Separate Accountability Proposal for Pacific Halibut Fisheries
Discussion Paper
NPFMC Staff
April 6, 2006

Introduction In February 2006, Alaska Longline Fishermen's Association (ALFA) submitted a proposal entitled Separate Accountability to the Council as part of public testimony on the initial review draft of the Charter GHL analysis. The proposal would separately manage the charter and commercial halibut allocations in Areas 2C and 3A. It aims to remove the economic penalty placed on the commercial sector for overages of the GHL incurred by the charter sector. The proposal recommended that the IPHC set a combined charter and commercial Constant Exploitation Yield (CEY) for Areas 2C and 3A and replace the deduction of charter harvests from the Total CEY with an allocation to the charter sector equal to the GHLs in each area.

On March 29, 2006, ALFA revised the proposal to incorporate two changes after discussions with International Pacific Halibut Commission (IPHC), NOAA Fisheries Service, and Council staffs (Attachment). The revised proposal recommends that: 1) the IPHC set combined charter and commercial catch limits for Areas 2C and 3A; and 2) the Council use the GHLs as the charter sector allocations within the combined catch limit, with the remainder to be allocated to the commercial sector. The effect of the revised proposal is the same as in the original proposal. Charter GHL overages would not reduce the commercial catch limit. The impact of this proposed procedure on the halibut resource is proportionate to the magnitude of any GHL overage.

Background A brief review of the current IPHC process for determining how the commercial catch limit is set is necessary to understand the impacts of the proposal. The commercial catch limit is indexed to total CEY, minus other removals, and adjusted by other Commission considerations and policies (e.g., the slow up-fast down process) (see Figure 1). To apply IPHC terminology:

Exploitable Biomass x Harvest Rate = Total CEY.

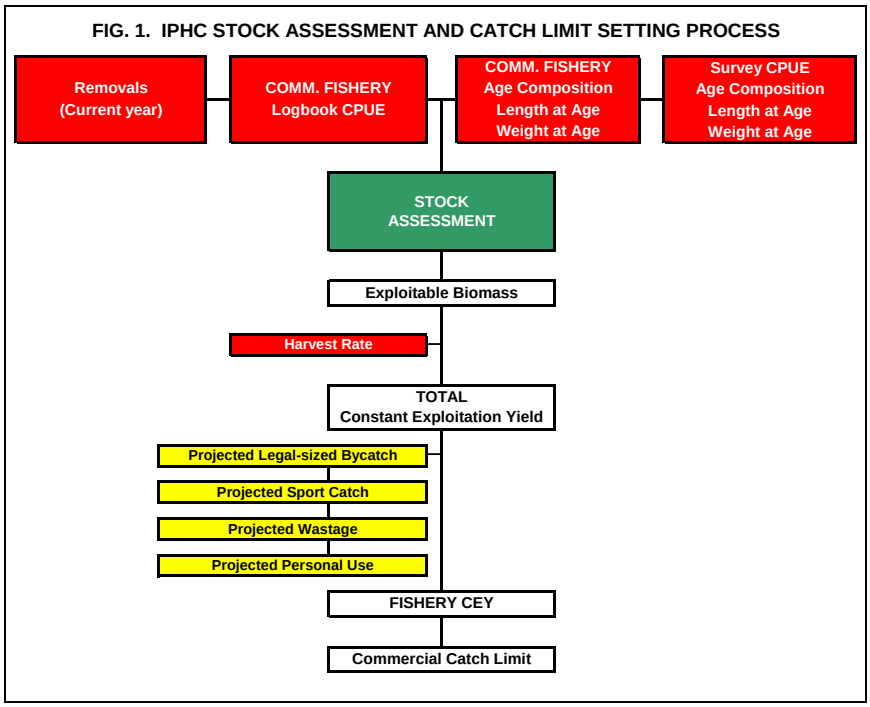
Total CEY – Other Removals = Fishery CEY.

Fishery CEY x Policy considerations = Fishery Catch Limit.

All non-commercial projected removals for the next year are deducted "off the top" of the Total CEY and reduce the remainder available to be set as the Fishery CEY, which is then available to be set as the (commercial) catch limit, factoring in the Commission's "slow-up, fast down" and other harvest policies. If actual removals are less than projected for any sector, then the stock benefits in future years. If they are higher, then the stock is marginally reduced.

