species	Total allowable catch	Catcher processor sector		Catcher vessel sector		Total	
			Catch (in metric tons)	Percent of the total allowable catch	Catch (in metric tons)	Percent of the total allowable catch	Catch (in metric tons)	Percent of the total allowable catch
2005	Shortraker rockfish	324	127	39	19	6	146	45
	Rougheye rockfish	557	48	9	9	2	57	10
2006	Shortraker rockfish	353	145	41	14	4	159	45
	Rougheye rockfish	608	5	1	30	5	35	6
2007	Shortraker rockfish	353	63	18	4	1	67	19
	Rougheye rockfish	611	19	3	6	1	25	4
2008	Shortraker rockfish	315	57	18	32	10	89	28
	Rougheye rockfish	834	33	4	15	2	49	6

rce: NMFS Catch Accounting.

Table 7. Catches and total allowable catches of shortraker rockfish and rougheye rockfish in <u>all</u> Central Gulf fisheries (2005-2008)

Year	Shortraker rockfish			Rougheye rockfish		
	Catch (in metric tons)	Total allowable catch (in metric tons)	Percent of total allowable catch harvested	Catch (in metric tons)	Total allowable catch (in metric tons)	Percent of total allowable catch harvested
2005	223	324	68.8	122	557	21.9
2006	303	353	85.8	134	608	22.0
2007	158	353	44.8	178	611	29.1
2008	244	315	77.5	190	834	22.8

Source: NMFS Catch reports (2005-2008).

Note: Prior to 2005, shortraker rockfish and rougheye rockfish were managed using an aggreage total allowable catch

Table 8. Catch of shortraker rockfish in all Central Gulf fisheries by gear and sector (2005-2008)

Year	Catcher processor				Catcher vessels				Total	
	Rockfish program (mt)	Hook & line (mt)	Trawl-outside rockfish program (mt)	Total (mt)	Rockfish program (mt)	Hook & line* (mt)	Trawl-outside rockfish program (mt)	Total (mt)	Rockfish program (mt)	Outside rockfish program (mt)
2005	127	19	14	161	19	38	7	64	146	78
2006	145	8	18	171	14	97	51	163	159	175
2007	63	15	7	85	4	49	67	120	67	138
2008	57	25	8	91	32	84	38	154	89	155

Source: NMFS Catch Accounting

*Jig and pot catch totals were included with hook and line catch numbers to protect confidential data.

Under the first option for modifying management of shortraker, the maximum allocation to catcher processor cooperatives would be increased to 50 percent of the shortraker TAC. In the second year of the program, catches of shortraker by catcher vessels in the rockfish fishery were 10 percent of the TAC,[2] while catches outside of the program were nearly 50 percent of the shortraker TAC (see Table 8). Both catcher vessel rockfish fishery catches and catches outside of the rockfish fishery reached their highest percentage of the shortraker TAC since management of

[2] This catch of shortraker rockfish effectively equals the maximum percent permitted by the sector prior to managers putting the species on PSC status for the catcher vessels sector (i.e., 9.72 percent).

shortraker was separated from rougheye management in 2005.[3] At these catch levels, if catcher processors were to received an increased allocation in the program and all vessels joined cooperatives, catches by program catcher vessels and non-rockfish fisheries would need to be constrained to prevent overharvest of the shortraker TAC. In all likelihood, managers would put shortraker on PSC status, if needed to limit total catch, to prevent any retention of shortraker in non-rockfish fisheries (and possibly in the catcher vessel sector of the rockfish fishery). In season managers regularly take such actions to manage catches, so such a limitation would not be extraordinary. Although these measures are believed to effectively protect stocks from overharvest, they also can result in discards of the species, an undesirable consequence, especially for a species of concern with a relatively high value, such as shortraker.

Under the second option for shortraker management, all participants in the catcher processor sector would be subject to an aggregate shortraker/rougheye MRA of 2 percent. The reduced The Vessels unable to limit their catches of shortraker rockfish and rougheye rockfish would benefit from the MRA option, as it would remove the risk of being shutdown for fully harvesting the allocation of shortraker (or rougheye), since the consequence of catch exceeding an MRA is a discard requirement. While this greater flexibility may be beneficial, the MRA option may have some undesirable effects. Allowable retention of shortraker and rougheye in the aggregate would be reduced from the level allowed by the current allocation[4]; however, if vessels use the MRA to catch shortraker (and not rougheye), it is possible that shortraker catches could be increased beyond the current allocation amount. Regardless of the behavior of vessels subject to the MRA, if total catch of shortraker (including catches of vessels in other fisheries) approach the TAC, it is possible that shortraker could be put on PSC status preventing any retention.

Generally, MRAs can contribute to discards. As currently applied in the Gulf, an MRA requires discards of catch that exceed the prescribed level at any time. So, a vessel that catches an unexpected amount of an MRA species early in a trip may be forced to discard, even if the catch would be retainable at later time in the trip. For valuable species, an MRA may induce a vessel to catch up to the maximum amount, knowing that overharvest of the MRA may be discarded without risk of penalty. These added discards would be avoided under the current allocations, which counts all harvest against the allocation and does not allow discards.

MRAs can also contribute to excessive harvests of a species. Since an MRA limits only retention, requiring vessels to discard above the retainable amount, they do not limit total harvest of a species. For species of value that are fully utilized, establishing an MRA in a fishery prosecuted with exclusive allocations of basis species and an extended season could provide participants in the fishery with an advantage in the harvest of the MRA species, These persons may fish to the MRA, as they will not be subject to the time pressures that arise in a limited access race for fish.

Sector allocations of halibut PSC

Halibut PSC will also be allocated through a three step process. In the first stage, an allocation would be made to the rockfish program as a whole, based on historic average annual usage of

[3] Prior to separation of management of the two species, aggregate harvests of shortraker and rougheye outside the rockfish fishery never exceeded 50 percent of the aggregate TAC.

[4] In addition, it is possible that harvests could be limited below the level permitted by the MRA, if overall harvests of shortraker approached the TAC. In which case, shortraker would be put on PSC status, preventing any retention. Allocations of shortraker, such as those currently made to catcher processor cooperatives, are less likely to be constrained, as those allocations would be considered in determining whether to impose PSC status.

halibut PSC by the rockfish fisheries. This allocation would then be divided between the sectors based on qualified rockfish catch. In the third stage, each sector's allocation is subdivided within the sector based on primary rockfish allocations within the sector. Table 9 shows the historic halibut PSC usage in the rockfish fishery during the different qualifying year combinations.

Total halibut usage in the rockfish fishery remained relatively stable across the qualifying years, but declined for the catcher processor sector while increasing for the catcher vessel sector in more recent years. During the later qualifying year periods, the increase in primary rockfish harvests by catcher vessels contributed to this increase in halibut usage, but halibut per metric ton of rockfish increased for the sector in the more recent qualifying years. Halibut usage averaged 112 metric tons for the catcher processor sector and 113 metric tons for the catcher vessel sector during the 1996 to 2002 period. During the 1998 to 2006 period, average halibut usage for the catcher processors was 92 metric tons, while average halibut usage for catcher vessel sector was 137 metric tons. For the 2000 to 2006 period, average halibut usage for the catcher processor sector was 73 metric tons, while average halibut usage for the catcher vessel sector during this period was 146 metric tons.

Table 9. Total and average halibut usage by sector during qualifying years

Qualifying Year	Sector	Total halibut usage	Average halibut usage
1996-2002	CP	787	112
	CV	792	113
1998-2006	CP	825	92
	CV	1,233	137
2000-2006	CP	510	73
	CV	1,021	146

Source: ADF&G Fish Tickets for CV data and WPR for CP data

Cooperative allocations of secondary species and halibut PSC

After the sector allocation for secondary species and halibut PSC are determined, allocations of both secondary species and halibut PSC would be made to cooperatives based on the aggregate target rockfish histories of their members'. Since each license holder's catch history is likely to affect the leverage within the cooperative, these individual histories are relevant to assessing the effects of allocations. Table 10 shows the numbers of participants in the trawl catcher vessel and trawl catcher processor sectors and simple statistics of aggregated CGOA primary rockfish histories that would be used to determine allocations of secondary species and halibut PSC within each sector. Applying these allocation percentages using 2009 TAC, Table 11 shows the median allocation in metric tons for the secondary species and halibut PSC, while Table 12 shows the average of four largest allocations for secondary species and halibut PSC. The change in distribution within the sector may be explained, in part, by the number of catcher processors participating in the fishery in recent years. Since 2000, no more than 7 catcher processors have participated in the fishery in any year.

