



Alaska Longline

FISHERMEN'S ASSOCIATION

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December 31, 2009

Dear Commissioners,

On behalf of the members of the Alaska Longline Fishermen's Association (ALFA) I would like to offer the following comments on the staff recommendation for 2010 catch limits and the apportionment options presented in the stock assessment.

First, I would state the concern of ALFA's membership regarding the chronic overharvest by the area 2C guided sport sector and the effect of this overharvest on rebuilding efforts in 2C. The 2C guided sport industry has exceeded its allocation every year since 2004. The cumulative overage now totals 3.5 million pounds. Despite implementation of a one halibut daily limit for guided sport clients in 2009, the industry exceeded its 2009 GHL by 0.5 million pounds, or 65%. In the absence of additional restrictions, the industry can be expected to exceed the 2010 GHL as well. We strongly urge the Commission to take decisive action to control 2C guided sport harvest to the sector's guideline harvest level (GHL) for 2010. We support the proposal submitted by the Halibut Coalition, and believe the Commission should carefully evaluate management options then adopt a precautionary guided sport management regime. Six years of GHL overages is unacceptable

Secondly, we would like to thank IPHC staff for hosting a second apportionment workshop, the associated on-line forum, and for the time the staff has spent responding to the myriad data requests from industry. Representatives of ALFA engaged fully in the workshops and remain committed to identifying an apportionment method that conserves the halibut stock across all areas and is widely accepted by the industry.

ALFA members recognize the importance of protecting the rebuilding potential of the halibut stock across all management areas. 2C quota share holders have accepted a 54% reduction in the area catch limit over the past three years to contribute to that rebuilding. We continue to be concerned about the Area 2 stock, but are also increasingly concerned that, Gulf-wide, the halibut stock does not seem to be responding as anticipated under the survey-based apportionment strategy. We strongly believe that the resource and the stakeholders in this fishery would be best served by an interim apportionment methodology while issues associated with the survey are investigated. Historical shares by themselves cannot be used as an interim apportionment step as they are not responsive to stock dynamics over time and will not address the conservation concerns identified for specific areas. However, several other options were identified during the apportionment workshops that may prove workable as an interim method. ALFA representatives will be attending the Annual IPHC meeting and look forward to working with IPHC commissioners, staff and other industry groups to build consensus around an interim apportionment method and to develop a process that combines research and stakeholder engagement to develop a long-term strategy

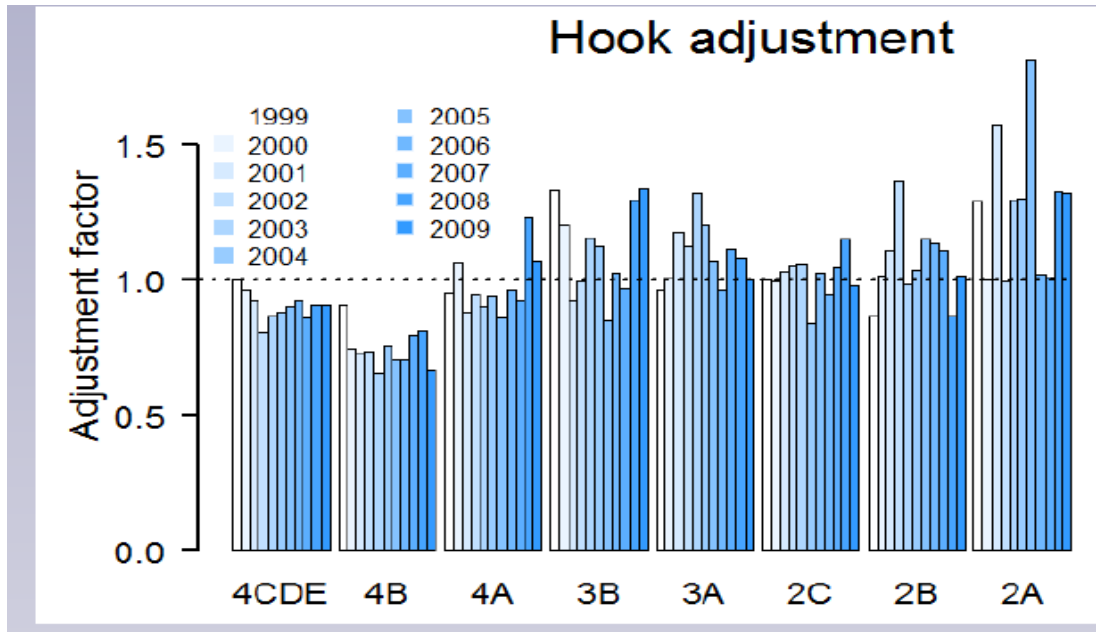
With respect to the adjustment factors for the survey based apportionment identified in the 2010 Stock assessment (SA), ALFA appreciates the staff's responsiveness to criticism of the survey and the efforts the staff has made to develop adjustment factors in response to that criticism. Time did not permit sufficient discussion during the apportionment workshops to fully explore the adjustment factors, which seem to be presenting conflicting and at times counter-intuitive results. For these reasons, we question the use of the adjustment factors as currently applied. We provide comments immediately below specific to each adjustment factor for consideration in the event that the adjustment factors are applied. Finally, we believe modifications to the survey should be evaluated and tested to strengthen the survey as an apportionment tool, and offer some recommendations in this regard toward the end of these comments.

