



Salmon Bycatch Committee
North Pacific Fishery Management Council
1007 West Third Ave., Suite 400 Anchorage, Alaska 99501
Co-Chairs: Rachel Baker and Andy Mezirow

March 17, 2023

Re: Chum salmon bycatch measures and future analysis

Dear Ms. Baker, Mr. Mezirow and Salmon Bycatch Committee Members:

The Boat Company is a charitable foundation with a 40 year history of operating in Alaska where it conducts multi-day conservation, education, sport fishing and adventure tours in Southeast Alaska aboard two small cruise vessels. The Boat Company's charitable work focuses on Alaska conservation issues, including efforts to protect and maintain salmon populations and their habitat which support diverse local fishing economies throughout Alaska. The Boat Company participates in North Pacific Fishery Management Council processes that involve proposed management measures related to trawl bycatch of fish species that have high value to Alaska's commercial, recreational and subsistence fisheries. The Boat Company requests that the Salmon Bycatch Committee ("Committee") include chum salmon bycatch limits among the alternatives recommended for addressing chum salmon bycatch and that the Committee's proposed purpose and need statement detail current chum fishery conditions in western Alaska.

Comments on the range of alternatives

Council staff compiled three alternatives submitted by Committee members: (1) Alternative 1, a no action alternative; (2) Alternative 2, which would establish chum bycatch limits and/or area closures through four different options and (3) Alternative 3, which would add new chum avoidance requirements for pollock industry Incentive Plan Agreements. Committee members from western Alaska communities that depend on salmon fisheries submitted Alternative 2 as several distinct alternatives. Two of the alternatives would establish bycatch limits ranging between zero, 22,000 or 54,000 chum salmon based on either a percentage of historical bycatch levels or triggered by multiple chum abundance metrics from 3 river systems. A third alternative proposed bycatch limits based on spatial and temporal management.

The Boat Company requests that the Committee recommendations include multiple ways to develop and analyze chum salmon bycatch limits such as the options suggested under proposed Alternative 2. Consideration of various alternative means of achieving the purpose of a proposal is an important function of

the National Environmental Policy Act because it helps to further define the key issues, improve the environmental analysis and inform public participation and agency decisionmaking.¹

The Boat Company requests that the Committee consider whether to reconfigure what is now Alternative 2 into multiple alternatives as originally proposed. For example, past, recent and ongoing chum genetic stock composition analyses can inform the development of an alternative that links bycatch limits with the spatial and temporal distribution of chum salmon and chum salmon bycatch.² The largest numbers of bycaught chum that originate in the northeastern Pacific – whether from western Alaska or other parts of the state – are distributed east of 170° longitude.³ The timing of the bycatch also warrants further analysis – for example, over 70 percent of the 2021 bycatch of western Alaska chum (34,917/48,656) occurred during the middle of the B season in two pulses in mid-July and mid-August in the eastern portion of the Bering Sea.⁴

Similarly, the development and analysis of a separate alternative or alternatives linked to abundance as suggested by representatives from western Alaska salmon fishing communities would be valuable for public and agency review. Federal management of Alaskan chum salmon taken as bycatch is very different from the management of Alaska salmon fisheries. Alaska salmon fishery managers use escapement goals to maintain salmon productivity for directed fisheries.⁵ Regulations require much more conservative management responses to escapement failures than existing federal chum salmon bycatch management measures.⁶

A combination of failures to meet subsistence needs and/or escapement failures is an appropriate trigger for a lower bycatch limit in the following year. The chum life cycle can be highly variable in terms of their age when they return to rivers.⁷ Chum typically return to spawn between three and five years old and most frequently at age 4.⁸ Marine conditions, pink salmon abundance and year-class strengths can affect the age of maturity.⁹ Historically, over two-thirds of the chum returning to the Yukon River were age four; five year old fish were the second most common returning age of spawners.¹⁰ Most of the chum taken as bycatch are adult fish age three and four.¹¹ Each successfully spawning chum on average generates nearly two

¹ 40 C.F.R. § 1502.14; see also *Barnes v. U.S. Dep't. of Transp.*, 655 F.3d 1124, 1131 (9th Cir. 2011); *Westlands Water Dist. v. U.S. Dep't of Interior*, 376 F.3d 853, 872 (9th Cir. 2004)(citations omitted).

