November 20, 2024

Board of Fisheries
Prince William Sound Finfish Meeting
December 10 – 16, 2024
Cordova, Alaska

Proposal 78, 5 AAC 24.370 Prince William Sound Management and Salmon Enhancement Allocation Plan and,

Proposal 156, 5 AAC 33.364 Southeastern Alaska Area Enhanced Salmon Allocation Management Plan

Dear Chair Carlson-Van Dort and Board Members:

We would like to express our opposition to Proposal 78 and Proposal 156. These are nearly identical proposals to Proposal 43 heard less than nine months ago at the Upper Cook Inlet (UCI) meeting in Anchorage, a proposal that failed on a 1:6 vote. The lack of new information or new evidence to support proposal 43's premise that hatchery produced pink and chum salmon cause deleterious effects on Bering Sea salmon stocks (i.e., Yukon and Kuskokwim), further underscores the wisdom of maintaining the Board's previous decision. The exhaustive record from the most recent UCI and Lower Cook Inlet (LCI) meetings remains relevant and should continue to guide your deliberations for your upcoming meetings. Research published after the UCI meeting by Sovmov et.al. (2024)[1] provides additional evidence that temperature and climate show a positive correlation among pink, sockeye, and chum biomass, rising and falling together. Research by Yasumiishi et.al. (2024)[2] in an empirical marine study finds a positive correlation with juvenile sockeye and juvenile pink salmon during their first year in the Eastern Bering Sea.

[1] Sovmov, A., et.al. 2024 Comparison of Juvenile Pacific Salmon abundance, distribution, and body condition between Western and Eastern Bering Sea using spatiotemporal models. Fisheries Research Journal

[2] Yasumiishi, E. 2024 Biological and environmental covariates of juvenile sockeye salmon distribution and abundance in the southeastern Bering Sea, 2002–2018. Ecology and Evolution

These above papers will be summarized and added to an updated Critique of Synthesis Papers, originally submitted as PC 4 at the UCI meeting.[3]

When considering these proposals, it is important to acknowledge the limitations of the Board's authority as framed by **AS 16.10.440(b)**[4] which the proposer points out in his opening statements[5]. Hatchery egg permitting authority resides with the commissioner of Fish and Game, a fact emphasized by numerous stakeholders over the past two decades, including the Ashburn & Mason opinion[6], fishermen groups, PNP operators and at least one legislative attorney present at the original drafting of this administrative code. It appears the author of proposals 78 & 156 struggles to find a relevant regulation to cite for his proposal, settling on **5 AAC 24.370** for Prince William Sound (PWS)[7], and **5 AAC 33.364** for Southeast[8], regulations that do not include or even pertain to Valdez Fishery Development Association (VFDA) referenced in proposal 78. Furthermore, these regulations lack any reference to permitted salmon egg capacity. The cited regulations delineate the allocation of enhanced salmon among fishing gear types in Special Harvest (SHA) and Terminal Harvest Areas (THA). These enhanced salmon regulations codify 'fair' harvest proportionality that was vetted by Board of Fish directed committee work and endorsed by PNP boards of directors prior to Board of Fish adoption in the 1990s.

[3] PC 4 Upper Cook Inlet meeting, Anchorage Feb 23 – March 5, 2024. Critique of Synthesis Papers, pg. 13 – pg. 36.
[4] Alaska Statute 16.10.440(b) The board of fisheries may not adopt any regulations or take any action regarding the issuance or denial of any permits required in AS 16.10.400.
[5] Proposals 78 & 156 paragraph five
[6] Ashburn & Mason letter to the Board June 9, 2018
[7] Private Nonprofit Salmon Hatcheries, Chapter 24 PWS Management and Salmon Allocation Plan Article 3 Salmon Fishery
[8] Private Nonprofit Salmon Hatcheries, Chapter 33 SE Alaska area, Article 3 Salmon Fishery

The Board of Fish was fully immersed in regulation **5 AAC 24.370** encompassing Prince William Sound Aquaculture Corporation (PWSAC) enhanced salmon, a multiple years-long process, debated and agreed upon by gear groups, the PWSAC board of directors and then adopted by the Board of Fish as the Prince William Sound Management and Salmon Enhancement Allocation Plan, which begins:

> "5 AAC 24.370 (a) The purpose of the management and allocation plan contained in this section is to provide a fair and reasonable allocation of the harvest of enhanced salmon among the drift gillnet, seine, and set gillnet commercial fisheries, and to reduce conflicts between these user groups. It is the intent of the Board of Fisheries (board) to allocate enhanced salmon stocks in the Prince William Sound Area to maintain the long-term historic balance between competing commercial users that has existed since statehood, while acknowledging developments in the fisheries that have occurred since this plan went into effect in 1991."

