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Dan Hull, Chairman  
North Pacific Fishery Management Council  
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Re: Agenda Item C-9, Full Observer Coverage in the GOA Trawl Fishery Discussion Paper

Dear Mr. Hull:

Thank you for the opportunity to comment on the discussion paper analyzing options for 100% coverage in the GOA trawl fisheries. I submit the following comments on behalf of The Boat Company (TBC). TBC is a tax exempt, charitable, education foundation with a long history of operating in southeast Alaska. TBC requests that the Council move forward with alternatives that will provide for 100% monitoring of GOA trawl CVs.<sup>1</sup> At a minimum, further analysis of funding options is critical regardless of whether the shift to full coverage occurs as part of the GOA bycatch management program or under the existing observer program. This analysis is particularly relevant in light of the program's reliance on revenues from the halibut resource.

TBC also believes that the Council should revisit the criteria for placing GOA trawl CVs in the partial coverage sector if needed to transition to full coverage pending the development of the GOA bycatch management program. As the discussion paper indicates, a significant benefit of shifting to full coverage would be the elimination of the need to extrapolate PSC rates from observed hauls to unobserved effort. The 2011 analysis for the restructured observer program acknowledged that PSC limits could be exceeded due to inaccurate estimates, but assumed that overharvest of PSC species would not be a conservation concern. In light of recent and ongoing declines in the abundance of GOA halibut, crab and Chinook populations, that assumption is wrong. TBC thus urges the Council to continue to consider shifting GOA trawl CVs to the full coverage sector in the near term rather than await the finalization of the administrative and regulatory process for the more comprehensive and complex bycatch management program.

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<sup>1</sup> TBC would support the use of EM for fisheries where it would meet management needs (verifying chinook PSC retention on smaller vessels participating in the WGOA pollock fisheries) and potentially reduce the increased cost of human observers associated with rural ports and short pulse fisheries.

### Further analysis could develop funding alternatives for GOA trawl CVs

TBC requests that the Council consider whether a separate funding mechanism that would provide for full coverage in the GOA trawl sector would address possible – and likely - future declines in program revenues. In developing the restructured program, NMFS anticipated that non-IFQ fisheries were unlikely to generate sufficient revenue to pay for their own observer coverage costs. [NMFS 2011 at 112].<sup>2</sup> Excess funds from IFQ fisheries would then cover projected shortfalls from other sectors. [*Id.*]. Indeed, the discussion paper recognizes that fees paid by vessels in other sectors and NMFS funds have been necessary to supplement fees paid by the GOA trawl CV fleet.

TBC's concern is that the restructured program relies too much on revenue from the halibut fishery to support costs for the entire partial coverage fleet. NMFS originally estimated that 69 percent of the ex-vessel revenue fee would come from IFQ halibut and sablefish landings: \$2.2 million from the halibut fishery, \$.7 million from the sablefish fishery and \$1.3 million from shoreside groundfish deliveries. [*Id.*]. The problem, however, is that the EA for the restructured program projected program revenues based on fishery data from 2005 through 2008 when the average commercial halibut harvest in Alaska was 65.3 million pounds. [*Id.* at 100-101]. NMFS even initially anticipated a general increasing trend in total revenue. [*Id.* at 77]. However, by 2011, the commercial halibut harvest had dropped in half relative to the baseline for NMFS's initial fee estimate, to 32.3 million pounds.<sup>3</sup> By 2014, commercial halibut landings had dropped by nearly 50% again, to 17.28 million pounds. [*Id.* at 67, Table 2].

Fee revenues reflect the decline in halibut fishery harvests. In 2013, fees from the IFQ sector met the \$2.9 million projection from the IFQ sector, but only because an increase in revenues from the sablefish fishery offset a 27% decline in anticipated revenue from the halibut fishery.<sup>4</sup> But in 2014, total IFQ revenue was \$1.8 million and fee revenue from the halibut fishery declined again to roughly \$1 million - less than half of NMFS' original estimate.<sup>5</sup> Additionally, further revenue declines are possible because an increasing proportion of the halibut resource is taken as PSC.