Adjustment Factors

Survey weighting 3 yr equal (1:1:1) vs. reverse weighting (2:2:1): There are myriad factors which can effect the survey WPUE in a year. Weather, tide cycles, water temperature, availability of prey species, and abundance of competing species such as dogfish, or sand fleas are a few. ALFA members believe the benefit of using multiple years of data in an apportionment regime is to smooth out year to year variability from confounding factors such as those listed above. There is no reason to believe one year's survey is less affected by these confounding variables than any other. Therefore, equal weighting (1:1:1) seems the most appropriate approach to smoothing the data. The reverse weighting scheme (2:2:1) presented pre-supposes that the most recent years of survey data are more accurate than past years. To our awareness there has been no justification provided for this assumption.

Hook Competition: Survey based apportionment is predicated on constant catchability across areas. Clark, 2007 discusses the basis for computing an adjustment factor for hook competition and notes that *"[if] CPUE of halibut is reduced by the number of baits taken by other species, and if the strength of this effect varies among areas the result would be differences in survey catchability among areas."* He goes on to say that *"It is interesting to note that the effect of hook competition on the comparability of survey CPUE is wholly determined by the total bait removal rate Z. The species composition of the bait takers makes no difference."* Hence the hook competition correction factor is based on the number of hooks recovered with baits taken, vs. the number with baits intact. ALFA is concerned that by using the number of baits returned in the adjustment factor there may be area specific biases. A baited hook returned may mean the hook was not on bottom (habitat rugosity), there were fewer sand fleas in that particular area, or it may mean a halibut was not present to take the bait. Slides presented in the Dec. 2009 staff presentation show that this correction factor can be highly variable ranging from +- 30% across areas and from year to year. (see below).

Given the myriad confounding variables associated with whether a bait gets taken, ALFA does not believe this adjustment factor should be applied at this time. We do however note that the observed +- 30% variance between areas from this one factor illustrates that survey catchability is not likely constant across areas, a pre-condition for using survey based apportionment.



Survey Timing: ALFA members believe that the amount of catch taken prior to the survey influences CPUE in an area. However, members do not support including sport and charter catch into this analysis. The commercial fishery is likely to intersect the IPHC survey stations in a more uniform manner, directly impacting CPUE of survey stations. The sport and charter catch is more aggregated and less likely to overlap with survey stations and the magnitude of this catch, timing of the catch, and catch distribution is not reliably documented. Further, the commercial CPUE is included in the model and sport fish and charter CPUE is not. In order for this analysis to be meaningful it should be based on the same information in each location. The most accurate information is the amount of commercial catch taken prior to the survey. Using commercial catch only levels the playing field between areas and also allows for review of this interaction in the past. Inclusion of sportfish and charter catch makes this comparison less useful in areas 2. If an adjustment is made based on survey timing it should be based on the percent of commercial quota taken prior to the survey.

