



Salmon Bycatch Committee REPORT

March 20-21, 2023: 9am-5pm AKDT

UAA Gorsuch Commons Room 107
3700 Sharon Gagnon Lane, Anchorage, AK

Committee [eAgenda](#) with all meeting materials and written comments

Members in attendance: Andy Mezirow (co-chair), Elizabeth Reed, Jennifer Hooper, Kevin Whitworth, Mellisa Johnson, Dr. Mike Williams Sr, Oscar Evon, Rachel Baker (co-chair), Ruth Christiansen, Serena Fitka, Stephanie Madsen, Steve Ricci

Members not in attendance: *Kevin Whitworth (March 20), Jennifer Hooper (March 21), Dr. Mike Williams Sr. (March 21)*

Others in attendance:

Diana Stram (Council staff), Sarah Marrinan (Council staff), Kate Haapala (Council staff), Paul Wilkins, Chris Oliver, Ernie Weiss, Michael Link, Susie Zagorski, Brent Paine, Joe Spaeder, Terese Schymogi, Karen Gillis, Brenden Raymond-Yakoubian, Aaron Martin, Andrea Akalleq, Andrew Magel, Andrey Khalkachan, Angel Drobnica, Anne Vanderhoeven, Annika Saltman, Arnold Demoski, Austin Estabrooks, Autumn Cantu, Becca Robbins Gisclair, Boyd Blihovde, Brian Ritchie, Brooke Woods, Caitlin Yeager, Chris Landry, Chris Tran, Colleen Anderson, Craig Rose, Curt Chamberlain, David Witherell, Deenaalee, Eddie Corp, Ellen Krsnak, Eric Deakin, Florence Kargi, Frank Kelty, Gabe Canfield, Gerald Davis, Glenn Merrill, Gretchen Harrington, Heather Mann, Hilma Kameroff, Ivy Pelkey, Jackie Arnaciar, Jan Rumble, Jeff Regnart, Jennifer Williams, Jessica Reynolds, Jill Klein, Jim Ianeli, John Gruver, John Merrill, Josh Keaton, Justin Leon, Karen Gillis, Karla Bush, Kathy Holly, Katie Kashatok, Keenan Sanderson, Kendall Henry, Kenny Down, Kimberly Nicholas, Landry Price, Loretta Brown, Mackenzie Bindas, Maria Davis, Marilyn Heiman, Mary Furuness, Mary Martinez, Megan Williams, Michelle Stratton, Nicole Kimball, Nicole Watson, Patrick Barry, Paul Matyas, Paul Olson, Princess Johnson, Rachel Sapin, Raychelle Aluaq Daniel, Richard Heller, Rochelle Adams, Rose Bennett, Sam Cunningham, Sara Cleaver, Sarah Rheinsmith, Shannon Carroll, Shannon Down, Shannon Erhart, Shannon Gleason, Shawaan Jackson-Gamble (Ch'aak'tí), Sara Labelle, Steve Martell, Steve Marx, Tom Gemmell, Tom Meyer, Trent Hartill, Tyler Lawson, Valerie Derendoff, and Wes Jones.

Introductions

The co-Chairs of the Salmon Bycatch Committee opened the meeting with introductions from committee members and Council staff, and Dr. Stram provided an overview of the meeting agenda. The purpose of this meeting was for the committee to receive the final staff reports and presentations that respond to the committee's request for information, and to reach consensus on a draft purpose and need statement and concepts for alternatives for the Council's consideration for potential management measures to minimize non-Chinook prohibited species catch (PSC is also referred to throughout this report and the committee's work as 'bycatch') in the Bering Sea pollock fishery.¹ The Council's motion from December 2022 guided this discussion as it directed the committee to develop recommendations for potential salmon bycatch management measures with a focus on Western Alaska chum salmon.

