



ALASKA BOARD OF FISHERIES

HATCHERY COMMITTEE MEETING

Friday, March 8, 2019, 8:30 a.m.  
Sheraton Hotel, Anchorage

MEETING SUMMARY

*(revised March 8, 2019)*

**COMMITTEE MEMBERS:**

Reed Morisky, Chair  
Robert Ruffner  
John Jensen  
Orville Huntington

Al Cain  
Israel Payton  
Fritz Johnson

**OPENING BUSINESS**

Call to Order – Chairman Morisky calls the meeting to order at 8:34 am.

Introductions of Board Members and Staff. The committee members introduced themselves. Member Jensen was absent. Staff included:

Commissioner's Office

Ben Mulligan, Deputy Commissioner

Commercial Fisheries

Sam Rabung – Director  
Forrest Bowers – Deputy Director  
Bill Templin – Chief Fishery Scientist  
Andrew Munro – Statewide Fisheries Scientist  
Chris Habicht – Principal Geneticist  
Emily Lescak – Fisheries Geneticist  
Kyle Shedd – Fisheries Geneticist  
Mac Cambell – Fishery Biologist  
Bert Lewis – Central Region Reg. Supr.  
Aaron Poetter – PWS/Bristol Bay Mngt Coord.  
Jack Erickson – Central Region Research Coord  
Nick Sagalkin – Westward Region Reg. Supr.  
Jeff Wadle – Westward Mngt Coord.  
Kevin Schaberg – Westward Research Coord.  
John Linderman – AYK Region Reg. Supr.  
Chuck Brazil – AYK Research Coord.

Sport Fisheries

Dave Rutz – Director  
Tom Taube – Deputy Director  
Tom Vania – Southcentral Reg. Supr.  
Dan Bosch – Southcentral Mngt Coord.  
Matt Miller – Cook Inlet Mngt Coord.  
Bob Chadwick – Southeast Mngt Coord.  
Klaus Wuttig – AYK Mngt Coord.  
Tim McKinley – Southcentral Research Coord.  
Jeff Milton – Statewide Hatchery Coord.  
Katie Howard – Fisheries Scientist

Boards Support

Glenn Haight – Board of Fisheries Exec. Director  
Jen Peeks – Western Region Coordinator  
Jessalynn Rintala – Publications Specialist  
Joe Corona – OIT

Department of Law

Seth Beausang, Assistant Attorney General



Review the Joint Protocol on Salmon Enhancement (Finding/Policy #2002-FB-215). Chairman Morisky reviewed the protocol.

## STAFF REPORTS

The department provided a number of reports (available on line at: <http://www.adfg.alaska.gov/index.cfm?adfg=fisheriesboard.meetinginfo&date=03-08-2019&meeting=anchorage>).

1. Salmon Fishery Enhancement production trends, management issues, and planning efforts, Sam Rabung, presenter – The presentation covered enhancement producers and historic production levels, salmon enhancement regions in the state and associated production, board authorities, management and tracking techniques, regional planning team information, annual management plan information, and other details on Alaska salmon enhancement program.

Under questions and answers (Q&As) – the board asked:

- How often are regional plans updated?
  - *No set timeline. Generally done as deemed necessary. Some every 10-, 20-years. Others have never been updated.*
- Do the Alaska Statutes for salmon hatcheries apply to commercial and sport fish hatcheries?
  - *Yes, they apply to all hatcheries.*
- Does the department have a statewide plan? How are all the regional plans rolled up into a statewide plan?
  - *The department does not prepare statewide plans. That practice ceased when the former Fisheries, Rehabilitation and Enhancement Division (FRED) was dissolved in the 1990s.*
- Discussion about the need for a statewide plan with an increase in enhancement production since the 90's. There is concern enhancement could replace wild stocks. Is there a target ratio or balance between wild and enhanced stock by region?
  - *Not at this time.*
- If there was a statewide plan, it seems an element would be for enhancement to augment wild stocks, but if it was found that enhancement was replacing wild stocks that would not be desirable. Thoughts on this concern?
  - *Members of hatcheries are commercial fishermen. Experience indicates if studies demonstrated enhanced stocks were replacing natural production, the fishermen would be the first to shut down enhancement. Information indicates that isn't the case and the goal of enhancement is to produce more harvest to meet demand.*
- On slide 32 are harvest rates the same as exploitation rates?
  - *Yes.*
- When accounting for harvest rates for hatcheries at 99%, what is the other 1% going to?
  - *Broodstock harvest. These numbers came from a detailed marine-water survey in the Prince William Sound area from 2013-2015.*
- Do we account for the total return of total released?
  - *Yes, this is referred to as ocean survival rate. We know how many are released, how many come back, and how many are harvested.*
- Marine survival rate? Is it possible to calculate that for natural stocks?
  - *It can be estimated based off escapement numbers.*