5 AAC 33.364 for Southeast went through a similar process with the Board of Fish in the early 1990s; the Board adopted **Finding #94-02-FB** consisting of eight pages in the Private Nonprofit Salmon Hatcheries regulation book. The first of the fourteen findings of the task force was "1 The primary goal of the Southeast Alaska salmon enhancement program is to provide additional fishing opportunities and revenue to traditional common property fisheries." The remaining thirteen findings and rationales do not refer to permitted eggs, although when attempting to rectify allocation imbalances one of the tools in Finding 13. (2) is to add "new enhanced salmon production".

To reiterate, the allocation plans for PWSAC and Southeast are *regulations* adopted by the Board of Fish, the permitting of eggs resides within the *administrative code* under the commissioner of Fish and Game.

Proposals 78 & 156 incorrectly state there are no other venues to address hatchery issues. However, it is important to recognize that there are numerous platforms open to public involvement beyond the Board's proceedings, which by anyone's standard has been voluminous. However, these additional public forums include Regional Planning Team meetings in every region of Alaska, updates to the Salmon Management Plan which entail several years of public meetings, the Alaska Hatchery-Wild Interaction research meetings and website[9], all PNP board meetings, and the Board of Fish's own Hatchery Committee[10], all of which is to emphasize the commitment to a broader public dialogue on this topic. It must be pointed out that other than the Board of Fish, the author of the proposal has not advantaged himself of these opportunities.

Proposals 78 & 156 in paragraph 6 of each *provide* the answer to the board for which he *asks*:

> "For several years, different groups have been submitting proposals for hatchery egg take reduction. All those proposals **have been refused on the basis of lack of conclusive evidence** (*emphasis added*) that there is a correlative relationship to detrimental impacts of hatchery production in wild stocks through competition for forage food and straying."

The evidence which the author states in his words is "*correlative",* and not cause and effect or empirical. At the March 2024 UCI meeting extensive scientific evidence published

[9] https://www.adfg.alaska.gov/index.cfm?adfg=fishingHatcheriesResearch.current_research
[10] https://www.adfg.alaska.gov/index.cfm?adfg=fisheriesboard.meetinginfo&date=10-14-2023&meeting=anchorage

by NOAA scientists, International Year of the Salmon Japanese, Russian, Korean, and North American scientists, ADF&G's own Salmon Ocean Ecology Program scientists, and independent researchers was presented. These primarily empirical studies pointed to why Yukon River chum experienced declining survival in ocean years 2016 to 2019. These extreme warm ocean years in the Bering Sea and North Pacific Ocean affected marine survival as demonstrated by poor Yukon River adult returns in 2020 and 2021. As the board well knows, this is only a tiny sample of what was presented at the UCI meeting in March 2024.

The claims made by proposals 78 & 156 regarding the integrity and rigor of the scientific literature presented to the Board are misguided. Peer-reviewed research has been shared, presenting a dual view—supporting and refuting the proposer's position. However, what is critical is that our attention must remain on empirical findings that establish clear links between cause and effect rather than speculative correlations which can and have been misleading.

To provide some context on this issue, at the UCI meeting the proposer of 78 and 156 testified fifteen minutes to his proposal 43,[11] exclaiming his pique for the loss of his chum salmon roe markets on the Yukon River thirty years ago. In his final minutes he got around to the recent speculative research papers. These synthesis papers were addressed in two

[11]UCI Board of Fish meeting testimony February 26, 2024, 11:01 a.m. to 11:25 a.m. https://www.adfg.alaska.gov/static/regulations/regprocess/fisheriesboard/swf/2023-2024/uci-2/index.html?mediaBasePath=/Meeting%2002-26-24%20%282%29%20%28Feb-26-24%204-25-18%20PM%29

documents: PC 4[12] and PC 174[13] at the UCI meeting and will be re-submitted for the Cordova and Ketchikan meetings.

