Columbia Basin Collaborative
Harvest/Hatcheries Work Group
Meeting Summary

Wednesday, September 30, 2022, from 9:00am – 12:00pm PT/ 10:00am – 1:00pm MT

Attendees

Participants: Aaron Lieberman (Idaho Outfitters and Guides Association), Andrew Gibbs (ODFW), Brad Halverson (NW Steelheaders), Brandon Weems (Confederated Tribes of the Grand Ronde), Brent Hall (Confederated Tribes of the Umatilla Indian Reservation), Casey Baldwin (Confederated Tribes of the Colville Reservation), Chris Sullivan (Idaho Fish and Game), Cory Kamphaus (Yakama Nation Fisheries), David Bain (Orca Conservancy), David Moskowitz (The Conservation Angler), Gary Marston (Trout Unlimited), Gary James (Confederated Tribes of Umatilla Indian Reservation), Glen Spain (Pacific Coast Federation of Fishermen), Guy Norman (State of Washington), Helen Neville (Trout Unlimited), Jay Hesse (Nez Perce Tribe Department of Fisheries), Joe Oatman (Nez Perce Tribe Department of Fisheries), John Powell (Idaho Fish and Game), John Simpson (Idaho Water Users), Maureen Hess (Northwest Power and Conservation Council), Paul Ward (Columbia River Inter-Tribal Fish Commission), Robert Sudar (Independent Salmon Distributor), Ryan Lothrop (Washington Department of Fish and Wildlife), Sean Tackley (Army Corps of Engineers), Steve Manlow (Lower Columbia Fish Recovery Board), Stuart Rosenberger (Idaho Power), Tom Iverson (Yakama Nation Fisheries), Tom Scibbner (Yakama Nation Fisheries), Tucker Jones (Oregon Department of Fish and Wildlife)

Observers: Brandon Weems, Denny Rohr, Patty O'Toole, Paul Arrington, Tammy Mackey

Facilitation Team: Liz Mack (Kearns & West), Amira Streeter (Kearns & West), and Grant Simmons (Kearns & West)

Welcome, Agenda Review, Updates, and Introductions

Liz Mack, Kearns & West provided an overview of the agenda and meeting guidelines. The topics included: 1) Overview and Context of the Columbia Basin Collaborative (CBC) and Habitat/Harvest Work Group, 2) Overview and Context of Columbia River Basin Hatcheries, 3) Discussion of Resources and Gaps, 4) Overview and Context of Management of Harvest of Columbia River Stocks, 5) Harvest Discussion of Resources and Gaps, 6) Work Plan and Next Steps, and 7) Confirm Next Steps, Upcoming Meeting Topics, and Summary. The work group members introduced themselves.

The work group members shared the following updates:

- Several members noted the role their organization plays in harvest and hatcheries and noted how their respective organizations have been involved in the harvest and hatchery process over the past few months.
- Many members noted the lack of infrastructure and funds they were experiencing in their field.

Overview and Context of the CBC and Habitat/Harvest Work Group

Guy Norman, State of Washington, shared a slideshow presentation in which he outlined the topic specific work group process for the Columbia Basin Collaborative. Guy noted the need to work

collaboratively and use existing data to develop draft recommendations for the I/RG. He also went over the biological matrices and outlined the process behind creating those work products. Guy emphasized that these matrices are meant for general guidance and are not representative of any final conclusions.

Overview and Context of Columbia River Basin Hatcheries

Maureen Hess, Northwest Power and Conservation Council, presented on hatcheries in the Columbia River Basin. This presentation went over the history of hatcheries, the funding of hatcheries, hatchery production and management, and the history of deferred maintenance of these hatcheries. She stated that lack of funding has resulted in actions that have been detrimental to the salmon population in the Columbia River.