¹ Salmon PSC is categorized as 'Chinook' and 'non-Chinook'. The non-Chinook category includes chum, pink, coho, and sockeye salmon reporting categories, but over 99% of the salmon incidentally caught as bycatch in the non-Chinook category are chum salmon.

This meeting also provided members of the public an opportunity to provide testimony to the committee on their perspectives and ideas for the purpose and need statement and concepts for alternatives.

Overview of presentations for information requests

Under this section of the agenda, the committee received four presentations in response to its request for information. It is important to note the committee's [eAgenda](#) includes a more expansive suite of materials than were presented at the committee meeting; this approach allowed the committee, the Council, and members of the public to reference materials responding to all information requested from staff while prioritizing those oral presentations most likely to inform the committee's dialogue and recommendations.

Ms. Terese Schymogi and Dr. Joe Spaeder provided a presentation on the 2022 Kuskokwim River Salmon Situation Report. This presentation covered trends and population declines for Chinook, chum, and coho salmon on the Kuskokwim River, as well as a broader snapshot on salmon declines across the Arctic-Yukon-Kuskokwim River. The Committee also received a presentation from Mr. Oscar Evon and Mr. Steve Ricci on the Community Development Quota (CDQ) Program, CDQ group's relative dependence on pollock, and how the CDQ groups provide different types of social and economic benefits to their communities through revenues earned from Federal groundfish and crab fisheries.

Dr. Pat Barry provided a presentation on the preliminary results for the genetic stock composition of chum salmon bycatch in the 2022 Bering Sea pollock fishery. In 2022, the Bering Sea pollock fishery incidentally caught 242,224 chum salmon as bycatch, of which 50,527 were attributed to the Western Alaska (WAK) genetic stock reporting group (i.e., approximately 21% of the total bycatch). The WAK genetic stock reporting group extends from Kotzebue in the north to Nushagak in the south. An important update to the genetic stock composition results for 2022 is that geneticists with Auke Bay Lab were able to re-evaluate and break out Kotzebue Sound from the WAK reporting group. In 2022, the new Kotzebue Sound genetic stock reporting group accounted for 5% of the overall bycatch or approximately 10,772 chum salmon. When accounting for the Kotzebue Sound genetic stock reporting group, the overall count of chum salmon caught as bycatch from the WAK reporting group is 40,492 fish (or 17% of the total bycatch).

Dr. Barry's presentation described the differences in each sector's fishing behavior (e.g., the shoreside catcher vessel sector targets pollock in the B season further east and closer to shore than catcher processors able to move fish further west along the shelf) and noted that the genetic stock composition of the bycatch depends on when and where the bycatch occurs. The pollock fishery is more likely to encounter WAK chum salmon further east (i.e., there is a general decreasing trend in the rate of chum salmon bycatch going east to west), though the timing of when bycatch occurs in the B season does not seem to be an indicator for when the fleet encounters WAK chum salmon.

Lastly, the committee received a presentation from Dr. Jim Ianelli on chum salmon bycatch patterns in relation to temperature changes and encounter rates compared to pollock. While the chum salmon bycatch rate varies year-to-year, there is a correlation between higher chum salmon bycatch and warmer sea surface temperatures.

Committee's recommendation for a purpose and need statement

At the committee's January 2023 meeting, the co-Chairs provided direction to committee members to prepare proposals for a draft purpose and need statement as well as concepts for alternatives and submit them to Council staff prior to the March meeting. This approach directly responds to the Council's December 2022 motion, and it provided Council staff an opportunity to form a strawman purpose and

need statement and alternatives set for the committee to discuss at this meeting. Four proposals were submitted for purpose and need language.²

On Day 2 of the meeting, the committee had substantial dialogue on the strawman purpose and need statement developed by Council staff. This strawman purpose and need statement drew from the commonalities identified in all four proposals. **The committee reached consensus to recommend to the Council the following purpose and need statement.**

SBC consensus purpose and need

Salmon are an important fishery resource throughout Alaska, and chum salmon that rear in the Bering Sea support subsistence, commercial, sport, and recreational fisheries throughout Western and Interior Alaska. Western and Interior Alaska salmon stocks are undergoing extreme crises and collapses, with long-running stock problems and consecutive years' failures to achieve escapement goals, U.S.-Canada fish passage treaty requirements, and subsistence harvest needs in the Yukon, Kuskokwim, and Norton Sound regions. These multi-salmon species declines have created adverse impacts to culture and food security and have resulted in reduced access to traditional foods and commercial salmon fisheries.

