

**Discussion Paper**  
**Halibut PSC Allocations under BSAI Amendment 80 and Amendment 85**

**Current Halibut PSC Management**

Current regulations establish a limit of 3,400 metric tons of halibut mortality in the BSAI trawl fisheries (after deducting the halibut PSQ reserve for use in the groundfish CDQ program). In the annual TAC setting process, NMFS apportions this amount to different trawl fishery categories (e.g., yellowfin sole, Pacific cod, rock sole/other flats/flathead sole as established in regulation) based on Council recommendations. In some fisheries, the allocation is further apportioned by season.

Typically, at the beginning of the fishing year, the Pacific cod trawl fishery is allocated approximately 1,400 metric tons of halibut PSC, more than is usually used in that directed fishery. Despite this apportionment of PSC to the Pacific cod trawl fishery, in recent years NOAA Fisheries has worked with industry to ensure that other fisheries are not constrained by PSC limits (while keeping total halibut PSC under the trawl limit) by moving PSC among fisheries in season to cover potential shortfalls. This movement of PSC allowances has been undertaken informally, with general consent from industry. Overall consent is critical to this flexibility since no formal regulation defines this management.

In assessing the different halibut PSC allocation options under Amendment 80 and Amendment 85, it is important to bear in mind that under the existing limited access management some directed fisheries are constrained by halibut PSC. Dividing the trawl halibut PSC allowance by allocating portions to the various trawl sectors to support either all fishing of the Non-AFA Trawl CP sector (under Amendment 80) or the directed trawl cod fishery (under Amendment 85) and leaving the remainder to support other directed fisheries could increase the potential for halibut PSC to constrain fishing by limiting the flexibility of managers to respond to PSC shortfalls.<sup>1</sup> Depending on TAC changes, it is possible that PSC shortfalls could prevent the harvest of cod allocations under Amendment 85, allocations to Non-AFA Trawl CP sector under Amendment 80, or the harvest of other allocations (including the incentive fisheries under Amendment 80). In addition, by removing halibut PSC through the PSC allocations under Amendment 80 and Amendment 85 from the pool available to trawl vessels, the different allocations could affect negotiations in the specifications process, potentially increasing contention among participants in the different fisheries.

The Council should also note that since the methodology for calculating the PSC allocations under Amendment 80 and Amendment 85 differ, unless a method for reconciling and implementing the provisions is specified, the allocations could differ from that intended by the Council. Specifically, staff recommends that the Council clearly prioritize the amendments to avoid potential misunderstanding or misapplication of the PSC allocation provisions.

The following discussion describes the options for allocating halibut PSC under Amendment 80 and Amendment 85, then describes a possible means for implementing those allocations in their existing form. The discussion also raises several issues with the allocations and suggests possible

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<sup>1</sup> Although these PSC divisions have the potential to result in a shortfall for one or more sectors, sectors that benefit from share-based management structures that facilitate bycatch reduction could benefit from an exclusive PSC allocation that allows the sector to slow fishing to avoid halibut bycatch without risking harvest of the allocation by other sectors.

considerations that could justify the use of consistent methodologies for halibut PSC allocations across the two actions.

**PSC Allocations Under Amendment 80 (Non-AFA Trawl CP Sector Non-Pollock Groundfish Cooperative)**

The halibut PSC allocation component within Amendment 80 identifies three different options for apportioning halibut PSC to the Non-AFA Trawl CP sector. The first PSC option would allocate a portion of trawl halibut PSC allowance to the Non-AFA Trawl CP sector based on its historical usage of halibut PSC in all fisheries. The second option would also allocate a portion of trawl halibut PSC allowance based on its historical usage of halibut PSC, but only from the fisheries for species allocated in Amendment 80 plus Pacific cod. The third PSC option would allocate the sector a portion of the historic PSC usage (by all sectors) in each directed trawl fishery equal to the sector’s proportion of the Amendment 80 species allocation plus Pacific cod.<sup>2</sup> Finally, the Council can select specific percentages and/or amounts of PSC that would be allocated to the Non-AFA Trawl CP sector.<sup>3</sup> These allocations are assumed to be arrived at through consideration of the estimated allocations using the other three allocation methods.