² See e.g. NPFMC. 2022. Discussion Paper D1 Chum Salmon Bycatch (November 15, 2022) (identifying the highest proportion of western Alaska chum bycatch as occurring early during B season in the Southeast Bering Sea, gradually increasing after June through early August and declining by October,, but with variable timing through with periodic high spikes). Available at: [D1 Chum Salmon discussion paper \(npfmc.org\)](#).

³ Barry, P., C. Kondzela, J. Whittle, J. Watson, K. Karpan, K. D'Amelio & W. Larson. 2022 (specifically, during the 2021 B season pollock industry chum bycatch west of 170° included 2,970 western Alaska chum and 8,411 Eastern Gulf of Alaska/Pacific Northwest chum bycatch east of 170° included 46,590 western Alaska chum, 12,283 southwestern Alaska chum and 105,006 Eastern Gulf of Alaska/Pacific Northwest chum).

⁴ Barry, P., C. Kondzela, J. Whittle, J. Watson, K. Karpan, K. D'Amelio & W. Larson. 2022. Roughly two-thirds of the bycatch of chum from southeast Alaska and the Pacific Northwest also occurred during the middle portion of the B season (74,552/112,611).

⁵ 5 AAC § 39.222 (Policy for the Management of Sustainable Salmon Fisheries).

⁶ 5 AAC § 39.222.

⁷ Johnson, O.W., Grant, W.S., Kope, R.G., Neely, K.G., Waknitz, F.W. and Waples, R.S., 1997. Status review of chum salmon from Washington, Oregon, and California.

⁸ *Id.*

⁹ *Id.*

¹⁰ *Id.*

¹¹ Kondzela, C.M., J.A. Whittle, P.D. Barry, H. T. Nguyen, E.M. Yasumiishi, D.W. Nicolls, J.T. Watson & W.A. Larson. 2021. Genetic stock composition analysis of chum salmon from the prohibited species catch of the 2019 Bering Sea walleye pollock trawl fishery. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-AFSC-422, 69 p.

returning fish.¹² In other words, if there is a year with poor escapements, a corresponding lower bycatch limit the next year would allow for more escapement the following year and offer hope for better future returns.

Comments on the Proposed purpose and need statements

Proposed purpose and need statements submitted by Committee pollock industry members focus narrowly on minimizing impacts to western Alaska chum stocks. Members from Alaska salmon fishing communities added Upper/Middle Yukon River stocks, and noted that “measures should focus on reducing impacts to Alaska chum salmon....” The Boat Company agrees that the Committee should focus first on improving chum salmon escapements to support western Alaska and Yukon River fisheries but requests that the Committee consider all Alaska chum salmon. Chum salmon taken as bycatch in the Bering Sea are also important to other U.S. fisheries – roughly 27 percent of the bycaught chum return to the Eastern Gulf of Alaska/Pacific Northwest, ranging between 50,000 and 150,000 chum in recent years.¹³

Chum salmon are a high value species and increasing in value, with ex-vessel prices ranging from 95 cents per pound in Norton Sound to \$1.18 per pound in Southeast Alaska, with fillets from Southeast Alaska retailing for \$20 per pound.¹⁴ Yukon River and western Alaska chum have the potential to generate higher values because of niche marketing that can take advantage of higher fat and omega-3 fatty acid levels oil contents that make them a healthy and flavorful favorite of chefs and consumers.¹⁵ Yukon River, Norton Sound and Kotzebue commercial chum fishermen caught 1.9 million chum worth \$7.7 million in 2018 and 1.1 million chum worth \$3.9 million in 2019.¹⁶