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<sup>2</sup> NMFS. 2011. EA/RIR/IRFA for Proposed Amendment 86 to the Fishery Management Plan for Groundfish of the Bering Sea/Aleutian Islands and Amendment 76 to the Fishery Management Plan for the Gulf of Alaska Restructuring the Program for Observer Procurement and Deployment in the North Pacific. Secretarial Review Draft. March 2011.

<sup>3</sup> Stewart, I.J. 2015. Overview of data sources for the Pacific halibut stock assessment and related analysis at 67, Table 2. Pp. 47 – 120.

<sup>4</sup> NMFS. 2014. North Pacific Groundfish and Halibut Observer Program 2013 Annual Report. See Table 2-1 at 15 (showing revenues from primary contributing fisheries as follows: (1) halibut IFQ: \$1.62 million; (2) sablefish IFQ: \$1.26 million; (3) trawl pollock: \$.43 million; (4) trawl cod: \$.39 million) See also Table 2-2, p. 18 (showing revenue from the GOA trawl cod fishery alone (\$.13 million)).

<sup>5</sup> NMFS. 2015. North Pacific Groundfish and Halibut Observer Program 2014 Annual Report. See Table 2-2, p. 26 (showing revenues from primary contributing fisheries in the BSAI and GOA as follows: (1) halibut IFQ: \$1.05 million; (2) sablefish IFQ: \$.72 million; (3) trawl pollock: \$.64 million; (4) trawl cod: .43 million). See also Table 2-3, p. 27 (showing revenue from the GOA trawl cod fishery alone (\$.16 million)).

Unless the halibut resource experiences a surprising recovery, declining fee revenues will have significant ramifications for coverage rates under the restructured program. According to the discussion paper, 2014 fee revenues from GOA trawl CVs were \$847,919, enough to fund 820 days of coverage at \$1,067 per day. 925 observer days were thus needed to observe the fleet at just a 15.1% rate, meaning \$112,000 funding was needed from other sources.<sup>6</sup> The 2016 draft Annual Deployment Plan (ADP) anticipates 1,873 GOA trawl trips in 2016 at a 29% coverage rate, requiring sufficient funds - \$1.8 million - for roughly 1,700 days of observer coverage. [NMFS 2015 at 11, 33, Table 1].<sup>7</sup> The cost thus exceeds the \$1.5 million fee revenue paid by GOA trawl CVs in 2013 and 2014 combined. [See Discussion Paper at 12 (\$874,919 in 2014, \$621,731 in 2013)(purchasing 582 observer days)].<sup>8</sup> The discussion paper indicates that the full coverage program is more cost-efficient, and estimates a cost of \$1.94 million for full coverage of 5,864 days fished by GOA trawl CVs at a daily cost of \$331. Earlier this month, OAC members indicated that the full coverage cost is higher than estimated for some GOA trawl fisheries. Even so, it is still notable that the initial estimate for full coverage is not much higher than the cost of 29% coverage and further analysis of how much more and better data the Council could obtain per dollar spent is warranted.

TBC recognizes that full coverage would substantially increase costs to GOA trawl CVs relative to the existing fee mechanism. As noted in the 2011 analysis for the restructured program, observer costs can have a higher marginal impact on lower profit fisheries. But the Council can consider alternatives to funding the shift to full coverage under the pay-as-you-go system through further analysis. For example, the 2011 analysis suggested that the Council could offset the marginal impact by setting different fee rates for different fisheries. The pollock fishery was responsible for 68% and 73% of the GOA trawl fee revenue in 2013 and 2014, respectively. The Council could set a higher fee percentage, or even consider a TAC set aside to fund monitoring costs. The Council could address the funding shortfall caused by allocating more halibut to PSC by imposing a fee on halibut PSC. Further analysis could also consider an electronic monitoring for WGOA pollock CVs to monitor Chinook retention in order to alleviate impacts to specific fisheries that may experience relatively higher full coverage costs under the pay-as-you-go system.

