Columbia Basin Collaborative
Habitat Work Group

Meeting Summary

Tuesday, September 20, 2022 from 9am – 12:00pm PT/10am - 1:00pm MT

Attendees

Working Group Members in Attendance: Andrew Spanjer (United States Geological Survey), Bob Lessard (Columbia River Inter-Tribal Fish Commission), Calla Hagle (Burns Paiute Tribe Natural Resources), Conor Giorgi (Spokane Tribe of Indians), Cynthia Studebaker (United States Army Corps of Engineers), David Bain (Orca Conservancy), Elaine Placido (Lower Columbia Estuary Partnership), Gary James (Confederated Tribes of the Umatilla Indian Reservation), Jay Backus (Port of Clarkston), Jay Hesse (Nez Perce Tribe), Jeff McLaughlin (Bureau of Reclamation), Jason Karnezis (Bonneville Power Administration), John Foltz (Snake River Salmon Recovery Board), Jim Brick (Oregon Department of Fish and Wildlife), Laura Brown (Washington Department of Fish and Wildlife), Lynne Krasnow (National Oceanic and Atmospheric Administration), Michelle Rub (National Oceanic and Atmospheric Administration), Mike Edmondson (Idaho Governor's Office of Species Conservation), Mitchell Cutter (Idaho Conservation League), Norman Semanko (Quincy-Columbia Basin Irrigation District)), Pat Frazier (Private Consultant), Patty Dornbusch (National Marine Fisheries Service), Rudy Salakory (Cowlitz Indian Tribe), Stephen Waste (United States Geological Survey), Steve Manlow (Lower Columbia Fish Recovery Board), Tom Iverson (Yakama Nation Fisheries), Tracy Bowerman (Upper Columbia Salmon Recovery Board).

Facilitation team: Amira Streeter (Kearns & West) and Colin Johnson (Kearns & West)

Welcome, Agenda Review, and Introductions

Amira Streeter, Kearns & West, welcomed the work group members to the first meeting of the Estuary and Tributary Habitat Work Group. Amira shared best practices for collaboration and provided the meeting guidelines before sharing the agenda. The topics included: 1) Overview and Context, 2) Columbia Basin Partnership Data, 3) Estuary Habitat Discussion of Resources and Gaps, 4) Tributary Habitat Discussion of Resources and Gaps, 5) Work Plan and Next Steps, 5) Confirm Next Steps, Upcoming Meeting Topics, and Summary. The work group members introduced themselves, sharing their affiliations and expertise as well as what they hoped to bring to the discussion. As an icebreaker, members shared their favorite fall activity.

Overview and Context

Amira opened the session by inviting Patty Dornbusch, National Marine Fisheries Service, to provide an overview of the role that the Topic-Specific Work Groups (TSWG) will play within the Columbia Basin Collaborative (CBC), and more broadly in achieving the goals of the Columbia Basin Partnership. Patty began by explaining that the CBC was convened by the states of Washington, Oregon, Montana, and Idaho, before offering an overview of the goals and scope of the CBC. She went on to provide an overview of the Integration/Recommendations Group (I/RG) Membership and the role that the I/RG plays in relation to the broader CBC.

- Patty introduced the five Topic-Specific Work Groups and explained the role the work groups will play in the CBC. Patty then provided a list of each of the member-organizations represented within the Estuary and Tributary Habitat Work Group.

Columbia Basin Partnership Data

Patty presented a table detailing the compiled impacts by stocks and reviewed each facet of the table, including the fact that, based on a combination of impact level and status of stock, addressing tributary habitat was a high priority for many stocks and addressing estuary habitat was a medium priority for most stocks. She explained that the Columbia Basin Partnership Task Force (CBPTF) had identified low, medium, and high goals for stock recovery. The table identified where each stock was in relation to the medium recovery goal, and described the endangered species act status by stock.