Table 10. Mean, median, and four largest allocations for Central Gulf aggregated rockfish species

Qualifying Year	Sector	Vessel Count	Mean (%)	Median (%)	Average of four largest allocation (%)
1996-2002 (drop 2)	CP	19	5.3	3.6	12.0
	CV	52	1.9	1.6	5.3
1998--2006 (drop 2)	CP	16	6.3	2.6	17.1
	CV	53	1.9	1.8	5.7
1998-2006 (drop 4)	CP	16	6.3	3.0	16.0
	CV	53	1.9	2.0	5.3
2000-2006 (drop 2)	CP	10	10.0	10.4	19.0
	CV	43	2.3	2.4	5.7

Source: ADF&G Fish Tickets for CV data and WPR for CP data

Table 11. Median allocation using 2009 TAC for secondary species and halibut PSC

Sector	Qualifying Year	Median allocation using 2009 TAC (metric tons)						
		Pacific cod	Sablefish	Shortracker/rougheye*	Shortraker*	Rougheye*	Thornyhead	Halibut PSC
CP	1996-2002 (drop 2)	1.97	8.15	18.39	n/a	n/a	5.29	1.98
	1998--2006 (drop 2)	2.19	5.17	n/a	3.58	8.05	5.26	1.43
	1998-2006 (drop 4)	2.57	6.06	n/a	4.20	9.43	6.17	1.67
	2000-2006 (drop 2)	8.09	18.30	n/a	14.11	30.02	23.64	5.71
CV	1996-2002 (drop 2)	7.52	4.63	0.78	n/a	n/a	1.10	1.80
	1998--2006 (drop 2)	13.71	5.74	n/a	0.28	1.03	1.19	2.04
	1998-2006 (drop 4)	15.45	6.47	n/a	0.31	1.16	1.34	2.29
	2000-2006 (drop 2)	21.69	8.19	n/a	0.40	1.56	1.62	2.75

Source: ADF&G Fish Tickets for CV data and WPR for CP data

* Prior to 2005, shortraker and rougheye rockfish were managed in the Central Gulf under an aggregate TAC, as a result, in years prior to 2005 aggregate shortraker and rougheye catch were used in the catch calculation

Table12. Average of four largest allocations using 2009 TAC for secondary species and halibut PSC

Sector	Qualifying Year	Average of four largest allocations using 2009 TAC (metric tons)						
		Pacific cod	Sablefish	Shortracker/rougheye*	Shortraker*	Rougheye*	Thornyhead	Halibut PSC
CP	1996-2002 (drop 2)	6.59	27.27	61.50	n/a	n/a	17.70	6.62
	1998--2006 (drop 2)	14.44	34.00	n/a	23.56	52.98	34.64	9.38
	1998-2006 (drop 4)	13.53	31.88	n/a	22.09	49.67	32.48	8.80
	2000-2006 (drop 2)	14.83	33.55	n/a	25.88	55.04	43.34	10.46
CV	1996-2002 (drop 2)	25.43	15.67	2.65	n/a	n/a	3.73	6.08
	1998--2006 (drop 2)	44.10	18.46	n/a	0.89	3.31	3.84	6.55
	1998-2006 (drop 4)	40.91	17.13	n/a	0.83	3.07	3.56	6.07
	2000-2006 (drop 2)	52.00	19.63	n/a	0.95	3.74	3.87	6.59

Source: ADF&G Fish Tickets for CV data and WPR for CP data

* Prior to 2005, shortraker and rougheye rockfish were managed in the Central Gulf under an aggregate TAC, as a result, in years prior to 2005 aggregate shortraker and rougheye catch were used in the catch calculation

The distributions of secondary species and halibut PSC for catcher processors and catcher vessels for each of the four different qualifying year options are shown in Figure 9 through Figure 12. Allocations are aggregated into groups of four to maintain confidentiality, with vessel groupings made in descending order form the largest estimated allocation to the smallest allocation. The last and smallest grouping contains between 4 and 7 estimated allocations, since at least 4 persons

activities must be included under confidentiality rules. The estimated allocation shown for each 4-vessel group is the average allocation to members of that group. Allocations are shown as shares of the secondary species and halibut PSC based on the participants proportion of the sectors aggregate rockfish history.

Under the 1996-2002 (drop 2) qualifying year option (Figure 9), the four largest catcher processor allocations would average approximately 12 percent of the total allocation of secondary species and halibut PSC to the sector, while the four largest catcher vessel allocations would average approximately 5 percent of the catcher vessel sector's allocation. The figure shows the last 7 catcher processor participants would receive an average allocation of less than 2 percent each, while the 4 smallest catcher vessel allocations would average less than 1 percent.

The distribution of allocations under the 1998-2006 (drop 2) and the 1998-2006 (drop 4) qualifying year options, shown in Figure 10 and Figure 11, are generally within 1 percent of each other. Looking specifically at allocations using the 1998-2006 (drop 2) year option, the four largest catcher processor allocations would average approximately 16 percent of the sector's total allocation of secondary species and halibut PSC, while the four largest catcher vessel allocations would average approximately 6 percent of that sector's allocation. On the lower end, the 4 smallest catcher processor allocations would average less than 1 percent of that sector's allocation, while the 5 smallest catcher vessel allocations average less than one-eight of one percent of that sector's allocation.

Looking at the final set of years, 2000-2006 (drop 2) shown in Figure 12, the four largest catcher processor allocations of secondary species and halibut PSC would average almost 20 percent of the sector's allocation, while the 4 largest catcher vessel allocations average almost 6 percent of the sector's total allocation. The smallest 6 catcher processor allocations would receive an average allocation of almost 4 percent of the sector's allocation, while the smallest 7 catcher vessel allocations would average approximately one-quarter of a percent.

Figure 9. Allocations of secondary species and halibut PSC for catcher processors and catcher vessels using 1996-2002 (drop 2) year combination

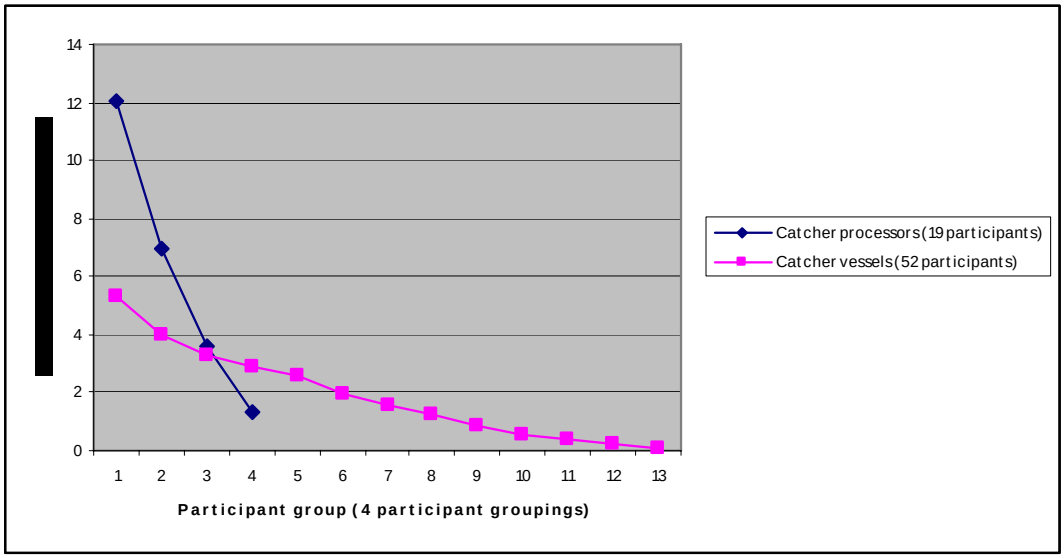


Figure 10. Allocations of secondary species and halibut PSC for catcher processors and catcher vessels using 1998-2006 (drop 2) year combination

