January 30, 2026

Ms. Angel Drobnica, Chair
North Pacific Fishery Management Council
1007 West Third, Suite 400
Anchorage, AK 99501

RE: Comments on Agenda C-2 Bering Sea Chum Salmon Bycatch Management

Dear Chair Drobnica and Council Members:

The At-sea Processors Association ("APA") appreciates the opportunity to comment on Agenda item C-2, Bering Sea Chum Salmon Bycatch Management. APA is a trade association representing five companies that own and operate 15 U.S.-flag catcher-processor ("CP") vessels that participate in the Eastern Bering Sea ("EBS") Alaska pollock fishery.

I. Overview

As the Council considers this agenda item, it is critical that it continues to focus on its stated goal of minimizing bycatch of **western Alaska ("WAK") origin chum salmon** in the pollock fishery, and that this be done consistent with the Magnuson-Stevens Act, National Standards, and other applicable law. **In 2024,[1] non-WAK origin chum salmon constituted 96% of the catcher-processor fleet's chum bycatch.[2] The fleet caught a total of 313 WAK chum salmon while harvesting more than 1.28 billion pounds of pollock.** Final action by the Council must recognize and be responsive to this reality.

Our comments make the following points about the Proposed Alternatives and the Draft Environmental Impact Statement ("DEIS"):

1. Alternatives 2 and 3 do not address the Proposed Action's purpose and need to minimize western Alaska origin chum salmon bycatch.
2. Reducing existing pollock fishery contributions to total WAK chum mortality will not result in reliable and predictable changes to chum salmon spawning escapement nor subsistence fishing opportunities.
3. Alternative 4 provides the most effective and common-sense approach to reducing bycatch impacts on WAK chum salmon.
4. If the Council includes Alternative 5 in Final Action, Option 2 merits consideration.
5. If the Council includes Alternative 5 in Final Action, Option 1 and Suboption 1 should be avoided.
6. APA supports Options 3 (Suboption 1), 4, and Apportionment Option 3 under Alternative 5.

[1] 2024 is the most recent year for which final genetics information are available. We anticipate that final 2025 genetics data will demonstrate broadly similar genetic stock composition bycatch trends for the CP fleet.
[2] https://meetings.npfmc.org/CommentReview/DownloadFile?p=845933ce-b9c4-41b7-a380-2df22d8c54a3.pdf&fileName=C2%202024%20Chum%20Salmon%20Bycatch%20Report.pdf.

JUNEAU
P.O. Box 32817
Juneau, AK 99803
Tel: (907) 523-0970
Fax: (907) 523-0798

SEATTLE
4039 21st Avenue W., Suite 400
Seattle, WA 98199
Tel: (206) 285-5139
Fax: (206) 285-1841

II. Background

(a) APA's commitment to continuous improvement

As the analysis makes clear, there is a crisis resulting from recent declines in salmon returns to many WAK river systems. We recognize that these run declines have profound social, cultural, and economic impacts in many communities throughout western Alaska. APA and its member companies have a long-standing commitment to continuous improvement of our fleet's environmental performance, including the implementation of salmon bycatch mitigation measures. In the face of ongoing chum salmon run declines, APA is committed to maintaining and extending our fleet's efforts to minimize bycatch of WAK chum salmon. Our sector's commitment is demonstrated through initiatives such as investments in the development of technologies that have reduced salmon bycatch, including salmon excluders, salmon lights, and cameras; and investments in real-time data sharing and the Rolling Hot Spot program, to move vessels away from areas of high bycatch. Furthermore, the Pollock Conservation Cooperative ("PCC") has worked in full partnership with regulators and fishery stakeholders to implement and strengthen its Incentive Plan Agreement ("IPA"). The CP fleet's IPA is subject to agency oversight and annual reporting requirements. NOAA must approve all IPA changes, and we are required to demonstrate regularly that the IPA is operating effectively to achieve bycatch minimization objectives. When WAK chum salmon declines became acute, the PCC made proactive changes to its IPA, formally strengthening the fleet's salmon bycatch avoidance measures. We will continue to propose voluntary changes that drive improvement as opportunities are identified by our sector.

The DEIS routinely refers to Alternative 4 impacts as being neutral relative to status quo.[3] This underrepresents significant ongoing investments by the fleet in measures that minimize chum salmon bycatch. For example, live feed camera hubs require ongoing maintenance and real-time data sharing, and in-season measures to relocated vessels away from salmon have significant costs that include lost production value due to lower fish quality and increased fuel costs. Furthermore, we are confident that the Rolling Hot Spot programs and IPA incentive structures will continue to improve outcomes for WAK chum salmon avoidance as increasingly refined spatio-temporal genetics information is incorporated.

While recognizing that the best available science suggests that ecosystem and climate changes are the leading causes of recent chum salmon run failures, APA's commitment to continuous improvement of salmon conservation extends beyond the vessel level. APA's commitment includes finding holistic solutions for salmon returns to western Alaska as evidenced by dedicated financial support for salmon lifecycle research – including through our 25-year partnership with the Pollock Conservation Cooperative Research Center – and participation on the Alaska Salmon Research Task Force.

(b) History of Salmon Bycatch Reduction Measures and Chinook Prioritization.

The long history of salmon bycatch management in the pollock fishery, and the rationale that has motivated Council decision making in this area over time, was reviewed in detail in our January 2025

[3] DEIS at 148.

comment letter to the Council.[4] As outlined in that letter, static area closures with trigger bycatch limits for both Chinook and chum salmon were implemented in 1995 but subsequently abandoned in favor of a Rolling Hot Spot program that was implemented in 2007. This was due to "catch and observer data suggest[ing] that pollock trawl fishing restrictions in Salmon Savings Areas were counterproductive as there were greater bycatch rates outside of these areas."[5] Another key milestone was implementation of Amendment 110. This incorporated chum salmon bycatch avoidance measures into the legally binding IPAs. The Council action included strict financial penalties and clear economic incentives, requiring the fleet to meet 13 specific regulatory objectives in reducing both Chinook and chum salmon at any level of abundance. In its rationale for this management approach, the Council cited the need for flexibility in responding to new genetic information on the spatial and temporal patterns of Alaska chum stocks, while simultaneously not undermining Chinook salmon avoidance measures.