Hatcheries Discussion of Resources and Gaps

Liz asked the group to respond to a series of questions via a Google Jamboard. Work group members shared the following input in response to these questions:

1. **What existing forums are addressing hatcheries?:**

Federal:

- Within NOAA: five-year review process, Hatchery and Genetics Management Plan, and Section 10 permits all act as forums for this discussion.
- Pacific Salmon Commission
- BPA Fish and Wildlife Program

State:

- Oregon Hatchery Research Center
- Washington Statewide Steelhead Management Plan
- Washington Department of Fish and Wildlife Commission
- Washington Fish and Wildlife Commission Anadromous Salmon and Steelhead Hatchery Policy (C-3624)

Tribal:

- Nez Perce Tribe 5 Year Supplementation Symposiums

Other:

- US v. Oregon
- Lower Snake River Compensation Plans (LSRCP)
- Northwest Power and Conservation Council Independent Science Review Panel
- Regional recovery processes
- Upper Columbia Blocked Area Phase 2 Implementation
- Idaho Power Company Mitigation
- Annual Operating Plans (AOPs)
- Recent research, especially tribal, on the interaction of wild and hatchery spawners and the effect on productivity

- Mid-Columbia Public Utility District's (PUDs) Habitat Conservation Plans and Settlement Agreements
- More existing management entities/structure than existing 'forum', but in Idaho, hatchery programs operated by Idaho Fish and Game, the Nez Perce Tribe, and USFWS.
- Subbasin-specific hydro programs

2. Where there are gaps in efforts or knowledge about hatcheries?

Analysis/info needs:

- Scientifically valid studies to address impacts or benefits of hatcheries (this group to consider)
- Economic cost/benefit analysis
- Understanding hatchery ecological impacts (competition, predation, and disease)
- Effects of selection on size and run timing
- Understanding of impact climate change on hatchery production

Hatchery impacting wild stocks:

- Analysis of impacts and mitigation measures
- Integrating new information (not depending on old studies)
- Impacts of hatchery fish on predation of wild stocks
- Assessment of demographic replacement, epigenetics, genetic drift
- Understanding "wild" for appropriate comparison of Relative Reproductive Success
- Impacts of strays on neighboring watersheds

Infrastructure:

- Need to increase production or build new hatcheries (specifically for Upper Columbia)
- Implement recommended hatchery reform actions at existing hatcheries (need to consider site specifics, what has been done and monitoring and reporting for adaptive management)
- Implementing new technologies
- Need estimated cost to repair/maintain/infrastructure improvements at existing facilities and fund it

Maintenance:

- Understand risk of catastrophic failure

Performance:

- Overview of mitigation performance (meeting or failing to meet adult return goals), data showing release/return goals throughout basin
- Operations not meeting implementation plans/accountability
- Focused goals on adult returns
- Metrics evaluated appropriately to goals (generation 3+ benefits of hatcheries)

Management:

- Full adipose clipping of all mitigation (harvest directed) programs
- Random vs. selective spawning of broodstock to improve age and survival of hatchery fish (some of this information is available and site-specific)

Release size/timing:

- Hatchery release/program size relative to carrying capacity (freshwater & marine)
- Impact to smolt to adult returns and age structure

In addition to the Jamboard comments, the following discussion was had by group members:

- Some members expressed that they feel a gap exists in implementation, not knowledge. The knowledge of what to do for hatcheries and harvest is there and well recorded but implementation measures are not.
- Members discussed mitigation obligations that have not been fulfilled since mitigation programs have been created. Many pointed out there is a long history to this subject, and the ramifications come with a huge cost to conservation and those who fish.
- There is a need to refocus hatchery efforts. Instead of focusing on release goals, the group should focus on natural spawning, specific harvest goals, etc. Hatcheries should scale to meet return goals.

3. **What are the funding sources for addressing hatcheries? Where are more funds needed?**

Federal Funding Sources:

- Lower Snake River Compensation Plan
- Mitchell Act
- Bureau of Reclamation
- US Army Corps of Engineers
- US Fish & Wildlife Service
- Annual legislative budgets
- Pacific Coast Salmon Recovery Fund (PCSRF)

Private & Public Utilities Funding Sources:

- Tacoma Power
- PacificCorps
- Cowlitz PUD
- Mid-Columbia Public Utility
- Portland General Electric
- Idaho Power Company

Other Funding Sources:

- Angler licenses, ad valorem tax on commercial harvest, excise taxes on angling equipment purchases, state general funds
- Idaho Power Company
- Mitigation agencies and utilities
- Northwest Power and Conservation Council (NPCC) /Bonneville Power Administration
- Direct state agency legislative appropriations
- Hydro ratepayers