Patty moved on to explain the methodology used to create biological matrices for each of the threat categories identified by the CBPTF. She shared two charts from the CBPTF Phase 2 Report that were used to compared stock status (low, medium, high, very high) with impact level (low, medium, high, very high) to determine which actions and stocks needed to be prioritized for immediate actions for recovery. Patty presented matrices for Estuary and Tributary Habitat.

Patty walked through a table that provides sequential steps for the CBC. Patty explained that the following steps had been completed by the CBPTF: 1) Define fish goals, 2) Define current fish mortalities, 3) Develop salmon analyzer predictive model. The next step, confirm science-based approach for working groups, was completed by the CBC's biological subgroup. Currently the project is in step 5, Identify needs for Tributary Habitat, Mainstream Hydro, Blocked Areas, Estuary Habitat, Predation, Hatcheries, Harvest, and Integration across threat categories, and its completion is the responsibility of the TSWG.

Amira asked the group if there were any questions.

- A member requested to revisit the Estuary Habitat Table and for clarification around what the low, medium, high, very high rankings mean in terms of priority. Amira explained that when a stock has a ranking of low impact level/low status on the habitat matrix it would indicate that the stock is being impacted by a factor other than habitat. If the ranking is high impact level/low status then the estuary habit is likely contributing to the stock's low status, therefore it would make sense to prioritize estuary recovery to improve that stock's status. It was clarified that this was not a ranking of stock importance but a tool to determine where to prioritize habitat actions.
- One group member asked whether predation in the estuary was included in this table, specifically by seabirds. Another group member added that their understanding was predation had been separated out but that they were not certain.
- One participant invited reactions to the table from members who know the estuary stocks very well.
- One participant elaborated that the Biological Sub-Group, when considering prioritization, discussed the need to look across the threat categories. The group landed on looking at integration and multi-threat considerations as a later step, and that predation would also be considered then.

- One participant shared that for those who work on estuary habitat, the results of the modeling were surprising, because the stock with the highest priority for estuary actions (UCR summer steelhead) spends only 3-5 days in the estuary. Although we know these fish eat prey (insects) that move from the floodplain wetlands into the mainstem, estuary habitat restoration is probably not a high priority for this stock's recovery, or at least no more so than for SR spring/summer Chinook. This anomaly is likely a result of how the CBP determined estuary impacts, which was based on limited survival data for this life stage.
- Another participant shared that they thought of predation actions as managing predators, such as sea lions. Habitat restoration actions may also reduce the impacts of predators, but those recommendations would come out of the habitat work group.

Amira offered to send the full document of the biological matrices to this group as a follow-up and reminded the group that the purpose of today is to focus on tributary and estuary habitat.

Estuary Habitat Discussion of Resources and Gaps

Amira introduced the discussion questions and shared that the jam boards would be used to collect responses during the discussion. The discussion questions were as follows:

- What existing forums are currently operating?
- What resources exist currently? What programs need more resources?
- What existing data, research, and studies are already out there that the group can form recommendations on?

Amira explained that we would compile the information gathered on the jamboards and bring that information back to the group.

Estuary Jamboard Question 1 - What existing forums are currently operating?:

Responses:

Federal Entities

- Columbia Estuary Ecosystem Restoration Program (CEERP) - The program includes BPA/Corps mitigation under the Columbia River System Biological Opinion.
- US Army Corps of Engineers Anadromous Fish Evaluation Program (AFEP) Studies Review Work Group (SRWG) for regional input on Corps funded research and studies
- Expert Regional Technical Group (ERTG)
- Multi-agency/NGO: Lower Columbia Estuary Partnership Science Work Group
- Federal land use and regulatory programs

State and Regional Entities

- Programs such as Fish Barrier Removal Board, to restore access to blocked tributary habitats. State of WA, statewide program
- State and local land use and regulatory programs
- Washington Governors Salmon Recovery Office development of 2- and 10-year recovery work plans with state agencies under the new Statewide Strategy update.