The need to prioritize Chinook salmon avoidance has been a recurring theme of Council action. For example, it was the reason that the Council did not enact PSC limits for chum salmon in 2012. We note that the current purpose and need continues to maintain the priority of the objectives of the Amendment 91 and Amendment 110 Chinook salmon bycatch avoidance program. Final action must be carefully designed if this objective is to be met.

III. Composition and Trend of Alaska Pollock Fishery Chum Bycatch by Origin

The purpose and need of this action can only be met through careful consideration of where the Alaska pollock fleets' chum bycatch originates. Additionally, it is critical that the Council focuses on what the data is signaling about the likely future trajectory of the fishery's chum bycatch composition.

First, the DEIS confirms that between 2011 and 2023 just **18.6%**[6] of the chum salmon intercepted in the Bering Sea Alaska pollock fishery were of western Alaska origin. In order to meet the purpose and need, the Council must focus on how to minimize this relatively small portion of the fishery's overall chum bycatch, not the remaining 81.4% that is not western Alaskan and overwhelmingly of hatchery origin. The clear outlier years in which the CP fleet and the pollock fishery collectively had high levels of WAK chum bycatch were 2016 and 2017.[7] These were years in which four and six million chum salmon respectively returned to the Yukon River alone, and both summer and fall chum returns in those years fell well within the upper 75th – 99th percentile of all chum returns on the Yukon since 1992.[8]

Second, and equally important, the Council must take note of recent declines in WAK chum salmon as a percentage of total Alaska pollock fishery chum bycatch. WAK chum constituted 10.6% of total chum bycatch in 2023 and 13.1% in 2024.[9] In 2025, preliminary genetics data suggest that just 10.2%[10] of shoreside chum bycatch is of western Alaska origin, meaning that

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[4] https://meetings.npfmc.org/CommentReview/DownloadFile?p=f0a262e5-6913-4dee-8f74-a196fe2bae93.pdf&fileName=APA.%20C2%20Chum%20Salmon%20Bycatch%20NPFMC.%2001.31.2025.pdf.
[5] https://www.npfmc.org/wp-content/PDFdocuments/fmp/BSAI/BSAIGFAmActionSumm.pdf.
[6] DEIS Table 3-28 page 177
[7] DEIS Tables 3-28 and 3-31.
[8] DEIS Table 2-15 page 94.
[9] https://meetings.npfmc.org/CommentReview/DownloadFile?p=a83debd9-bb1d-4e9e-823b-223aad0d2e0e.pdf&fileName=PPT%20Council%20C2%20Chum%20Salmon%20Genetics%20Report.pdf.
[10] https://www.bbsri.org/_files/ugd/bc10d6_ed304cee417e4df6bc0bc21acc0f3db3.pdf.

final genetics data for the entire pollock fleet is likely to be less than 10%.

For APA's CP vessels, which routinely fish farther to the northwest Bering Sea in the B season, the purpose and need for action becomes even less acute. Our fleet operates predominantly in genetic clusters 3 and 4, where few WAK chum salmon are intercepted in low abundance years. As noted above, in 2024 the Alaska pollock CP fleet's estimated combined WAK chum bycatch was just 4.0% of our total chum catch.

This serves to underscore the incredible and increasing complexity of this management action.

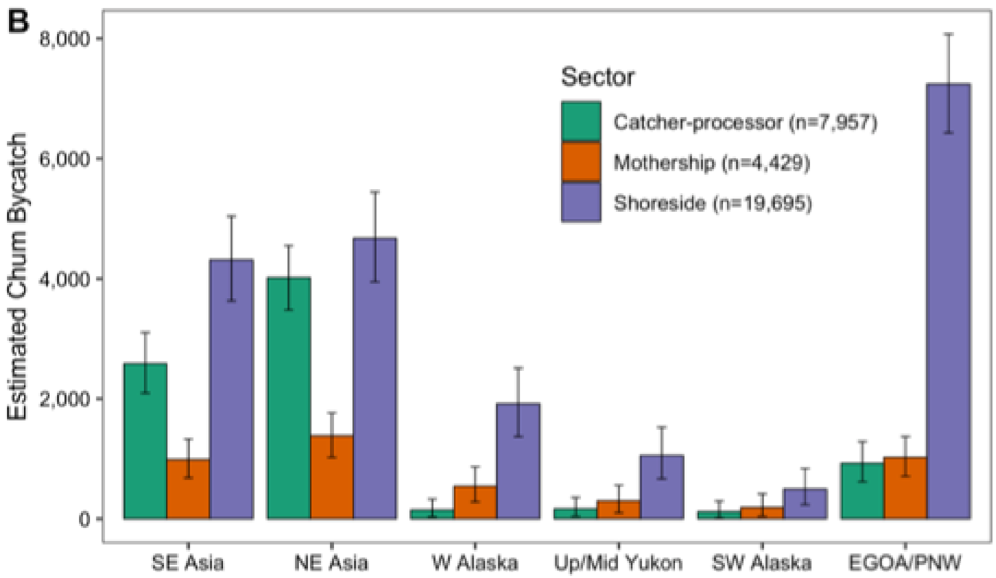

Figure 1. 2024 B season chum salmon PSC by sector and stock reporting group.

Reductions in the percentage of western Alaska chum salmon in the fishery's overall chum bycatch is concomitant with observed declines in western Alaska chum salmon returns as well as prolific Pacific Rim chum hatchery releases. Russian and Japanese hatchery chum have long been a significant proportion of the fleet's chum bycatch, but the preliminary Bristol Bay Science and Research Institute ("BBSRI") 2025 B season genetics reporting also underscores the presence of hatchery chum of Southeast Alaska origin:[11] "Of the 73,291 chum salmon caught by the shoreside sector since statistical week 24, the largest contributing genetic group in the bycatch has been the E GOA/PNW, with a point estimate of 47,008 chum salmon."[12] We can infer that the overwhelming majority of E GOA/PNW chum salmon intercepted by Alaska pollock vessels are of Alaska hatchery origin. While the state of Alaska hatchery program is rigorously and sustainably managed to minimize negative impacts on wild stocks, these hatchery fish may continue to increase as a percentage of Alaska pollock chum bycatch if wild stocks remain in decline and marine heatwaves continue to impact productivity in the Gulf of Alaska.

The recent changes observed indicate the stock composition of chum salmon in the summer Bering Sea pollock fishery could look starkly different ten years from now. According to official

[11] Since 2020, the State of Alaska has released 750 – 781 million hatchery chum salmon per year into the Gulf of Alaska: https://www.npafc.org/wp-content/uploads/Statistics/NPAFC_Hatchery_Stat-1925-2024.xlsx.
[12] https://www.bbsri.org/_files/ugd/bc10d6_ed304cee417e4df6bc0bc21acc0f3db3.pdf.