Funding needs:

Infrastructure:

- Repairs, maintenance, modernization
- Water sources
- Climate change planning
- Rearing and release conditions of hatcheries

Monitoring and evaluation:

- Tagging of hatchery fish
- Genetic ID
- True assessment of PHOS and outcomes/impacts

Emergency conservation:

- Captive brood, cryopreservation

Programs:

- The Upper Columbia Blocked Area Reintroduction Program
- NOAA Funding to complete HGMPs
- Long-term stability in Mitchell Act funding levels

Funding for studies:

- Evaluate hatchery outcomes/reforms
- Understand effects in ocean phase
- Cost/benefit analysis

Overview and Context of Management of Harvest of Columbia River Stocks

Guy Norman delivered a presentation of the management of Harvest of Columbia River Stocks. This presentation included an overview of the location of harvest facilities, the current numbers of each stocks as well as their status, and who controls each harvest location. The group offered the following input:

- A member shared that the abundance of stocks is critical – healthy stocks should be focused on.
- Another member noted harvest practices have been reduced over time. Endangered Species Act requirements since the 1980s have played a key role in these reductions.
- A member noted there are stocks where there is a high harvest rate and also a high return. That is the goal with a lot of stocks and these high harvest/high return ones should be seen as successful examples.
- Question: Are the summer Chinook in the high impact level because these metrics factor in a future run that includes reintroduction in the Upper Columbia? I ask because they currently meet their passage goals every year. Answer: The stock status is low because current return is less than 20% of historical abundance. Once we establish fish above the Grand Coulee Dam, we anticipate better results.

- Question: Are you accounting for Canadian harvest on the Okanagan stock? Answer: I don't recall that we accounted for that. Additionally, for Upper Columbia Sockeye, we are anticipating reintroduction.
- Question: The Deschutes Spring Chinook are not doing well, why is this not reflected in the biological matrix? Answer: The tributaries are accounted for in the matrix.
- Question: When you say these stocks have "established escape goals" what does that mean? Answer: There are established escapement goals that have been previously set by biologists. The return above that escapement goal is what is considered harvestable. Some stocks meet their escapement goal and thus are harvestable and some do not.
- Question: Where are these escapement goals found? Answer: These goals differ by organization but for this report we cited Washington Department of Fish and Wildlife Hannford-Reach Fisheries, and many similar organizations.
- Question: How often are escapement goals reviewed and do they consider newly opened up territory for fish? Answer: The escapement goal review process is different for every organization but, yes, it's important for these goals to consider current conditions which includes newly opened territory.
- One member stated that the group should think about moving stocks from upper right section of matrix to lower left through recovery actions.
- Question: Could you clarify different terminology between escapement goals and adult returns? Answer: The escapement goals are established on scientific assessment. Adult returns refers to numbers of adult fish returning to the water system.
- Members discussed that it is important to acknowledge the many different processes for salmon don't all have the same escapement goals. For instance, different departments in Oregon and Washington can have different goals at times, sometimes even with the same species.

Harvest Discussion of Resources and Gaps

Liz turned the group's attention to a jamboard link and asked for input.

1. **What existing forums are addressing harvest?**

- North of Falcon (WDFW)
- Pacific Fisheries Management Council (PFMC)
- State Fish & Wildlife Departments
- US-Canada Pacific Salmon Treaty (Pacific Salmon Commission)
- Federal Treaty/Trust Responsibilities
- US v Oregon - Columbia Basin Fisheries Management Plan, Production Advisory Committee (PAC), and Technical Advisory Committee (TAC)
- See PPT - "Chinook Management Processes"
- State/tribal agreements, i.e., WDFW-Colville
- Washington Columbia River Salmon Fishery Policy (C3630)
- Columbia River Compact
- Subbasin/Tributary Fisheries Management

- Recovery Plans include "healthy and harvestable" targets; Lower Columbia Recovery Plan includes harvest (and other H) threat reduction targets by stock