Table 1 shows the halibut PSC allocations under the different allocation options included in the Amendment 80 analysis. The table shows that a wide variety of options are available to the Council, which would allocate as much as four-fifths or as little as two-fifths of the trawl halibut PSC to the Non-AFA trawl catcher processor sector.

**Table 1. Estimated halibut PSC allocations to the Non-AFA trawl catcher processor sector under Amendment 80 options.**

	Sector's historic usage (all fisheries) - option 1		Sector's historic usage (A 80 species and Pacific cod) - option 2		Portion of fishery usage based on sector's allocation - option 3					
					retained/retained		total/total		retained/total	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
Non-AFA CP Trawl Sector allocation as a percent of trawl halibut PSC	82.8	65.7	78.9	62.7	72.5	61.0	68.6	55.5	53.0	39.8
Non-AFA CP Trawl Sector allocation (assuming 3,400 mt trawl PSC allocation)	2,815	2,234	2,683	2,132	2,465	2,074	2,332	1,887	1,802	1,353
PSC remaining for other trawl sectors (assuming 3,400 mt trawl PSC allocation)	585	1,166	717	1,268	935	1,326	1,068	1,513	1,598	2,047

**PSC Allocations Under Amendment 85 (Pacific Cod Sector Allocations)**

Under Amendment 85, the Pacific cod trawl sector allocations could potentially be divided into four trawl sectors as opposed to the existing two sectors, each of which could receive an allocation of halibut PSC. Each sector’s PSC allocation is intended to support its prosecution of the Pacific cod fishery (and could not be used to prosecute other fisheries). The primary difference in the PSC allocation methodology under the two amendments is that Amendment 85 (unlike Amendment 80) continues to rely on the annual specifications process to determine the aggregate allocation of halibut PSC to the Pacific cod trawl fishery (1,434 mt in 2006). The Amendment 85 options merely determine the division of that PSC allocation among the different trawl sectors. As a consequence, any analysis of the PSC allocations must make assumptions

<sup>2</sup> Under this third option, an allocation of Pacific cod to the Non-AFA trawl CP sector would be estimated for the purpose of determining the PSC allocation, but no allocation of Pacific cod would be made.

<sup>3</sup>Current regulations establish a limit of 3,400 metric tons of halibut mortality in the BSAI trawl fisheries (after deducting the 7.5% halibut PSQ reserve for use in the groundfish CDQ program). Note that Amendment 80 also proposes to increase the halibut PSQ reserve for the CDQ program, in relation to a proposed increase in the CDQ target flatfish allocations. Thus, the current 3,400 mt may be reduced further if this option is selected under Amendment 80.

about the total halibut PSC allowance for the Pacific cod trawl fisheries, which is currently an outcome of the specification process. The halibut allowance to the trawl cod fishery group has been 1,434 mt for the past several years.

Two methods are under consideration in Amendment 85 for dividing the allocation of halibut PSC to the trawl Pacific cod fishery among (potentially) four trawl sectors.<sup>4</sup> Under the first option (Option 7.1), the allocation is divided among the different trawl sectors based on their allocations of Pacific cod under Amendment 85. Thus, each sector will receive the same portion of the trawl Pacific cod halibut PSC as it receives of the trawl Pacific cod allocation. Under the second option (Option 7.2), the Pacific cod trawl PSC allowance is divided among the sectors based on directed Pacific cod catch during the qualifying years. Thus, each sector will receive a portion of the Pacific cod trawl PSC allowance equal to its percentage of the directed trawl Pacific cod catch during the qualifying years. Staff is still in the process of preparing data showing the targeted catch of Pacific cod, preventing the estimation of allocations under this option. Estimates of PSC allocations under the first option, however, are provided.

