



The Joint Protocol Committee of the
North Pacific Fisheries Management Council
and the
Alaska Board of Fisheries



Draft Meeting Summary

October 17, 2018, 9 am – 5 pm
Anchorage, Alaska – Egan Center

Joint Protocol Committee (JPC) membership:

North Pacific Fishery Management Council (NPFMC)

Buck Laukitis
Andy Mezirow
Kenny Down

Alaska Board of Fisheries (BOF)

John Jensen
Fritz Johnson
Robert Ruffner

Meeting commenced at 9:05am.

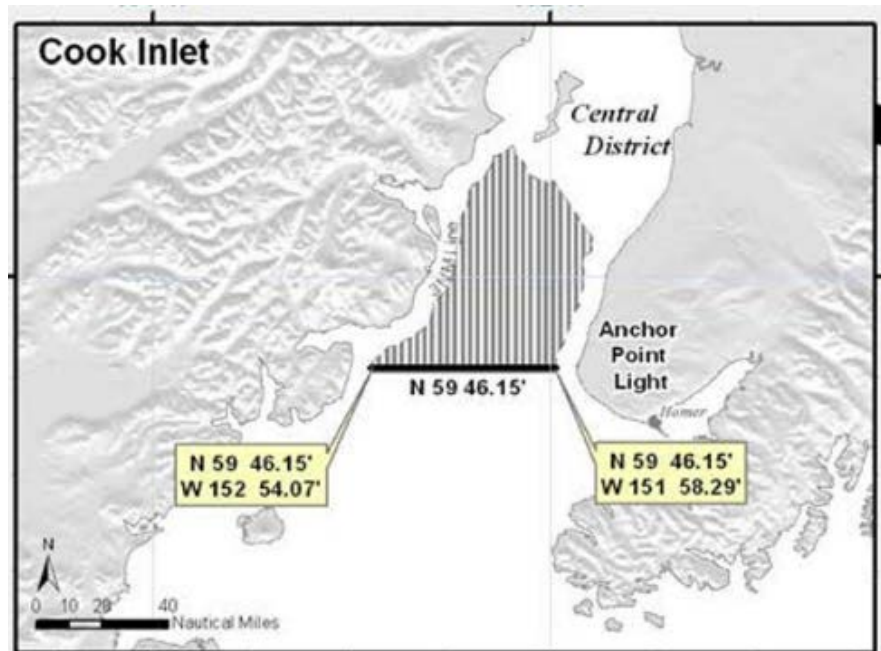
1. Introductions and review of the Agenda: Mr. Jensen served as chair and provided opening remarks followed by introductions of members and staff. All committee members were in attendance along with staff from the NPFMC, National Marine Fisheries Service (NMFS), and Alaska Department of Fish & Game (ADF&G).
2. Executive Director reports. Director Dave Witherell provided Council updates including the St. Matthew blue king crab stock decline and rebuilding plan, halibut bycatch retention provisions in the Bering Sea/Aleutian Islands (BS/AI) sablefish pot fishery, and AI crab.
3. Staff Reports

NPFMC Action on the Salmon Fisheries Management Plan (FMP).

http://www.adfg.alaska.gov/static/regulations/regprocess/fisheriesboard/pdfs/2018-2019/jp/council_salmon.pdf

Jim Armstrong, Plan Coordinator with NPFMC, presented on the status of the Council's efforts to establish a salmon FMP for Cook Inlet federal waters in compliance with court orders. Mr. Armstrong reported a committee, chaired by Mr. Jensen, was formed to provide a review and recommendations on meeting Magnuson-Stevens Act (MSA) requirements including a description of the fishing sectors, standardized bycatch reporting methodology, and social, economic and community impacts. A staff working group is drafting an analysis of two primary alternatives to the status quo: a cooperative state-federal management program (like the Crab and Scallop FMP), or full federal management. A committee meeting is tentatively scheduled for December 4.

Following the presentation, Mr. Armstrong clarified the action area for management was the federal waters within Cook Inlet (those waters three miles from shore) and the focus was on fisheries management as opposed to species management. There were also questions and clarifications about the MSA standard of managing fisheries throughout their range, and the composition of the committee to include other salmon users on the committee in the future. It was further noted the BOF will begin its formal review of the Upper Cook Inlet finfish regulations starting this winter and culminating in a meeting February 2020.