2. Where are there gaps in effort or knowledge about harvest?

Information Gaps

- Improve adult fish sampling facility at Bonneville Dam to get a better stock-specific estimates for all species.
- Understanding the sub-lethal effects of catch and release fisheries on the released species
- Improve forecast models and run size updates
- Harvest impacts to the observed reduction in size and age at return of fish in the basin
- How timing fisheries differentially impact male vs. female returns
- Better assessments of likely impacts of climate change on salmon at all life stages which will impact harvest opportunities
- How the lack of adipose clipping of Priest Rapids production impacts the implementation of mark selective fisheries
- Sampling of unclipped CWTs in Canadian and Alaskan waters
- Understanding harvest sharing within user groups
- Real-time measures of effort, encounter, and harvest rates (not models and estimate)
- Effects of hatchery fish on harvest of wild fish (lack of tagging, lack of stock-specific harvest in situ)
- Recent levels of harvest supported by mitigation/conservation hatcheries in basin
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Coordination Needs

- More involvement/consideration for IDFG in regional harvest
- Better coordination between Canadian and US fisheries to account for total impacts
- Better integration between hatchery and harvest management to ensure hatcheries are sized properly to provide fish to fisheries and avoid large surplus returns to hatcheries and spawning ground

Management Needs

- Improvements to optimize LC Tule management
- Better in-season management of ESA-impact utilization and sharing
- Development of adult harvest goals from specific hatchery programs
- Updated escapement goals, incorporate habitat improvements and access to habitat

Other Needs

- Need to better address population or strata scale impacts

In addition to the jamboard comments, the following comments were shared by group members:

> The group discussed the issues of different resources between different organizations. The lack of contact between different agencies is a hurdle.

3. **What funding sources exist for addressing harvest and where are more funds needed?**

Funding Sources:

- Idaho Power Company
- Harvest monitoring: NPCC/BPA, LSRCP
- Power Snake River Compensation Plan (LSRCP)
- Bureau of Indian Affairs
- Same sources as for hatcheries: angler purchase excise taxes, commercial harvest ad valorem taxes, angling licenses and fees, general funds from state taxes
- Fishing license sales (sport and commercial)
- Pacific Coast Salmon Recovery Funds
- Mitchell Act
- State legislatures
- Sport Fish Restoration Funds
- tributary hydro mitigation funds
- NOAA Grants
- BPA- Fish and Wildlife Program
- PFMC/NOAA
- Columbia Basin Tribes
- Pacific salmon commission

Funding Needs:

Monitoring

- Sufficient and stable funding for tagging and monitoring
- Additional tools and technology to assess catches and returns (improved software technology to collect sample data and PIT tag arrays)
- Real-time on-board fishery monitoring for all fisheries including life cycle monitoring
- Development of electronic reporting of catch reporting for both commercial and recreational fisheries, including catch and release (rec) to allow better in-season management

Other

- Separation of agency funding from license-based income to shift emphasis from serving fisheries constituency towards increase focus on conservation needs
- Development of fishery management plans
- Experimental fishery technology development and evaluation
- Enhanced tribal/treaty fishing
- A robust, basin wide study of the economic and cultural impacts of reduced harvest opportunity (tribal and non-tribal)

Work Plan and Next Steps

Liz then asked the group for input on next steps for the group to help inform a work plan. She reminded them that this is planned to be a monthly group with no designated end time. The group offered the following input:

- Members discussed the level of interest in this group. There are lot of perceived gaps and needs. Before we can make recommendations, we need to come to terms with the actual impacts of fisheries. People focus on fisheries because it is the dial that is most easily turned.
- Members discussed the scale of impacts. Many members discussed the need to focus on a finer scale. Beyond the high-level classification, there are areas even within a healthy stock where there are low stock, high impacts from harvest, etc. The level of granularity matters to get a comprehensive picture of stock and a finer level of detail would help us.
- One member proposed a stock-by-stock approach to this work group.
- Members discussed how fisheries is seen as a convenient button because it is within our control. However, fisheries can't be maintained without habitat measures put in place and measures put in place to minimize hydropower impacts.

Next Steps, Upcoming Meeting Topics, and Summary

Liz closed the meeting by thanking members for a productive meeting and asked them to prepare for next month's meeting.

Action items:

- K&W: Get more info about escapement goals and share with group
- K&W: Send PowerPoint slides as follow up
- K&W: Send summary afterwards
- All: Respond to Doodle Poll for November meeting