2. Enhancement Related Research, Bill Templin and Chris Habicht, presenters. The presentation opened with a quick review the sustainable salmon fisheries policy and some of its key tenets.
3. Straying and Homing in Salmon Life History, Christ Habicht, presenter. The presentation provided foundational concepts of salmon homing versus straying.

Under Q&A.

- The board discussed concepts related to maximum sustained yield v. sustained yield.

4. Pink Salmon Hatchery Proportions in Selected Lower Cook Inlet Commercial Fisheries, 2015-2018, Andrew Munro, presenter. The presentation provided results from studies from 2015-2018 in the Lower Cook Inlet that determined the composition of hatchery versus wild pink salmon in various river systems in the area.

Under Q&A.

- The board discussed study findings. There was a note that numeric figures in contrast to the percentages as presented would be more meaningful. *The department indicated numeric information is available.*

Prior to delving into research subjects under the Alaska Hatchery Research Program (AHRP), Bill Templin provided opening remarks. The AHRP had three key questions: 1.) what is the genetic stock structure of chum and pink salmon in each region (sets background for understanding straying), 2.) what is the extent and annual variability of pinks in Prince William Sound and chums in Southeast, and 3.) what is the impact on fitness (productivity) on wild pink and chum salmon stocks due to the straying of hatchery production.

5. Genetic Structure of Chum and Pink Salmon in Prince William Sound and Southeast, Sarah Gilk-Baumer, presenter. This presentation looked at a review of genetic information for chum salmon stocks in the Prince William Sound and Southeast.
6. Population Structure of Pink Salmon in Prince William Sound, Sarah Gilk-Baumer, presenter. A review of the genetic information for pink salmon in Prince Williams Sound including differences in even- and odd-year species, and from around the Sound.

Under Q&A

- Are smaller streams more vulnerable to drift and migration? *If there is a smaller run, the number of strays would have a greater impact on the stocks. The higher the stray rate the higher genetic impact. But the fish coming in would need to have a big enough genetic difference to have much of an effect. Drift with large populations of pinks in PWS isn't much of a factor.*
- What is the vulnerability to populations that are more distinct? *There are two forces going on. Two distinct population with a different life history will have large genetic differences. However, impacts will be greater for these distinct stocks if run-timing is similar.*

7. What is the extent and annual variability of straying?, Bill Templin, presenter. The presentation provided analysis on how much straying is occurring for hatchery pink and chum salmon in Prince William Sound and hatchery chum salmon in Southeast.



8. Prince William Sound Run Size and Harvest Rates, Bill Templin, presenter. Using results from an ocean sampling project in Prince William Sound from 2013-2015, this report indicated how much of the total pink and chum salmon runs were hatchery versus wild salmon.
9. Alaska Hatchery Research Program Fitness Study: PWS Pink Salmon, Emily Lescak, presenter. This presentation opened with an overview of how genetic testing determines lineage, including how it does so between wild and hatchery fish. The results indicate hatchery pink salmon are spawning with wild salmon and the offspring demonstrate less fitness measured by the level of returns.
10. Alaska Hatchery Research Program Fitness Study: SEAK Chum Salmon, Kyle Shedd, presenter. This presentation provided a similar analysis for chum salmon productivity in four Southeast creeks.
11. Department Framework for Interpretation of Results, Chris Habicht, presenter. A quick overview of how the department interprets results from the AHRP.
12. Assessing Mechanisms Driving Relative Reproductive Success, Chris Habicht, presenter. A presentation on the factors in nature or in a hatchery that impact reproductive success.