The best available western science suggests that ecosystem and climate changes are the leading causes of recent chum salmon run failures; however, non-Chinook (primarily chum) salmon are taken in the Eastern Bering Sea pollock trawl fishery which reduces the amount of salmon that return to Western and Interior Alaska rivers and subsistence fisheries. It is important to acknowledge and understand all sources of chum mortality and the cumulative impact of various fishing activities. Therefore, in light of the critical importance of chum salmon to Western Alaska communities and ecosystems, consideration of additional measures to further minimize Western Alaskan chum bycatch in the pollock fishery is warranted.

The purpose of this proposed action is to develop actions to minimize bycatch of Western Alaska origin chum salmon in the Eastern Bering Sea pollock fishery consistent with the Magnuson-Stevens Act, National Standards, and other applicable law. Recent genetics stock composition information indicates that the majority of non-Chinook bycatch in the pollock fishery is of non-domestic hatchery origin; therefore, alternatives should structure non-Chinook bycatch management measures around improving performance in avoiding Western Alaska chum salmon specifically.

The Council intends to consider establishing regulatory non-Chinook PSC management measures that reduce Western Alaska chum bycatch; provide additional opportunities for the pollock trawl fleet to improve performance in avoiding non-Chinook salmon while maintaining the priority of the objectives of the Amendment 91 and Amendment 110 Chinook salmon PSC management program; meet the requirements of the Magnuson-Stevens Act, particularly to minimize salmon PSC to the extent practicable under National Standard 9; include the best scientific information available including Local Knowledge and Traditional Knowledge as required by National Standard 2; take into account the importance of fishery resources to fishing communities including those that are dependent on Bering Sea pollock and subsistence salmon fisheries as required under National Standard 8; and to achieve optimum yield in the BSAI groundfish fisheries on a continuing basis, in the groundfish fisheries as required under National Standard 1.

Committee's recommendations for conceptual alternatives

Council staff organized the alternatives proposed by committee members into the four alternatives presented below. **The committee agreed to move forward all conceptual alternatives, and there was consensus on all but one.** There was not consensus on the details of Alternative 2, which was the primary point of dialogue for committee members. Rationale and discussion are captured in the subsequent section.

² Proposal with purpose and need language: [Proposal 1](#), [Proposal 2](#), [Proposal 3](#), and [Proposal 4](#)

Alternative 1: No action,

Alternative 2: PSC limit for chum salmon and/or area closures

Option 1: PSC limit of zero chum salmon.

Option 2: PSC limit based on historical (32-year time series) total bycatch numbers.

- *Option 2a: Closure of directed pollock fishery when bycatch exceeds 22,000 (10th percentile of 1991-2022 PSC levels).*
- *Option 2b: Closure of directed pollock fishery when bycatch exceeds 54,000 (25th percentile of 1991-2022 PSC levels).*

Option 3: Weighted, step-down PSC limit triggered by a three-river chum index (Kwiniuk, Yukon, Kuskokwim) that is linked to prior years' chum abundance/ANS/escapement and weighted to account for variance in stock sizes across river systems.