What a 25% reduction in chum and pink salmon permitted egg production would mean

The financial foundation of the PNP hatchery system is built on pink and chum production, primarily chum salmon in Southeast hatcheries and pinks and chum in the South Central and Kodiak regions. Pinks and chum have short-term hatchery freshwater residence and are relatively easy to raise compared to coho, chinook, and sockeye, and spend most of their lifecycle in the ocean. Like most salmon, ninety-six percent of the fry and rearing fish are consumed by ocean predators, the majority of the mortality within the first forty-five days of ocean life[14]. The one to four percent that survive to the adult stage provide for important local fisheries, cost recovery harvest revenue, and broodstock to perpetuate the program.

Income for the PNP programs flow from two major sources, a 2% or 3% enhancement tax (SET tax) that fishermen pay on wild and enhanced salmon, and the sale of salmon harvested in the terminal areas adjacent to the hatchery facility. Approximately twenty percent of the revenue derives from the SET tax, while most of the revenue (~75%) is from the sale of pinks and chum. Smaller revenue streams from the other three salmon species,

[12] Critique of Synthesis Papers https://www.adfg.alaska.gov/static/regulations/regprocess/fisheriesboard/pdfs/2023-2024/uci/pc1-50.pdf
[13]High Ocean Biomass https://www.adfg.alaska.gov/static/regulations/regprocess/fisheriesboard/pdfs/2023-2024/uci/pc151-200.pdf
[14] Parker, R.R. 1968. Marine mortality schedules of pink salmon of the Bella Coola River, Central British Columbia

grants, and Pacific Salmon Treaty projects make up the remainder. Each organization is unique, so these figures and proportions are approximations.

Enhancement programs that benefit sport charter, personal use, subsistence, and local communities usually consist of coho, chinook, or sockeye, and are paid for by revenue derived from chum and pink salmon cost recovery. Capital improvements and loan repayments to the State of Alaska are also primarily from the sale of pink and chum salmon to processors.

Cutting production of pink and chum salmon would significantly reduce these revenue streams making it difficult, if not impossible, to meet State of Alaska Fisheries Enhancement Revolving Loan Program repayment obligations, particularly in years when pink and chum prices bottom out. In 2023 and 2024, prices were so low that some hatchery programs failed to make corporate cost recovery goals. Reduction of revenue would also necessitate reducing chinook, sockeye and coho programs due to their significantly lower return on investment, due to their high dependence of funding from pink and chum cost recovery revenues. In addition to diminishing the ability to repay State of Alaska loans, PNPs in Southeast may have difficulty meeting their production obligations to fishermen; programs where capital improvements were covered by Pacific Salmon Treaty monies, and finally, to be realistic some PNPs will likely decline into bankruptcy.

Economically, a 25% reduction would be devastating to communities from Ketchikan to Cordova to Kodiak. Coastal communities are dependent on local fisheries and fish

processing plants for fisheries related tax revenues, jobs, and local support businesses. The speculative benefits that the proposer hopes for is a gamble for an outcome that empirical science suggests will not bear out. To that point, PNP operators submitted a paper on High Ocean Biomass[15] PC 174 at the UCI meeting that states that all salmon are estimated to make up 4-7% of the nekton biomass (all swimming animals and fishes). All pink salmon which the vast majority if wild would thus compose 1-2% of this biomass, and hatchery pink salmon < 0.5%., a proportion that has not been shown to affect local or broad trophic conditions in the Bering Sea or North Pacific Ocean.

No new hatchery permitted pink and chum egg production, 2019

The perception that Alaska hatchery chum and pink production continues to increase is simply not true. The Fairbanks AC raised this issue at the UCI meeting and therefore needs explanation and clarification. The PNP hatchery operators met with the commissioner of the Department of Fish and Game in 2019 to discuss limiting the number of pink and chum salmon eggs to existing permitted capacities approved by the department. The operators agreed at the meeting in 2019 that no new increases to hatchery operating permits for pink and/or chum salmon eggs would be applied for or granted by the department. The commissioner was clear at that time that no additional requests for increased pink and/or chum permitted capacity would be approved until further research on the effects of hatchery production were concluded. Since 2019, actual chum eggs taken at hatcheries in Southeast have remained at, or below permitted capacity approved by the commissioner. At times broodstock shortages can lead to

[15] Wertheimer et.al. 2018 High Ocean Biomass of Salmon and Trends in Alaska Salmon in a Changing Climate, PC174

missing the egg goal. Between 2019 and 2024 brood stock shortages prevented operators from achieving their permitted capacity, explaining the appearance of an increase after the agreement with the commissioner. Most importantly, there has been no new pink or chum egg permitted capacity requested or approved for hatchery production since the agreement in 2019.[16] PNP hatcheries may not exceed their permitted capacity (see graph below).