- Return of the Redds, North Coast Watershed Association, Oregon
- The Lead Entity Programs managed by the four Salmon Recovery Regions - $46 million on the ground this year

Other

- Private entities: Mitigation banks

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

- One member mentioned that if we are not protecting habitat baseline at the same time as restoration then we are just slowing the rate of loss, and that it is important to think of programs that protect what we currently have.
- A member pointed out that many of the organizations shared in the jamboard were interwoven or interconnected.

Estuary Jamboard Question 2 - What resources exist currently? What programs need more resources?:

Responses:

Existing resources

- Bonneville Power Administration works with Cowlitz, Columbia Land Trust, Lower Columbia Estuary Partnership, private entities, the Washington Department of Fish and Wildlife, and Columbia River Estuary Study Taskforce to implement Columbia Estuary Ecosystem Restoration Program (CEERP) Restoration and Monitoring.
- BPA set aside just 10% of their surplus revenue this year for estuary and habitat restoration work.
- For the Army Corps of Engineers, the Columbia River Fisheries Mitigation appropriated funds support research, monitoring, and evaluation. The Water Resources Development Act (WRDA) 536 authorizes habitat restoration.
- The Army Corps of Engineers is working to leverage their dredge material management plan to use material to create or augment estuary habitat.
- Regional Science Center (Northwest Fisheries Science Center) Point Adams Research Station is a resource for research/monitoring but very much in need of funding
- The Bipartisan Infrastructure Law (BIL) provided significant funding to National Estuary Programs, the Columbia Basin Restoration Program, and many other programs.
- The new Infrastructure Investment and Jobs Act, Inflation Reduction Act, and Transformational and Community Resiliency grant programs are opening the door for more robust projects.

Funding Needs

- More funding is needed for tributary and estuary habitat status and trends monitoring in Oregon and Washington.
- The Army Corps of Engineers needs more funding to support the Columbia River Fish Mitigation Program (CRFM) and Water Resources Development Act (WRDA) 536. The Corps is challenged by year-to-year federal funding limits and competing nationwide priorities. Congressional support and appropriations would help fund this effort for estuary and tributaries.

- The Army Corps of Engineers has missions for climate resiliency – we could use help getting support for this in estuary [and tributary] respective to floodplain reconnections to ameliorate projected impacts of climate change
- The Columbia River estuary is one of the most developed parts of the basin, land values are very high, and require many parcels to build meaningful projects. Resources are needed to protect and conserve land and floodplain access.

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

- The Army Corps of Engineers plays a big role in estuary habitat improvement and restoration and requires Congressional appropriations to do their monitoring. The Corps is currently facing challenges from federal funding limits, which is also an issue for state level organizations.
    - One group member shared that as the country recovers from COVID we could see more stimulus bills. It is possible we could seek funding from future stimulus bills like the funding which was allocated to a recent plan to remove four dams on the Klamath River.
- One member shared that the EPA has been leading excellent research efforts in the Lower River, and is filling a role that was typically filled by the Corps.

Estuary Jamboard Question 3 – What existing data, research, and studies are already out there that the group can form recommendations on?:

Responses:

- Columbia Estuary Ecosystem Restoration Program Synthesis memos, Corps' Action Effectiveness Monitoring Study and Final Report, various Expert Regional Technical Group (ERTG) products. All are available at www.cbfish.org/estuary; and Lower Columbia Estuary Partnership's (LCEP) new Tableau data dashboard.
- The ERTG forums and Science Work Group forums are where estuary practitioners commonly present and discuss new data and trends. Both are open to the public.
- Recent reports from the northwest's Intensively Monitored Watershed (IMW) projects are shedding light on which restoration approaches are/are not producing results to date.
- Currently, BPA partners are working to develop an online platform for data captured by the Status and Trends & Action Effectiveness Monitoring Program
- More research is needed about stock and timing-related estuary survival rates.
- Many different studies – sea level rise, thermal refuge, land cover, watershed evaluation, Ecosystem Monitoring Program (EMP), Action Effectiveness Monitoring program (AEM), more information available at: https://www.estuarypartnership.org/our-work/research
- Marine Survival Project report on factors affecting salmon survival in Puget Sound, including estuary habitat factors; marinesurvivalproject.com and marinesurvival.wpengine.com/wp-content/uploads/2021PDF-SynthesisPaper-Screen.pdf
- NOAA Fisheries ocean studies

