

# Columbia Basin Collaborative Structured Decision Making Steelhead Pilot Sub-group

## Meeting Summary

Friday, November 22, 2024, from 9:00am – 11:00am PT/ 10:00am – 12:00pm MT

### Attendees

**Sub-group Members in Attendance:** Adrienne Grimm (National Oceanic and Atmospheric Administration), Alex Conley (Yakima Basin Fish & Wildlife Recovery Board), Art Martin (Oregon Department of Fish and Wildlife), B.J. Kieffer (Spokane Tribe of Indians), Brent Hall (Confederated Tribes of Warm Springs), Cindy Studebaker (U.S. Army Corps of Engineers), Gary Marston (Trout Unlimited), Greg Sieglitz (National Oceanic and Atmospheric Administration), Jay Hesse (Nez Perce Tribe Department of Fisheries), Jerimiah Bonifer (Confederated Tribes of the Umatilla Indian Reservation), Jody Lando (Bonneville Power Administration), Kevin Scribner (Salmon-Safe), Larissa Lee (National Oceanic and Atmospheric Administration), Leslie Druffel (The McGregor Company), Robert Lessard (Columbia River Inter-Tribal Fish Commission) Scott Hoefer (Bureau of Reclamation), Steve Martin (Snake River Recovery Board), Toby Harbison (Washington Department of Fish and Wildlife)

**Facilitation Team:** Colin Johnson (Kearns & West) and Samantha Meysohn (Kearns & West).

### Welcome, Agenda Review, and Updates

Samantha Meysohn, Kearns & West, welcomed members to the Structured Decision Making (SDM) Steelhead Pilot Project meeting as part of the Columbia Basin Collaborative (CBC). Members and guest presenters introduced themselves. Samantha reviewed meeting guidelines and provided an overview of the agenda. The meeting topics included: 1) Salmon Analyzer Presentation, 2) Columbia Basin Partnership Report Scenario Actions Presentation, and 3) Mid-Columbia Steelhead Recovery Plan Presentation.

Samantha gave a brief recap of the Integration/Recommendations Group (I/RG) Meeting in November. The meeting included a review of the work the SDM Steelhead Pilot Project sub-group completed since June and an outline of the workplan for implementing the eight-step proposal process that the sub-group is working on. The I/RG was supportive of considering new members for the sub-group.

### Salmon Analyzer Presentation

Samantha invited Bob Lessard, Columbia River Inter-Tribal Fish Commission, to present on the Salmon Analyzer tool. Samantha shared that this presentation aligns with Step Four of the SDM proposal, which reads:

*Ensure that there is agreement on the use of existing analyses (e.g., salmon slider, heat map, etc.), coupled with supplemental analyses (e.g. other studies,) as needed and how they will be used to assess scenarios.*

Bob shared that the goal of the presentation was to familiarize people with the assumptions and empirical basis that went into developing the salmon analyzer, address concerns about the use of the analyzer, and provide insight into how the analyzer can be used as part of the SDM Steelhead Pilot

Project. Bob explained that the analyzer uses data from the heat maps in the Columbia Basin Partnership Task Force (CBPTF) Report which looked at various impacts affecting 24 stocks. The impacts captured in the salmon analyzer are:

- Freshwater Habitat
- Estuary Habitat
- Mainstem Habitat
- Hydropower with/without Latent Mortality
- Blocked Habitat
- Predation
- Harvest
- Hatchery
- Future Conditions

Bob explained that 'Future Conditions' was a stand-in for impacts from climate change. The analyzer looked at salmon lifecycles from spawn to return to see how many salmon are making it from one stage to the next. The analyzer produced a table for all 24 stocks breaking down what the impact was for that conceptual grouping. The effect of each impact was designated using a scale of 0-100. The tool could be used to calculate what the net amount of recovered fish would be from a single action aimed at reducing mortality, and gave a foundation for looking at contrasts across stocks. The tool does not determine how long it would take to achieve a specific gain in abundance but does propose that gains would be achieved sooner if a specific action to reduce mortality was carried out with increased frequency. Bob reviewed the different data and tools that had historically tracked impacts to stocks and were used to build out the salmon analyzer.

Bob previewed a version of the salmon analyzer focused on Mid-Columbia steelhead stocks that was adapted from data used to create the original salmon analyzer. Bob described how this version of the salmon analyzer tool could be used to develop and test scenarios to support Mid-Columbia salmon recovery. Bob previewed a table that could be used to look at impacts systematically, outline costs, and determine benefits across stocks. A quantitative measure of the qualitative gains would be included to estimate the social, cultural, economic and ecological (SCEE) benefits that would result from each action. The sub-group will need to discuss how best to quantify SCEE values. Bob explained that the salmon analyzer currently does not have a temporal component but that one can be built if needed.

Bob addressed comments and concerns shared by SDM sub-group members during previous meetings.

- Bob explained that the salmon analyzer provides a baseline of relative benefits.
- Density dependence is incorporated into the current values, but increasing abundance will affect the boundaries of productivity.
- All parameters of the salmon analyzer are empirically derived.
- The impacts are distinct from one another, however the interactions between impacts can become implicit when part of a scenario.
- Bob shared that while methodologies are different across populations, a more consistent methodology can be expected if the salmon analyzer is focused on just the Mid-Columbia steelhead.