2020 and 2021 Yukon River, Norton Sound and Kotzebue commercial chum harvests of 190,000 fish and 103,000 fish were worth \$650,000 and \$360,000.¹⁷ The Boat Company requests that Committee recommendations for a purpose and need statement provide detail of these and other losses. The opening paragraph from the proposed purpose and need statement submitted by Committee members from salmon fishing communities best describes the importance of the various chum fisheries and current conditions. Chum are normally the most abundant salmon species in western Alaska and are critical for subsistence and commercial fisheries.¹⁸ The Yukon and other western Alaska rivers support stocks from five ADF&G management areas, including the state's northernmost commercial salmon fishery.¹⁹ Yukon River chum

¹² Joint Technical Committee of the Yukon River U.S./Canada Panel. 2021. Yukon River salmon 2020 season summary and 2021 season outlook. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 3.A21-01, Anchorage. Appx. A.

¹³ Kondzela, C.M., et al. 2021; NPFMC. 2022. Discussion Paper Discussion Paper, Figure 3-3; Barry, P., C. Kondzela, J. Whittle, J. Watson, K. Karpan, K. D’Amelio & W. Larson. 2022.

¹⁴ <https://alaskagoldbrand.com/products/wild-keta-salmon-portions?variant=40318679056568>
https://www.adfg.alaska.gov/static/fishing/pdfs/commercial/2022_preliminary_salmon_summary_table.pdf

¹⁵ See, e.g. [Yukon River Fall Keta \(Chum\) Salmon in Salmon and Halibut at Alaska Gourmet \(akgourmet.com\)](#); [ff-yukon-keta-salmon-sm.pdf \(fortunefishco.net\)](#)

¹⁶ https://www.adfg.alaska.gov/static/fishing/pdfs/commercial/2019_preliminary_salmon_summary_table.pdf
https://www.adfg.alaska.gov/static/fishing/pdfs/commercial/2018_preliminary_salmon_summary_table.pdf

¹⁷ https://www.adfg.alaska.gov/static/fishing/pdfs/commercial/2020_preliminary_salmon_summary_table.pdf
https://www.adfg.alaska.gov/Static/fishing/pdfs/commercial/2021_preliminary_salmon_summary_table.pdf
https://www.adfg.alaska.gov/static/fishing/pdfs/commercial/2019_preliminary_salmon_summary_table.pdf
https://www.adfg.alaska.gov/static/fishing/pdfs/commercial/2018_preliminary_salmon_summary_table.pdf

¹⁸ Westley, P.A.H. 2020. Documentation of en route mortality of summer chum salmon in the Koyukuk River, Alaska and its potential linkage to the heatwave of 2019. *Ecology and Evolution* 2020; 10:10296-10304.

¹⁹ NPFMC. 2022.

harvests between 2015 and 2019 reached nearly a million fish in combined commercial and subsistence fisheries in some years.²⁰

In 2020 Yukon River and western Alaska chum returns collapsed with dramatic run declines and low escapements, followed by unprecedented low escapements in 2021.²¹ In 2020 only half the escapement goals were met; in 2021, only 2 of 14 chum salmon escapement goals were met.²² The 2021 record low run size was roughly a third as large as the previous record low.²³ The 2020 Yukon summer chum commercial harvest of roughly 14,000 fish was 97 percent below recent average harvests.²⁴ The 2021 Kuskokwim chum run was the lowest on record and likely 95 percent below 20 year averages.²⁵ 2020 Yukon River subsistence harvests dropped by over two-thirds to under 50,000 fish, failing to meet subsistence standards.²⁶

Proposed purpose and need statements from pollock industry Committee members identify environmental factors such as changes in the freshwater and marine environments and the high proportion of bycaught hatchery chum as primary considerations in their proposed purpose and need statements. While there are multiple environmental factors and more than half of the bycaught chum do originate in Asia, substantial portions of the bycatch are from western Alaska.²⁷ Between 2011-2021, average bycatch of western Alaska chum and Yukon River chum was roughly fifty-thousand fish.²⁸