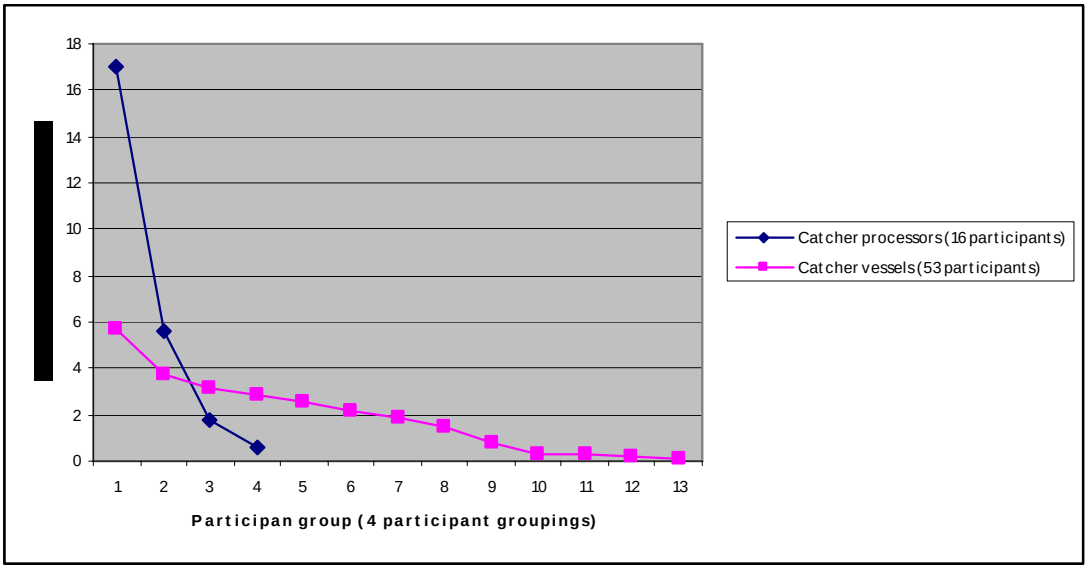


Figure 11. Allocations of secondary species and halibut PSC for catcher processors and catcher vessels using 1998-2006 (drop 4) year combination

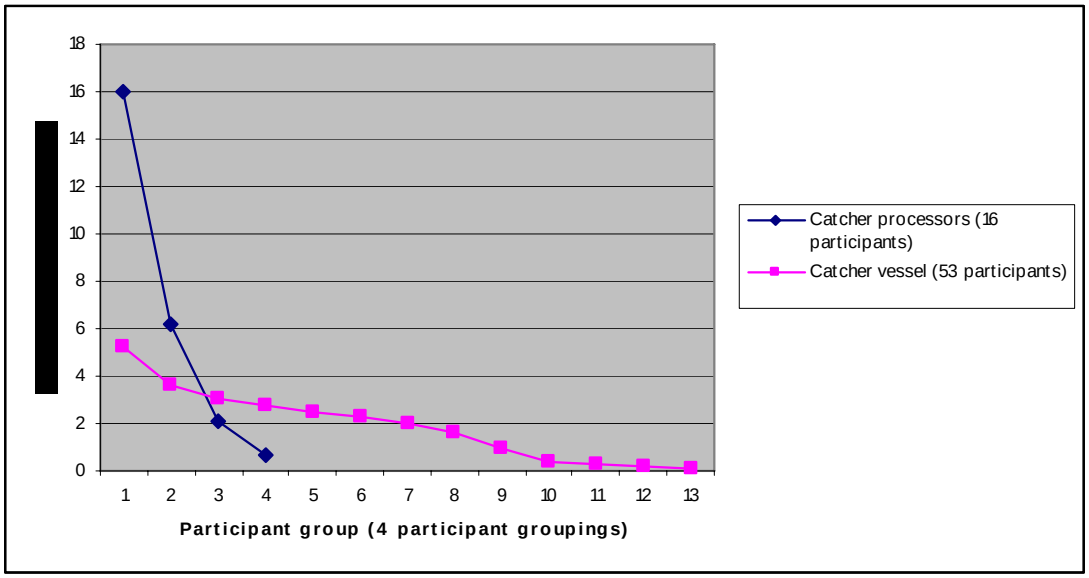
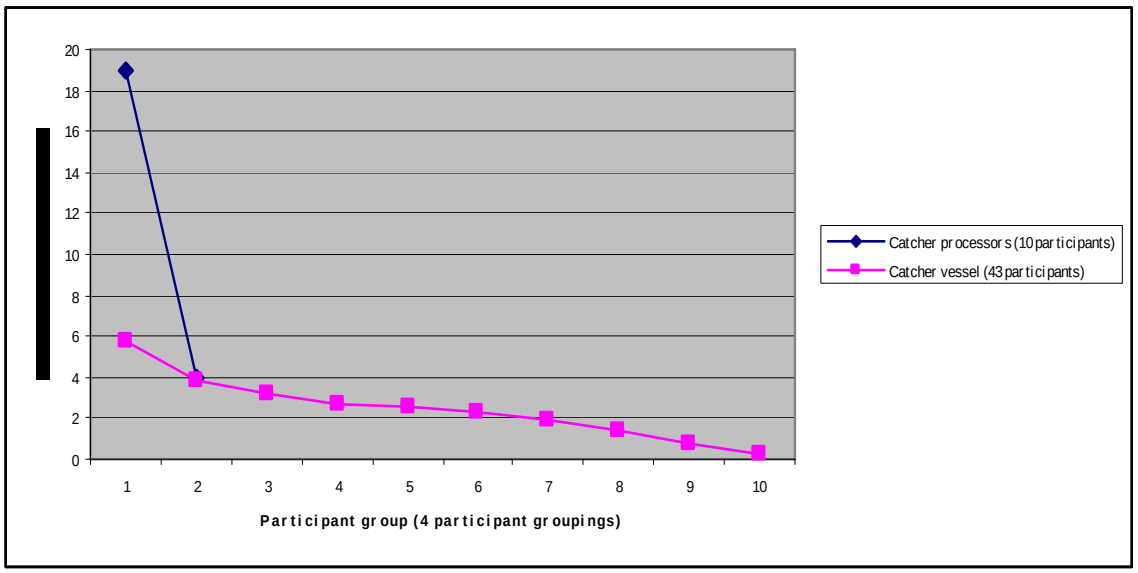


Figure 12. Allocations of secondary species and halibut PSC for catcher processors and catcher vessels using 2000-2006 (drop 2) year combination



Allocation of harvest shares to processors

Under one of the catcher alternatives, the catcher vessel harvest share allocation would be divided between eligible harvest sector participants and eligible processing sector participants. The Council would select a fixed percentage of the catcher vessel harvest share pool for allocation to harvesters based on their qualifying histories, with the remainder allocated to processors based on their qualifying processing histories. Under the alternative, allocations of target rockfish, secondary species and halibut PSC would be divided between the sectors at the prescribed percentages.

9.3 Option B - Processor allocation of harvest shares (CV – 3)

Allocation of the primary rockfish, secondary species, and halibut PSC to the CV sector shall be apportioned between harvesters (CV only) and shore based processors:

Option 1: 90/10
Option 2: 80/20

Eligible processors will be allocated target rockfish, secondary species, and halibut PSC from the processor pool of harvest shares in proportion to its qualifying processing history. Annual allocations will be of the same species and subject to the same allocation and harvest rules governing catcher vessel allocations.

The processor portion of the harvest share pool would be allocated to eligible processors based on individual processing histories in CGOA target rockfish during qualifying years. Two options could be used to define general processor eligibility. Under each, a processor would need to have purchased at least 250 metric tons of primary rockfish species in at least 4 years during a specific period – either 1996-2002 or 2000-2006. Allocations to eligible processors would be based on their relative processing histories during a specified qualifying period – either 1996-2002 (drop 1) and 2000-2006 (drop 2).

9.1 Processor eligibility (CV-3, 4, 5, and 6)

An eligible processor is a processing facility that has purchased:

Option 1 - 250 MT of aggregate Pacific Ocean perch, northern rockfish, and pelagic shelf rockfish harvest per year, for 4 years, from 1996 to 2000.