North Pacific Anadromous Fish Commission statistics, Pacific Rim hatchery releases of chum salmon have totaled between 3 and 3.5 billion fish annually from 2020-2024.[13] Russia's production alone has increased nearly fivefold to 1.5 billion chum salmon since 2000, and media accounts point to further increases.[14] The Council must not fail to account for future increases in hatchery releases, sustained higher survival rates of hatchery released chum salmon relative to wild stocks, and increasing prey competition in the marine environment. To do so would be to risk catastrophic unintended management consequences.

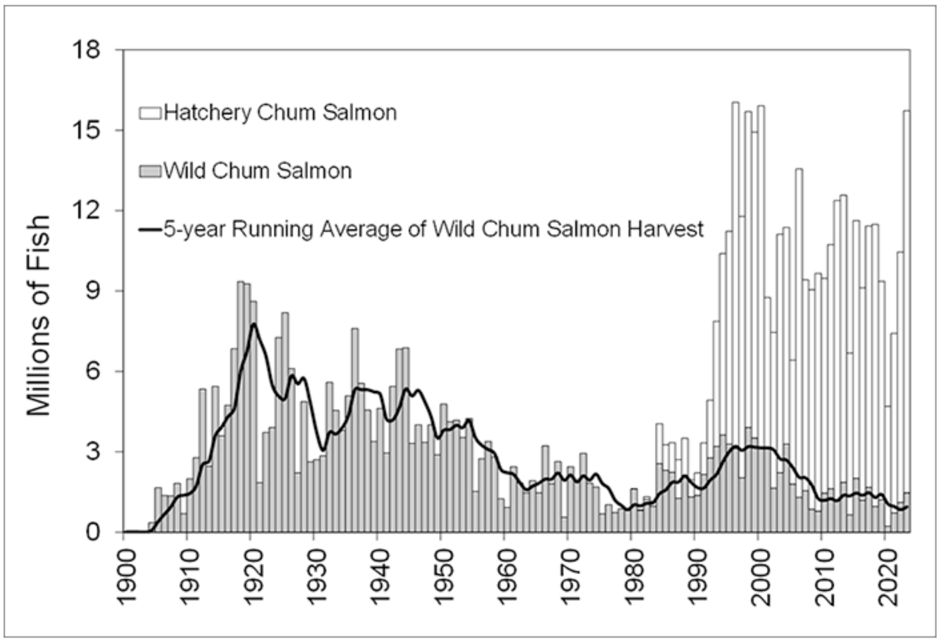

Figure 2. Annual commercial harvest of chum salmon in Southeast Alaska from 1900 to 2023 showing estimated harvests of both hatchery-produced and wild chum salmon.[15]

IV. Specific APA Comments Relating to the Proposed Alternatives and the DEIS

1. *Alternatives 2 and 3 do not address the Proposed Action's purpose and need to minimize western Alaska origin chum salmon bycatch.*

Selecting a proposed alternative that is not guaranteed to reduce WAK chum salmon bycatch[16] is contrary to the Purpose and Need Statement's goal of minimizing bycatch of WAK origin chum salmon in the pollock fishery, and therefore inconsistent with applicable law. The Council should therefore eliminate Alternatives 2 and 3 from consideration.

A hard cap for chum salmon – as is proposed in both Alternatives 2 and 3 – does not discriminate between a chum salmon originating from the Yukon River and a chum salmon originating from the Kamchatka peninsula. It prioritizes minimization of all chum salmon regardless of origin and will force vessels to fish in areas where absolute chum bycatch rates are lowest. Areas with low chum bycatch rates may have higher proportions of WAK chum salmon. As was demonstrated in consecutive 2021 and 2022

13 https://www.npafc.org/wp-content/uploads/Statistics/NPAFC_Hatchery_Stat-1925-2024.xlsx.
14 https://interfax.com/newsroom/top-stories/104211/.
15 https://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareasoutheast.salmon_research_chum.
16 DEIS at 34.

B seasons, the pollock fleet reduced overall chum salmon PSC by 303,592 fish, however the combined western Alaska chum salmon PSC increased from an estimated 51,512 to 55,724 fish. A PSC limit that encompasses the entire fishery management area risks creating incentives that do not align with the action's purpose and need. It has the potential to move vessels towards areas / times that have historically produced higher levels of WAK chum salmon bycatch.[17]

The most restrictive management action being considered within the DEIS is a 100,000 chum salmon PSC limit under Alternative 2. **The Council previously considered PSC limits below 100,000 but appropriately determined they were inconsistent with National Standard 9.**[18] The DEIS presents a retrospective cost benefit analysis of Alternative 2 and an extremely stark tradeoff between forgone pollock harvests and uncertain WAK chum salmon savings emerges.

Table 2-33 Comparison of the average mean AEQ reductions for the CWAK and Upper/Middle Yukon reporting groups, average chum salmon PSC reductions, and potentially forgone pollock (mt) under the analyzed chum salmon PSC limits and apportionment options. A stochastic model was used for AEQ estimation.

PSC Limit	Apportionment	AEQ CWAK (# of fish)	AEQ Up/Mid Yukon (# of fish)	Chum PSC (# of fish)	Forgone Pollock (mt)
100,000	Option 1: 3-Year Avg.	21,519	3,391	150,355	272,620
	Option 2: 5-year Avg.	21,612	3,437	150,937	271,872
	Option 3: Pro Rata	21,652	3,448	151,009	271,777
	Option 4: AFA	21,303	3,308	149,945	266,531
325,000	Option 1: 3-Year Avg.	4,780	821	33,223	79,252
	Option 2: 5-year Avg.	4,504	798	32,614	61,735
	Option 3: Pro Rata	4,529	807	60,568	114,651
	Option 4: AFA	3,341	568	28,348	54,811
550,000	Option 1: 3-Year Avg.	1,700	357	9,564	21,116
	Option 2: 5-year Avg.	1,172	233	7,315	27,663
	Option 3: Pro Rata	1,154	235	7,330	28,503
	Option 4: AFA	292	48	2,210	15,741

Source: NMFS Alaska Region CAS, data compiled by AKFIN.
Notes: Estimated reductions in the AEQ bycatch are based on the average for each reporting group using data from 2011–2022 while total chum PSC reductions and forgone pollock are based on data from 2011–2023.