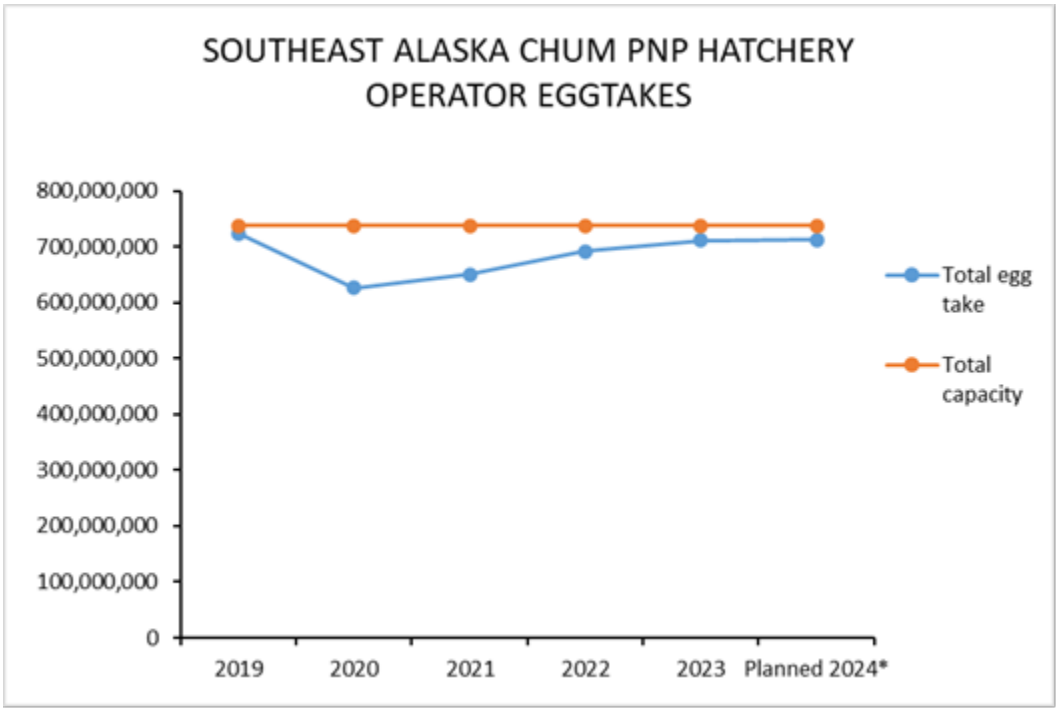

Figure 1. Southeast Alaska all hatchery facilities aggregated permitted chum egg capacity from 2019 to 2024, except Annette Island Indian Reservation (Tamgas Creek Hatchery). Note stability in permitted capacity (dotted orange line at top) since 2019 and egg take numbers (dotted blue line) which are consistently below the maximum permit number.

[16] Alaska salmon fisheries enhancement annual report, 2023. https://www.adfg.alaska.gov/FedAidPDFs/RIR.5J.2024.05.pdf