Under Q&A

- Does the department access other scientific reports on these subjects? *Yes, the department follows the literature. Many of the reports rely on "correlation" to understand effects.*
13. On Being a Wise Consumer of Science, Bill Templin, presenter. This presentation provides the essential scientific study process and an example when hypothesis jumps to conclusion without adequate scientific support.
  14. Enhancement Related Research: Ideas & Recommendations, Bill Templin, presenter. A summary of current and prospective enhancement related research.

Under Q&A

- How long will the current ocean carrying capacity international study go on? *Currently one year, but looking for additional funding.*
- How will the department address the straying concerns for PWS pinks in LCI and provide a recommendation to the commissioner? *The department needs to pay attention to it and study the impacts in a focused manner.*
- Board comments that "ad hoc monitoring" is a way to help capture the issue and lead to stronger observations.
- It is safe to assume there are more research topics than money. Is there a process for prioritization? What are the next steps? *The department provides a general response, but is uncertain beyond current efforts.*

## OPEN FORUM DISCUSSION

The board held an open forum for discussion on a number of set topics. The information below summarizes many of the public comments heard on each topic.

### Hatchery stock straying – are there recommendations on additional study subjects

- When presenting analysis provide total numbers of fish along with percentages to understand the relative impacts.



- Some results indicate a high number of hatchery straying into streams, but some haven't had runs in years.
- What is the impact of natural straying over time? Will the genetic strain be diluted further?
- Would like to see studies that look at the level of straying in wild fish?
- Run experiments on hatchery fish in an attempt to reduce straying. Are there best management practices, or perhaps the use of chemicals in reducing straying?
- It is important to reintroduce the ocean return salmon sampling program that was conducted in Prince William Sound from 2013-2015.
- Public comment 60 for the Hatchery Committee meeting provides a number of potential research subjects.
- There is a Cook Inlet Aquaculture Association fish ladder by the Paint River that has a chum run which was not there before. They are not hatchery fish. This stock could be examined to study straying trends in natural chum salmon.
- It would be interesting to know if there are differences in straying rates depending on what portion of the river the broodstock is obtained. Are fish that make it higher up a river less likely to stray than fish that settle closer to the mouth of the river?
- Helpful to review what are the positive and negative impacts of straying. Is it really all negative? Does it matter and how does it matter?
- There may be other factors that are more important to review including health of our forage fish.
- The straying study will take five years to complete. It would be helpful if the board would support continued funding with the Legislature and Governor.
- Would like to see more studies on the genetic differences between hatchery and wild stocks.

Regional Planning Teams (RPTs) - Potential improvements to the RPT public input and regulatory process

- People don't know what's going on. Info isn't provided upfront – only after. Needs to have audio listen-in ability.
- RPTs need to have a statewide perspective.
- Need an ecologist on the RPT – someone with a comprehensive view. There are already three aquaculture specialists on RPTs. Needs greater diversity on the teams.
- Some regions do not have hatcheries so creating an RPT and developing a comprehensive salmon plan (CSP) can be very confusing.
- There are questions in the CSP process like articulating how many fish are needed to feed a family, which many rural residents are uncertain how to answer.
- The public does not understand the RPT process very well. Generally, people want more fish and do not understand the rules that apply to hatcheries. Essentially the RPT serves as an advisor to the commissioner.
- Money is a big constraint. People want all kinds of fish, but the only way for the hatchery (Kodiak) to pay for itself is cost-recovery pink salmon. It would help if the public understood the limitations applied to hatcheries. There are not a lot of big decisions that occur at RPT meetings.
- Would like to get a Yukon RPT to help enhance king salmon production.
- In Southeast Alaska RPTs need bigger rooms. A recent Petersburg RPT was standing room only. There is a lot of public interest in Southeast Alaska.
- In northern Southeast Alaska we asked the department where we could expand production. They came back with ideas, which was very productive.
- The northern Southeast RPT has a conservation seat.
- Public comment 65 contains background on the northern Southeast planning process.