Note that any estimate of the specific magnitude of the trawl PSC allocations requires an assumption concerning the overall allocation of halibut PSC to the entire Pacific cod trawl fishery. In recent years, approximately 1,400 metric tons of halibut PSC has been allocated to the Pacific cod trawl fishery. Since the PSC allocations under the first option vary with the qualifying years and whether each sector drops its year of lowest Pacific cod catch, a range of allocations are available to the Council. Table 2 shows the range of potential allocations to the different trawl sectors under this first option and an estimate of the magnitude of those allocations (assuming

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<sup>4</sup> The current motion describing these allocations provides for the following two options:

Component 7:

Option 7.1: PSC apportioned to the cod trawl sectors will be based on the average bycatch rate of the trawl cod sectors applied to the cod allocation percentages determined for each sector under Component 2.

Option 7.2: PSC apportioned to the cod trawl sectors will be based on the average bycatch rate of the trawl cod sectors applied to the cod allocation percentages used in the directed cod fishery by each sector under Component 2.

Option 7.1, as written, provides for trawl sector halibut PSC allocations equal to the halibut bycatch rate in the Pacific cod trawl fishery multiplied by the percentage Pacific cod allocation of the sector. Under Option 7.2, as written, the allocation to a sector would equal the halibut bycatch rate times the allocation percentage in the Pacific cod fishery. In both cases, the options describe a sector allocation based on the rate of halibut bycatch multiplied by the sector's allocation of Pacific cod (as a percentage). On their face these provision appear to describe a usage (or rate) based allocation of halibut similar to the methods used in Amendment 80. In deliberations, however, the Advisory Panel and Council clarified that these provisions are intended only to divide the halibut PSC allowance for the Pacific cod trawl fisheries among the trawl sectors base on either their Pacific cod allocations or their targeted catch history. The language in the motion could confuse stakeholders and the public and/or lead to an error in implementation of the provision. **If the Council wishes to remove this confusion and ensure its intention is followed in making this allocation, staff suggests that Options 7.1 and 7.2 be revised as follows:**

**Option 7.1: The annual PSC allocation to the trawl Pacific cod fishery will be apportioned to the cod trawl sectors based on the cod allocation percentages determined for each sector under Component 2.**

**Option 7.2: The annual PSC allocation to the trawl Pacific cod fishery will be apportioned to the cod trawl sectors based on the sector's directed cod fishery harvests during the qualifying period under Component 2.**

that the current 1,400 metric ton allocation of halibut PSC is maintained). The table also shows the amount of trawl halibut PSC remaining for other fisheries (2,000 metric tons, assuming 1,400 metric tons allocated to the Pacific cod fishery). To help understand the interaction of the Amendment 85 allocation with the Amendment 80 allocations, the PSC allocation to sectors other than the Non-AFA catcher processor trawl sector are shown and the amount of PSC remaining for all sectors including the Non-AFA catcher processor trawl sector, if that sector is excluded from the PSC allocations under Amendment 85 (since the sector may have already received a Pacific cod related PSC allocation under Amendment 80). In reviewing the table, it is important to bear in mind that any change of the halibut PSC allocation to the Pacific cod trawl fishery will affect both the allocations to the sectors and the amount of PSC remaining for other fisheries.

**Table 2. Estimated allocations of trawl halibut PSC under Amendment 85.**

	Allocations of Pacific cod				Halibut PSC allocation (assuming 1,400 mt to trawl Pacific cod fishery)	
	as a percent of the Pacific cod TAC		as a percent of the Pacific cod trawl allocation		Maximum	Minimum
	Maximum	Minimum	Maximum	Minimum		
AFA trawl CP	3.7	0.9	8.9	2.3	125	32
Non-AFA trawl CP	16.2	12.7	42.3	32.5	592	455
AFA trawl CV	24.4	17.8	60.1	47.9	841	670
Non-AFA trawl CV	3.1	0.5	7.9	1.2	111	17
Remaining trawl PSC (for fisheries other than Pacific cod)					2,000	2,000
Pacific cod related PSC allocation to all sectors excluding Non-AFA trawl CP			67.5	57.7	945	808
Remaining trawl PSC (including PSC for Non-AFA trawl CP sector fisheries)					2,455	2,592

### Coordination of Amendment 80 and Amendment 85 PSC Allocations

Reviewing the PSC allocations proposed under Amendment 80 and Amendment 85 reveals some potential inconsistencies. The specific nature of the inconsistencies depends on one's interpretation of the different provisions and which provision is given priority, particularly with respect to the Non-AFA Trawl CP sector.

