

PROPOSAL 170

5 AAC 40.XXX New Regulation.

Reduce the permitted egg take level of each hatchery permit containing pink and chum salmon by 25% of the current permitted capacity for those species, as follows:

What is the issue you would like the board to address and why? Currently, 30 salmon hatcheries are operating in the state. Twenty-seven facilities are operated by private nonprofit (PNP) corporations, which are funded primarily from the sale of a portion of hatchery returns. Of these, 11 are state owned and operated by PNPs on the state's behalf at no cost to the state. Non-PNP operated hatcheries include two sport fish hatcheries operated by the state and one hatchery operated by the Metlakatla Indian Community under federal regulation.ⁱ Most of these hatcheries have been operating since the Alaska Hatchery Act was adopted in 1974, authorizing private nonprofit corporations to own and operate salmon hatcheries to supplement wild salmon stocks and support fisheries.

The regulatory intent in the Act was to also protect wild salmon stocks. The Alaska Hatchery Act establishing the PNP Hatchery system was adopted in 1974. "Section 1. INTENT. It is the intent of this Act to authorize the private ownership of salmon hatcheries by qualified nonprofit corporations for the purpose of contributing, by artificial means, to the rehabilitation of the state's depleted and depressed salmon fishery. The program shall be operated without adversely affecting natural stocks of fish in the state and under a policy of management which allows reasonable segregation of returning hatchery-reared salmon from naturally occurring stocks." However, during the 50 years since the implementation of PNP hatcheries, there has been virtually no environmental review or cost-benefit analysis of the impacts of hatcheries and very limited oversight by Alaska Board of Fisheries.

State of Alaska law (Policy for management of sustainable salmon fisheries – 5 AAC 39.222) mandates that hatcheries shall operate without adversely affecting natural stocks of fish.

Assessing that impact is the Board of Fish responsibility. However, except for a 1977 authority given to the Board of Fisheries for salmon broodstock releases under a hatchery permit, there was no annual Board oversight on hatcheries between 1974 and 1999. In 1999, the first Board of Fish hatchery committee was established. The committee did not meet until 2001 but only for two years to establish protocols. Between 2003-2018 there were no Board hatchery meetings. In 2018, the Board adopted the Committee of the Whole (entire Board) which met for a full day since, except 2021 due to Covid. This means that for most of the 49 years of the PNP hatchery program, there was no public review or Board of Fish oversight.

With the severe and escalating decline of wild salmon stocks in both average size and abundance, there is ample peer-reviewed scientific evidence that hatchery salmon negatively impact wild salmon in many significant ways. For several years, different groups have been submitting proposals for hatchery egg take reduction as one of the responses to protect wild salmon. All those proposals were refused on the basis of lack of conclusive evidence that there is a correlative relationship to detrimental impacts of hatchery production in wild stocks through competition for forage food and straying.

However, there is over-whelming evidence of negative impacts with very little corresponding evidence to the opposite. “Hatcheries have long produced salmonids for fisheries and mitigation, though their widespread use is increasingly controversial because of potential impacts to wild salmonids. We conducted a global literature search of peer-reviewed publications (1970–2021) evaluating how hatchery salmonids affected wild salmonids, developed a publicly available database, and synthesized results. Two hundred six publications met our search criteria, with 83% reporting adverse/minimally adverse effects on wild salmonids. Adverse genetic effects on diversity were most common, followed by effects on productivity and abundance via ecological and genetic processes. Few publications (3%) reported beneficial hatchery effects on wild salmonids, nearly all from intensive recovery programs used to bolster highly depleted wild populations. Our review suggests hatcheries commonly have adverse impacts on wild salmonids in freshwater and marine environments.”ⁱⁱⁱ Since this synthesis was published in 2023, even more hatchery-impact papers have emerged.

While the Alaska Board of Fisheries has limited authority to provide injunctive relief on this issue, they can reduce hatchery egg take permitting levels. This is the only venue open to public proposals and the only recourse for the general public to debate or contest hatchery practices.

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain.

PROPOSED BY: Fairbanks Fish and Game Advisory Committee Jeff Lucas, Chair
(EF-F26-137)

PROPOSAL 171

5 AAC 40. XXX New Regulation.

Amend Prince William Sound hatchery permits to reduce pink salmon egg take capacity, as follows:

Require changes in Prince William Sound Pink Salmon hatchery production sufficient to reduce straying into Lower Cook Inlet streams to levels specified in the Prince William Sound/Copper River Comprehensive Salmon Plan.