- *Option 3a: If the chum index is average/above average for 3/3 river systems, then the PSC limit is set at 54,000 (25th percentile of 1991-2022 PSC levels).*
- *Option 3b: If the chum index is average/above average for 2/3 river systems, then the PSC limit is set at 22,000 (10th percentile of 1991-2022 PSC levels).*
- *Option 3c: If the chum index is average/above average for 1/3 or 0/3 river systems, then the PSC limit is set at 0.*

Option 4: Implement area hard caps in genetic sampling Cluster 1 and/or implement entire area closures in genetic sampling Cluster 1 during the B-season.

- *Option 4a: PSC limit of 10th percentile of genetic cluster 1 chum PSC during the B-Season in Region 1.*
- *Option 4b: PSC limit of 25th percentile of genetic cluster 1 chum PSC during the B-Season in Region 1.*
- *Option 4c: Area Closure of genetic cluster 1 during the entire B-Season (weeks 22-45).*
- *Option 4d: Area Closure of genetic cluster 1 during the B-Season Early Weeks (weeks 22-32).*

Option 5 (applies to all): Implement ways for alternative measures to evolve and be refined to protect W. Alaska/Upper and Middle Yukon stocks as real-time genetic sampling becomes available.

Alternative 3: Time/area closures (these would be managed by either NMFS or within the IPAs)

- *Option 1: Establish a Chum Salmon Reduction Plan Agreement (RPA) during the B season requiring pollock vessels to avoid identified subareas in genetic cluster areas 1 and 2 for a specified amount of time based on two triggers being met: 1) an established chum salmon incidental catch rate and 2) historical genetic composition (proportion) of Western Alaska chum salmon to non-Western Alaska chum salmon.*

Alternative 4: Additional regulatory requirements for IPAs

- *Option 1: Additional regulatory provisions requiring IPAs to utilize the most refined genetics information available to further prioritize avoidance of areas and times of highest proportion of WAK chums in years of low abundance.*

Rationale and discussion for committee members' proposals for conceptual alternatives

Rationale and discussion around Alternative 2 (Submitted by Tribal and in-river subsistence representatives – [Proposal 4](#) on the eAgenda):

Tribal and in-river subsistence representatives put forward several options for conceptual alternatives, all of which focus on an overall limit (or cap) for chum salmon PSC in the Bering Sea pollock fishery, though there are important distinctions between them.

Alternative 2 option 1 in the set above would establish a chum salmon PSC limit of zero, which would effectively close the Bering Sea pollock fishery if one chum salmon was incidentally caught as bycatch. The proposer's rationale for including this chum salmon PSC limit is that, because the National Environmental Policy Act requires the status quo be analyzed for every action the Council considers, and there is currently not a chum salmon PSC limit established in regulations for the Bering Sea pollock fishery, a limit of zero would be appropriate to analyze. Representatives of the pollock industry noted a PSC limit of zero would close the Bering Sea pollock fishery every year; Chinook and chum salmon are found in similar locations and depths as pollock making it impossible to completely avoid salmon PSC.³ Pollock industry representatives also expressed concern that this option would prohibit the Council and NMFS from achieving National Standard 1, achieving the optimum yield on a continuing basis for the Bering Sea Aleutian Island groundfish fishery.

Alternative 2 option 2 would establish a chum salmon PSC limit using a 32-year time series (1991-2022) for total bycatch. There are different PSC limits under this alternative that would close the pollock fishery when chum salmon PSC exceeds 22,000 (option 2a, the 10th percentile for chum salmon PSC from 1991-2022) or 54,000 (option 2b, the 25th percentile for chum salmon PSC from 1991-2022) fish. The proposers explained these limits would apply to the overall amount of chum salmon PSC encountered by the Bering Sea pollock fishery and would not be a WAK chum-only limit. The 32-year time series was selected by Tribal representatives/in-river subsistence representatives because it is the full range of values for chum salmon PSC currently reported by NMFS, it includes years when Norton Sound chum abundance was low, and it encompasses a range of years representing different environmental conditions in the Bering Sea.

