

Alaska Hatchery Research Program Science Panel meeting January 22, 2025

Virtual meeting via Microsoft Teams

Summarized meeting notes and decision points

Attendees

Science Panel

Milo Adkison, Alaska Department of
Fish and Game (ADF&G)

John Burke, ADF&G and Southern
Southeast Regional
Aquaculture Association
(SSRAA; retired from both)

Peter Westley, University of Alaska

Jeff Hard, Northwest Fisheries
Science Center, National
Marine Fisheries Service
(NMFS; retired)

Ron Josephson, ADF&G (retired)

Bill Smoker, University of Alaska
(retired)

Bill Templin, ADF&G

Alex Wertheimer, NMFS (retired)

Unable to Attend

Chris Habicht, ADF&G (retired)

Finance Committee

Mike Wells, Valdez Fisheries Development
Association

Geoff Clark, Prince William Sound
Aquaculture Corporation

Tina Fairbanks, Kodiak Regional
Aquaculture Association

Katie Harms, Douglas Island Pink and
Chum, Inc (DIPAC)

Scott Wagner, Northern Southeast Regional
Aquaculture Association (NSRAA)

Julie Decker, Pacific Seafood Processors
Association

Other Attendees

Lauren Bell, Sitka Sound Science Center
(SSSC)

Chance Gray, SSSC

Ron Heintz, SSSC

Alex McCarrel, ADF&G

Garold V. "Flip" Pryor, ADF&G

Britteny Cioni-Haywood, ADF&G

Eric Prestegard, DIPAC (retired)

Samuel May, United States Department of
Agriculture (USDA)

Lorna Wilson, ADF&G

1) Introductions and Planning 2025-2026

- Science Panel greetings and introductions
- Docking the Ship
 - Update on AHRP products and analyses
 - Field work is completed
 - Lab work for pink salmon is mostly done, except for some clean up with otolith event matching
 - Finishing chum salmon analysis and writing publications is the remaining work.

2) a) Financial Review

- Flip P. reviewed the Proforma budget
 - Project is currently solvent but will run out of money by the end of FY25 without additional funding:
 - Gene Conservation Lab (GCL) projected expenses will be utilized (lab analysis, genotyping, pedigrees, data analysis, archiving, and writing publications)
 - Projected management costs will be limited to publication expenses, if there are any in FY25 (less than expected \$30k)
 - FY25 shortage of \$125k.
 - FY26 wraps up the project
 - GCL expenses projected expenses will be utilized.
 - Projected management costs includes funding for a final presentation like past public meetings in association with Board of Fisheries meetings
 - Total project shortage of approximately \$260k.
 - Financial contributions may not align with the fiscal calendar

2) b) Update on Outstanding Analyses / Products

- Analyzed and unanalyzed samples:
 - Tissues in GCL archives.
 - Otoliths split between GCL archives and Cordova Otolith Lab. Ideally all will be moved to the Mark Tag and Age Lab.
 - Genotype data are stored in GCL database Loki.
 - All other data (date, origin, demographics, etc.) will be stored in the ADF&G Hatchery/Wild Interactions database.
- Repairing otoliths and tissue matches (PGOD event)
 - Implementation of an updated and streamlined duplicate rate method is ongoing.
 - **Kyle** has generated duplicate rates and **Kyle and Kristen** need to do matching and finalized assignments.
 - Target completion is late winter 2025.
- Expected dates for reporting relative return per spawner rates:
 - Pink salmon – Summer 2025 (genotyping is complete, pedigree analysis is pending finalization of tissue/otolith rematch).

- Chum salmon – Early 2026 (DNA extraction and panel development are complete, primers available by early February, and then begin genotyping).