What is the issue you would like the board to address and why? High levels of straying by Prince William Sound hatchery pink salmon have been identified in Lower Cook Inlet streams (Otis et al. 2018. Observations of Pink Salmon hatchery proportions in selected Lower Cook Inlet escapements, 2016-2017. Alaska Department of Fish and Game Special Publication 18-11). PWS hatchery contributions averaged 22% in 17 LCI streams sampled in 2014-2018. Combined contributions of LCI and PWS hatchery fish averaged 34%.

High stray rates reduce wild pink salmon productivity due to low relative reproductive success of hatchery fish recently identified by the Alaska Hatchery Research Project. High stray rates violate criteria in the *Prince William Sound/Copper River Comprehensive Salmon Plan* specifying that the proportion of hatchery salmon straying into wild-stock streams must remain below 2% of the wild-stock escapement over the long term.

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain. Not applicable

PROPOSED BY: Kenai River Sportfishing Association

(EF-F26-009)

PROPOSAL 172

5 AAC 40.XXX New Regulation.

Board generated regulation that places a moratorium on pink and chum hatchery production.

Adopt a Hatchery salmon policy establishing a moratorium on any increase in egg take of Pink Salmon and Chum Salmon for the purposes of artificial production in the waters of Alaska relative to permitted levels as of 2025.

The moratorium would remain in effect until repeal or revision by the Board based on considerations that might include:

- 1) resolution of uncertainty in the science regarding hatchery-wild effects,
- 2) comprehensive hatchery policy guidelines for acceptable levels of hatchery straying; hatchery sanctuary areas for protection of genetic legacy salmon populations; criteria for identification and evaluation of remote hatchery release sites; criteria for new releases of hatchery salmon in areas where they do not currently occur; escapement goal assessments in enhanced wild salmon population; and ecosystem interactions with hatchery fish.
- 3) the availability of updated Regional Comprehensive plans that reflect current programs and comprehensive hatchery policies.
- 4) results of any independent scientific review of Alaska hatchery research findings, policies and programs that might occur.

A moratorium would call a time out on any further hatchery expansion in light of significant concerns and uncertainty in negative effects of current programs. This pause would allow time for the Alaska hatchery study time to complete its work and for current information to be incorporated into policy and practice.

This action endorses and codifies an informal policy decision by the Commissioner to not permit increased egg take for pink salmon hatchery production as reported in RC240 of the 2024 Upper Cook Inlet Board of Fisheries meeting. Without Board action, this informal policy could be set aside by a future Commissioner without regard for the current scientific information on hatchery effects.

This action is within Board authority as per AAC 16.05.251 (9) “prohibiting and regulating the live capture, possession, transport, or release of native or exotic fish or their eggs” and AAC 16.10.440 (b) “the Board of Fisheries may, after the issuance of a permit by the commissioner, amend by regulation...the terms of the permit relating to the source and number of salmon eggs...”

What is the issue you would like the board to address and why? New information produced by the Alaska Hatchery Research Project and recent publications in the peer-reviewed scientific literature have identified a high potential for significant negative impacts of Alaska salmon hatchery programs on wild salmon stocks and the marine ecosystem. Hatchery Pink and Chum salmon have been observed to stray widely into Prince William Sound, Southeast Alaska and Lower Cook Inlet wild salmon streams. Wild Pink Salmon productivity may be reduced by low relative reproductive success of hatchery fish.

Significant changes in marine ecosystems have also been associated with large numbers of Pink Salmon including hatchery fish. Ecosystem impacts of large-scale hatchery in Alaska may have contributed to widespread declines in productivity of Chinook and Chum salmon in many areas of Alaska.

The *Policy for the Management of Sustainable Salmon Fisheries* directs that wild salmon stocks and fisheries on those stocks should be protected from adverse impacts from artificial propagation and enhancement efforts [5 AAC 39.222(c)(1)(D)] and artificial propagation shall be managed conservatively with a precautionary approach in the face of uncertainty [5 AAC 39.222(c)(5)(A)].

While enhancement activities are guided by a variety of Department policies, guidelines and processes, many of these have not been updated based on current scientific information and a comprehensive salmon hatchery policy does not exist. Regional Comprehensive Salmon Enhancement Plans [5 AAC 40.340] are out of date and current programs may be inconsistent with the available plans.

Did you develop your proposal in coordination with others, or with your local Fish and Game Advisory Committee? Explain. Not applicable

PROPOSED BY: Kenai River Sportfishing Association (EF-F26-007)