Table 2-35 Comparison of annual average gross first wholesale revenue forgone (millions of 2022 $) based on hypothetical B season closures, 2011-2023

PSC Limit	Apportionment	CDQ	CP	Inshore	Mothership
100,000	Option 1: 3-Year Avg.	$21.61	$121.40	$153.45	$33.57
	Option 2: 5-year Avg.	$21.28	$116.99	$158.64	$32.17
	Option 3: Pro Rata	$21.28	$115.26	$158.64	$33.57
	Option 4: AFA	$18.32	$85.69	$181.81	$33.57
325,000	Option 1: 3-Year Avg.	$13.95	$60.49	$15.92	$5.79
	Option 2: 5-year Avg.	$13.53	$38.09	$17.10	$5.79
	Option 3: Pro Rata	$13.53	$38.09	$17.10	$5.79
	Option 4: AFA	$13.53	$17.31	$31.51	$5.79
550,000	Option 1: 3-Year Avg.	$8.56	$17.31	$0.00	$0.99
	Option 2: 5-year Avg.	$7.24	$13.39	$11.83	$0.00
	Option 3: Pro Rata	$7.24	$13.39	$11.83	$0.99
	Option 4: AFA	$3.02	$0.22	$11.83	$2.09

Source: NMFS catch accounting system, data compiled by AKFIN.

Table 2-33 estimates that 271,777 tons of pollock would have remained unharvested annually on average at the highest Adult Equivalent ("AEQ") WAK chum salmon savings of 25,100. The resulting first wholesale revenue loss as estimated by Table 2-35 is over $328 million.

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[17] Genetic Clusters 1 and 2 have historically had higher proportions of WAK chum salmon than Genetic Cluster 3 and 4, while the early B season has higher WAK chum salmon relative to the late B season.
[18] DEIS at 122.

The analysts conclude in Section 6.1 that the action alternatives under consideration are not expected to interfere with the achievement of Optimum Yield ("OY") on a continuing basis simply because the alternatives are not expected to reduce overall groundfish harvests in the Bering Sea below 1.4 million metric tons, which constitutes the lower bound of the established OY range. In reality, the Council establishes an OY or Maximum Sustainable Yield ("MSY") through the harvest specification process on an annual basis. If the overall groundfish Total Allowable Catch ("TAC") in the Bering Sea were to be routinely set at 2.0 million metric tons, and regulations promulgated under this action were to prematurely prohibit TAC from being achieved on an annual basis (e.g., by foregoing pollock harvests of up to 271,777 annually due to a chum salmon PSC limit), this would clearly constitute a management action inconsistent with National Standards 1, 8 and 9 of the Magnuson-Stevens Act.

2. *Reducing existing pollock fishery contributions to total WAK chum mortality will not result in reliable and predictable changes to chum salmon spawning escapement nor subsistence fishing opportunities.*

The DEIS confirms that the pollock fishery is responsible for only a tiny fraction of salmon mortality resulting from Alaska Region fisheries. From 2011 to 2022, on average, **AEQ removals of coastal western Alaska ("CWAK") chum salmon attributed to the Bering Sea pollock fishery was just ~1.75%, while State commercial harvests accounted for 89.44%, and subsistence harvests 8.81%.**[19] It bears emphasizing the average pollock fishery bycatch impact rate on the Upper/Middle/Yukon stock has been 1.0% without considering Area M CWAK chum salmon harvests. The magnitude of the bycatch reductions that could be expected under each alternative are uncertain and speculative, but would largely manifest as largely undetectable changes in abundance, rather than increased subsistence or commercial fishing opportunities.[20] Chum salmon harvests in other State of Alaska fisheries with a known component of western Alaska chum salmon harvests (e.g., Area M salmon fisheries) would have further contextualized the extremely limited impact of the pollock fishery on CWAK chum salmon populations and further reduced the percentage estimate assigned to its contribution to total mortality. Some estimates of western Alaska chum salmon harvests[21,22,23] in these other fisheries are available and could have provided a direct comparison for the years in which data was available. While we understand a comparable AEQ estimate may not be possible from the existing Alaska Department of Fish & Game ("ADF&G") data, and genetics data was not available prior to 2011 for the Bering Sea pollock fishery, a simple year case study could be shown for 2022, for which complete data is available. If completed, such a case study would show that the CWAK chum mortality of the Area M fisheries was double that of the Bering Sea Alaska pollock fishery. We recommend that this available scientific information be included in the Final EIS to ensure a comprehensive picture of known western Alaska chum harvests from all sources to ensure the proposed action is evaluated in the context of known sources of harvests and mortality. Otherwise, the DEIS fails to capture the very limited ability of the Bering Sea pollock fishery to appreciably reduce anthropogenic sources of mortality and therefore does not appropriately contextualize for stakeholders the likelihood of Alternatives 2 and 3 resulting in reliable and predictable changes in chum salmon spawning escapement and future subsistence or

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[19] DEIS at 31, 183.
[20] DEIS at 38.
[21] https://www.researchgate.net/publication/312578289_Harvest_and_harvest_rates_of_chum_salmon_stocks_in_fisheries_of_the_Western_Alaska_Salmon_Stock_Identification_Program_WASSIP_2007-2009.
[22] http://www.adfg.alaska.gov/FedAidPDFs/RIR.5J.2023.02.pdf.
[23] https://www.adfg.alaska.gov/FedAidPDFs/SP23-07.pdf.

commercial harvest opportunities. The proposed alternatives aim to reduce bycatch and its impacts from existing very low levels of mortality relative to other Statewide harvests.

The Upper/Middle Yukon stock is uniquely positioned as the only WAK chum salmon stock that contains a full run reconstruction, AEQ assessment, and pollock fishery bycatch impact assessment. The extremely minor change in overall impact to the Upper/Middle Yukon chum salmon stock group across the most restrictive Alternative being considered is epitomized by the following Table 3-41. A 100,000-chum salmon PSC limit would have reduced estimated impacts on the Upper/Middle Yukon chum stock by less than half a percent in most years.

Table 3-41 Estimates of the mean impact rate reduction for the Upper/Middle Yukon genetic group as if the overall chum salmon PSC limits and apportionments were in place from 2011–2022 compared to status quo. A stochastic model was used for AEQ estimation.