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

- There are upstream-downstream influences that impact habitat depending on whether a restoration project happens in an estuary or tributary. Impacts to fish stocks conditions that impact tributaries might impact what happens in the estuary at its confluence point. There should be some consideration to how river systems interact with each other, and impact connected habitats.
- More research is needed about stock and timing-related estuary survival rates.

Tributary Habitat Discussion of Resources and Gaps

Amira introduced the discussion questions as the topic shifted from Estuary to Tributary Habitats. Group members were invited to respond to the same questions as during the Estuary Habitat discussion, this time focused on Tributary Habitats:

- What existing forums are currently operating?
- What resources exist currently? What programs need more resources?
- What existing data, research, and studies are already out there that the group can form recommendations on?

Tributary Jamboard Question 1 - What existing forums are currently operating?:

Responses:

Federal Entities

- Columbia River System Biological Opinion Tributary Habitat Program (including Tributary Habitat Steering Committee and Tributary Technical Team)
- NOAA Pacific Coast Salmon Recovery Fund
- BPA Fish and Wildlife Program and funding

State and Regional Entities

- Washington State Forest Practices Board (Timber Fish and Wildlife program)
- Governor's Salmon Recovery Office development of 2 and 10 year recovery work plans with Washington state agencies (estuary and tributaries).
- Fish Barrier Removal Board (WDFW)
- Washington Salmon Recovery Funding Board (SRFB)
- Idaho Regional Planning and Implementation Efforts, including: Clear Water Focus, Upper Salmon Basin Watershed Program and Tech Team, Upper Snake River Working Group
- Washington Regional Planning and Implementation Efforts, including: Washington Salmon Coalition (and associated Lead Entities and Reginal Recovery Organizations, such as Upper Columbia Salmon Recovery Board and Regional Technical Team, Washington Snake River Salmon Recovery Board, Lower Columbia Fish Recovery Board); Yakima Basin Integrated Plan.
- Oregon Regional Planning and Implementation Efforts, including: Watershed Councils, Grande Ronde Model Watershed and Implementation Team, Oregon Watershed Enhancement Board Regional Review Teams, Malheur River Recovery Technical Work Group

Public Utilities

- The Public Utility Districts (PUDs) in Washington State have tributary committee's in association with implementation of their habitat conservation plans
- Habitat Conservation Plans associated with some Federal Energy Regulatory Commission (FERC) licensed dams owned and operated by public utilities

Other

- Western Rivers Conservancy
- With regard to land use/regulatory programs, there are many planning efforts at the local, state and federal levels that affect habitat protection.
- Soil and Water Conservation Districts
- Land trusts (e.g., Deschutes); local non-profits

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

- The relationship between the Columbia River System Tributary Habitat Steering Committee and the Columbia River System Biological Opinion Tributary Habitat Program was explained.
- Additional context was provided for the Oregon Watershed Enhancement Board Regional Review Teams.
- Many members shared the names of State organizations, particularly in Washington. When asked if any non-profit groups could be identified, one group members shared that, at least in Idaho, most non-profits were usually captured under these state efforts.
- Patty invited members from Oregon to provide additional context around the Deschutes Land Trust.
    - It was explained that this was one of many groups that was conducting its own restoration work. The Deschutes, Grande Ronde, Clackamas and John Day are 4 Oregon basins funded under an OWEB Focused Investment Partnership. Each operates under a strategic action plan and has been awarded non-competitive monetary awards, for six year periods, to conduct tributary habitat restoration. These partnerships encompass many entities from state, fed, local agencies, tribes and non-profits. These also include a level of effectiveness monitoring.
- One group member shared that every watershed in the Columbia River Basin likely has some watershed council or group.
- Patty raised the topic of Tribal fish & wildlife programs, and whether they work in collaboration with the other entities named.
    - Group members responded that in many cases they work with other organizations working within tributaries and estuaries.
    - In Idaho must Tribes apply for funding through the government but some have separate funding sources.
    - Spokane Tribes are in a unique situation given their location in the blocked areas, thus making financial resources hard to come by. They have recently become involved in the Washington Governor's salmon restoration efforts.