Southeast Alaska King Salmon Stock Status and Management.

http://www.adfg.alaska.gov/static/regulations/regprocess/fisheriesboard/pdfs/2018-2019/jp/se_king.pdf

ADF&G's Jeff Nichols, Southeast Regional Fisheries Research Coordinator, and Bob Chadwick, Southeast Regional Fisheries Management Coordinator, provided a status report on Southeast Chinook salmon and management, focused on escapement goals, stock status, and harvest rates of Southeast Chinook salmon. There are 34 known Chinook stocks, eleven which are identified as indicator stocks. Indicator stocks receive a high level of monitoring and assessment including the application of escapement goals¹. Stock status is very poor. Four of the 11 indicator stocks had levels below their biological escapement goals over the past 3 years. There are four Chinook stocks of concern in Southeast for the Chilkat, Stikine, Unuk, and King Salmon rivers. Detailed action plans were developed at the February 2018 Southeast Finfish meeting in an effort to curtail harvest on these stocks. The actions plan culminated in significant restrictions to harvest among all users.

A question was answered about the genetic composition of NMFS's Gulf of Alaska (GOA) trawl bycatch showing a very low percentage of Southeast Chinook salmon. Other responses discussed the long term status of Chinook salmon as 'good' based on average escapement observed over the time series and the effects of ocean temperature on production in the GOA described in the Council's ecosystem status report.

Bering Sea Aleutian Islands Pacific Cod Assessment and Management.

http://www.adfg.alaska.gov/static/regulations/regprocess/fisheriesboard/pdfs/2018-2019/jp/bsai_pcod.pdf

¹ Escapement goals for salmon refers to the range of salmon that must return and reproduce in their natal spawning grounds in order to have consistent and sustainable returns of salmon in years to follow.

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NPFMC Plan Coordinator Dr. Diana Stram, and Economist Jon McCracken, provided an overview on the status of Pacific cod stocks, an overview of total allowable catch (TAC) allocation and federal management of BS/AI cod, and updates on NPFMC initiatives on BS/AI cod fishery participation and AI cod community and shoreside processor protections.

Pacific cod is managed as three separate stocks: Eastern BS, AI, and GOA. The control rules for maximum catches provide for reduced harvests at biomass below 40%, and a closure to directed fishing when biomass drops below 20%. Survey data indicate declines in BS abundance, a low biomass but slight increases in the AI, and a steep decline in the GOA due to high mortality (from starvation) resulting from warmer water temperatures. The relative abundance of Pacific cod in state waters from the NMFS summer trawl surveys in the AI (~ 13% in 2018) and BS were reported. Genetic information suggests separate cod populations in Prince William Sound, Kodiak, Adak, and all BS areas (including the Northern BS). Genetic samples are needed from the Shumagin Islands area for a full picture of the populations. Tagging studies suggest large seasonal movements within the Eastern BS. Tagging also shows a winter migration of cod from the BS into the GOA at perhaps 15-17% of the population. There is likely a strong association between the Shumagin and Unimak populations.

Catch limit specifications were described, including the allocation to the state waters guideline harvest level (GHL) fisheries from the acceptable biological catch (ABC) levels in the AI (27%) and BS (6.4%). Thirty-four separate sector allocations of TAC were described.

Over 50% of the cod vessels have full coverage (100+%) with at least one observer on the vessel at all times. The other vessels fall into the partial coverage category funded by a fee collected based on a percent of landings fish ticket value. Pacific cod contributed to 45% of all observer fees collected in the BSAI and 8% coastwide.

The NPFMC is looking at adjusting the AI Pacific cod harvest set-aside program to protect shore plants in the Aleutians. NPFMC is also considering limiting participation in the trawl catcher vessel cod fishery and the number of catcher processors acting as motherships. Also noted was the decline in halibut stock, and the mortality associated with pot gear (9%), but not limited by a prohibited species limit for this gear type.