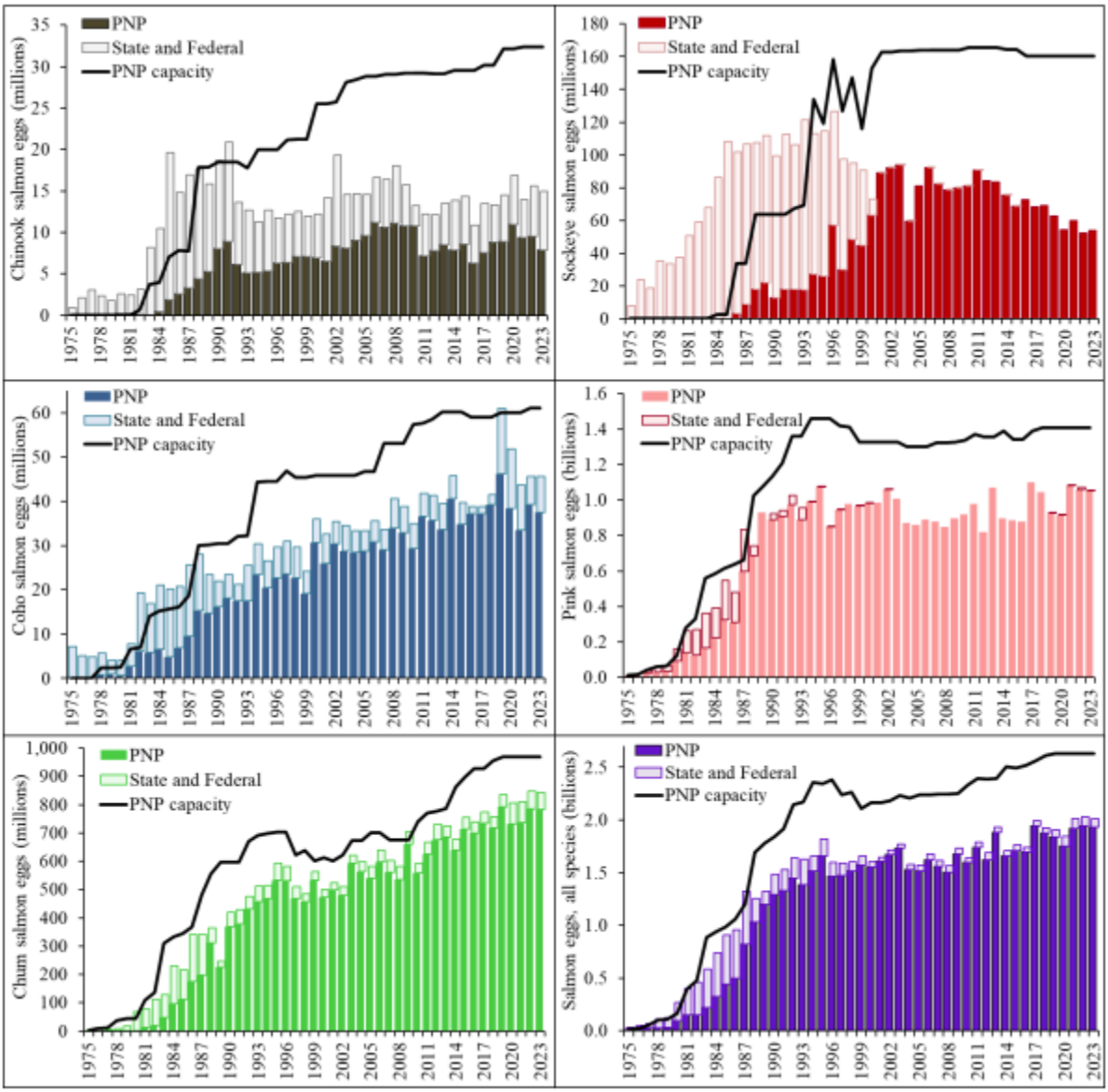

Figure 2. Graphic from Alaska salmon fisheries enhancement annual report, 2023 (pg. 24 figure 8). Bars denote hatchery salmon eggs collected by PNP, state, and federal hatcheries, and PNP hatchery permitted capacity (black line) by species and total, 1975–2023. Difference between bars and capacities is due to several factors: egg survival is less than 100% and IHNV incidence requires destroying sockeye eggs (primary causes), and broodstock availability,

Thank you for your consideration of our concerns regarding proposals 78 and 156. We believe it is essential to uphold the scientific rigor and integrity that underpin responsible management of our salmon resources. We look forward to speaking further with the Board during the upcoming meetings.

Sincerely

Alaska's PNP Salmon Hatchery Operators

Kodiak Regional Aquaculture Association
Tina Fairbanks, Executive Director

Cook Inlet Aquaculture Association
Dean Day, Executive Director

Prince William Sound Aquaculture Co.
Geoff Clark, General Manager/CEO

Douglas Island Pink & Chum
Katie Harms, Executive Director

Valdez Fisheries Development Association
Mike Wells, Executive Director

Northern Southeast Regional Aquaculture Association
Scott Wagner, General Manager

Southern Southeast Regional Aquaculture Association
Susan Doherty, General Manager