#### **Criteria for Full Coverage: 100% Coverage Needed to Monitor PSC Limits**

A critical point in the discussion paper (p. 14) pertains to benefits associated with eliminating “the need to extrapolate PSC rates from observed hauls to unobserved effort in order to

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<sup>6</sup> 105 days x \$1,067 per day = \$112,035.

<sup>7</sup> NMFS. 2015. Draft 2016 Annual Deployment Plan for Observers in the Groundfish and Halibut Fisheries Off Alaska. 1873 trips x 3 = 5,619 days; 5,619 x .29 = 1,692 days; 1,692 x \$1,067 = \$1.805 million.

<sup>8</sup> The discussion paper (p. 12) suggests that diversification of the fee revenue provides stability, and that removing the GOA trawl CV fleet from partial coverage would increase reliance upon price stability in halibut and sablefish markets. But clearly the only significant contribution from the GOA trawl CV sector is from the pollock fishery. Further analysis of whether the pollock fisheries fund their own coverage costs would be warranted before assuming that diversification provides financial stability for the program.

estimate” PSC. The analysis of potential effects to trawl vessels identifies two problems with extrapolating PSC based on observed PSC rates. First, if observed vessels have higher PSC rates, the fishery closes early to the disadvantage of cleaner fishing, unobserved vessels. However, as indicated in footnote 19, if observed vessels are fishing cleaner than unobserved vessels, the fleet may exceed its limit, and unobserved vessels benefit from the extrapolated data. This second scenario concerns TBC and other halibut and Chinook fishery stakeholders because of the potential for adverse impacts to the resource and directed fisheries.

The EA for the restructured program also considered the potential for PSC limit exceedances at low coverage rates, noting that “fisheries have the potential to be closed after PSC levels have been reached, resulting in overharvest of PSC species.” [NMFS 2011 at 210]. But even though the EA acknowledged that better data would increase the likelihood that groundfish fisheries remained within their limits, it explained that the potential for exceeding PSC limits “does not necessarily represent a conservation concern.” [*Id.* at 210]. The EA – completed in March 2011 – followed a five-year period when the TCEY for Area 3A and 3B halibut averaged 40 million pounds a year. By 2014, the combined Area 3 TCEY declined to roughly 16 million pounds. The EA also preceded the 2012 federal fisheries disaster declaration that included several GOA chinook fisheries. Thus, as noted in the 2015 draft Supplemental EA for the observer program, there is a clear concern with halibut and salmon PSC in the GOA and a priority on covering PSC vessels. [NMFS 2015b at 56].<sup>9</sup>

TBC appreciates the recent testimony from some WGOA trawlers advocating for increased monitoring based on the concern that Chinook PSC estimates in 2014 were higher than experienced in their fishery. However, in general, TBC submits that PSC limit exceedances are the more likely result of the data extrapolation process. The IPHC has consistently identified problems with the reduction in observer coverage levels under the restructured observer program and “considers the bycatch estimates for the groundfish fisheries as minimum estimates” with “unknown” accuracy. [IPHC 2014].<sup>10</sup> The IPHC’s 2013 and 2014 Reports of Assessment and Research Activities both express concerns with halibut PSC estimation in the GOA:

Area 3 remains the area where bycatch mortality is estimated most poorly. Observer coverage for most fisheries is relatively low, as noted earlier, and the extrapolation of bycatch rates from a small set of observed vessels to a much larger unobserved fleet renders the estimates provided here uncertain.<sup>11</sup>

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<sup>9</sup> NMFS. 2015b. Draft Supplement to the Environmental Assessment for Restructuring the Program for Observer Procurement and Deployment in the North Pacific.

<sup>10</sup> IPHC. 2014. Report of the Halibut Bycatch Work Group II. September 2014. *Available at:* [www.iphc.int/documents/bycatch/Halbiut\\_Byc\\_Work\\_Group\\_rept\\_v17\\_final.pdf](http://www.iphc.int/documents/bycatch/Halbiut_Byc_Work_Group_rept_v17_final.pdf).