The National Standard 9 guidelines require decisionmakers to adhere to the precautionary approach when faced with uncertainty regarding, among other things, population effects for the bycatch species, changes in the economic, social, or cultural value of fishing activities, and social effects.²⁹ There are significant uncertainties regarding Bering Sea salmon and salmon fishing communities in general that warrant a precautionary approach aimed at limiting bycatch well below a threshold at which there is a risk of contributing to further decline.³⁰ The precautionary approach provides that “[t]he absence of scientific information should not be used as a reason for postponing or failing to take measures to conserve ... non-target species and their environment.”³¹ The rationale reflects the understanding that scientific certainty

²⁰ Joint Technical Committee of the Yukon River U.S./Canada Panel. 2021; Appx. B3, B4; See also Alaska Department of Fish and Game. 2017. 2017 Preliminary Yukon River Summer Season Summary, Appx C.

²¹ Siddon, E. 2021. Ecosystem Status Report 2021: Eastern Bering Sea, Stock Assessment and Fishery Evaluation Report at 10, 26. North Pacific Fishery Management Council, 1007 West Third, Suite 400, Anchorage, AK 99501; Westley, P.A.H. 2020; NPFMC. 2022. Discussion Paper, Table 4-5.

²² NPFMC. 2022. Tables 4-1, 4-2

²³ NPFMC. 2022. Table 4-5.

²⁴ JTC. 2021. Appx. A 2 & B3.

²⁵ Kawerak, Inc., Association of Village Council Presidents, the Kuskokwim River Inter-Tribal Fish Commission, the Yukon River Inter-Tribal Fish Commission, The Aleut Community of St. Paul and Bering Sea Elders Group. 2021. Request for emergency action to eliminate Chinook salmon bycatch and cap chum salmon bycatch in the Bering Sea pollock trawl fishery in the 2022 season. Letter to Honorable Gina Raimondo, Secretary of Commerce. December 21, 2021. N. 19: Division of Fisheries, Alaska Department of Fish & Game, Advisory Announcement: Kuskokwim River Salmon Fishery Announcement #14 2021 Preliminary Kuskokwim Area Season Summary (Nov. 4, 2021) available at <https://www.adfg.alaska.gov/static/applications/defnewsrelease/1345527186.pdf>;

²⁶ Joint Technical Committee of the Yukon River U.S./Canada Panel. 2021. Appendix B3 & B4.

²⁷ Kondzela, C.M. et al. 2021 at Table 3.

²⁸ NPFMC. 2022. Discussion Paper D1 Chum Salmon Bycatch; Barry, P., C. Kondzela, J. Whittle, J. Watson, K. Karpan, K. D'Amelio & W. Larson. 2022.

²⁹ 50 C.F.R. § 600.350(d)(3)(i), (ii). See also NPFMC. 2020. Fishery Management Plan for Groundfish of the Bering Sea and Aleutian Islands Management Area at 4-5. Anchorage, AK. November 2020.

³⁰ Magnuson-Stevens Act Provisions, National Standard Guidelines, Final Rule. 63 Fed. Reg. 24,212, 24,226 (May 1, 1998).

³¹ *Id.* at 24,227. The Bering Sea Fishery Management Plan policy also incorporates a precautionary approach. See NPFMC. 2020. Fishery Management Plan for Groundfish of the Bering Sea and Aleutian Islands Management Area at 4-5. Anchorage, AK. November 2020 (directing consideration and adoption of “measures that accelerate the Council’s precautionary, adaptive management approach ... and where appropriate and practicable, increase habitat protection and bycatch constraints.” The FMP’s

often arrives too late to design effective policy responses to environmental concerns. The precautionary approach weighs heavily in favor of moving forward with alternatives that include chum salmon bycatch limits.

Conclusion

The Boat Company requests that the Committee’s recommendations include multiple alternatives that develop chum salmon bycatch limits, whether based on abundance, history, or spatial/temporal triggers. The Boat Company also requests that the Committee’s purpose and need statement provide detail about chum salmon fisheries and current conditions as stated in the draft proposed by Committee members representing salmon fishing communities.

Thank you,

Paul Olson
The Boat Company
Alaska Conservation and Permitting Director

precautionary approach specifically aims at providing “socially and economically viable fisheries for the well-being of fishing communities”).