Option 2 - 250 MT of aggregate Pacific Ocean perch, northern rockfish, and pelagic shelf rockfish per year, for 4 years, from 2000 to 2006.

Suboption: (entry level fishery processor): 250 MT of aggregate Pacific Ocean perch, northern rockfish, and pelagic shelf rockfish harvested from 2007 to 2008.

Processor qualifying years

Each eligible shore based processor is allocated processor catch history based on individual processor histories of CGOA target rockfish for the years:

Option 1 - 1996-2000 (drop 1 year)

Option 2 - 2000–2006 (drop 2 year)

Suboption 1: (entry level processors): 2007–2008

Table 13 shows the number of eligible rockfish processors along with average landings and the mean and median processor allocations of primary rockfish species for these two qualifying year options. The table also includes the 2009 mean and median allocations for the processors for each target rockfish species assuming the processors receive 10 percent, 20 percent and 30 percent of the harvest share pool.

Under the 1996-2002 (drop 1) option, 5 processors are eligible for an allocation, while under the 2000-2006 (drop 2) option 6 processors are eligible. Inclusion of an additional processor under the 2000-2006 (drop 2) option, in part, contributes to a lower median allocation under that option.

Table 14 shows the percent mean and median allocation and the 2009 allocation of secondary species and halibut PSC for eligible rockfish processors under the two different qualifying year options. Given the allocation of secondary species and halibut PSC is based on processing history of the primary rockfish species during the qualifying period, the allocation pattern of secondary species and halibut PSC is similar to target rockfish allocations. Using 1996-2002 (drop 1) qualifying period results in an allocation that is more evenly distributed across the five eligible processors, whereas 2002-2006 (drop 2) qualifying period again tends to favor the processors with more history resulting in larger allocations of secondary species and halibut PSC.

Table 13. Number of eligible shore based rockfish processors, average landings, mean and median allocations of primary rockfish species (as a percent and in metric tons based on 2009 catcher vessel allocations of primary rockfish species) by qualifying year option

Qualifying years	Species	Eligible processors	Average landings (mt)	Mean allocation (%)	Median allocation (%)	Allocation assuming processors receive 10% of the catcher vessel harvest share pool (in mt based on 2009 TAC)		Allocation assuming processors receive 20% of the catcher vessel harvest share pool (in mt based on 2009 TAC)		Allocation assuming processors receive 30% of the catcher vessel harvest share pool (in mt based on 2009 TAC)	
						Mean	Median	Mean	Median	Mean	Median
1996-2002 (drop 1)	Northern rockfish	5	1,356	20	24.1	25.5	30.7	51.1	61.5	76.6	92.2
	Pacific ocean perch		2,394		21.4	75.3	80.7	150.6	161.4	225.8	242.1
	Pelagic shelf rockfish		902		20.5	28.3	29.0	56.7	58.1	85.0	87.1
2000-2006 (drop 2)	Northern rockfish	6	2,093	17	13.9	21.7	17.7	43.4	35.5	43.4	53.2
	Pacific ocean perch		4,447		12.5	64.0	47.0	128.0	94.0	128.0	141.0
	Pelagic shelf rockfish		1,408		14.7	24.1	20.8	48.2	41.6	48.2	62.4

Source: Alaska Department of Fish and Game

Table 14. Number of eligible shore based rockfish processors, mean and median secondary species and PSC allocations (as a percent and in metric tons based on 2009 catcher vessel allocations) by qualifying year option

Qualifying years	Species	Eligible processors	Mean allocation (%)	Median allocation (%)	Allocation assuming processors receive 10% of the catcher vessel harvest share pool (in mt based on 2009 TAC)		Allocation assuming processors receive 20% of the catcher vessel harvest share pool (in mt based on 2009 TAC)		Allocation assuming processors receive 30% of the catcher vessel harvest share pool (in mt based on 2009 TAC)	
					Mean	Median	Mean	Median	Mean	Median
1996-2002 (drop 1)	Pacific cod	5	20	21.5	9.8	10.6	19.6	21.1	29.5	31.7
	Sablefish				6.3	6.7	12.5	13.5	18.8	20.2
	Thornyhead rockfish				1.9	4.1	3.7	8.3	5.6	12.4
	Halibut				2.3	2.5	4.6	4.9	6.9	7.4
2000-2006 (drop 2)	Pacific cod	6	17	13.2	8.3	6.5	16.7	13.0	25.0	19.5
	Sablefish				5.3	4.1	10.6	8.3	16.0	12.4
	Thornyhead rockfish				1.6	2.6	3.2	5.1	4.7	7.7
	Halibut				2.0	1.5	3.9	3.0	5.9	4.6

Source: Alaska Department of Fish and Game

Allocation of shares to <u>licenses</u> participating in the pilot program entry level fishery

Under the Council's motion, participants in the pilot program's entry level fishery could be included in the cooperative program. The motion provides that vessels that have registered for the entry level fishery in both 2007 and 2008 and have at least one landing during those years would qualify under this provision. Two vessels registered for the pilot program entry level trawl fishery and participated in at least one year. Each of these participating licenses would receive an allocation either based on its history in the entry level fishery or equal to some portion of the allocation to certain vessels that qualify for the program under the general qualifying criteria.

4.4 Entry level trawl qualification/allocations for the main program:

1) Vessels / LLPs that do not qualify for Cooperative quota (CQ) for the CGOA rockfish cooperative program.
2) The trawl LLP must have registered for the entry level fishery both in 2007 and 2008.
3) The trawl LLP must have made a landing of fish in the entry level fishery with trawl gear in either 2007 or 2008.

4.5 The qualified entry level trawl LLP would receive an allocation of QS for the primary rockfish species equivalent to:

1) Average of the lowest one-quarter to one-third of the qualified CV LLPs that actively fished in the RPP program in either 2007 or 2008.
2) Average of the lowest one-quarter to one-third of all qualified CV LLPs.
3) Actual catch history of the vessel/LLP in 2007 or 2008 (information would be with held due to confidentially restrictions unless the vessel(s) agrees to have the data released to the public).
4) Average of the qualified CV LLPs that actively fished in the RPP program in either 2007 or 2008
5) Average of all qualified CV LLPs

Note: secondary and halibut PSC allocations are calculated the same as the other qualified LLPs.

Each of these options requires some interpretation. Under the options based on allocations to qualified licenses, the distribution of the allocation among the three different primary rockfish species is not delineated. The most straightforward interpretation of the motion is to provide each of the qualified entry level vessels with an equal share of the pools of the different primary species (e.g., a one percent allocation would provide one percent of each of the primary species).

Allocations of secondary species and halibut PSC would be based on these primary species allocations, as is done for all other program participants.

One or two vessels meet the 'entry level' qualifying criteria, depending on the general qualifying criteria selected. If the qualifying years include recent years (up to 2006), only one vessel qualifies as an entry level vessel, as the other vessel that participated in the entry level fishery meets the general qualification. Table 15 shows the characteristics of the 'entry level' allocations under options based on the allocations to eligible licenses. Those options would result in allocations to entry level vessels that range from approximately 0.2 percent of each primary species pool to approximately 2.3 percent of the pool.[5] These allocations would exceed the allocations of between 6 and 30 of the eligible licenses (or between approximately one-tenth and in excess of one-half of the eligible licenses), respectively.

Table 15. Allocations to entry level participants based on aggregate catch history of program participants.

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Qualifying years	Number of licenses qualifying for an allocation	Mean allocation		Mean allocation of active licenses		Average allocation of licenses in lowest third	
		Allocation as percent of total	Number of qualifying licenses with smaller allocation	Allocation as percent of total	Number of qualifying licenses with smaller allocation	Allocation as percent of total	Number of qualifying licenses with smaller allocation
1996 - 2002 (drop 2)	52	1.9	30	2.9	38	0.3	7
1998 - 2006 (drop 2)	53	1.9	27	3.0	42	0.2	7
1998 - 2006 (drop 4)	53	1.9	26	2.9	41	0.2	7
2000 - 2006 (drop 2)	43	2.3	20	3.1	32	0.7	9

Qualifying years	Average allocation of active licenses in lowest third		Average allocation of licenses in lowest quarter		Average allocation of active licenses in lowest quarter	
	Allocation as percent of total	Number of qualifying licenses with smaller allocation	Allocation as percent of total	Number of qualifying licenses with smaller allocation	Allocation as percent of total	Number of qualifying licenses with smaller allocation
1996 - 2002 (drop 2)	1.4	24	0.3	6	1.2	21
1998 - 2006 (drop 2)	1.7	24	0.2	6	1.4	22
1998 - 2006 (drop 4)	1.7	26	0.2	6	1.4	21
2000 - 2006 (drop 2)	1.8	15	0.4	8	1.5	13

Source: ADFG Fish Tickets.
Note: Allocations are to a license holder based on vessel activity using that license.