Year	Alt. 1	100,000-Chum Salmon PSC Limit				325,000-Chum Salmon PSC Limit				550,000-Chum Salmon PSC Limit			
	Impact Rate	Option 1	Option 2	Option 3	Option 4	Option 1	Option 2	Option 3	Option 4	Option 1	Option 2	Option 3	Option 4
2011	0.84%	0.34%	0.39%	0.39%	0.39%								
2012	0.28%	0.09%	0.10%	0.10%	0.10%								
2013	0.22%	0.06%	0.08%	0.08%	0.09%								
2014	0.33%	0.14%	0.15%	0.15%	0.15%								
2015	0.63%	0.28%	0.27%	0.27%	0.25%				0.05%				
2016	0.84%	0.51%	0.49%	0.49%	0.51%	0.13%	0.12%	0.12%	0.05%	0.02%			
2017	0.71%	0.49%	0.48%	0.49%	0.42%	0.21%	0.21%	0.21%	0.13%	0.13%	0.09%	0.09%	0.02%
2018	0.71%	0.45%	0.45%	0.45%	0.39%	0.14%	0.12%	0.12%	0.07%	0.08%	0.05%	0.05%	0.00%
2019	0.28%	0.17%	0.17%	0.17%	0.16%	0.04%	0.02%	0.03%	0.01%	0.01%	0.01%	0.01%	0.00%
2020	1.11%	0.75%	0.74%	0.73%	0.70%	0.06%	0.12%	0.13%	0.22%	0.00%	0.00%	0.00%	0.01%
2021	4.94%	3.21%	3.20%	3.21%	3.27%	0.85%	0.93%	0.90%	0.97%	0.03%	0.12%	0.13%	0.05%
2022	1.48%	0.76%	0.76%	0.75%	0.88%	0.15%	0.16%	0.16%	0.16%	0.00%	0.02%	0.03%	0.01%

Source: NMFS Alaska Region CAS, data compiled by ABL.

3. *Alternative 4 provides the most effective and common-sense approach to reducing bycatch impacts on WAK chum salmon.*

APA supports Alternative 4, which provides increased incentives and targeted strategies to specifically avoid WAK chum to the extent practicable. Indeed, the CP fleet is already moving forward with implementation of Alternative 4 through its IPA and is committed to extending WAK chum salmon avoidance through the IPA structure whenever opportunities to do so are identified.

The use of recent or real-time genetic information to inform Rolling Hot Spot closures is the most effective and common-sense approach to reducing bycatch impacts on WAK chum salmon stocks. Haul-specific genetic sampling has indicated that WAK chum salmon are likely distributed similarly to the broader spatio-temporal patterns observed, which generally indicates that WAK chum are more prevalent east of 168 degrees West longitude and earlier in the B season. Utilizing both inseason BBSRI genetics reports and recent Auke Bay Lab seasonal genetics reports, the CP sector is already considering ways in which WAK chum salmon avoidance can be enhanced within the IPA to emphasize avoidance of WAK chum salmon in stat areas that may not exceed base rate thresholds triggering a Bycatch Avoidance Area, but that nonetheless have high proportions of WAK chum.

It's important to recognize that under all Alternatives being considered, the existing Rolling Hot Spot program will continue to operate and large areas of the pollock grounds may be closed to fishing via this mechanism.

4. *If the Council includes Alternative 5 in Final Action, Option 2 merits consideration.*

If the Council concludes that Alternative 4 alone is insufficient for Final Action, APA believes that

Option 2 of Alternative 5 merits consideration. Spatial patterns of WAK chum bycatch indicate management measures should be focused on the SE corner of the Bering Sea. A series of useful tables and figures have been provided in this iteration of the DEIS – notably Tables 3-29, 3-30, 3-57 and Figure 3-30 – which demonstrates that nearly 84% of the WAK chum bycatch has occurred within genetic clusters 1 and 2.[24] This has been identified as the inseason corridor under Alternative 5, and it is where APA believes bycatch mitigation efforts are most effectively focused. Efforts to limit chum salmon bycatch in genetic clusters 3 and 4, where the CP fleet accrues a majority of B season pollock catch, will have extremely limited benefits to WAK chum salmon.

Alternative 5 is effectively a temporally and spatially imposed hard cap. For some smaller vessels that are unable to fish economically outside of genetic clusters 1 and 2, it is a temporally imposed hard cap. For larger vessels that can fish to the northwest, Alternative 5 acts like an enhanced IPA provision. Figure 3-32 of the DEIS, presented below, demonstrates that under Alternative 5 (Suboption 1 used as an analytical example), chum salmon savings would have predominantly occurred in just two years, 2017 and 2021. The median estimated annual number of WAK chum savings would be 9,800 at the most restrictive 50,000 chum corridor cap limit. However, estimated WAK chum salmon savings at the 50,000 corridor cap level come at an extraordinary cost to the Bering Sea pollock fleet.