<sup>11</sup> Williams, G. 2015. Incidental catch and mortality of Pacific halibut 1962-2014. Int. Pac. Halibut Comm. Report of Assessment and Research Activities 2014: pp. 313-336; Williams, G. 2014. Incidental catch and

Importantly, the IPHC’s assessment of GOA halibut PSC estimates reflects studies showing that the observer effect is more likely to result in lower PSC rates. Observers affect decisions about where to fish, what to target, how to deploy gear and how crew members handle PSC species. The literature shows that bycatch rates from observed trips do not reflect actual bycatch rates and bias the estimates. [Sampson 2002;<sup>12</sup> Benoit and Allard 2009]. The 2015 draft Supplemental EA for the restructured program acknowledges that “since bycatch accounting relies on at-sea data collection from observers, incentives exist to fish differently when an observer is on board a vessel than when a vessel is unobserved (i.e. to fish in areas where bycatch is expected to be lower). [NMFS 2015b at 112].

NMFS’ programmatic guidance for monitoring programs, “Evaluating Bycatch,” similarly explains that PSC limits can affect both the “nature and magnitude” of bias arising from the observer effect: “if there are bycatch limits that can either close a fishery or trigger time and area closures, fishermen will have a greater incentive to take actions that result in observer effect bias.” [NMFS 2004].<sup>13</sup> Indeed, NMFS has historically taken the position that bycatch caps exaggerate the observer effect and undermine the accuracy of bycatch estimates:

... vessels carrying observers have a significant incentive to change their fishing behavior to lower their bycatch rates and keep the entire fishery open. Unobserved vessels do not have this same incentive to reduce discards; thus, there is a strong chance that the whole fleet would reach the discard cap before the observed fleet’s expanded data indicated that the cap has been reached. Stronger observer effect under incentives like discard cap management leads to less scientific accuracy from the observer program. [66 Fed. Reg. 29729, 29731 (June 1, 2001)(Final Rule implementing Amendment 13 to the Pacific Coast Groundfish FMP)].

The inherent difficulty in determining the representativeness of observed catch and effort is also magnified for “programs with low levels of coverage, where knowledge is limited regarding the unobserved portion of the fleet.” [NMFS 2004 at 38]. At the recent NPFMC/IPHC Halibut

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mortality of Pacific halibut 1962-2013. Int. Pac. Halibut Comm. Report of Assessment and Research Activities 2013: pp. 289-310; *see also* Stewart et al. 2015. Accounting for and managing all Pacific halibut removals. Int. Pac. Halibut Comm. Report of Assessment and Research Activities 2014: pp. 221 – 266 (identifying “a substantial amount of uncertainty in the current treatment of bycatch” due in part to data collection, and explaining that while the BSAI has 100% coverage, “other fisheries have much lower coverage (particularly in the GOA).... In these cases, observer data may not be representative of all fishing activity (observed and unobserved) and therefore there is no way to be certain that the estimates are unbiased, regardless of the statistical design. Indeed, evidence indicates that the existing estimates are biased by harvester behavior (Benoit and Allard 2009, Faunce and Barbeaux 2011).

<sup>12</sup> Sampson, D.B. 2002. Final Report to Oregon Trawl Commission: analysis of data from the at-sea data collection project. Oregon State University. Newport, Oregon (finding that the species composition of landings from observed and unobserved trips were significantly different, implying that total estimates of bycatch based on observer data may not be reliable).

<sup>13</sup> NMFS. 2004. Evaluating Bycatch: A National Approach to Standardized Bycatch Monitoring Programs.