If the Amendment 80 allocations are assumed to take priority for the Non-AFA trawl catcher processor sector, the halibut PSC allocation under that program would be made to the Non-AFA trawl catcher processor from the total trawl halibut PSC allowance (3,400 metric tons). **Since the Amendment 80 PSC allocation would be intended to support all catch (including Pacific cod) by the Non-AFA trawl catcher processor sector, no additional halibut PSC would be allocated to that sector under Amendment 85.** Allocations of halibut PSC would be made to the other three trawl sectors for the Pacific cod trawl fishery under Amendment 85. These allocations would be calculated as a percentage of the halibut PSC allocation to the trawl Pacific cod fishery. So, the specification process outcome should clearly provide that the PSC allocation to the Pacific cod fishery should be divided among the remaining trawl sectors (e.g., AFA CV; AFA CP, non-AFA trawl CV), with no allocation to the Non-AFA trawl catcher processor sector). If the Council elects to prioritize the Amendment 80 PSC allocations, it could include the following provision in its Amendment 85 motion to make this intent explicit:

**If Amendment 85 is implemented prior to Amendment 80, the Non-AFA trawl CP sector would receive an allocation of PSC in accordance with Amendment 85. Upon implementation of Amendment 80, no allocation of PSC will be made to the Non-AFA trawl CP sector under Amendment 85.**

In addition, if the Council elects to prioritize the Amendment 80 allocation, the halibut PSC allocated to the Pacific cod trawl fishery should be adjusted downward from 1,400 metric tons, since the Non-AFA trawl CP sector would not use that allocation. Estimates of the magnitude of

the reduction range from 455 metric tons to 592 metric tons (depending on the option selected for allocating Pacific cod in Amendment 85 – see Table 2).<sup>5</sup> **Amendment 85 currently assumes that the Amendment 80 allocations are assumed to take priority for the Non-AFA Trawl CP sector.**

Alternatively, if the Council chooses to prioritize the Amendment 85 allocation of halibut PSC to the Non-AFA Trawl CP sector (over the Amendment 80 PSC allocation), the calculations are slightly more complicated, but could be accomplished by decreasing the allocation of PSC to the Non-AFA Trawl CP sector under Amendment 80<sup>6</sup> and providing the sector with a halibut PSC allocation under Amendment 85, based on its Pacific cod allocation (or target catch) under Amendment 85. In addition, the Council should clarify whether the Non-AFA Trawl CP sector would be limited to using the Amendment 85 PSC allocation for Pacific cod in the targeted Pacific cod fishery. If limited to using the PSC allocation in the Pacific cod fishery, that sector might be unable to achieve some of the benefits described and contemplated under Amendment 80. If the Council elects to prioritize the Amendment 85 allocations, the Council will need to develop a method of reconciling the two allocations (likely adjusting the Amendment 80 allocation by removing the allocation related to Pacific cod halibut PSC).

### **PSC Availability for Trawl Sectors and Fisheries**

An additional consideration, beyond reconciling the methodology used for allocating halibut PSC under Amendment 80 and Amendment 85 are the effects on both the fisheries and sectors receiving the allocations and other trawl fisheries and sectors that would use any remaining PSC to support their fishing. Developing an understanding of these implications first requires a comparison of the allocations and residual PSC amounts shown in Table 1 and Table 2. In addition, consideration of historic halibut usage by the various sectors and fisheries is necessary.