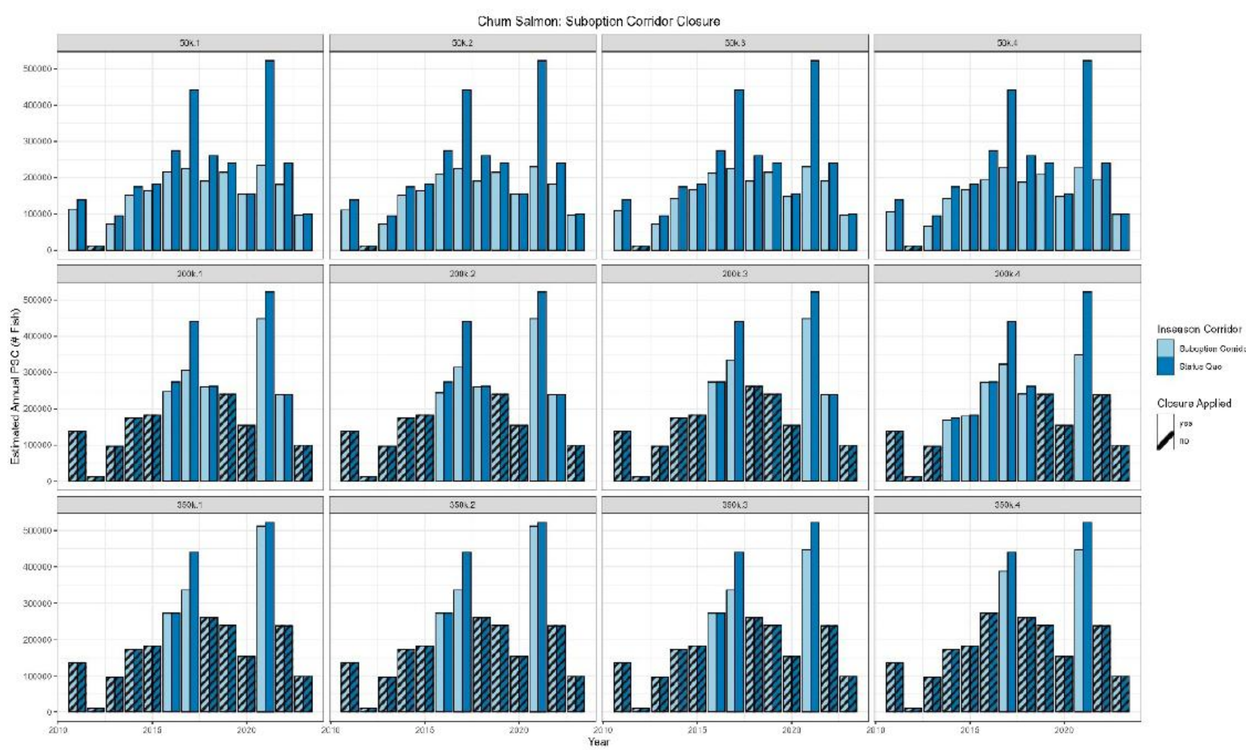

Figure 3-32 Comparison of the pollock fleet's historical chum salmon PSC inside the corridor (dark blue, status quo) to the fleet's estimated chum salmon PSC (light blue, suboption corridor) for each analyzed corridor chum salmon PSC limit and apportionment option under Suboption 1, Alternative 5, 2011–2023

Table 3-18 below demonstrates that at the lowest corridor cap level of 50,000 chum salmon, more than 100,000 tons of pollock catch will be displaced outside of cluster 1 and 2 in some years, while a significant amount of pollock catch will be displaced in most years. **The Council must carefully**

[24] DEIS at 216.

consider the unintended consequences of displacing significant volumes of pollock catch on the order of tens of thousands of tons. This will lengthen the pollock B season, extend fishing effort in October, and increase Chinook salmon bycatch. Furthermore, the Council must consider the implications of a potential complete shutdown of a subset of small vessels in the inshore pollock fleet until August 31, increased fuel usage, and loss of fishery value due to lower quality fish being delivered to shoreside plants.

Table 3-18 Estimates of pollock catch (mt) displaced from 29 stat areas inside the inseason corridor as if the overall chum salmon PSC limits and sector apportionments were in place from 2011–2023 under Alternative 5, Suboption 1

Cap:	50,000				200,000				350,000			
Sector:	CDQ	CP	M	Inshore	CDQ	CP	M	Inshore	CDQ	CP	M	Inshore
Apportionment Option 1: 3-Year Average												
2011			6,777	51,269								
2012												
2013				62,047								
2014				19,309								
2015				10,559								
2016	11,704	86,654	9,503	8,763		50,769	6,452			16,937		
2017	25,529	89,749	632	43,374	18,099	76,892		1,765	18,099	63,853		
2018	3,607	24,098	4,154	53,475		7,173						
2019		7,211		14,176								
2020				100								
2021	10,729	3,139	15,901	81,988	407	3,139	13,059	52,235	407	3,139	13,059	39,837
2022		19,024	3,483	28,154								
2023				8,682								
Apportionment Option 2: 5-Year Average												
2011			9,175	51,269								
2012												
2013				62,047								
2014				19,309								
2015				10,559								
2016	14,175	86,654	12,626	8,763	362	50,769	8,287			16,937		
2017	25,529	89,749	632	43,374	25,529	63,853		1,765	18,099	63,853		
2018	3,607	24,098	4,154	53,475	395	7,173						
2019		7,211		14,176								
2020				100								
2021	10,729	3,139	18,257	81,988	407	3,139	13,059	52,235	407	3,139	13,059	39,837
2022		7,044	3,483	28,154								
2023				8,682								
Apportionment Option 3: Pro Rata												
2011			6,777	54,546								
2012												
2013				62,047								
2014				34,617								
2015				14,536								
2016	11,704	73,730	9,503	8,763		16,937	6,452		0	16,937		
2017	25,529	89,749	632	43,374	18,099	63,853		9,532	18,099	63,853		
2018	3,607	24,098	4,154	53,475								
2019		7,211		14,176								
2020				3,679								
2021	10,729	3,139	18,257	81,988	407	3,139	13,059	52,235	407		13,059	52,235
2022		3,366	3,483	28,154								
2023				8,682								
Apportionment Option 4: AFA												
2011			9,175	58,263								
2012												
2013				103,784								
2014				34,617				4,003				
2015				14,536				2,110				
2016	11,704	62,042	12,626	16,711			6,452	3,643				
2017	25,529	76,892	632	43,374	18,099	63,853		29,522	18,099	33,490		
2018	3,607	11,438	4,154	53,475				16,503				
2019				20,182								
2020				3,679								
2021	10,729	3,139	18,257	83,324	407		13,059	62,859	407		13,059	52,235
2022			3,483	28,154				556				
2023				12,778								

What has been most overlooked in the DEIS is how sector level corridor caps will be allocated, and the resulting vessel level behavior that will result. Any corridor cap imposed under Alternative 5 would be allocated to each individual vessel level in our CP cooperative with unallocated buffers set aside prior to vessel allocations – similar to currently used protocols for Chinook salmon. The analysis implies that all vessels would be simultaneously closed out of the corridor when the sector level cap is reached. In reality, such a scenario is highly unlikely. Vessels will in fact be selectively excluded from fishing in cluster 1 and 2 based on their **individual bycatch performance, with the smallest vessels and allocations likely being eliminated first. The vessel level allowance of chum salmon PSC creates individual accountability and a strong incentive to maintain access to fishing grounds within cluster 1 and 2 through good bycatch performance.** Under Alternative 5, all individual pollock vessels will receive a chum salmon PSC limit when fishing in genetic clusters 1 and 2 prior to August 31. Vessels with low bycatch will be allowed to remain fishing in clusters 1 and 2, while vessels not able to avoid chum salmon will likely fish up to their allocation before being forced to move outside of cluster 1 and 2 prior to exceeding their individual chum salmon corridor cap. Despite the potential for ADF&G stat areas to be exempted from closure under Option 2, IPA rules would likely preclude vessels that have exceeded their individual vessel corridor cap from continuing to fish in clusters 1 and 2 until the sector level cap is exceeded, as all chum salmon caught within cluster 1 and 2 accrue towards the respective sector level caps. Therefore, it is highly unlikely that all vessels within a sector would exceed their individual corridor caps and trigger a sector level closure. In the rare event that this were to occur, however, the IPA rolling hot spot program will have implemented chum bycatch avoidance areas based on representative chum salmon genetic information inside the corridor. Meaning, the IPA will have identified the cleanest areas to fish and moved the fleet into those areas. The ability to maintain access to a portion of stat areas in the corridor after a PSC limit is reached represents an opportunity for the fleet to continue fishing in the cleanest areas within the corridor while closing areas with high WAK chum bycatch.