IPHC staff uses the total reported harvest for all sectors in the estimation of population abundance (exploitable biomass). As such, an overage (or underage) of the GHL is simply part of the total harvest. It is

FIG. 1. IPHC STOCK ASSESSMENT AND CATCH LIMIT SETTING PROCESS



not treated separately or differently than the rest of the harvest by that sector. The same would hold true if one of the groundfish fisheries exceeded its halibut Prohibited Species Catch bycatch limit. Only the actual removal is used in the computations.

IPHC staff uses the estimate of removals from the most recent year available for projecting subsistence, wastage, and bycatch removals for the next year. Charter and non-charter sport harvest deductions are based on projections by ADF&G Sport Fish Division staff. Different methods are employed for Areas 2C and 3A. In Area 2C, the projected sport halibut harvest for the next year is based on the recent five-year average of the ratio between the final SWHS estimate and the respective in-season creel survey estimates for Ketchikan, Craig, Juneau, and Sitka, while the projections for the Petersburg/ Wrangell and Glacier Bay areas were based on the most recent three-year data due to a more limited database. The projected harvest for Haines/Skagway area was generated by applying the most recent five-year average of the Haines/Skagway proportion of the total Area 2C to the projected 2005 harvest for all Area 2C areas except Haines/Skagway. The respective charter/private proportions within each of the SWHS areas, based on the average proportion of the final 2003-2004 Statewide Harvest Survey (SWHS) estimates, were applied to determine the number of fish harvested within each user group. Average weight estimates of halibut harvested by charter and private anglers for the current year were then applied to each of those projected harvests and summed to generate the overall Area 2C projection of harvested biomass. In the past, Juneau average weights were applied to the harvest in Glacier Bay as a surrogate since no sampling occurred there. But because of the commencement of a catch sampling program in Gustavus and Elfin Cove in 2002, the Gustavus/Elfin Cove average weight is now being applied to Glacier Bay harvests. Juneau average weights were still used as the surrogate for Haines/Skagway harvests. For most of Area 3A, the number of fish taken by each user group in each of six subareas was based on a linear projection of the most recent five harvest estimates from the SWHS. Estimates for eastern and western Prince William Sound, corresponding to mean weights from Valdez and Whittier, are only available since 2001. Therefore, the projections for these two areas are only based on the last four years.

On average, the projections have been sufficiently accurate (± 3% over the long term), although the variance of the projections relative to the final number have been high (Table 1). Preliminary harvests for Area 2C during 1995-2004 were lower than final SWHS estimates by 6.7 percent on average, with a range of 25 percent below and 20 percent above. From a resource perspective, the average margin of error is acceptable but the large excursions around this average are undesirable. In pounds, the difference ranged between 631,000 below and 421,000 lb above the final estimate. Projected harvests for Area 3A were higher than final SWHS estimates by 2.1 percent on average, with a range of 15 percent below and 24 percent above. In pounds, the difference ranged between 863,000 lb below and 1,015,000 lb above the final estimate. Figure 2 depicts these data graphically. The effects of using the actual GHL in the proposal, in lieu of a projection, would have a resource-neutral effect, as long as the management measures can keep the charter harvest within a range around the GHL comparable to the error associated with ADF&G projections.