Table 3 shows historic usage of halibut PSC for selected sectors and fisheries. The table shows wide variations in usage across years in the various fisheries and sectors. These variations likely reflect both changes in targeting activity and changes in PSC catch rates. In general, halibut usage by the Non-AFA trawl catcher processors has increased significantly as that sector has increased its portion of the flatfish catch in recent years, while AFA trawl catcher processors participation (and halibut usage) in those fisheries has declined.

### **Table 3. Historic halibut PSC usage (1995-2003).**

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<sup>5</sup> These amounts represent the amount that would have been allocated to the Non-AFA trawl catcher processors under Amendment 85 had that sector received an allocation under Amendment 80.

<sup>6</sup> If the Council wishes to pursue this approach, staff could provide those estimates at a later date.

	Maximum	Minimum	Average
Non-AFA trawl CP sector (all fisheries)	2,772	1,498	2,311
All other trawl sectors (all fisheries)	2,228	472	1,158
Pacific cod trawl fishery	1,640	667	1,209
Pacific cod trawl fishery excluding Non-AFA CP trawl sector	1,360	262	770
All trawl fisheries except Pacific cod	2,577	2,062	2,251
Non-AFA trawl CP sector - All fisheries except Pacific cod	2,367	1,146	1,873
All trawl fisheries except Pacific cod excluding Non-AFA trawl CP sector	1,147	101	377

Considering all three tables allows some assessment of the interaction of the allocations with fishing activity. First, Table 1 shows that the total trawl halibut PSC amount remaining after the Amendment 80 allocation to the Non-AFA trawl CP sector ranges from 585 metric tons to 2,047 metric tons. This residual would be used to support both the Pacific cod fisheries and all other trawl fisheries. At the low end, 585 metric tons is far less than the amount projected to be allocated to other sectors under Amendment 85 (see Table 2 – between 808 metric tons and 945 metric tons). So, if the maximum allocation is made under Amendment 80, the remaining halibut PSC allowance would be insufficient to maintain the allocations of PSC to other sectors in the Pacific cod fishery (using the 1,400 metric ton PSC basis) and would leave no PSC to support other fisheries (including the incentive fisheries). Overall, the 585 metric ton residual amount is approximately one-half of the average use of other sectors in all fisheries (see Table 3 – 1,158 metric tons).<sup>7</sup> Even at the upper end, the residual remaining after the PSC allocation to the Non-AFA trawl CP sector is less than the maximum annual halibut usage of all other trawl fisheries (Table 3 – 2,228 metric tons).

On the other hand, a middle range allocation to the Non-AFA trawl CP sector (slightly more than 2,000 metric tons) and a similar middle range allocation to other sectors in the Pacific cod fishery (900 metric tons) would leave approximately 500 metric tons residual to support other fisheries. On its face, this residual would appear sufficient to support other fisheries (Table 3 shows the average historic usage of 377 metric tons). Examining the time trend of data (not shown in the table) shows that the historic usage was substantially higher than the residual amount in 1995 (1,147 metric tons) and exceeded the residual slightly in 1996 and 1997 (552 metric tons and 561 metric tons). Overall, these usage levels, however, suggest a possible issue with PSC allocations that do not fluctuate to reflect dynamic conditions in the fisheries (such as TAC levels and changes in PSC rates across fisheries).

The concern that the PSC distribution may not reflect PSC needs arises if allocations cannot be redistributed across target fisheries in response to shortfalls. The Amendment 80 allocation to the Non-AFA trawl CP sector can be redistributed among fisheries within the sector's cooperatives. The benefits of this redistribution would be limited to cooperative members within that sector. The Amendment 85 PSC allocations, on the other hand, cannot be used outside of the Pacific cod fishery. The Amendment 85 PSC allocations, however, only distribute the Pacific cod trawl

<sup>7</sup> This residual does not exceed the minimum usage, which occurred in 2001. In all other years, the usage of other sectors exceeded this minimum residual.

allowance among the different sectors in the Pacific cod fishery. The determination of the Pacific cod trawl allowance is left to the specification process, which allows for periodic adjustments in response to changing circumstances. The specification process, however, adds a level of uncertainty to the allocation process.