5. *If the Council includes Alternative 5 in Final Action, Option 1 and Suboption 1 should be avoided.*

APA does not support Option 1 because of the severe unintended consequences that may result.

First, it is important to acknowledge that future oceanographic conditions and relative ocean survival rates for chum salmon are unpredictable and unknown. As APA has previously highlighted[25] and Section 3.3.2.1 of the DEIS makes clear,[26] foreign hatchery production and release of chum salmon fry into the North Pacific Ocean is unregulated and has increased exponentially over the last few decades. Foreign origin chum salmon constitute an increasing majority of chum salmon bycaught in the Bering Sea pollock fishery.

Second, the pollock fishery is an economic engine for many Alaskan communities, and a disruption or early closure of the Bering Sea pollock fishery would impact thousands of jobs and result in catastrophic revenue loss for many fishery stakeholders. This includes CDQ groups, which control more than one-third of the Bering Sea Alaska pollock quota, and Alaskan coastal communities. A disruption or early closure of the fishery would also have significant impacts on other Alaska Region fisheries that rely on access to operating processing plants. The delivery of Alaska pollock to these shoreside plants is essential to their viability, and their early closure would cause direct and negative impacts for harvesters operating in other fisheries. The Alaska

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[25] APA public comments on Bering Sea Chum Salmon Bycatch Management Environmental Impact Statement Scoping Report, https://downloads.regulations.gov/NOAA-NMFS-2023-0089-0011/attachment_1.pdf

[26] DEIS at 164-65.

pollock sector supports more than 6,300 Alaskan jobs and generates more than $830 million in Alaska economic output.[27] Curtailing its operation would cause job losses and economic harm to communities in the state that rely on Alaska pollock for revenue for their survival. Finally, reducing the available supply of sustainable, nutritious, low-cost protein would harm American consumers and would be a gift to foreign whitefish producers, including in Russia and China, which are far less regulated and do not have the same commitments to sustainable fishing practices.

Even under the highest corridor PSC limit and AFA apportionment scheme of Alternative 5, Option 1, nearly $15 million in revenue is projected to be at risk[28] for an uncertain and speculative benefit to WAK chum salmon.

Third, Chinook salmon PSC would increase if pollock fishing effort is shifted to September and October. This scenario is most likely to occur under Alternative 5, Option 1, which is predicted to displace a significant amount of pollock catch outside of historical fishing grounds. Similar herring PSC increases are expected under the alternatives and options that extend the B season.[29] The Council and NMFS should be wary of adopting a chum salmon bycatch management alternative that has the unintended consequence of increasing bycatch of other PSC species.

Current regulations require that Chinook bycatch remain the highest salmon avoidance priority for the pollock fishery in the Bering Sea. However, any management action that places a hard cap PSC limit on chum salmon automatically nullifies a Chinook salmon priority regardless of the explicit Council priorities and management goals. If a vessel were facing a shortage of chum salmon allocations and a surplus of Chinook salmon allocations, the salmon avoidance priority would shift to chum salmon, which is counter to the purpose and need, longstanding Council priorities, and current regulations. The Council should be wary of such a scenario not only under Alternatives 2 and 3, but also under Alternative 5, Option 1.

Similarly, APA opposes Suboption 1 because it does not consider potential future changes to pollock and WAK chum salmon distributions. In contrast to Option 2, Suboption 1 does not include the ability to revisit the placement of the corridor based on newly observed pollock and salmon distributions and after analyzing the performance of the corridor relative to WAK chum salmon reductions over time.

A review of the recent 2024-2025 pollock fishery catch data within the corridor closure time period reveals that just five ADF&G stat areas contained 75% of the pollock catch, while also simultaneously containing 69% of the estimated WAK chum catch. There are also five ADF&G stat areas that contain no estimated WAK chum catch as well as extremely limited pollock catch. It is important to recognize, however, that chum salmon genetics data does not currently exist at the ADF&G stat area level. The genetics data must be extrapolated to the ADF&G stat area based on broader spatio-temporal patterns. This is because independent assignment for chum salmon is not possible.

There are no obvious stat areas for which the data currently suggests minimal pollock displacement

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[27]https://static1.squarespace.com/static/66957f81ee2ae14061bb3861/t/691641b7c21dc53693f949ca/1763066295111/Economic+Impacts+of+the+Alaska+Pollock+Industry_Final.pdf.

[28] DEIS Table 1-5 at 47.

[29] DEIS at 41.

will result in WAK chum savings. This means that the analytical exercise of how IPAs should use the relevant data is challenging to game out. Pollock CPUE, chum salmon bycatch rates, and genetics data essentially ask the question: how much pollock fishing effort should be displaced to achieve uncertain WAK chum savings. How would IPAs select between 19 and 29 ADF&G statistical areas under Option 2?

APA's suggested approach would be to use the same suite of data and criteria used to implement IPA in-season chum salmon bycatch avoidance areas. The suite of data includes BBSRI in-season shoreside genetics, Auke Bay Lab historical genetic information, pollock CPUE, chum salmon bycatch rates and represents the best scientific information available to strategically identify and balance both WAK chum salmon avoidance and pollock catch. The IPA's will be required to provide support for the areas identified and are subject to NMFS approval by an established deadline. Furthermore, the IPA's will be required to report to the council on the efficacy of these measures during the annual IPA reporting cycle to both the council and NMFS.