Station Depth Stratification Adjustment: Currently, a mean survey CPUE, independent of depth, is calculated for each area and applied to the estimated bottom area, 0 to 400 fathoms, in that area. There are two factors which should be evaluated when considering an adjustment to survey data based on survey station depth stratification. The first is the potential misalignment between an Area's depth distribution and the number of survey stations associated with particular depth strata. In other words, if 10% of the survey stations in an area are in 40 to 80F of water, and 15% of that area's total bottom is comprised of these depth strata, then a correction factor might be applied to compensate for the misalignment. A second factor is the correlation of CPUE to depth--for example if survey CPUE is consistently higher in deep water, say 80 to 120F, then abundance estimates should account for this by calculating a mean CPUE for each depth strata, applying this number to the bottom area associated with that depth strata, and summing separate depth abundance calculations.

In evaluating this adjustment factor, we are not clear which potential bias the adjustment factor is attempting to address. ALFA suggests before deciding on the merits of a station depth stratification adjustment, both factors should be explicitly evaluated.

Bottom Area calculations:

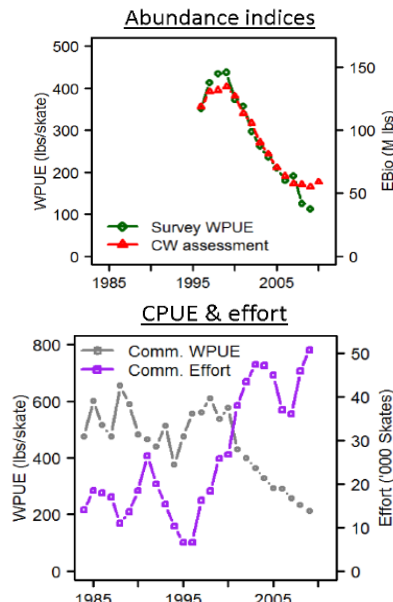
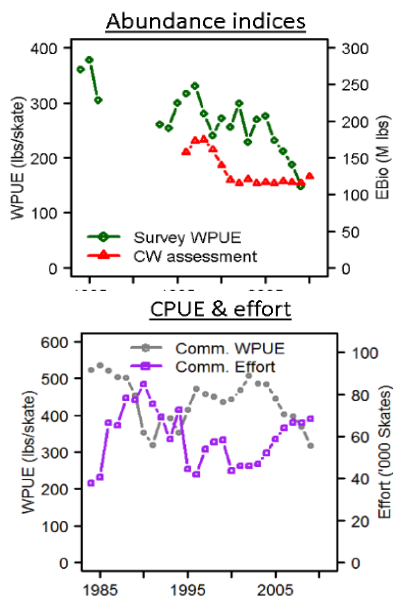
The 2009 assessment expands the definition of halibut habitat in an area to include waters from 300 to 400 fm (Hare, Webster 2010). The bottom area estimates “are derived from a 30-arc second digital bathymetry database, termed the “Bathymetric Chart of the Ocean”, the new dataset reportedly represents increased resolution in depth recordings over the digital database (ETOPO1) used to compute bottom area in 2008. Of interest to ALFA members is the fact that the new bottom area estimates are **less** than the 2008 estimates for Area 2B, 2C, 3A and 3B even though the new estimates contain an expanded depth range (300 to 400 fm). This difference amounts to a reduction of 6% in 2B, 11% in 2C, 3% in 3A, and 4% in 3B, even though the depth ranges have been expanded. A visual overlay of the 2008 map and the new 2010 map (which are of the same scale) cannot account for the 11% difference in the bottom area of 2C. ALFA members respect the work that goes into generating new bottom area estimates, but given this counter-intuitive result of an increase in depth range resulting in a decrease in bottom area across multiple areas, we request staff verify the new bottom area calculations and provide shape files which overlay the new and old projection so the areas which drop out can be identified.