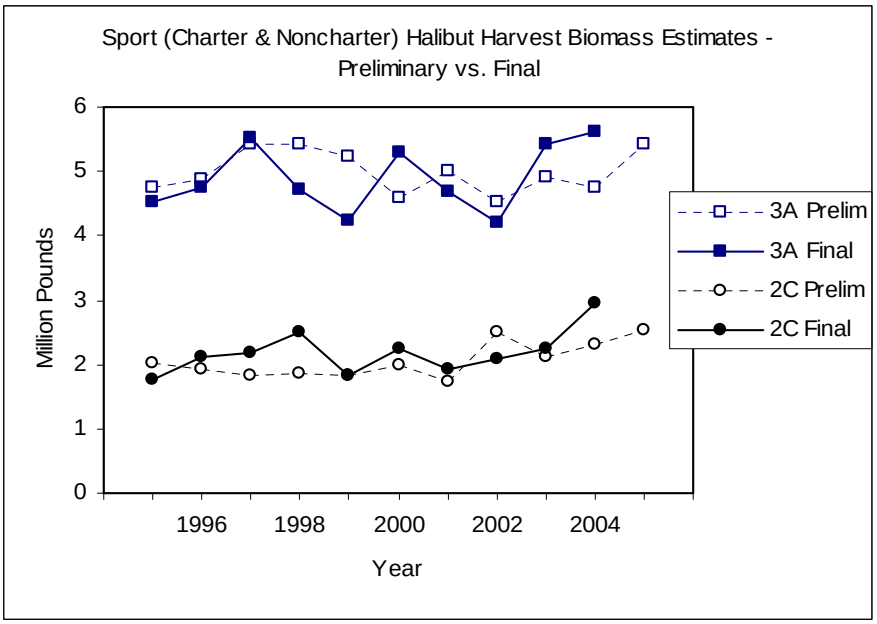


Figure 2. Comparison of projected and final sport halibut estimates

Table 1. Comparison of Preliminary (season's end) versus final estimates of sport harvest by ADF&G, 1995-present.
Error and error% are relative to the final, i.e., error is (pred-final)/final. Source: ADF&G

	Area 2C				Area 3A			
Year	2C Prelim	2C Final	Error (M lb)	Rel Error (%)	3A Prelim	3A Final	Error (M lb)	Rel Error (%)
1995	2.010	1.760	0.250	14.2%	4.750	4.511	0.239	5.3%
1996	1.910	2.130	-0.220	-10.3%	4.871	4.740	0.131	2.8%
1997	1.830	2.170	-0.340	-15.7%	5.415	5.514	-0.099	-1.8%
1998	1.870	2.500	-0.630	-25.2%	5.407	4.702	0.705	15.0%
1999	1.830	1.843	-0.013	-0.7%	5.243	4.228	1.015	24.0%
2000	1.978	2.258	-0.280	-12.4%	4.596	5.305	-0.709	-13.4%
2001	1.733	1.925	-0.192	-10.0%	5.016	4.675	0.341	7.3%
2002	2.511	2.090	0.421	20.1%	4.511	4.202	0.309	7.4%
2003	2.125	2.258	-0.133	-5.9%	4.897	5.427	-0.530	-9.8%
2004	2.306	2.937	-0.631	-21.5%	4.743	5.606	-0.863	-15.4%
2005	2.544				5.437			
Average				-6.7%				2.1%
Min				-25.2%				-15.4%
Max				20.1%				24.0%

Proposal The ALFA proposal suggests that removing the direct effect of GHL overages on the commercial sector: 1) facilitates the development of a long term plan by allowing the Council to focus on measures appropriate for the charter sector without worrying about spill-over effects on the commercial sector; and 2) promotes stability by noticing all parties that the Council intends to adhere to the GHL number during the interim, and implement post-season restrictions, as necessary. The proposal would reduce the impact of overages associated with the GHL, which are currently charged directly to the commercial sector and cause a reallocation and economic impacts. It would better align the catch limit setting process for the two sectors.

The proposal addresses specifically: 1) how the charter sector could be brought into the IPHC process for setting catch limits, rather than having the projected removals taken “off the top” as occurs under the current IPHC process; and 2) how to remove the economic penalty currently paid by the commercial sector for charter GHL overages and distribute any resulting penalty to future yield across all managed sectors.

By taking the charter sector out of the “other removals” in the IPHC process, a GHL overage does not directly reduce the commercial catch limit. Instead, it will be accounted in the total removals for that year and reduce the exploitable biomass available for all sectors in the subsequent year.

Under the proposal, a combined commercial and charter Fishery Catch Limit would be set by the IPHC (see Figure 3). Any GHL overages would be resource neutral if the combined catch limit is not exceeded. The commercial fishery has under-harvested its allocations in Areas 2C and 3A by around 200,000 to 300,000 lb each year. This continued underage may buffer any resource impacts associated with GHL overages as the combined catch limit would not be exceeded unless the GHL overage was very large. However, a policy of combined management is undesirable because it removes accountability by each sector. In addition, the Council is considering changes to the commercial IFQ program that may reduce some of those underages through a “use it or lose it” provision for completely inactive IFQ permits under proposed Omnibus V regulations.