1. *APA supports Options 3 (Suboption 1), 4 and Apportionment Option 4 under Alternative 5.*

Flexibility in the face of future environmental changes is essential if the objectives of this action are to be met. APA strongly urges the Council to consider this necessity as it reviews additional Options under Alternative 5.

APA supports Option 3, Suboption 1 under Alternative 5 because in some years chum salmon have proven to be extremely abundant, even in western Alaska river systems. Therefore, in those future years when returns are above average, the pollock fishery should not be unduly constrained when there is no conservation concern for chum salmon and escapement goals are being met. The 75th percentile is the appropriate measure for determining when the inseason corridor closure provisions would be suspended and is shown to be a very high bar: between 2011 and 2023, it was achieved only twice. The 90th percentile was not achieved even in the extremely high WAK chum abundance years of 2016 and 2017 when there was little conservation concern for chum salmon on the Yukon River, so Suboption 2 clearly fails to balance bycatch avoidance measures that are calibrated to the level of conservation need and achieving optimum yield.

APA supports Option 4 under Alternative 5, because in recent years, herring bycatch has occurred within the CVOA during the B season, forcing the catcher vessel fleet to prioritize fishing locations that avoid herring bycatch often leading to elevations in chum salmon bycatch. If an Alternative 5 corridor cap is selected, the shoreside fleet will be more likely to avoid chum salmon at the expense of herring. The net result will be the closure of the Winter Herring Savings Area, an area the size of the state of Maryland, which primarily restricts fishing opportunities for the CP fleet. The Winter Herring Savings Area has extremely low herring PSC during the month of September: see Figure 3-55. Table 3-70 shows that chum salmon bycatch rates are lower within the Winter Herring Savings Area than they are outside of the area in nearly all years, while herring bycatch rates within the Winter Herring Savings Area are consistently near zero. APA can attest that the Winter Herring Savings Area has historically been a very important B season fishing area for our fleet. If it were subject to more frequent closures due to a highly constrained catcher vessel fleet it will have adverse and unintended management consequences. If the CP fleet were closed out of the inseason corridor until August 31 and then immediately closed out of the Winter Herring Savings Area on September 1, it would be a catastrophic management situation that would likely have severe consequences for Chinook salmon as the fleet would be forced to fish much later in the year when Chinook are more prevalent on the grounds. Despite a date change, the CP fleet will still be excluded from the Winter Herring Savings Area for the entire month of October and through March 1st in the A season.

Finally, APA supports allocation Option 3, the pro-rata apportionment. Given the unique differences and challenges between the sectors, we recommend the Council select the apportionment method that best accounts for the differences between the inshore, mothership, CP and CDQ sectors.

V. Cooperating Agency Scientific Claims Deserve Scrutiny

Within the DEIS, claims have been made that discrete genetic spawning populations occur within the CWAK stock complex.[30] These claims are not supported by any current genetic scientific information. That is, there are no known tributary stocks with significant spatial or temporal separation such that they are genetically distinct, beyond the Fall (Mid/Upper) Yukon chum salmon stock and Kotzebue Sound reporting group. This is further supported by strong scientific evidence of straying among chum salmon populations, especially following habitat disturbance events and an inability to discriminate discrete spawning stocks within the genetically homogenous western Alaska stock reporting group.

Statements such as the following deserve further scrutiny: "It is critical to recognize that, particularly when experiencing low stock abundance, the return of a single chum salmon can support the viability of discrete spawning populations." This is especially true given evidence that chum salmon are expanding their range into the Arctic, presumably in search of new viable spawning habitat.[31]

Statements proclaiming that bycatch and intercept of salmon in the marine environment are the leading anthropogenic drivers of chum salmon declines[32] are simply not supported by the best available scientific information and are also directly contradicted by Table 3-33/Figure 3-19 and Section 4.4.4.2 of the DEIS. Furthermore, the Area M fisheries are a higher anthropogenic source of mortality on CWAK chum salmon stocks than the Bering Sea pollock fishery and are not governed or regulated under this management action.

Finally, there is no scientific evidence to support the proposition that fishery removals accumulate across decadal scales to drive population level declines for a species with a 7-year life cycle.[33]

For Chinook salmon on the Kuskokwim River, the largest contribution to sustained salmon declines is body size. More than 30% of female reproductive capacity has been lost in recent years due to smaller salmon returning.[34] For chum salmon, recent marine heatwaves have contributed to poor early marine life stage survival.[35] Coho salmon have historically contributed to subsistence harvests yet have also fallen significantly below escapement goals in recent years. Coho salmon are not intercepted as bycatch in any federal groundfish fisheries.

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[30] DEIS Appendix 8 at 28.
[31] https://www.uaf.edu/news/confirmed-salmon-are-spawning-in-arctic-rivers.php
[32] DEIS Appendix 8 at 30.
[33] *See* DEIS Appendix 8 at 33 ("Over decades, these chum salmon removals accumulate and contribute to the sustained decline in stock abundance.").
[34] https://onlinelibrary.wiley.com/doi/full/10.1111/gcb.17508
[35] https://repository.library.noaa.gov/view/noaa/56673

VI. Conclusion

The history of this action notes that significant environmental changes resulting in shifting food web structure, combined with rapidly escalating hatchery inputs and variable marine survival, confound the ability of the Council to surgically target WAK chum minimization without also causing significant harm to pollock participants and coastal and CDQ communities. As a result, we continue to support facilitating fleet flexibility to move in space and time using the best available genetic information to minimize WAK chum bycatch. Our IPAs are the primary tool that can consistently produce improved outcomes for WAK chum while also minimizing harm to the pollock fishery. Any consideration of management actions focused on WAK chum salmon must also ensure that IPAs can continue to function as designed, by creating incentives and not desperation.

We remain concerned that gaps and other shortcomings in the DEIS present a challenge for the Council in assessing the suitability of various potential management actions. What is certain and the underlying theme of our comments is that many of the Alternatives do not meet the purpose and need and will cause significant economic harm to many Alaskan coastal communities and hard-working families dependent on the Bering Sea pollock fishery. They threaten to do this while providing uncertain benefits to WAK chum salmon, rendering them both unwise and inconsistent with legal requirements. We encourage the Council to proceed cautiously given the ongoing ecosystem changes observed in the Bering Sea, and finally to carefully weigh the stark tradeoffs presented within the DEIS in the context of balancing the National Standards under the Magnuson-Stevens Act.

Sincerely,

Caitlin Yeager
Vice President of Policy & Engagement
At-sea Processors Association