Apportionment Strategies

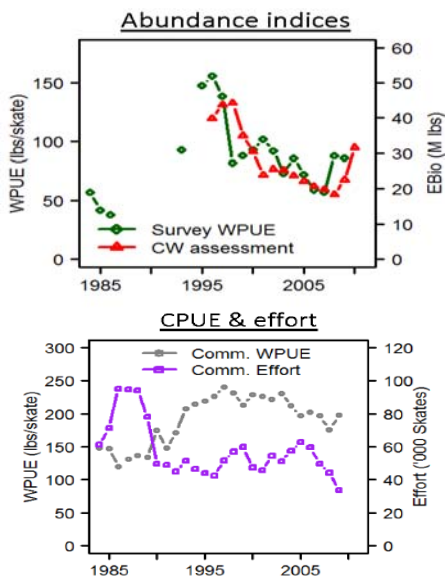
Survey-based apportionment: ALFA members continue to question a survey-only based apportionment approach. The survey based approach results in significant changes from past apportionments and suggests a biomass distribution that is inconsistent with other observable indicators. Our concerns are described below.

1). Survey biomass distribution seems to contradict other observable data in Area 3. Figures 33 and 34 (below) from the 2009 Stock Assessment (SA) show that survey apportionment of the coastwide assessment results in a relatively **stable** exploitable biomass (EBio) estimate for area 3A of approximately 110 M lbs since 2000, and a relatively stable EBio estimate for 3B of approximately 55 M lbs since 2005 (red lines). Yet in each area, the survey weight per unit effort (WPUE) has declined by almost 50% during this same time period, and the commercial WPUE has declined by almost 30%. Commercial effort has also increased significantly during this time, which in conjunction with the lower WPUE would suggest a declining EBio rather than a stable regime. This contradiction with observable data does not appear to exist in Area 2 (from Figure 31 and 32, 2009 SA) where there is some degree of correlation between the trend in estimates of EBio and WPUE in both the survey and commercial catch, and in the amount of commercial effort. There are many potential explanations for this discrepancy, but one that must be considered is that survey-based apportionment overestimates the available biomass in Area 3 and any catch limits based on this approach could result in over-harvest.

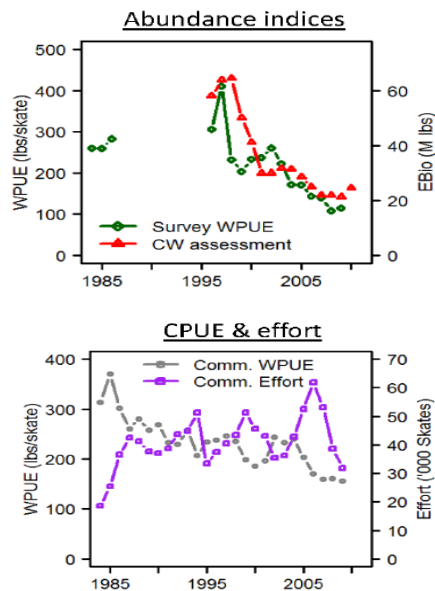
3A Fig 33. P 63 2009 SA	3B Fig 34. P 64 2009 SA
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2B
Fig 31. P 61 2009 SA



2C
Fig 32. P 62 2009 SA



2. Work done by IPHC staff on correction factors for hook competition suggest that catchability between areas can indeed vary as much as $\pm 30\%$ annually based on a single variable such as returned baits during a survey set, and that this variability changes from year to year.

3) Of further note is the 2010 staff recommendation to reduce the area 3B harvest rate to 15% citing declining trends in CPUE and age truncation as causes to assume productivity is less in this areas. ALFA supports this change, since otherwise total CEY would be increasing in this area when all other indicators are decreasing. A similar reduction was recently made in parts of Area 4. Productivity might indeed be less in these areas, but an alternative assumption, which must be considered, is that survey apportionment results in an over-estimate of EBio which in turn results in catch limits being set too high.