Pollock industry representatives did not support only having chum salmon PSC limits of 22,000 or 54,000 fish as those limits would likely close the Bering Sea pollock fishery every year (from 1991-2021 the average chum salmon bycatch for the Bering Sea pollock fishery is 188,000 chum salmon). Pollock industry representatives believe a broader range of potential chum salmon PSC limits should be included in any analysis and noted the Council would need to define a time series on which to base a chum salmon PSC cap should it choose to analyze a chum salmon PSC limit for the Bering Sea pollock fishery. However, there was concern that a 32-year time series is too extensive for several reasons. First, the American Fisheries Act (AFA) was signed into law in October 1998. Bering Sea pollock fishery operations substantially changed after implementation of the AFA because that law established sector allocations in the BSAI pollock fishery, determined eligible vessels and processors, allowed the formation of cooperatives, set limits on the participation of AFA vessels in other fisheries, and imposed special catch weighing and monitoring requirements on AFA vessels. An additional concern expressed with using an extended time series approach is that, prior to 2011 when the Amendment 91 Chinook salmon PSC management program was implemented, there was no census count of salmon PSC on every pollock vessel or systematic genetic sampling for Chinook and chum salmon PSC.

Alternative 2 option 3 would apply a weighted, step-down trigger based on a three-river chum index to the PSC limits put forward in Alternative 2 option 2. The proposers indicated that a three-river index for

³ 'Pollock industry' is used to denote when there was agreement from all pollock sectors represented on the committee.

chum salmon abundance could be based on the Kwiniuk, Yukon, and Kuskokwim Rivers because a total chum salmon run estimate is available for these rivers.⁴ The idea to weight the river systems is due to the fact that the chum run sizes for different river systems across WAK vary significantly. If chum abundance is average/above average in all three rivers, the overall chum salmon PSC limit (i.e., not specific to WAK chum) would be set at 54,000 (option 3a); if chum abundance is average/above average in 2/3 river systems, the overall chum salmon PSC limit would be set at 22,000 (option 3b); if chum abundance is average/below average for 1/3 or 0/3 river systems, the overall chum salmon PSC limit would be set to zero (option 3c).

In general, there was support from the pollock industry for the Council to consider identifying an index or approach to determining low or high abundance years for chum salmon; however, there was uncertainty about whether the three rivers identified in this proposal would be the most appropriate approach, noting analytical staff would be able to evaluate different options for indexing chum salmon abundance.

Alternative 2 option 4 would implement area-based chum salmon PSC limits in the B-season that are specific to genetic cluster area 1 where the majority of chum salmon PSC is encountered and is more likely to have a higher proportion of WAK chum salmon. The PSC limits reflect those put forward in Alternative 2 (22,000 chum salmon under option 4a and 54,000 chum salmon under option 4b) which would close pollock fishing in genetic cluster area 1 if reached. There are two additional options under Alternative 4 that would close genetic cluster 1 to pollock fishing for the remainder of the B season once the chum salmon PSC limit was reached (option 4c) or for the remainder of the early portion of the season (statistical weeks 22-32) after the chum salmon PSC limit was reached.

Pollock industry representatives noted the area closures put forward in Alternative 2 option 4 (i.e., entire genetic cluster areas) are much larger than the current rolling hot spot closures implemented under the Incentive Plan Agreements (IPAs) for Chinook and chum salmon. As currently written, representatives from the CV pollock sector noted this alternative would either close the southeastern Bering Sea to pollock fishing or push CVs to fish later in the B season, increasing the fleet's encounters with Chinook salmon.

Each conceptual alternative put forward by Tribal and in-river subsistence representatives included a sub-option to evaluate and implement ways to refine the alternative to protect WAK and Upper and Middle Yukon River chum salmon stocks as real-time genetic sampling becomes available. Tribal and in-river representatives noted that, if real-time genetic information were to become available, the PSC limits put forward under this conceptual alternative set that currently apply to all chum salmon PSC could be a limit that applied to WAK chum only.