The report touched on potential implications of increases to the GHL. These included less harvest with observer coverages which would reduce fees for coverage. Smaller allocations to the federal fishery would result in shorter seasons and constraints on other fisheries. There may also be stranded quota in the state waters fishery if participating vessels are unable to fully harvest the GHL.

Questions were raised about including Northern BS fish in the abundance estimates (not for 2018) and plans for including this information in this year's stock assessment and specifications given the Northern BS was a substantial portion of the survey catches and bears reporting by the NPFMC. A question regarding potential observer coverage rate changes after an allocation of more Pacific cod to state waters was answered by indicating data will be available after the BOF takes action. A question on observer coverage of the fishery was answered that a majority of cod is observed; in the BS/AI 172 vessels with the highest allocation of cod are in the full coverage category.

The committee asked about Unimak Pass cod movements and if this migration was accounted for in the assessment model. It was indicated the assessment is based on a closed boundary without any consideration of mixing of the stocks through the Unimak Pass. The committee had more questions on how an increase in the state-waters GHL can constrain catches for some fisheries. Staff indicated that Pacific cod is a 'choke' species that can limit the catch of target species in the Amendment 80 sector where cod is limited and used only as a bycatch. Once the Amendment 80 sector uses all of its cod bycatch it must shut down.

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The committee received further information on tagging and recovery studies from the 1990's, migration patterns federal and state-waters, and survey locations.

State-Waters Pacific Cod Fishery Review and Proposals of Mutual Interest.

http://www.adfg.alaska.gov/static/regulations/regprocess/fisheriesboard/pdfs/2018-2019/jp/state_pcod.pdf

ADF&G's Mark Stichert, Groundfish/Shellfish Fisheries Management Coordinator, provided an overview of the state's Pacific cod fisheries management, and a review of BOF Pacific cod proposals to be deliberated at the upcoming Pacific cod meeting. Mr. Stichert reviewed fisheries jurisdictions between state and federal management area boundaries. The fisheries are broken out into federal fisheries, parallel fisheries (federal fishery within 3 miles of the shore with catch deducted from TAC), and state-waters GHL fisheries. The presentation included an overview of the stock assessment process, and how the ABC, TAC, and GHLs are determined. State GHL fisheries are allocated by area. An overview of management measures were provided for the federal, parallel, and state fisheries jurisdictions.

The BOF is set to review 17 Pacific cod proposals. For the AI subdistrict -

- Proposal 2 eliminates the 15 million pound GHL limit.
- Proposal 5 increases the 2020 GHL based on the Amendment 113 set-aside not available due to unrestricted trawl harvest during the 2019 fishery.
- Proposal 7 would allow vessels 100 feet or less with hold capacity less than or equal to 250,000 pounds to fish in the parallel season within the Kanaga Islands/Ship Rock Sea Lion closure area.

For the Dutch Harbor subdistrict, proposals include –

- Proposal 11 would create a state-water management plan for jig vessels with 100,000 pounds GHL and a new subdistrict.
- Proposals 12-14 would increase GHL to 8%, 10%, or 20% of the BS Pacific cod ABC.

Questions on Mr. Stichert's presentation included trip limits in Adak and why that was implemented. Mr. Stichert noted that there was concern about fish being taken by larger catcher processors and not being delivered shoreside to promote development of small local fleet. To a question about dockside sampling in the absence of an observer program, it was indicated the BOF limited the fishery pot and jig gear to limit bycatch, and there is still an opportunity to collect biological samples shoreside if needed to supplement federal observer sampling.

National Marine Fisheries Service Presentation.

http://www.adfg.alaska.gov/static/regulations/regprocess/fisheriesboard/pdfs/2018-2019/jp/bsai_catch.pdf

<http://www.adfg.alaska.gov/static/regulations/regprocess/fisheriesboard/pdfs/2018-2019/jp/pcs.pdf>

NMFS's Glenn Merrill, Assistant Regional Director, noted NMFS written comments (PC-1) on concerns about the complexity in integrating upcoming BOF proposals with federal management, including potential impacts on Stellar sea lion (SSL) measures and pending federal actions. The comments discussed potential distributional effects the proposals had on existing sector allocations. NMFS also provided comments on reallocation and step up provisions for the AI fishery, including determining if there was 'undo harm' on fishery not subject to a set-aside fishery. Some proposals seeking change to management in the parallel fisheries may cause a Section 7 Consultation under the Endangered Species Act (ESA) to all of the BS/AI groundfish fisheries, which might cause changes in federal fisheries. If the BOF wished to pursue these proposals, one approach might be to conduct a consultation before taking affirmative action to determine the impact.