4) A survey-based apportionment regime is predicated on the fact that: a) estimates of bottom habitat are correct; b) bottom habitat has equal productivity across all depths and areas; and, c) that there is constant catchability between regulatory areas. In the 2007 CIE review, both reviewers noted the sensitivity of survey based apportionment to catchability. Dr. Paul Medley noted *"the [survey based] procedure is sensitive to survey catchability in particular..."* and that: *"...the current procedure has the important attribute that the exploitation rate will decrease in an area as its relative biomass decreases, but poor estimates of q may lead to instability. Underestimating q will overestimate the local biomass and contribute to depletion. With a coastwide stock assessment, such local depletion will not be automatically detected."*

The second review, Dr. Chris Francis was more critical of the survey based apportionment calling it the *"weakest part of the assessment."* He listed four reasons to *"doubt the assumption of area-independent survey catchability."* IPHC staff responded to some of the reasons presented by Dr. Francis, but did not refute the issues he cited.

Thus after participating in both apportionment workshops and giving careful consideration to existing information, ALFA members continue to question the advisability of adopting an apportionment strategy based solely on the survey. The projection of a stable EBio in Area 3 while other observable data indicate a decline; the ad-hoc adjustments to harvest rates in western areas to compensate for the high total CEYs generated by a survey-based apportionment; and the demonstrated variability in catchability associated with one factor such as baits returned—each are tangible evidence of weaknesses in the survey-based approach.

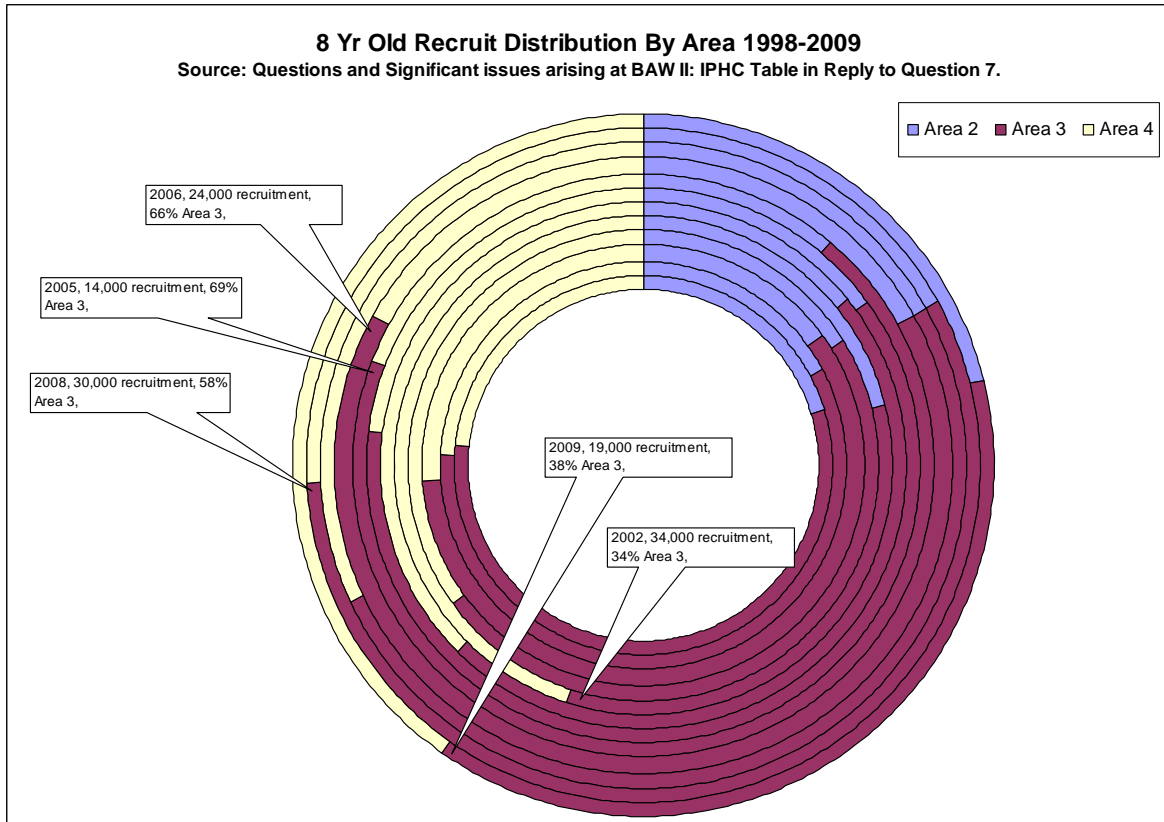
ALFA members regret the instability introduced by the need to develop a new apportionment method necessitated by the coastwide assessment model. We support a step-wise approach to addressing this instability that first identifies a stable apportionment method for a specified interim period while use of the survey is further assessed and potential survey modifications tested via supplemental surveys. Once the assessment of the survey is complete, this interim apportionment strategy can be re-evaluated. This type of approach is consistent with what Dr. Francis also noted when he wrote... *“while there were reasonably good grounds to believe that the previous method of allocation (using the closed-area assessment) was flawed, the evidence to support the new method was weak. In such a situation a pragmatic approach is to stay with something like the status quo until the scientific picture becomes clearer.*