Rationale and discussion around Alternative 3 (Submitted by Catcher Vessel (CV)/Mothership Sectors- [Proposal 1](#) on the eAgenda):

Representatives from the CV and mothership sectors provided one action alternative, time/area closures, in addition to the status quo alternative. This alternative would establish a Chum Salmon Reduction Plan Agreement (RPA) during the B season. The RPA could function outside of the sector's current IPA given that the proposal does not establish specific *incentives* for avoiding chum salmon (i.e., Chinook salmon savings credits incentivize avoidance of Chinook at all levels of abundance). It is important to note that this alternative is not intended to create competing incentives between avoidance of Chinook and avoidance of chum salmon.

The RPA would require pollock vessels to avoid identified subareas in genetic cluster areas 1 and 2, where CVs encounter the majority of chum salmon bycatch in the B season, for a specified amount of

⁴ ADF&G annually completes a full run reconstruction for the Kwiniuk River and Yukon River fall and summer chum salmon runs. Total chum salmon run abundance estimates are not available for the Kuskokwim River, though the proposers suggested that relative indices of abundance could be based on the Bethel Test Fishery in the lower river and the Kogruklu River weir in the upper river.

time based on two triggers being met. The first trigger is based on an established incidental catch rate for all chum salmon bycatch (irrespective of the genetic stock composition reporting group); this mirrors the approach used in 2022 for hot spot closure areas triggered by Sea State. The second trigger would use information on the historical genetic composition (i.e., proportion) of WAK chum salmon to non-WAK chum salmon. An example of how this multi-step approach would work is as follows: if the overall chum salmon bycatch meets or exceeds the incidental catch rate established for an area (trigger 1), and then has a high proportion of WAK chum salmon (trigger 2), then that area would potentially be subject to closure. The proposal does not specify what the proportion of WAK chum to non-WAK chum would be or whether the closures would be managed by NMFS. Additionally, the proposal did not specify whether it would be established every year or only in times of low chum salmon abundance. It is anticipated that both of these points would be developed in future analyses.

There was no opposition to this alternative.

Rationale and discussion around Alternative 4 (Submitted by Catcher Processor (CP) sector – [Proposal 2](#) on the eAgenda):

The primary conceptual alternative put forward from representatives of the CP sector would create additional regulatory provisions that require IPAs to utilize the most refined genetics information available to further prioritize avoiding areas and times with the highest proportion of WAK chum bycatch in years of low chum salmon abundance. This proposal focuses on the regulatory aspects of the IPAs which capture broad requirements for the pollock industry to meet, while providing a flexible approach for industry to determine the appropriate and necessary incentives for meeting those requirements through the IPAs. Representatives explained the proposal did not identify targets for the IPA as the Council would need to provide that direction and the analysis could provide points for consideration for a base rate, closure areas, length of closure areas, an outlier provision, as well as an appropriate indicator for low abundance of WAK chum salmon.

There was no opposition to this alternative.

Public testimony

Prior to the meeting, the committee received three written public comment letters from Salmon State, Kawerak, Inc., and the Boat Company. In addition to the three written public comments posted on the SBC's [eAgenda](#), the Committee received oral testimony from six individuals: Brooke Woods, Ernie Weiss (Aleutians East Borough), Suzie Zagorski (United Catcher Boats), Brenden Raymond-Yakoubian (Kawerak, Inc.), Brent Paine (United Catcher Boats), and Dr. Mike Williams, Sr. (also a committee member). Some oral testimony emphasized the need to institute a chum salmon cap, with a preferred cap of zero chum bycatch. Testifiers on behalf of the pollock industry stated they felt IPA measures have been working in avoiding chum bycatch and emphasized the importance of flexibility in any additional regulatory action. One testifier also spoke specifically to the practices of the Area M fishery and clarified that they do not intentionally target chum salmon in June.