Tributary Jamboard Question 2 - What resources exist currently? What programs need more resources?

Responses:

Existing Resources

- Washington State: Salmon Recovery Funding Board funds habitat restoration work
- Washington State: Fish Barrier Removal Board (FBRB) funds barrier removals throughout the atate anadmous stocks, operated by WDFW
- Infrastructure Act
- Pacific Coast Salmon Recovery Fund (NOAA)
- Upper Snake River Tribes Foundation and member Tribes
- BPA and Bureau of Reclamation Funding for Columbia River System Biologica Opinion tributary habitat program
- Project sponsor organizations doing the work need more capacity for staffing and project development/design. They are maxed out in WA.
- Oregon Watershed Enhancement Board
- Conservation Futures Trust funds, state and local parks grants
- There may be climate change funds that could be used for restoration as carbon capture methods.
- Federal land management agencies (USFS, BLM) have some funding for habitat restoration.
- The Bureau of Reclamation will have a request for proposals out by January 2023 through the WaterSMART program for infrastructure funds targeted toward ecosystem restoration (about $50 million per year throughout the western US)
- NOAA Restoration Center funds
- Yakima Basin Integrated Plan (WA State and Federal)

Funding Needs

- Habitat status and trends monitoring funding is insufficient for tributaries in WA, and potentially across all states in the Basin.
- Blocked habitats that historically supported anadromous fish.
- Funding is needed for monitoring effectiveness of both habitat protection and restoration programs, to inform adapative management.
- Walla Walla Water 2050 Plan Implementation (needs more resources)
- In general, much more funding is needed for habitat restoration, although there's also questions about capacity to get projects on the ground. In Oregon, human capacity is a limiting factor to advance landscape scale habitat restoration and effectiveness monitoring efforts. Many entities are maxed out on the number of restoration projects and monitoring they can do each year due to staff and funding limitations. Additional funding is needed to invest in the caapacity necessary to do the work if advancing the pace and scale of restoarion is a high priority.
- Additional resources are needed everywhere but the Youngs Bay, Big Creek and Clatskanie populations have very little restoration occurring compared to other watersheds. These Oregon watersheds may need an additional non-profit organization that could step in and assist/implement high priority watershed restoration projects.

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

- Funding through the Infrastructure Act was identified as a potential topic for a future meeting.
- The Conservation Futures Trust funds state and local park grants which purchase parklands and match with state funds to provide salmon recovery.
- Due to increases in funding, organizations have scaled efforts; however, if we are unable to get projects into the pipeline than this can cause a problem. This issue was seen in Washington last year.

Tributary Jamboard Question 3 – What existing data, research, and studies are already out there that the group can form recommendations on?

Responses (Within the jamboard, a separate column was creation for missing data/research):