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Mr. Merrill discussed the NMFS presentation which provides distributional maps of Pacific cod catch by area from 2011-2018. There is a progressive movement of Pacific cod catch northward, implying that catch in state waters (Area O) may be more difficult to achieve in the future.

Mr. Merrill responded to a question about how observer coverage is affected. There is full observer coverage in federal and parallel fisheries, but not in GHL fisheries. Many catcher vessels are subject to full coverage. For those subject to partial coverage, if the vessel has a federal fishing permit (FFP) onboard it is subject to observer coverage requirements. A vessel without an FFP onboard fishing in state-waters during the parallel fishery does not have observer coverage requirements.

When asked about the resources required for an ESA consultation, Mr. Merrill discussed two ways to address this situation, a formal or informal consultation. Informal consultations are simple, discrete actions, seeking concurrence from the Protected Resources Division that the management action is not likely to have an adverse impact. A formal consultation is required when a determination indicates actions may affect a protected species. In this case it may require a large biological assessment, and reasonable and prudent measures be established to mitigate effects. There was additional discussion about the Bogoslof jig fishery and ability to affect a consultation.

4. Public Testimony. The committee took public testimony from -

- Gerry Davis, Yukon Delta Fisheries Development Association
- Matt Robinson, Bristol Bay Economic Development Corporation
- Gerry Merrigan – Freezer Longliners
- Craig Lowenberg - Bering Sea Pot Cod Cooperative
- Brent Paine – United Catcher Boats
- Chad See – individual
- Chris Woodley / Todd Loomis – Groundfish Forum
- Hannah Heimbech – Under 60 Foot Harvesters.
- Paddy O’ Donnell – Alaska Whitefish Trawlers Association
- Julie Bonney – Alaska Groundfish Bank
- Dustin Dickerson – Unalaska Native Fishermen’s Association

5. Committee discussion of Agenda items

Following public testimony, the Committee discussed what they had heard in presentations and testimony. Comments were made on how helpful this information could be for decision making.

Kenny Down noted the importance of the tagging study information. While an old study, it provides insights into Pacific cod migrations. The Board went from 3.5% to 6.4%, but now there is not much buffer between the ABC and TAC to allow an increase in Pacific cod catch from the ABC. Testimony described impacts of Pacific cod GHL changes; the BOF should consider these.

Andy Mezirow also felt like he learned a lot about how the state made decisions and was struck by testimony of the Community Development Quota groups and others about the effects on Alaskans and Alaska communities.

Glenn Merrill expressed appreciation to staff for providing briefings and hope they help the BOF to understand complicated decisions and ESA issues. He also noted that economic analysis was not provided, but if the BOF thinks it might be useful, NMFS could help provide this information the next time around.

John Jensen also learned a lot and thanked everyone for participating.

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Fritz Johnson also found it valuable, noting the complexity of federal management. He thanked all for the great presentations.

Buck Laukitis thanked staff for excellent reports and feels that the JPC should occur more often, and, in the future, it would be good to know what data might be needed before the meeting to assist in decision-making. Mr. Laukitis encouraged a process for JPC members to think about the information they might want before them at the meeting. We may want to think about the best time to schedule future meetings.