Bycatch Workshop, IPHC Executive Director Bruce Leaman explained that the observer effect significantly undermined confidence in the estimate of halibut bycatch in the GOA:

The estimation of total bycatch mortality in the Gulf of Alaska therefore rests on the assumption that observations on observed vessels are representative of fishing activities and halibut bycatch estimates for unobserved vessels. There is ample evidence and analyses to deny the validity of this assumption. The biases in observer deployment and behavioral modifications ... make it impossible to estimate the magnitude of bias embedded in current estimation procedures. [Raab and Stern 2013].<sup>14</sup>

In light of the heightened concern for PSC species, and potential for overharvest because of observer effect bias, TBC requests that the Council reconsider its prior criteria for the full coverage sector. The primary rationale for placing GOA trawl CVs in the partial coverage sector was that it is not a catch-share fishery. In the proposed rule for the restructured observer program, NMFS explained that “full observer coverage is needed in programs where catch is allocated to specific entities with quotas and limits of [PSC], which must be discarded at-sea. Economic incentives exist for the industry to under report [PSC], especially in catch share programs where limits are placed on the amount of catch that may be retained and discarded. Therefore, the proposed rule would require full observer coverage on catcher vessels while they are fishing under a catch share program that has [PSC] limits.” [77 Fed. Reg. 23329].

As previously noted, partial coverage vessels also have a strong incentive to modify fishing behaviors when observed to avoid the consequences of fishery closures that occur when the PSC limit is met. The risk of PSC limit exceedances is even more serious now due to the declining abundance of PSC species. Scientists recognize that bycatch estimates must be made with high levels of precision when the bycatch species is a protected species (i.e. some Chinook salmon populations) or an important target species in another fishery (i.e. halibut). [Babcock and Pikitch 2003 at 12 (citing Karp and McElderry 1999)].<sup>15</sup> Additional reasons for having precise and accurate bycatch data include when estimation of impacts to juvenile fish is an issue, or when the bycatch of an important commercial species is large compared to the target catch. [Babcock and Pikitch 2003 at 13]. TBC thus urges the Council to consider the volume of PSC and impacts to target fisheries along with the economic incentives to modify fishing behavior in the partial coverage fleet as criteria that would warrant shifting GOA trawl CVs to the full coverage sector.

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<sup>14</sup> Raab, J. & S. Stern. 2013. NPFMC/IPHC workshop on halibut bycatch estimation, halibut growth and migration, and effects on harvest strategy: Meeting Summary. Int. Pac. Halibut Comm. Report of Assessment and Research Activities 2012: pp. 277-325.

<sup>15</sup> Babcock, E. & E. Pikitch. 2003. How much observer coverage is enough to adequately estimate bycatch? Unpublished report. 35 p.

**Making the observer effect a solution rather than a problem: full coverage as a bycatch minimization measure**

Finally, the Council should also consider 100% observer coverage as one of the tools necessary to meet National Standard 9's requirement to minimize bycatch and bycatch mortality.<sup>16</sup> [50 C.F.R. § 600.350(a)]. Implementing regulations specifically include measures that change fishing behavior and practices. [50 C.F.R. § 600.350(d)(3)].

At the recent NPFMC/IPHC workshop on halibut bycatch, fishery managers from British Columbia and the Pacific Northwest who implement 100 percent coverage programs cited the coverage level as a specific tool to minimize bycatch in trawl fisheries. [Raab & Stern 2013 at 276-277]. Amendment 80 vessels in Alaska also achieved 40 percent halibut bycatch reductions during implementation of the 200 percent observer coverage program. [*Id.*] Cited improvements included changed fishing patterns such as exploratory tows and shorter tow lengths. [*Id.*] Canadian fishery managers also cited more careful handling practices that have reduced bycatch mortality rates to levels well below GOA counterparts. The Council could request that further analysis consider the positive environmental benefits that would result from the effect of observers on fishing practices and more careful handling of bycatch species.

**Conclusion**

TBC requests that the Council continue progress toward implementing full coverage for GOA trawl CVs pending the development of the GOA bycatch management program. It is important to eliminate the need to extrapolate bycatch estimates in the near future in order to reduce adverse impacts to PSC stakeholders that can result from poor estimates. Also, further analysis of funding options for 100% monitoring will be useful both in the context of the bycatch management program and the restructured observer program.

Sincerely,

Paul Olson

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<sup>16</sup> TBC also considers 100% coverage as a measure that could help to ensure that the Council makes management decisions consistent with the MSA's requirement to utilize the best available scientific information. 18 U.S.C. 1851 (a)(2).