The option to make allocations based on catches in the entry level fishery in 2007 or 2008 also requires interpretation. This could be interpreted as providing these entering licenses with the

[5] These allocation percentages would be in addition to the allocations to licenses meeting the basic qualifying criteria. To allocate exactly 100 percent of the TACs of the primary species, all allocations would need to be standardized.

amount of their harvests in 2007 or 2008, or alternatively with an allocation based on catch histories based on those years (i.e., with a single year's history weighted against several years for other participants).

Although these allocations cannot be shown because of confidentiality limits, the approximate magnitude of the allocations can be determined. In both of these years, the entry level fishery received an allocation of 5 percent of the Pacific ocean perch available to the rockfish pilot program or 346 metric tons per year. No allocation of northern rockfish or pelagic shelf rockfish was made to the trawl entry level fishery. Crediting of catches from this allocation under the option is uncertain and again depends on interpretation. Perhaps most problematic is a pending enforcement investigation concerning all catches from the fishery in 2008. At the extreme, the investigation could result in all catches from the 2008 entry level fishery being determined to be illegal, which would prevent their consideration for determining allocations under the program.

If entry level participants receive an allocation equal to their 2007 and 2008 catches, with each vessel receiving its largest year's catch, the two eligible licenses could receive an allocation as large as 10 percent of the available Pacific ocean perch (assuming that one vessel harvested the entire entry level Pacific ocean perch allocation in 2007 and the other harvested that allocation in 2008).[6] The allocation would likely be smaller, as this catch distribution is unlikely, but could be as large as 4 percent of the Pacific ocean perch allocated to the program. Four percent of the Pacific ocean perch would be approximately 2.5 percent of the total primary rockfish allocation under the program (or approximately 5 percent of the catcher vessel allocation of primary species) based on the 2009 TACs (which would then be divided between the two licenses based on their relative catch histories). This allocation could be larger than all but the largest allocations to catcher vessels generally eligible under the program.

If the Council were to consider a single year's catch history of each of these licenses basing the allocation on the relative catch histories of the vessels in comparison to the catch histories of vessels that qualify under the general qualifying provision, the allocations would be reduced substantially, to an amount between one-half and three-fourths of a percent of the Pacific ocean perch allocation (or approximately one-third to one half of the aggregate primary rockfish species allocation based on the 2009 TAC).

Under any of these options, the Council will need to balance the equities of the allocations to these additional licenses that fail to meet the general qualifying criteria against the lost allocations licenses that meet qualifying criteria. If the Council elects to extend the qualifying criteria to 2006, the additional entry level license would have had no history in the rockfish fisheries for the seven years preceding implementation of the pilot program. Making an allocation to this license that is larger than allocations to licenses that meet the qualifying criteria for the program could be viewed as inequitable by some licenses that met the qualifying criteria. As is typical in the development of share-based programs, the Council must balance the competing interests of vessels that have historic participation and those that have shown an interest in entering the fishery.

The Council could take one of a few different approaches to defining allocations to licenses participating in the pilot program entry level trawl fishery. One approach could be to use the

[6] Small amounts of the other primary species could be allocated based on incidental catches by these 'entry level' licenses. These allocations would be necessary, as vessels cannot fish without unused allocations of all species.

information presented here (and any additional information that might be requested) to identify a specific allocation to licenses used in the pilot program trawl entry level fishery. Using this approach will add certainty to the allocations avoiding a potentially inequitable entry level allocation, if contingencies (such as the pending enforcement action) are resolved in a manner that is not expected. Alternatively, the Council could choose to work to more specifically define the options that are currently proposed. This latter approach could lead to a protracted process that would absorb considerable Council and staff time, without firmly resolving uncertainties.

Allocation of shares to <u>processors</u> participating in the pilot program entry level fishery
In the event that the Council elects to include processors in the allocation of harvest shares in the program, it has included an option that would make allocations to processors that participated in the entry level fishery.

<u>9</u> <u>Catcher vessel/shore based processor provisions</u> (CV – all)

9.2 <u>Processor eligibility</u> (CV-3, 4, 5, and 6)

An eligible processor is a processing facility that has purchased:

Option 1 - 250 MT of aggregate Pacific Ocean perch, northern rockfish, and pelagic shelf rockfish harvest per year, for 4 years, from 1996 to 2000.

Option 2 - 250 MT of aggregate Pacific Ocean perch, northern rockfish, and pelagic shelf rockfish per year, for 4 years, from 2000 to 2006.

Suboption: (entry level fishery processor): 250 MT of aggregate Pacific Ocean perch, northern rockfish, and pelagic shelf rockfish harvested from 2007 to 2008.

<u>Processor qualifying years</u>

Each eligible shore based processor is allocated processor catch history based on individual processor histories of CGOA target rockfish for the years:

Option 1 - 1996-2000 (drop 1 year)

Option 2 - 2000–2006 (drop 2 year)

Suboption 1: (entry level processors): 2007–2008

<u>Suboption 2</u>: (entry level processors) Eligible entry level processors will be allocated target rockfish, secondary species, and halibut PSC from the processor pool of harvest shares that are derived from those trawl LLPs that graduate from the entry level trawl fishery into the main program.

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To be eligible to receive an allocation, a processor that participated in the entry level fishery would need to have received delivery of 250 metric tons of primary rockfish in 2007 and 2008 combined.[7] In the first two years of the program, approximately 1,400 metric tons of rockfish were allocated to the two entry level fisheries (i.e., trawl and non-trawl). Although harvest amounts cannot be reported because of confidentiality limitations, it can be reported that in both years of the program, the trawl fishery closed on TAC. The entry level fixed gear participants harvested less than 30 metric tons of primary rockfish in the first two years of the program. Its allocation comes available to entry level trawl participants on September 1st. In the first year of the program trawl vessels prosecuted these fall fisheries, with the northern rockfish fishery closing on TAC. In the second year, trawl vessels did not attempt to harvest the remaining portions of the fixed gear entry level allocations. In sum, between 850 metric tons and 1,000

[7] The suboption is worded differently from the general processor qualification options in that it omits the requirement that the amount be received "per year".

metric tons of rockfish were harvested from the entry fishery in the first two years of the program. Since very little of these harvests were from the fixed gear fisheries, only processors receiving deliveries from the trawl fisheries could reach the eligibility threshold. Only two processor received deliveries from the trawl entry level fishery in the first two years of the program. Consequently, only one or two processors could qualify under this provision.

The Council advanced two options for defining the allocations to processors that participated in the pilot program entry level fishery. Under the first, processors would receive allocations based on their processing histories during 2007 and 2008. This provision could be implemented by crediting the former entry level processors with their histories in those years, effectively giving the processors zero processing history in other years. Yet, substantial uncertainty will exist concerning the effects of the provision. As noted earlier, a large portion of the entry level trawl allocation may be subject to a possible enforcement action. The harvester in question asserts that the catch was not from the Central Gulf. These circumstances raise a question of whether the landings of that catch can or should be credited to the processor that received the landings. AT the time of the landing, the receiving processor likely was unaware that the landings were from the entry level fishery. Notwithstanding this uncertainty, the allocation to entry level processors cannot be revealed because of confidentiality limits. Despite that confidentiality limits, it can be revealed that between 850 and 1,000 metric tons of rockfish were harvested from the entry level fisheries in 2007 and 2008 combined. Qualified pounds of processors meeting the general eligibility criteria are roughly between 34,000 metric tons and 48,000 metric tons (depending on the qualifying year option selected). If all of the entry level landings are by processors that eligible under the entry level processor provision, these processors would receive between 2 and 3 percent of the processor allocation. Whether all landings are by processors eligible under the entry level provision cannot be revealed. In addition, this allocation could be divided between two processors, if two processors are found to meet the entry level eligibility requirement.