- North Coast Watershed Association – Return of the Redds – strategic action plan – using 10 years of data and crated a prioritization scheme on where to focus (ODFW research on chum salmon reintroduction)
- Salmon Recovery Funding Board project effectiveness monitoring.
- Lessons learned and results from ongoing Intensively Monitored Watershed studies on what is/is not producing fish responses.
- Landward Migration Zones/Climate Vulnerability
- There's published literature about restoration science, there's monitoring reports, life-cycle models, local processes to identify and prioritize limiting factors/actions.
- Lower Columbia River Watershed Council-Strategic Action Plan
- High quality habitat prioritization documents in key basins (Upper Columbia Biological Strategy, IRA/MRA effort in Upper Salmon, Grand Ronde Atlas, and Tucannon Geomorphic Study) Washington State regional fish barrier prioritization modeling efforts (UCSRB, YBFWRB, SRSRB)
- Scappoose Watershed Council Strategic Action Plan
- Northwest Power and Conservation Council programs and subbasin plans
- In the Klamath, we used the S3 model to estimate juvenile salmon survival as a function of habitat area (calculated on a daily basis based on flow) and other habitat characteristics.
- There has been some recent synthesis work by the Beechie/Pess team that might be helpful. Also the recent IMW report.
- Clackamas Basin Partnership, an Oregon Watershed Enhancement Board (OWEB) funded Focused Investment Program, SAP
- Management Implications from Pacific Northwest Intensively Monitored Watersheds: https://www.pnamp.org/document/15207
- Specific plans related by major basins have a lot of data
- Evaluations of effectiveness of land use programs at achieving no net loss.
- Hood River 2040 Strategic Action Plan
- NOAA Fisheries 2022 5-year reviews
- Recovery Plans and other products developed for recovery plan implementation
- Yakima Steelhead Recovery Plan and workplan: https://ybfwrb.org/wp-content/uploads/2017/09/YakimaSteelheadPlan.pdf
- Hells Canyon Complex Fisheries Resource Management Plan

- Snake Salmon Recovery Region (WA) Recovery Plan and workplans: https://snakeriverboard.org/reports/#RecoveryPlan
- Upper Salmon Basin IRA/MRA. And reference reach studies
- Climate vulnerability assessment.
- NOAA Life Cycle Modeling Tech Memo
- Sandy River Basin Strategic Action Plan

Missing Data/Research

- Need better life cycle modeling to inform identification of bottlenecks
- Lack of fundamental habitat status and trends monitoring data for tributaries.
- Missing: better understanding of type of actions that will provide the biggest benefit for a particular population.
- Missing: Better understanding of the scale of restoration needed to really start to see benefits at population scale.
- Missing: limiting factors analyses and habitat restoration strategies, supported by empirical data, for some watersheds/subbasins.
- Understanding of climate impacts and best ways to mitigate.

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

- There are a number of recovery and subbasin plans in effect that can be utilized to determine baseline information needed to support this project's efforts.
- NOAA published a climate vulnerability assessment looking at all salmon evolutionarily significant units in 2019 and 2020. It was suggested that this group should check for new information on climate vulnerability adaptations.
- This group could emphasize evaluating the biological status of species and identifying actions of high priority for implementation in the next five years.
- Fish habitat response to habitat actions continues to be limited by out-of-basin factors including mainstem habitat conditions, hydro mortality and ocean conditions.

Work Plan, Next Steps, and Summary

The group concluded the discussion on Tributary Habitats and transitioned into a discussion focused on the generation of a work plan and identification of next steps.

The group was invited to share topics for next month's meeting. These suggestions included:

- A presentation to the group on the existing Estuary programs.
- A discussion on how the group will work together and what will be worked on.

Other suggestions and questions raised by the group included:

- Actions taken by this group may be more impactful for one stock than another.
- How quickly can restoration efforts recommended by this group manifest?

Proposed Next Steps for the Work Group Include:

- Compile the information collected during today's brainstorm and filter that information through the lens offered by the biological matrices.

    - Identify if there is anything that needs to be added.
- Review the "story" behind specific stocks
- Request I/RG to clarify:
    - What level of recommendations and actions are expected?
    - Should work group comment on what level of restoration is needed to achieve the desired outcomes?
    - Should we identify implementers, partners and collaborators in this work?
- Use the NOAA 5 Year Reviews as starting point for identifying priority actions for the next five years, including adding specificity to generalized recommendations.
    - Distill down into short-term and long-term restoration and protection related actions.
    - Rank priorities.

Amira thanked everyone for participating in the Estuary and Tributary Habitat Work Group and invited additional questions or comment to be shared over email.

The meeting adjourned at 12:00pm PT/1:00PM MT