The current use of the ADF&G projection methodology in year 1, followed by the use of final SWHS estimate in year 2, affects commercial halibut fishermen in two ways. First, 100 percent of the projected harvest directly reduces the commercial quota. Second, if the final estimate is higher than the projection, then the over harvest reduces the biomass available to everyone in future years and the yield associated with this biomass reduction is lost to the commercial fleet; however, the actual harvest and thus the difference between the projection and the actual harvest, will not be known for another year. Conversely, GHL underages benefit the commercial fleet, but the GHLs will increasingly be constraining under projected growth in harvests. IPHC staff could simulate this effect in the assessment model, but the effort is time-consuming and a qualitative examination results in the same conclusion. Fishery overages are miniscule compared with halibut biomass in each area, and the downstream effects to the populations are minor.

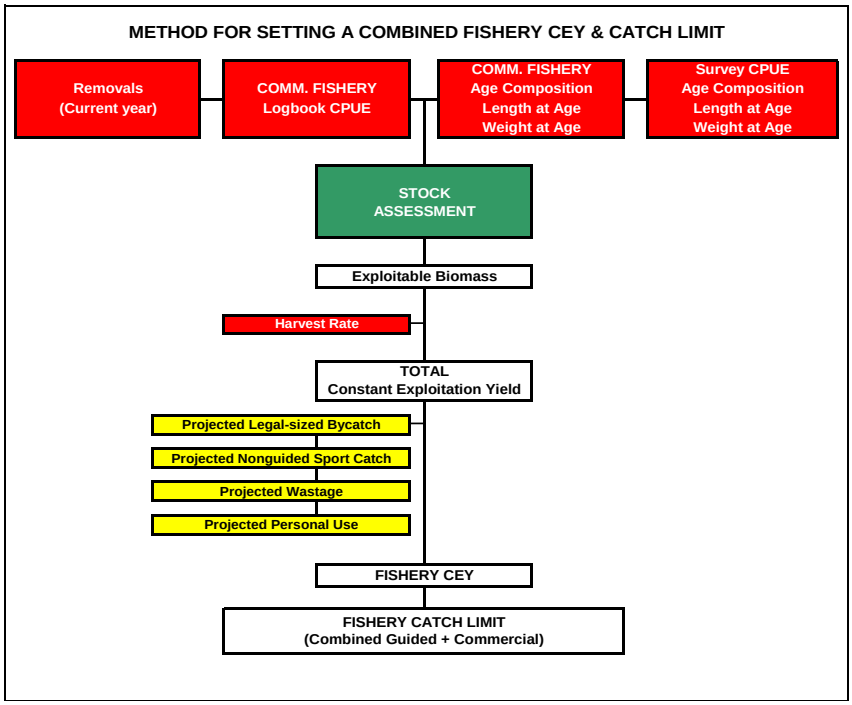


Figure 3. Proposed IPHC process under ALFA proposal

The ALFA proposal would eliminate this impact on the commercial fleet by using the actual GHL in lieu of a projection as the charter sector allocation as part of a combined charter-commercial catch limit. ALFA has suggested, based on previous IPHC work, that unharvested (i.e., "banked") halibut would generate an additional 10-20% yield (spread over several years). Using Area 2C, for example, a 313,000 lb difference occurred between the projection and final estimate for 2004. The final 2004 number was supplied in the fall of 2005 so the yield available to the commercial fleet in 2006 was the final estimate for 2004. The effect of harvesting, and not banking, the extra 313,000 pounds is a yield loss of 32-64,000 pounds. Nevertheless, the IPHC staff responded that if the GHL is used as the removal quantity, then a higher than intended fishing mortality is being exerted. The IPHC recommends the best estimates of removals be used in all cases and, in this situation, the fixed GHL is not the best estimate. In the scenario described by ALFA, if the GHL is used as the preliminary estimate and the final is higher, then the target harvest rate would be exceeded, going against the IPHC harvest policy. And by the same argument above, there would be further loss of yield from fish that were not left in water and captured due to use of the GHL as the removal estimate (which is clearly low).