- A statewide RPT process would be analogous to the statewide stocking plan where regional needs are compiled into the stocking plan.
- In the late 70's the northern Southeast region developed a CSP. This was later revised in 1985 and 1994. A fourth revision is planned for 2020 or 2021.
- In terms of public process, meetings are noticed 2-3 weeks before they occur. The agenda and all the information are available online. Recently there was a proposal to open a hatchery operation at Warm Springs on Baranof Island. There was significant organized public opposition. The RPT unanimously recommended not to go forward with the project. The commissioner agreed. The public process worked.
- The southern Southeast RPT meetings are well advertised and attended. That wasn't the case in the 90's when there was very little attendance.
- The RPT process isn't a rubber stamp. Two Southern Southeast Regional Aquaculture Association proposals were rejected by the department. They are off the table and may not resurface. The association is looking for more release sites and the department is requiring significant study.
- The RPT process is a very dry process. Lots of people do not want to engage. Would urge it not be changed dramatically.
- Another example of the RPT process working occurred with a recent Petersburg expansion. There was the RPT meeting with public comment. This led to studies between the hatchery and department. No wild stocks were found, and the project occurred.
- For the southern Southeast RPT, it is similar to the advisory committee process. It is made up of interested people in the region – Forest Service, ADF&G, environmentalists, etc. Conditions are put on permits and more permits are denied than passed. It is a public process. It uses teleconferencing when needed.

Enhancement related research - Recommendations on additional research efforts including topics, researchers, other

- Need more study on competition in the marine environment between hatchery and wild stocks.
- Concerned about the ocean carrying capacity.
- Analysis on the shrinking size of fish and is it impacted by increased competition between wild and hatchery stocks. Are fishermen of the state incurring a cost from small fish in general.
- There is not a consensus view of the ocean carrying capacity subject. There have been significant warming trends in recent years coinciding with fluctuations in pink salmon survivability. Are fluctuations based on hatchery production or other conditions?
- Need to continue the North Pacific Fishery Anadromous Commission's ocean carrying capacity study.
- We do not know how many of the wild stocks are leaving the streams.

Merits of including the Board's hatchery authorities as part of the Board's call for proposals

- Having the hatchery committee meeting on an annual basis is a good idea. Having a call every year is a bad idea. Bringing a class of stakeholders (hatcheries) before the board is unfair every year.
- Would like the board to have a call fall into the area under the board's cycle. Keep the annual hatchery committee. A call for hatchery proposals for the area affecting that call.



- Agree the hatchery committee is a good idea. Already think the board accepts hatchery proposals through its call for proposal. Hatchery proposals can already come forward.
- The cost for an individual to attend these meetings is exorbitant. More than one meeting a year is a financial burden.
- Yes, it should be in the call for proposal as part of the regular three-year schedule. Once a year protocol meeting and then in the call for proposal.
- Like the hatchery committee meeting, have it in the call, and have the RPTs report to the board.
- RPT's role was to develop annual plans. RPTs should not be asked to make recommendations to the board. RPTs go to the ADF&G. ADF&G should go to the board on any issues.
- The hatchery committee meeting is a good idea. RPTs shouldn't have to submit proposals to the board.
- Agree there should be a briefing to the board by the RPT, but don't agree with the call for proposals. Board members are political appointees who come and go. They do not always know about the system.
- Already have a three-year cycle. Shouldn't do it annually. Annual hatchery committee meeting is good to do at work session in October.
- Work with the board on special harvest areas and common property fisheries. Do that within the three-year cycle. Don't want to do it annually. Statutes require costs be borne by hatcheries.

#### **Schedule next Hatchery Committee meeting**

The board determined to hold the next Hatchery Committee meeting the day prior to the 2020 Statewide meeting.

#### **Adjourn**