2) c) i-ii Reports and Publications

- Contemporary structure of even-year pink salmon in Prince William Sound – **Bill** nearing ending of review and will go out as department publication.
- Investigation of the Influence of Hatchery Straying on the Population Structure of Pink Salmon in Prince William Sound Alaska – Wei Cheng (GCL) **Tony Garret** reviewed, and discussion section is being revised.
- Contemporary Chum Salmon Population Structure – Updated chum salmon baselines for PWS and Southeast are used in reporting. First published in April 2024. Peer reviewed paper is in preparation.
- Peripheral papers:
 - Whole Genome Sequencing of PWS pink salmon – Department publication. **Kristen, Lorna, and Kyle** are the leads. Draft completed by Spring 2025.
 - Heritability of Run Timing – Department and NOAA. LLRC-9. Additional samples are being run.
- Sam May model 2024 – Simulation model that demonstrates trade-off between demographic gains and diversity loss among populations due to hatchery straying.
- The Cost of Hatchery Straying: An Economic Case Study on Alaska Pink Salmon (May and Westerly) – Financial incentive to harvest all the strays.
- Phenotypic Sorting of Pink Salmon Hatchery Strays May Alleviate Adverse Impacts of Reduced Variation in Fitness-Associated Traits (Julia McMahon) – Phenotypic differences between hatchery and wild fish, and some interesting behavioral trends.
- Streamflow Shapes Site Attractiveness to Stray Hatchery-Origin Chum Salmon in Southeast Alaska (Molly Payne) – First step towards incorporating stream attractiveness into special planning of hatchery release locations. Funded by DIPAC. Currently in revision.
- **Discussion:** There was discussion on the active role of the science panel on current and future papers as the data is completed, and the need for someone to take the lead on new projects and how to identify new funding sources. **Alex** – *Part of the stated objectives at the beginning of the program was the potential to look at donor and recipient straying amongst wild systems.* This led to discussion on where the science panel's work ends and where department/other's work continues.
- **Action needed:** A science panel discussion on whether the project continues after the publications on the three original questions are completed (1. What is the genetic stock composition of pink and chum salmon in each region? Is there a regional meta-populations or discrete stocks? 2. What is the impact on fitness (productivity) of wild pink and chum salmon stocks due to straying of hatchery pinks and chum salmon? 3. How much straying is there of both wild and hatchery pink and chum stock? How much annual variation is there?). If the project continues, in what form and how is it funded? (included in final action below).

2) c) iii Science Panel Availability and Final Products

- **Discussion:** There was discussion on the science panel needs, member availability, and

whether additional people are needed to complete the project. There is a need to clarify what the role of the science panel is during this transitional phase from data collection to data analysis and then publishing. The original task of the science panel was to produce questions that could be answered with a scientific study, design a study that produced results that were useful for making decisions, oversee the process as the project matured, and finally interpret the data and place those results in a publication. Discussion on new members focused on how the aging science panel members can continue to contribute, having people with expertise of the data validated by being members of the science panel, the need to produce the final publications, and what becomes of the data once the original project is complete. The original mission needs to be completed under the current funding source, however the expertise accumulated by the science panel can be used to guide how related projects go forward. There is concern that momentum may be lost and delays could negatively affect how the outcome of the project is perceived.

- **Decision Point:** Alex **MOVED**, and Ron J. **SECOND**, add Sam May, Kristen Gruenthal, and Lorna Wilson to the Science Panel. Motion **CARRIED** unanimously. Discussion included adding Kyle Shedd to the science panel later.

2) d) Data Requests

- Data is available online by creating an account and using a sign-on page.
- Previously, all data requests for unpublished data went through the science panel.
Action: the formal process for using the data needs to be posted on the ADF&G website and all science panel members need to have access to the data.
- All the data will eventually become public as publications are released.

2) e) Timeline

- The next best date for a public presentation around a Board of Fisheries meeting is at the Statewide Finfish meeting (March 2026). Previously, public meetings were scheduled around Hatchery Committee meetings, which didn't occur last year.
- **Discussion:** The last public presentation was in March 2022. The public is interested in an update. We are currently about halfway through answering the three questions for both species. We should provide an update around the Board of Fish meeting; however, a final product may not be available until later. There should be a plan for how to present the final product in a more science-based arena.
Action: finalize a plan for a final presentation at next meeting (included in action below).

3) Financial Review

- The current financial picture covers finalizing data, finalizing reports, and a final presentation like what has been done in the past. This includes approximately \$260k in funding yet to be received from the hatchery associations and the processors.
- A large request from a third-party funding source is a possibility given the large data set collected, and papers already produced; however, this creates additional work not currently in the plan.
- **Discussion:** A question was raised about what the outstanding expenses include and

whether hiring a post-doc would be a better option. The gene conservation expenses included salaries, commodities, and services. Chum lab work will be done early in 2025, which leaves primary focus on analysis and writing the report. Using sources outside the GCL was broached to cut costs and alleviate the burden of GCL. SSSC resubmitted a 2-year budget proposal for post-doc and publication costs that was distributed via email after the meeting. Discussion continued to wrap back around to defining the end of the current project and where things go after that point. Funding commitments will be easier to explain to perspective boards, or potentially third-party funding sources, if a distinction is made between “phases”.

- **Action Needed:** At the March meeting, review whether the financial ask of \$260k adequately covers ending the project, specifically, will that produce the final papers in a timely manner. Review whether adding a post-doc would benefit the project. Decide what a final roll out of the project will look like and estimate the additional cost. Lastly, decide how the funding will be covered; traditional sources, third party funding, or a combination of both.

4) Next Meeting

- The next meeting is tentatively scheduled for March 26.