Under the second option, entry level processors would receive the processor portion of the harvest allocation made to entry level harvesters (i.e., 10 or 20 percent, as would be allocated to processors meeting the general eligibility criteria). Under this option, the allocation to processors from the pilot program entry level fishery would be wholly dependent on the allocation to entry level harvesters. The options for those allocations could result in each allocation being as small as less then one-quarter of one percent of the catcher vessel harvest share pool or as large as approximately five percent of the catcher vessel harvest share pool. With between one and three allocations to these entry level participants, the total allocation could be as small as one-quarter of one percent or as large as 15 percent of the catcher vessel pool. As noted in the discussion of those allocations, the allocation under any of the computational options is very uncertain because of the vagueness of the options and the potential enforcement action concerning catches from the entry level fishery.

The uncertainty of entry level allocations to processors could be resolved by the Council specifying those allocations. Using the information presented here (or information from future Council requests) the Council could choose an appropriate percentage allocation to processors eligible under the entry level provision. The most straightforward approach would be to simply make the allocation that would be equal to all eligible entry level processors. Such an allocation would avoid any uncertainty (and potential inequity) that might arise under a computed allocation (including any effect of the outcome of the potential enforcement action concerning harvests from the entry level fishery). Specifying an allocation for each eligible entry level processor would also

provide each processor with a certain allocation that would not be dependent on (or affected by) the number of processors receiving entry level eligibility.

In developing an allocation, the Council should consider the allocations to processors that have general eligibility under the program, who have longer participation and greater historical dependence on the fishery, and the potential for a processor to increase its market share under the program structure adopted. Alternatives that provide a processor with greater entry opportunities and the ability to compete for landings might merit less of an allocation to pilot program entry level processors.

Reallocation of halibut PSC to non-rockfish fisheries

In the rockfish pilot program, unused portions of the halibut PSC allocated to rockfish cooperatives are reallocated to the last seasonal apportionment. This reallocation is not included in the Council's motion, but could be considered, if the Council wishes this practice to continue. The following provision could be incorporated into the motion for this purpose:

> **Any allocation of halibut PSC that has not been utilized by November 15 or after the declaration to terminate fishing will be added to the last seasonal apportionment for trawl gear during the current fishing year.**

In the first two years of the program, 128 metric tons (2007) and 135 metric tons (2008) of halibut PSC were reallocated under the pilot program provision. This reallocation was possible because annual halibut catch and mortality in the CGOA rockfish fishery declined under the pilot program (see Table 16). In the years leading up to the pilot program, vessels in the rockfish fishery averaged in excess of 20 pounds of halibut mortality for each metric ton of primary rockfish species harvested. In the first two years of the program, vessels fishing in cooperatives and the limited access fishery under the program cut halibut mortality rates substantially. Vessels in the catcher processor limited access fishery reduced their catch to approximately 13 pounds of halibut per ton of primary rockfish catch in 2007, while in 2008 the halibut mortality rate was 16.5 pounds per ton of primary rockfish catch.[8] The single vessel fishing in a catcher processor cooperative in 2007 reduced its halibut mortality to less than 9 pounds of halibut per metric ton of primary rockfish catch, while the two participating vessels in 2008 had a halibut mortality of 10.5 percent. The catcher vessel sector reduced its halibut mortality to slightly more than 4 pounds of halibut per ton of primary rockfish species catch in 2007, while the halibut mortality in 2008 for this sector was roughly 8 pounds per metric ton of primary rockfish.[9]

[8] In assessing the change in catch rate in the catcher processor limited fishery access, it should be borne in mind that (although not fishing as a cooperative) the vessels fishing in that fishery did not compete for the allocations of pelagic shelf rockfish, reducing the pressure to race for fish.

[9] These calculations include all halibut mortality of vessels fishing allocations under the program, including mortality in trips targeting Pacific cod and sablefish.

Table 16. Halibut mortality of vessels in the Central Gulf rockfish pilot program (2007 and 2008)

Year	Fishery	Vessels	Halibut PSC mortality (pounds)**	Catch of primary rockfish (tons)	Pounds of halibut PSC mortality per ton of primary rockfish catch	Allocation including transfer of halibut PSC mortality (pounds)	Unused allocation (pounds)
2007	Catcher processor limited access	3	26,312.8	2,063.3	12.8	NA	NA
	Catcher processor cooperative*	1	16,623.3	1,933.1	8.6	77,760.7	61,137.3
	Catcher vessel cooperative	25	32,710.1	7,746.0	4.2	309,816.8	277,106.7
	Total	29	75,646.3	11,742.4	6.4	387,577***	338,244+
2008	Catcher processor limited access	4	47,624.4	2,892.1	16.5	NA	NA
	Catcher processor cooperative*	2	19,332.0	1,836.4	10.5	44,092.0	24,760.0
	Catcher vessel cooperative	23	60,622.0	7,446.7	8.1	331,906.9	271,284.9
	Total	29	127,578.4	12,175.2	10.5	375,998.9***	296,044.9+

Source: NMFS Catch Accounting Data

*Data are not confidential because of disclosure in cooperative reports.

** Includes all halibut mortality under the primary program (i.e., excludes entry level fishery).

*** Includes allocation to catcher processor cooperative that did not fish. No allocation is made to the limited access fishery.

+ Includes all allocations and only catches by vessels subject to those allocations.

The drastic reduction in halibut mortality (particularly in the catcher vessel sector) likely arises from several factors. First, vessels have exclusive allocations, allowing them to move from areas of high halibut catch without risking loss of catch of the primary rockfish. Second, exclusive allocations also increase the incentive for participants to communicate with each other concerning catch rates, improving information concerning areas of high halibut incidental catch in the fleet, and preventing repeated high halibut mortality among vessels exploring fishing grounds. Third, several vessels have begun employing new pelagic gear that limits bottom contact and halibut incidental catch. These gear changes are apparent when comparing the percentage of catch using pelagic trawl gear and non-pelagic gear in the first two years of the program with catch by those gear types in the preceding years (see Table 17). In the second year of the program over 40 percent of primary rockfish catch was with pelagic trawl, in comparison to less than 25 percent in 2006 and 6 percent or less in the preceding years. In the second year of the program, nearly 85 percent of the catcher vessel fleet used pelagic gear for some of its catch, in comparison to slightly more than half of that fleet in 2006 and less than 20 percent in the proceeding years. In the catcher processor sector, two of the four active vessels used pelagic gear in the first year of the program, in comparison to no pelagic trawl gear prior to implementation of the program. Catch data by gear type cannot be revealed for the catch processor sector because of confidentiality protections. Participants in the program report that a primary motivation for these changes in gear types is constraining halibut allocations, which could jeopardize cooperative catches in the event that halibut bycatch exceeds allocations.

Table 17. Catch by gear by sector in the Central Gulf of Alaska rockfish fishery (2003-2008)

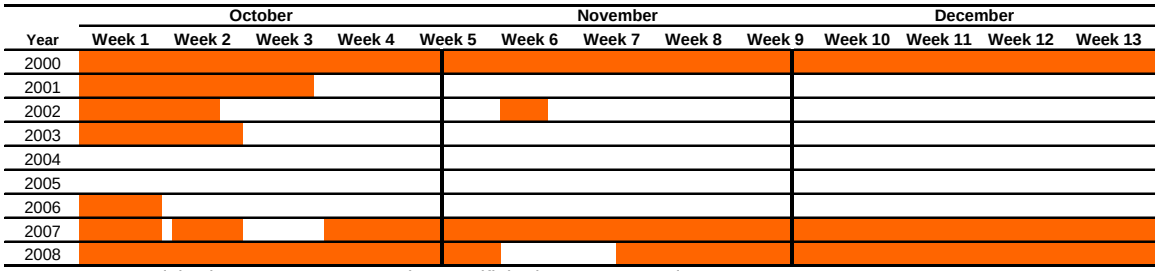
Year	Catcher processors		Catcher vessels					
	Non-pelagic trawl	Pelagic trawl	Non-pelagic trawl			Pelagic trawl		
	Number of vessels	Number of vessels	Number of vessels	Catch of primary rockfish species (in metric tons)	Percentage of catch of primary rockfish species	Number of vessels	Catch of primary rockfish species (in metric tons)	Percentage of catch of primary rockfish species
2003	5	0	31	9,396.6	99.0	1	95.6	1.0
2004	6	0	28	7,875.0	100.0	0	0.0	0.0
2005	6	0	24	6,702.4	94.0	4	429.2	6.0
2006	4	0	23	5,153.2	76.4	13	1,590.0	23.6
2007	4	2	24	4,813.0	62.1	19	2,933.0	37.9
2008	6	1	26	4,230.2	56.8	22	3,216.5	43.2

Source: NMFS Catch Accounting.

