



NORTHERN SOUTHEAST REGIONAL AQUACULTURE ASSOCIATION, INC.

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December 17, 2024

Alaska Board of Fisheries
PO Box 115526
Juneau, AK 99811

Re: Proposal 156

Dear Members of the Alaska Board of Fisheries,

Proposal 156

We respectfully request that the BOF oppose Proposal 156 due to the lack of scientific evidence to support the desired outcome of improving wild salmon stocks, and consequential economic burden to all fishery user groups and Southeast Alaskan communities that a 25% reduction in enhancement fish releases would impose.

The Alaska State Legislature had tremendous forethought in 1974 whilst drafting the Private Nonprofit Hatchery statutes to remediate local depressed salmon stocks. By establishing an array of guardrails to ensure that Alaska did not make the same historic salmon mismanagement mistakes that Washington and Oregon have, salmon enhancement programs in Alaska can and do operate in alignment with principles that prioritize conservation and protection of wild fish ahead of commercial fisheries supplementation and economic anthropological benefit.

The *Comprehensive Salmon Enhancement Plan for Southeast Alaska* continues to reinforce those safeguards today. Statutes such as a Genetics Policy, Fish Health and Disease Policy, avoidance of mixed-stock fisheries, and identification of enhanced fish through marking all ensure hatchery fish are produced in a responsible, ethical fashion that will not impose trophic competition or genetic harm upon wild stocks. Hatchery permit requests are rightfully heavily scrutinized by ADFG Divisions of Commercial and Sport Fisheries and the Joint Northern/Southern Regional Planning Teams to ensure wild fish stocks remain protected, and the public maintains the right to participate in the process.

The economic effect of a cut to enhanced salmon production and resultant loss of common property harvest opportunity will unquestionably be felt statewide at every level of the seafood producing market. Furthermore, this loss will come to commercial salmon permit holders during a period of record low fish prices and uncertain global markets. Since 1980, the commercial ex-vessel value contributed to the Southeast Alaska economy from NSRAA alone exceeds \$372,000,000 and has alleviated harvest pressure off local wild salmon stocks by providing new common property harvest opportunities that otherwise did not exist. This proposal will undoubtedly result in an increase in



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harvest of wild fish, thereby undermining the objectives of the State of Alaska to protect wild fish populations.

As one example of our dedication to responsible fisheries management, since 2023, NSRAA's research department has undertaken a multifaceted scientific appraisal of our fall-run hatchery production of chum in Crawfish Inlet to understand the biological and ecological drivers behind their homing behavior patterns. By extensively evaluating the movement of fry post-release as they exit the migration corridor, we are gaining a better understanding of concurrent influences on imprinting and outmigration patterns. To determine if there could be environmental factors affecting the homing accuracy of this program of fish, numerous freshwater sites within the migration corridor have been sampled for chemical and dissolved free amino acid analysis, both of which are known to influence salmon imprinting and homing behavior.

Spawner surveys on the West Crawfish Inlet index stream have also been performed to evaluate the temporal overlap in spawning seasons between stocks and quantify the proportion of hatchery origin spawners (pHOS) through confirmation of otolith mark presence. Results to date indicate that the pHOS in the West Crawfish Inlet index stream diminishes rapidly as a function of distance from the tide line. NSRAA is also interested in pursuing a genetic study to evaluate whether there is evidence of introgression and determine the proportionate natural influence (PNI) value should baseline data be made available for the summer-run indicator stock prior to enhancement activities occurring in Crawfish Inlet.

We have recruited data analysis and advising assistance for this project from numerous fisheries management biologists, researchers, and salmon olfactory experts, including but not limited to NOAA, University of Alaska, and the Sitka Sound Science Center. Presently, NSRAA is working with collaborators to build upon and seek funding for preliminary research into modulation of fish homing behavior by leveraging natural processes such as imprinting onto a natural, albeit chemically unique, macroalgae-derived compound to improve homing accuracy. Other Alaskan researchers and hatchery operators such as the Prince William Sound Science Center, Prince William Sound Aquaculture Corporation, and University of Alaska Fairbanks are also pursuing funding for this project, with regard to pink salmon enhancement production homing efficacy. Through implementation of Integrated Multitrophic Aquaculture (IMTA) practices, we intend to test the feasibility of propagating macroalgae/kelp species alongside salmon enhancement net pens to imprint fish onto the unique chemical properties which will later serve as an olfactory homing cues as the fish return nearshore as adults.

NSRAA plans to continue this significant allocation of staff time and fiscal resources to comprehensively evaluate the Crawfish Inlet chum enhancement program to inform fish culture and management decision making. We are committed to working with ADFG in managing this fish



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production program to ensure that it aligns with the state's resource management responsibilities while still providing common property harvest opportunity to all user groups. We will continue to manage our salmon enhancement programs with the utmost level of scientific integrity and ecological stewardship while serving as salmon management and fish husbandry experts within the broader scientific community.

Salmon hatcheries are often portrayed as willfully ignorant toward wild fish welfare and to have a perceived disregard for responsible salmon conservation biology, which is demonstrably untrue. As hatchery operators, we want healthy wild salmon runs and find collateral damage to wild stocks ethically unacceptable, thereby reinforcing our adherence to the best possible science when it comes to broodstock genetics, and disease management. Based on the aforementioned information, we respectfully request that the BOF oppose Proposal 156 and removal of the West Crawfish Inlet chum indicator stock. We invite the BOF members to visit our facilities to see firsthand our dedication to upholding a high degree of scientific rigor, stewardship of natural resources, and the added economic value that supports our local fishing communities.

Sincerely,

NSRAA Administration