

Fairbanks Fish & Game Advisory Committee

Interior Region Fish & Game Advisory Committees

Jeff Lucas
Chairman
1030 Daisy Drive
Fairbanks, Alaska 99712

Central	Middle Nenana River
Delta	Middle Yukon River
Eagle	Minto-Nenana
Fairbanks	Ruby
GASH	Stony Holitna
Koyukuk River	Tanana-Rampart-Manley
Lake Minchumina	Upper Tanana Fortymile
McGrath	Yukon Flats

Date: April 14, 2025

To: Members, Alaska State Senate
Members, Alaska House of Representatives

Re: 2025 Confirmation of appointments to the Alaska Board of Game
and Alaska Board of Fisheries

Dear Members, Alaska State Legislature,

The Fairbanks Fish & Game Advisory Committee (FAC) is one of 84 active committees in Alaska created by the Legislature and the Joint Board of Fisheries and Board of Game to provide the Boards with recommendations regarding fish and game issues. We are a group of citizens elected by our peers at a yearly meeting which is open to the public. Our meetings occur each 2nd Wednesday of the month and are publicly noticed on the State of Alaska website. We regularly encourage communications with other Interior advisory committees.

The FAC met on April 9, 2025, with a full quorum, in unanimous support of confirmation of Al Barrette to the Alaska Board of Game (BOG) and Olivia Irwin to the Alaska Board of Fisheries (BOF) and to oppose the re-appointment of Tom Carpenter to the Board of Fish.

Mr. Barrette has served the Interior well on the Board of Game for several years. He regularly consults with both the FAC and other Interior advisory committees. He has shown to be knowledgeable about game issues and dedicated to the consultation and research needed. He is always helpful in answering questions from the FAC. We have confidence in his ability to continue to represent Alaska game issues for the benefit of game resources and Alaskan users.

Ms. Irwin brings a long history of involvement in fisheries issues that affect the entire AYK (Arctic-Yukon-Kuskokwim.) As a co-chair of the Minto-Nenana Advisory Committee she has helped revitalize the participation of area residents. As a new member to the Yukon River Panel, she is deeply immersed in the most recent critical issues relating to Canadian bound Chinook and chum stocks. She is well versed in both state and federal salmon issues. She often attends the FAC Fisheries Subcommittee and full FAC meetings, engaging in extensive dialogues about each subject while also illustrating that she is focused on outcomes that benefit wild salmon without partiality to sectors. She is currently studying the newest Alaska Fish and Game Regulations book in a way that is impressing veteran committee members.

In contrast, the FAC has some critical concerns about the re-appointment of Tom Carpenter (Cordova) to the Board of Fisheries. Mr. Carpenter, as the past president of the largest aquaculture association (PWSAC) in Alaska producing the greatest number of pink salmon, has not shown an inclination to apply precautionary principles to hatchery production. Instead, as a Board of Fisheries member, Mr. Carpenter has repeatedly stated his reluctance to consider peer-reviewed science¹ in relation to negative hatchery impacts on wild salmon stocks and, further, has repeatedly discouraged a dialogue on the subject.

This is primarily a conservation issue. All salmon fisheries in the state of Alaska (with the exception of pink salmon) are in varying states of crisis for either/both run abundance and declining average size.² The over-production of pink salmon from both Alaska and Russian hatcheries is considered to be one of the primary culprits in competition for forage food in the ocean. In addition, hatchery stock straying into wild salmon producing streams potentially weakens wild stock DNA³ and defers attention away from wild stock management.

The AYK region of Alaska is particularly in crisis with the historic crashes - of up to 90% - of its summer and fall chum and coho salmon in 2021 and the continuing severe decline in size and abundance of Chinook salmon. This has been a complete and historic loss to subsistence, commercial, sports and personal use harvest of those salmon species to Yukon River stakeholders in particular. The predictions for Yukon River salmon abundance in 2025 indicate an even greater loss, continuing the concerns over extirpation of some discrete stocks.

The Fairbanks Fish and Game Advisory Committee deeply appreciates your consideration of these comments.

Sincerely,



Jeff Lucas, Chairman
Fairbanks Fish & Game Advisory Committee

¹ McMillan, J. R., Morrison, B., Chambers, N., Ruggerone, G., Bernatchez, L., Stanford, J., & Neville, H. (2023). **A global synthesis of peer-reviewed research on the effects of hatchery salmonids on wild salmonids.** *Fisheries Management and Ecology*, 30(5), 446-463. <https://doi.org/10.1111/fme.12643>

Abstract: 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. Future research on less studied effects—such as epigenetics— could improve knowledge and management of the full extent of hatchery impacts.

² Oke, K. B., Cunningham, C. J., Westley, P. A. H., Baskett, M. L., Carlson, S. M., Clark, J., ... & Palkovacs, E. P. (2020). **Recent declines in salmon body size impact ecosystems and fisheries.** *Nature communications*, 11(1), 4155. <https://doi.org/10.1038/s41467-020-17726-z>.

Abstract: Declines in animal body sizes are widely reported and likely impact ecological interactions and ecosystem services. For harvested species subject to multiple stressors, limited understanding of the causes and consequences of size declines impedes prediction, prevention, and mitigation. We highlight widespread declines in Pacific salmon size based on 60 years of measurements from 12.5 million fish across Alaska, the last largely pristine North American salmon-producing region. Declines in salmon size, primarily resulting from shifting age structure, are associated with climate and competition at sea. Compared to salmon maturing before 1990, the reduced size of adult salmon after 2010 has potentially resulted in substantial losses to ecosystems and people; for Chinook salmon we estimated average per-fish reductions in egg production (–16%), nutrient transport (–28%), fisheries value (–21%), and meals for rural people (–26%). Downsizing of organisms is a global concern, and current trends may pose substantial risks for nature and people.

³ Christie, M. R., Marine, M. L., Fox, S. E., French, R. A., & Blouin, M. S. (2016). **A single generation of domestication heritably alters the expression of hundreds of genes.** *Nature communications*, 7(1), 10676. <https://doi.org/10.1038/ncomms10676>.

Abstract: The genetic underpinnings associated with the earliest stages of plant and animal domestication have remained elusive. Because a genome-wide response to selection can take many generations, the earliest detectable changes associated with domestication may first manifest as heritable changes to global patterns of gene expression. Here, to test this hypothesis, we measured differential gene expression in the offspring of wild and first-generation hatchery steelhead trout (*Oncorhynchus mykiss*) reared in a common environment. Remarkably, we find that there were 723 genes differentially expressed between the two groups of offspring. Reciprocal crosses reveal that the differentially expressed genes could not be explained by maternal effects or by chance differences in the background levels of gene expression among unrelated families. Gene-enrichment analyses reveal that adaptation to the novel hatchery environment involved responses in wound healing, immunity and metabolism. These findings suggest that the earliest stages of domestication may involve adaptation to highly crowded conditions.