The incentive for halibut mortality reductions is increased by the reallocation of saved halibut mortality to other fisheries late in the year, allowing the trawl sector as a whole (including vessels that did not qualify for the pilot program) to benefit from these halibut mortality reductions. In both years of the program, the reallocation of halibut PSC from the rockfish pilot program to the

GOA trawl fisheries allowed the trawl GOA groundfish fisheries to remain open until December 31. In the five years previous to implementation of the rockfish pilot program, the trawl GOA groundfish fisheries were closed to directed fishing prior to the end of the season so as not to exceed the halibut PSC limit (see Figure 13). In two of those years, 2004 and 2005, the trawl GOA groundfish fishery was closed to direct fishing on October 1.

Figure 13. Season duration of the trawl Central Gulf of Alaska groundfish fisheries from October 1 to December 31, 2000 to 2008



Source: NOAA Fisheries status reports and groundfish closure summaries

Catch of groundfish late in the year has fluctuated both before and after implementation of the rockfish pilot program. Table 18 below shows vessel count, total catch, and halibut PSC by target for trawl vessels during the October 1 to December 31 period from 2000 to 2008. As seen in the table, in the two years preceding the program, no harvest of groundfish occurred, as all fisheries were closed because no halibut PSC was available. In earlier years, halibut PSC was primarily used in the shallow-water flatfish, Pacific cod, and arrowtooth flounder fisheries. Smaller amounts of halibut PSC were used in the rex sole and flathead sole fisheries. In years since the rockfish pilot program, halibut PSC was primarily used in the shallow-water flatfish fishery, while a smaller amount of halibut PSC was used in the Pacific cod and arrowtooth flounder fisheries. The rollover, 128 metric tons in 2007 and 135 metric tons in 2008, has clearly supported additional fishing activity, but the degree of the change is uncertain and appears to depend on target preferences, which have varied year-to-year.

Table 18. Vessel count, total catch, and halibut PSC by target for trawl vessels in central and western GOA during the 5th season (Oct 1 – Dec 31) from 2000 - 2008

Species Complex	Target		2000	2001	2002	2003	2004	2005	2006	2007	2008
Shallow-water	Shallow-water flatfish	Vessel Count	16	9	26	2	0	0	7	7	7
		Target catch	1,711	183	3,518	*	0	0	1,776	3,204	5,773
		Halibut PSC	82	9	213	*	0	0	210	208	238
	Pacific cod	Vessel Count	1	53	9	3	0	0	3	6	9
		Target catch	*	10,166	170	*	0	0	*	710	2,170
		Halibut PSC	*	437	6	*	0	0	*	15	56
	Flathead sole	Vessel Count	2	4	2	2	0	0	1	0	2
		Target catch	*	194	*	*	0	0	0	0	*
		Halibut PSC	*	4	*	*	0	0	0	0	*
Deep-water	Rex sole	Vessel Count	4	1	2	1	0	0	1	1	0
		Target catch	1,353	*	*	*	0	0	*	*	0
		Halibut PSC	38	*	*	*	0	0	*	*	0
	Arrowtooth	Vessel Count	2	1	8	13	0	0	7	6	8
		Target catch	*	*	2,702	6,700	0	0	2,095	1,808	2,025
		Halibut PSC	*	*	70	186	0	0	122	38	45
	Deep-water flatfish	Vessel Count	2	0	0	0	0	0	0	0	0
		Target catch	*	0	0	0	0	0	0	0	0
		Halibut PSC	*	0	0	0	0	0	0	0	0
	Rockfish	Vessel Count	0	0	0	1	0	0	3	7	5
		Target catch	0	0	0	*	0	0	*	973	1,392
		Halibut PSC	0	0	0	*	0	0	*	9	23
Days open during 5th season**			**92**	**20**	**16**	**14**	**0**	**0**	**7**	**82**	**82**

Source: Target catch was from Blend data/Catch Accounting, while halibut PSC was from NMFS PSC data

* Withheld for confidentiality

** All closures during the 5th season were to prevent exceeding halibut PSC limit

Pacific cod and Sablefish Management

Currently in the pilot program, the catcher vessel sector receives allocations of Pacific cod and sablefish; the catcher processor sector receives an allocation of sablefish, while its Pacific cod catch is managed under a reduced MRA of 4 percent. The sector allocations of Pacific cod and sablefish are based on the average annual percentage of total CGOA retained catch in the rockfish fishery during the qualifying years.

At the June 2009 Council meeting, the Council adopted for consideration, the following two options that would modify management of Pacific cod and sablefish catches in the program:

Option 1: No directed fishing for secondary species Pacific cod and sablefish.
Option 2: Manage Pacific cod and sablefish under a modified MRA.

A prohibition on directed fishing is likely to decrease the value of any sablefish and Pacific cod harvested from the rockfish fishery. One of the benefits of exclusive allocations is that participants are able to pattern their fishing to receive the greatest benefit from these allocations. As a result, several times in the first two years of the program, catcher vessels took trips targeting Pacific cod and sablefish (see Table 19). By limiting their catch of rockfish in these trips, harvesters are able to both reduce costs of traveling to the different grounds and increase quality of catch and sorting costs needed to limiting the extent of mixing of Pacific cod and sablefish with rockfish, the spines of which can damage more fragile fish. Over 75 percent of the Pacific cod and over 50 of the sablefish caught during non-rockfish target trips, during these non-rockfish target trips few primary rockfish were harvested.[10] Although the catch of sablefish and Pacific cod in this manner may be viewed by some as beyond the scope of the rockfish fishery, harvests

[10] Some primary rockfish are harvested during these trips that are non-rockfish targets, as MRAs for shortraker and rougheye rockfish use only catch of primary rockfish as the basis for determining the MRA poundage.

of these species have remained at, or below, their historic levels in the rockfish fishery. In addition, these practices bring additional value to catch. It is unclear whether any benefit could come from a prohibition on targeting Pacific cod and sablefish in the absence of other changes.

Table 19. Catcher vessel trips and catch by trip target (2007 and 2008).

Target	Vessels with at least one trip in the target		Total trips in the target		Species caught in the target	Catch (in metric tons)		Percent of total catch of the species	
	2007	2008	2007	2008		2007	2008	2007	2008
Pacific cod	10	12	11	13	Pacific Ocean Perch	5.2	13.2	0.1	0.3
					Northern Rockfish	0.9	2.2	0.0	0.2
					Pelagic Shelf Rockfish	0.4	13.5	0.0	0.8
					Pacific Cod	**207.1**	**429.9**	**74.7**	**75.7**
					Sablefish	30.5	53.6	6.6	13.5
Rockfish	25	26	130	112	**Pacific Ocean Perch**	**4,145.3**	4,477.5	**99.5**	**99.4**
					Northern Rockfish	**2,000.1**	1,343.7	**100.0**	**99.7**
					Pelagic Shelf Rockfish	**1,577.0**	1,578.1	**99.9**	**98.9**
					Pacific Cod	54.5	137.3	19.6	24.2
					Sablefish	205.7	128.2	44.2	32.4
Sablefish	14	13	16	17	Pacific Ocean Perch	16.1	12.9	0.4	0.3
					Northern Rockfish	0.0	1.8	0.0	0.1
					Pelagic Shelf Rockfish	0.9	3.6	0.1	0.2
					Pacific Cod	15.7	0.7	5.7	0.1
					Sablefish	**229.1**	214.3	**49.2**	**54.1**

Source: NMFS Catch Accounting Data.