6. Other Business. None.

7. Adjourn



Alaska Department of Fish and Game

Board of Fisheries

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Nushagak-Mulchatna King Salmon Fishery Management Plan Special Committee Meeting

Tuesday, February 26, 2019

Meeting Participants and Attendees

Alaska Board of Fisheries

Robert Ruffner, Committee Chair

Reed Morisky

Israel Payton

Fritz Johnson (in attendance only)

Alaska Department of Fish and Game

Dan Bosch, Sport Fish Division

Aaron Potter, Commercial Fisheries Division

Greg Buck, Commercial Fisheries Division

Forrest Bowers, Commercial Fisheries
Division

Tom Taube, Sport Fish Division

Bill Templin, Commercial Fisheries Division

James Hasbrouck, Sport Fish Division

Tom Vania, Sport Fish Division

Tim McKinley, Sport Fish Division

Glenn Haight, Boards Support Section

Alaska Department of Law

Brad Meyen, Natural Resources Section

Additional Participants and Attendees

Michael Link, Bristol Bay Science and
Research Institute

Jeff Regnart, Bristol Bay Science and Research
Institute

Gene Sandone, Bristol Bay Economic
Development Corporation

Peter Christopher Sr., New Stuyahok

Robert Heyano, Dillingham

Julianne Curry, Icicle Seafoods

Ben Allen, Chignik Fish and Game Advisory
Committee

Tommy Sheridan, Silver Bay Seafoods

Paul Hansen, Naknek Native Village

Marilyn Hansen, Naknek

Thomas Tilden, Dillingham

Tony Zock, Bristol Bay Economic
Development Corporation

Kay Andrews, Aleknagik

Meeting Summary

1. **Call to Order.** Committee Chairman Ruffner called the meeting to order at 3:42pm.
2. **Introductions.** Ruffner offered opening remarks regarding the purpose of the meeting and went around the room asking for introductions from all committee members, staff, and participants.



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3. **Update from the technical team.** Michael Link, representing the Bristol Bay Science and Research Institute, discussed initial plans of the technical team to work in cooperation with ADF&G in short order to have a research plan put together for summer activity. Other members of ADF&G participated in this discussion. Ruffner asked if everyone was clear on their respective roles in working with the technical committee including who was on it, and expectations from the department and the external consultants. Everyone confirmed that they understood ADF&G was responsible for the final escapement goal recommendation. ADF&G had a further discussion that external peer review of the goal would be beneficial.

A preliminary report would be ready for the full committee by the fall 2019. The technical team would receive initial input from the committee and start work to finalize the research to be completed in anticipation of additional committee meetings starting in November or December 2019.

Ruffner asked and was assured the department would have adequate funding for the work.

Payton asked to have allocation issues separated from escapement goal analysis in the final analysis.

4. **Consideration of Proposal 182 within special committee business.** Proposal 182 involving the Nushagak Coho Salmon Management Plan is set for statewide. The committee decided to not review the proposal.

5. **Review applicants for the special committee.** The committee asked the legalities of going into executive session. Prior to doing so, Ruffner asked if any of the individuals in the audience had applied to be on the committee and wished to speak. Robert Heyano offered a few remarks.

Payton moved the committee go into executive session. Morisky seconded the motion asking for unanimous consent. The committee went into executive session at 4:00pm.

The committee came out of executive session at 4:21pm.

Payton motions having ten committee members with a couple of alternates. Morisky seconds asking for unanimous consent. Payton then moves to have the following applicants serve on the committee with a second by Morisky.

- | | | |
|----------------|--------------------------|---------------------|
| • Bob Klontz | • George Wilson | • Robert Heyano |
| • Brian Kraft | • Dan Michels | • Tom O'Connor |
| • Bud Hudson | • Nanci Lyon | • John Wise (alt) |
| • Gene Sandone | • Peter Christopher, Sr. | • Heath Lyon (alt.) |



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Ruffner asks a question of Sandone and his connection to the fishery. The committee discussed how the committee will be used. Ruffner asked when the technical team will be done? The team hoped to have draft analysis completed by the fall with a final report in late-fall, early-winter. Ruffner offered the following tentative workplan for the committee –

- October 22, 2019 - Have the full committee meet one-day prior to the Board's work session. Board members on the committee would report committee status to the entire board at the work session.
- Mid-November, early-December pull the full committee again to hear from the technical team on their final report.
- Meet again in December/January to develop a board proposal that can be deliberated on at the March 2020 Statewide meeting, March 7-11.

The committee returned back to the motion for applicants which was approved.

The committee asked Boards Support to make contact with all who applied and provide an update.

6. **Other business.** None.
7. **Adjourn.** The committee adjourned at 4:35pm.



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