Table 2 compares the current IPHC process for 2003-2006 with the proposal to set a combined catch limit and not deduct charter harvests "off the top." For the proposal, Other Removals is shown but this ONLY includes legal bycatch mortality, unguided sport harvest, subsistence (as was known at that time), and commercial fishery wastage. Finally, the combined commercial and charter CEY is calculated after subtracting Other Removals from the Fishery CEY. The combined Catch Limit would result from additional Commission considerations and may be different from the combined CEY (the table assumes that the IPHC made the same adjustments between Fishery CEY and Catch Limit for the proposal as under the under the status quo.

For Area 2C, the commercial quota would have been increased by 67,000 lb (worth approximately $200,000) in 2003; 305,000 lb ($900,000) in 2004; 124,000 lb in 2005 ($370,000); and 203,000 lb ($600,000) in 2006.
For Area 3A, the commercial quota would have been decreased by 708,000 lb (worth approximately -$2,100,000) in 2003; 93,000 lb (-$280,000) in 2004; 503,000 lb in 2005 (-$1,500,000); and 233,000 lb (-$700,000) in 2006.

Table 2. Commercial halibut catch limits under status quo and ALFA proposal.

		STATUS QUO				PROPOSAL				
YEAR	AREA	TOTAL CEY	OTHER REMOVALS	FISHERY CEY	COMM. CATCH LIMIT	OTHER REMOVALS (-charter)	COMB. FISHERY CEY	COMB. CATCH LIMIT	GHL	COMM. CATCH LIMIT
2003	2C	12.000	2.890	9.110	**8.500**	1.391	10.609	9.999	1.432	**8.567**
	3A	40.000	5.780	34.220	**22.630**	2.838	37.162	25.572	3.650	**21.922**
2004	2C	12.000	2.970	9.030	**10.500**	1.233	10.767	12.237	1.432	**10.805**
	3A	35.000	6.520	28.480	**25.060**	3.255	31.745	28.325	3.650	**24.675**
2005	2C	14.900	3.120	11.800	**10.930**	1.544	13.356	12.486	1.432	**11.054**
	3A	32.900	6.610	26.300	**25.470**	3.453	29.447	28.617	3.650	**24.967**
2006	2C	13.730	3.400	10.330	**10.630**	1.765	11.965	12.265	1.432	**10.833**
	3A	32.180	7.240	24.940	**25.200**	3.823	28.357	28.617	3.650	**24.967**

ADF&G issues The proposal suggests that ADF&G projection methodology may change as a result of proposed GHL measures. In both areas, ADF&G first estimates the number of fish harvested and then multiplies by the current year's average weight. The number of fish harvested is estimated as follows.

In Area 3A, harvest is estimated from a simple linear projection of the past 5 years of mail survey estimates. This is done separately for charter and non-private sectors. There are no precise in-season indicators of harvest from the port sampling program. If management restrictions go into place, we would likely project the harvest as usual then adjust the projection for the anticipated reduction due to the regulation change. Even after the final harvest estimate becomes available, we won't be able to tell how much of a change in harvest was due to regulation changes versus year-to-year variation. For example, a restriction on crew harvest could be accompanied by an increase in client harvest, for a net increase in charter harvest overall.

In Area 2C, harvest is estimated from a projection of the ratio of creel survey and mail survey estimates for the past several years. In some subareas of 2C the recent 5-year time series is used, in other subareas 3 years is used, and in some subareas a different method is used all together. Methods differ by subarea based on the amount of available data. But at least for most of 2C, in-season harvest data from the creel survey is available that should reflect a change in harvest due to changes in regulations. Thus, methods shouldn't have to change significantly.

IPHC issues Earlier concerns regarding the original proposal have been resolved as a result of rewording in the revised proposal. Under this revised proposal, the IPHC would adopt a combined catch limit for charter and commercial fisheries at its January annual meetings. The IPHC would provide this combined catch limit to the Council for it to further allocate between the sectors. The IPHC's expectation would be that the Council and NMFS would manage each fishery to achieve their respective catch limits, as adherence to the allocations by each sector is most important from a resource perspective.