During this interim period, ALFA does not support an apportionment based solely on historical shares, since they are not responsive to stock dynamics over time and will not address the conservation concerns identified for specific areas. However, several other options were identified during the apportionment workshops and may prove workable. We believe a blend of historical and survey, possibly weighted toward the survey, may provide the “*pragmatic approach*” referenced by Dr. Francis in the CIE review. Several ALFA members will be attending the Annual IPHC meeting and look forward to working with IPHC commissioners, staff and other industry groups to identify a workable option for the interim, and a process that combines research and stakeholder input to develop a final recommendation.

Investigating potential modifications to the survey

ALFA members would also respectfully request the IPHC staff and commissioners consider using supplemental surveys to investigating potential survey modifications to improve the survey as a tool for apportionment. One example would be a supplemental survey which increases the density of station distribution in various habitat types, and by area, to determine if the current 10 mile grid is the appropriate spacing for all areas and habitat types.

Finally, the sensitivity of stock performance indicators such as age structure, WPUE, NPUE, and spawning biomass distribution should be evaluated in light of transient effects such as annual variation in migration rate, and the annual variation in the initial distribution of a year class. This potential impact of transient effects on the management strategy and performance indicators was discussed at the BAW 2 workshop. Participants explicitly asked for model runs which evaluated these impacts in the near term (5 to 10 years) in addition to the 50 to 100 year equilibrium models used to evaluate the stock. In response to one question on annual variation in the distribution of a year class, staff presented a table listing estimated age 8 recruit distributions using the survey. The figure below is a graphic representation of these data and indicates a large annual variation in year class distribution, especially between Areas 3 and 4. The impacts of transient effects such as these on performance indicators such as current age structure, WPUE and NPUE need to be incorporated into models describing the performance of the stock as a whole and by area. The current equilibrium models do not describe the near term impact of these effects.



Summary

In closing, ALFA remains committed to the long-term conservation of the halibut resource and supports a management regime that protects the rebuilding potential of the halibut stock. For the reasons documented above, we remain concerned that the survey-based apportionment strategy as currently applied does not support stock health on a fishery-wide basis, and urge adoption of an interim apportionment strategy that guards against current uncertainties. We oppose the use of adjustment factors that seem geared toward addressing symptoms of problems with the survey as an apportionment tool, rather than correcting the problem, and offer some suggestions for assessing the apportionment accuracy of the survey. Finally, we strongly urge the IPHC to take effective action to control 2C guided sport harvest to the sector's GHIL in 2010; guided sport overharvest constitutes a conservation risk to the resource.

Thank you for your consideration of ALFA's comments.

Sincerely,

Linda Behnken
 (Executive Director)