In addition to a possible prohibition on targeting Pacific cod and sablefish by vessels fishing rockfish program allocations, the Council included an option to manage these secondary species under a modified MRA (which in addition to affecting the manner and amount of harvests would also operate as an effective prohibition on targeting). Under MRA management, rockfish vessels exceeding the MRA at any point in a trip would be required to discard catches above the MRA. While MRA would limit directed fishing for these species, MRA management may have some undesirable effects. MRAs can contribute to discards. As currently applied in the Gulf, an MRA requires discards of each that exceed the prescribed level at any time. So, a vessel that catches an unexpected amount of an MRA species early in a trip may be forced to discard, even if the catch would be retainable at a later time in the trip. For valuable species, an MRA may induce a vessel to catch up to the maximum amount, knowing that overharvest of the MRA by be discarded without risk of penalty. These added discards are avoided under species allocations, since all catch counts against the allocation.

MRAs can also contribute to excessive harvests of a species. Since an MRA limits only retention, requiring vessels to discard above the retainable amount, they do not limit harvest of a species. For species of value that are fully utilized, establishing an MRA in a fishery prosecuted with exclusive allocations and an extended season could increase harvests relative to MRA harvests in a limited access race for fish. Persons able to harvest the MRA in conjunction with exclusive allocations may be under less time pressure to harvest the MRA species than persons fishing in a limited access race for fish, where harvest of the basis species could be constrained.

As written, the option does not include a modified MRA level. Under the LLP, the MRA for Pacific cod was 20 percent in rockfish fisheries, while the MRA for sablefish was 7 percent. The catcher processor sector and the catcher vessel limited access fishery operate under a reduced MRA of 4 percent for Pacific cod and both sectors' limited access fisheries operate under a reduced MRA of 3 percent for sablefish. Table 20 provides catch rates of Pacific cod and sablefish relative to the primary rockfish allocations for the catcher vessel and catcher processor

sectors. These rates show catches of Pacific cod and sablefish relative to the cooperative rockfish allocations; or the effective retention rates of Pacific cod and sablefish relative to rockfish allocations, which would be considered basis species under an MRA.[11] In the catcher vessel sector, Pacific cod catches have been substantially below the historic MRA (of 20 percent) and are below Pacific cod catch rates observed in the qualifying years (which averaged between 8.6 percent and 10.7 percent of rockfish catch). Sablefish catch rates under the program also appear to be slightly lower than qualifying year rates, which averaged between 5.5 percent and 6.2 percent of rockfish catches (see Table 21).

Table 20. Cooperative Catch and catch rate of Pacific cod and sablefish relative to primary rockfish allocations in the CGOA rockfish fisheries (2007 and 2008)

Year	Sector	Species	Catch* (in metric tons)	Allocation of primary rockfish**	Catch rate of secondary species relative to rockfish allocations including transfers
2007	Catcher vessel	Pacific Cod	271.9	8,436.4	3.2
		Sablefish	453.8		5.4
	Catcher processor	Sablefish	78.2	2,125.0	3.7
2008	Catcher vessel	Pacific Cod	568.0	8,192.5	6.9
		Sablefish	396.1		4.8
	Catcher processor	Sablefish	66.7	1,986.0	3.4

Source: NMFS Catch Accounting data

* Catch and allocation amounts for the catcher processors sector does not include catch or allocation amounts from the limited acess fishery.

** Allocations for the catcher vessels include transfers, while allocations for catcher processors exclude transfers.

Table 21. Retained catch and current retainable percentages for vessels targeting Central Gulf of Alaska rockfish for three qualifying periods

			Pacific cod				Shortraker/rougheye			
Qualifying Years	Sector	Target rockfish catch (metric tons)	Catch (metric tons)	Percent of target rockfish	Retainable percentage	Maximum retainable amount	Catch (metric tons)	Percent of target rockfish	Retainable percentage	Maximum retainable amount
1996-2002	CV	41,063.9	4,401.4	10.7	20.0	8,212.8	261.3	0.6	15.0	6,159.6
	CP	40,653.0	617.5	1.5	20.0	8,130.6	2,573.9	6.3	15.0	6,098.0
	Total	81,717.0	5,018.8	6.1	20.0	16,343.4	2,835.2	3.5	15.0	12,257.5
1998-2006	CV	66,882.1	8,157.0	10.0	20.0	13,376.4	305.1	0.4	15.0	10,032.3
	CP	51,334.7	982.3	1.2	20.0	10,266.9	2,573.6	3.1	15.0	7,700.2
	Total	118,216.7	9,139.3	11.2	20.0	23,643.3	2,878.7	3.5	15.0	17,732.5
2000-2006	CV	55,847.7	7,022.4	8.6	20.0	11,169.5	246.3	0.3	15.0	8,377.2
	CP	36,733.4	584.6	0.7	20.0	7,346.7	1,882.9	2.3	15.0	5,510.0
	Total	92,581.1	7,607.0	9.3	20.0	18,516.2	2,129.2	2.6	15.0	13,887.2

		Thornyhead				Sablefish			
Qualifying Years	Sector	Catch (metric tons)	Percent of target rockfish	Retainable percentage	Maximum retainable amount	Catch (metric tons)	Percent of target rockfish	Retainable percentage	Maximum retainable amount
1996-2002	CV	333.7	0.8	15.0	6,159.6	2,528.3	6.2	7.0	2,874.5
	CP	641.4	1.6	15.0	6,098.0	1,924.1	4.7	7.0	2,845.7
	Total	975.1	1.2	15.0	12,257.5	4,452.4	5.4	7.0	5,720.2
1998-2006	CV	396.4	0.6	15.0	10,032.3	3,680.3	5.5	7.0	4,681.7
	CP	1,128.8	2.2	15.0	7,700.2	2,231.2	4.3	7.0	3,593.4
	Total	1,525.2	1.3	15.0	17,732.5	5,911.5	5.0	7.0	8,275.2
2000-2006	CV	280.9	0.5	15.0	8,377.2	3,065.9	5.5	7.0	3,909.3
	CP	953.7	2.6	15.0	5,510.0	1,575.1	4.3	7.0	2,571.3
	Total	1,234.6	1.3	15.0	13,887.2	4,641.0	5.0	7.0	6,480.7

Source: CP data from WPR and CV data from ADF&G Fish Tickets

If the Council elects to use a modified MRA, it should consider several factors, beginning with its purpose for reverting to MRA management. A reduced MRA may be used to constrain targeting (or intentional incidental catch). The extent to which pilot program participants have used allocations to target Pacific cod and sablefish (rather than to support incidental catches) suggests

[11] Catch and allocation amounts for the catcher processors sector does not include catch or allocation amounts from the limited access fishery.

that those species could be avoided, if the Council adopts management measures to create an incentive for avoidance. This reduced MRA would benefit other fisheries that harvest Pacific cod and sablefish, shifting catches from the rockfish fishery to other target fisheries, but could be argued to be unfair to participants in the rockfish fishery who have a long history of reliance on Pacific cod and sablefish catches to support their rockfish operations. Given the high value of Pacific cod and sablefish (relative to rockfish), a substantial reduction in permitted retention of Pacific cod and sablefish would have a notable effect on the economics of the rockfish fishery.

In the current rockfish program, discards of allocated species are prohibited. Consequently, no discards of Pacific cod or sablefish by catcher vessels or sablefish by catcher processors are permitted. Under MRA management, discards of these species would be permitted and may be required, if the MRA is exceeded. This discard requirement applies at all times, so a vessel could be required to discard Pacific cod or sablefish, if a tow early in a trip yields a disproportionate amount of those species, regardless of whether the vessel has substantial basis species catches later in the trip.[12] The potential of an MRA to contribute to discards, together with the increase in sorting costs to prevent mixing of Pacific cod and sablefish with rockfish in the hold, suggest that changing to MRA management or a prohibition on targeting may not be the best way to constrain harvests of Pacific cod and sablefish by the rockfish fishery.

[12] If the Council elects to develop MRA management of these species, it could consider a provision that would apply an MRA only at the end of a trip (or week, in the case of catcher processors). Such an approach might be more suitable to an allocated fishery, in which the availability of basis catches to support MRA retention is more certain than in a limited access derby.