The IPHC staff is comfortable with post-season changes in the management of the charter fishery, to be implemented for the subsequent year. Council staff has identified that it takes a year to identify a GHL overage, another year to propose and analyze necessary management measures, and then two additional years to implement and measure the fishery performance to assess the adequacy of the measures. The IPHC staff does not believe this time frame is sufficiently responsive for effective management of the charter allocation. From the IPHC's perspective, effective management requires more responsive implementation of remedial measures, in order to ensure conservation. The Council is exploring mechanisms to shorten this delay.

From the IPHC's perspective, a formal catch sharing plan or catch management plan is the most desirable allocation process, but the necessity of such a plan is clearly a decision for the Council. The IPHC already follows

three Council catch sharing plans: 1) the NPFMC CSP for commercial fisheries in Areas 4C/D/E; 2) Pacific Fishery Management Council Area 2A multiple sector CSP (Washington, Oregon, and California); and 3) Area 2B multiple sector CSP (British Columbia), and has frequently recommended this approach to the Council for commercial/charter allocation issues. The success of the other CSPs is due to pre-season and in-season management measures that adequately restrict the harvests to their respective allocations. Area 2A, for example, has in-season monitoring for all but one of its sport fisheries (the remaining fishery has an accounting system that results in year-end data). Area 2B does not yet have an in-season catch accounting that is acceptable to the IPHC, but the Department of Fisheries and Oceans is currently developing such a plan.

Until a CSP is adopted, the IPHC would consider a written request from the Council to have the IPHC approve a combined commercial and charter fishery catch limit, with the understanding that this would be an interim approach while the Council works on a longer term solution. The IPHC could also consider adopting an allocation division of this catch limit, at the direct request of the Council.

IPHC staff has suggested that, under a combined commercial/charter catch limit, commercial wastage would be removed from the "other removals" deduction and be made a part of the commercial fishery allocation, so that the charter sector does not "pay" for commercial wastage. However, that wastage would need to be deducted subsequently from the commercial share of the combined limit, in order to arrive at an operating catch limit for the commercial sector. This may lead to a similar determination of charter wastage as well.

Council issues The proposal refers to "separate accountability," but the Council should consider how this proposal increases accountability for the charter sector because as presented, there is no direct accountability if the charter sector exceeds its GHL. The commercial sector, by virtue of its catch accounting system, cannot exceed its catch limit. The proposal eliminates the direct penalty to the commercial sector, but it does not replace it with a direct penalty to the charter sector due to process of post-season management under which the charter fishery is managed. Any overage simply gets factored into a slightly reduced biomass, a higher than intended harvest rate, and a lower total CEY in subsequent years, for which all sectors then pay any penalty. The effect of the proposal is to "charge" GHL overages (and underages) to the halibut biomass (and all users), rather than directly to the commercial sector (although with a fixed GHL, only the commercial sector share of the combined catch limit would change in response to changes in catch limits).

The effect of this biomass reduction cannot be simulated simply, because of numerous fluctuating model parameters. However, the overage amounts were small (200,000 – 300,000 lb) compared with exploitable biomass (e.g., age 8+ fish, estimated at 60 Mlb in Area 2C in 2005). Even over 20 or 50 years, "extra" removals of this magnitude likely would not have a significant impact on the Area 2C halibut population, or adjacent areas.

The Council should consider whether the proposed approach of using the GHL as an allocation within a combined fishery catch limit (with an implicit acceptance that the GHL can be adhered to using post-season management measures) is an improvement over the status quo of deducting projected harvests either now or under a permanent solution (note theses issues are the same whether under a GHL or a percentage allocation, while individual charter fishing quotas would be more directly managed). The Council should consider whether it is confident that it can manage the charter allocations with post-season management so that they would not be exceeded. If the GHL is not equivalent to the actual harvest, then this proposal would create a procedure which has embedded in it, an incorrect amount of charter harvest and could systematize the *potential* for overharvest if corrective or remedial management measures are not adopted.

Lastly, NOAA General Counsel staff has advised that the Council should confirm that the administrative record has adequately noticed the public that the GHL was and continues to be intended as an allocation such that the existing record would satisfy a Council recommendation to use the GHL as the amount to use within the combined commercial/charter catch limit in a catch sharing plan.

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