- The timescale of the impacts is not currently incorporated in the model, and it may be helpful to consider timing in the SDM process.
- A discount factor can be built into the scenarios to account for climate change.
- A lot of the latest science was brought into the development of the salmon analyzer.
- The salmon analyzer can be accessed by SDM sub-group members in the SharePoint folder.
  - Bob caveated that the tool is currently not populated with validated impacts for each Mid-Columbia Steelhead Stock. Instead, it has placeholder impacts/heatmap values that are hypothetically modified from the Mid-Columbia Steelhead Slider aggregate value.
  - Bob added that the scenarios are also hypothetical, and the example provided for scenarios is focused on a subset of the stocks. The tool, in its current form, illustrates how the framework of the slider model can be used more specifically and more granularly at the subbasin level or stock level. It requires considerable fine-tuning and expert judgement.

The SDM sub-group shared the following questions and comments about the salmon analyzer:

- The updated salmon analyzer for the Mid-Columbia steelhead will allow for SCEE values to be incorporated sooner in the scenario development process.
- A member asked about the capacity and resources available to build out the salmon analyzer.
  - Bob shared that this is dependent on individual capacity and resources that sub-group members have to dive into the development of the salmon analyzer. Bob added that building out the salmon analyzer to add additional components would require collaboration from sub-group members with the required expertise. The tool currently provides insight into relative impacts on stocks and places where actions are likely to lead to positive changes.
  - A member highlighted the group's limited capacity to make the tool perfect but added that with an understanding of the salmon analyzer's strengths and limitations, the group can use the tool and improve it when possible.
- A member asked for clarification on whether the salmon analyzer considers singular reduction methods for each impact.
  - Bob clarified that the model shows what an expected outcome will be when a certain impact area is reduced, but does not specify a singular method to achieve reduction.
- A member asked if the analyzer can determine outcomes from actions that are coupled together to achieve a greater benefit.
  - Bob shared that salmon analyzer does not have that feature and that it currently adds the outcome from actions up linearly.
- A member shared concerns about the interaction between impact factors, and how that interaction can be accounted for in understanding impacts.
  - Impact factors, or "I values", are expressed as 0-100 with 0 being 0% mortality and 100 being 100% mortality for a single impact.
  - Bob clarified that everything in the salmon analyzer model assumes an absolute additive effect. The model was derived using empirical data which means that some interaction

is included already. That is less applicable the further that the model moves from the status quo, however it is unknown to what extent.

- A member shared that, as the salmon analyzer is used, the sub-group should be careful about any interactions that may not be accounted for by the model.
  - This can be considered in a cell-by-cell context within the heat map. The salmon analyzer can provide an objective basis for discussions, and an objective measurement for results.
- A member proposed bringing technical experts on the Mid-Columbia to help tailor and improve the model.

Samantha thanked Bob for the presentation and sub-group members for the robust discussion.

### Columbia Basin Partnership Report Scenario Actions Presentation

Samantha introduced the second presentation topic which focused on the Columbia Basin Partnership Report scenarios and the actions included within those scenarios. Samantha shared that this presentation aligns with Step Two of the SDM proposal, which reads:

*Look at the scenarios that were developed as part of the CBPTF Phase 2 Report and identify all the actions (e.g., habitat restoration, predator control action, hydro action, etc.) that collectively make up the scenarios.*

Samantha invited Kevin Scribner, Salmon Safe, to lead the presentation developed by Tom Iverson, Yakima Nation Fisheries, on the scenario actions. Kevin reviewed the key messages and recommendations from the CBPTF Report, which can be found on page 28 of the report. Kevin shared that, per the 2011 Canty Report, a comparison of needs verses availability of funds indicated that only 25% of capital and non-capital recommended actions could be completed. The CBPTF Project Team identified four-six key strategies for each impact area, and CBPTF participants developed 13 salmon recovery scenarios based on the identified strategies. Kevin reviewed a set of sequential steps developed by the CBC Biological Working Group to develop an integrated restoration recommendation.

The CBC hypothesis called for seeking broad acceptance and support of the most common strategies for each impact area. Kevin shared the following key takeaways from the scenarios regarding specific impact areas:

- Tributary and Estuary Habitat Strategies - 100% of the scenarios included an ask to increase investments and focus on large-scale, process-based restoration projects and for the protection of habitat function sufficient to demonstrably improve the abundance and productivity of key populations.
- Hydropower Mainstem and Tributary Dam Strategies - 92% of scenarios called for implementing dedicated efforts to substantially improve fish passage and survival through significant modifications of hydropower system operation and configuration.
- Blocked Areas Strategies – 77% of scenarios called for experimental reintroduction with interim hatchery supplementation concurrent with evaluation of passage potential.

- Predation and Invasive Species Strategies – 85% of scenarios called for undertaking lethal but limited removal of key predators in specific areas or as part of redistribution efforts.
- Fishery Strategies – 92% of scenarios called for managing fisheries to optimize harvest of healthy natural stocks within constraints of reduced exploitation rates on weak or less abundant stocks to ensure that harvest does not impede recovery.
- Hatchery Strategies – 85% of scenarios called for employing hatcheries for conservation and reintroduction to protect and restore native diversity and distribution.
- Systemic Strategies:
  - 92% of scenarios called for providing funding levels adequate to restore salmon and steelhead to healthy and harvestable levels consistent with Partnership Goals.
  - 85% of scenarios called for developing new legislation to foster an effective salmon and steelhead restoration program.
  - 85% of scenarios called for expanded monitoring and assessment efforts to assess the status and progress toward salmon and steelhead recovery.

Kevin summarized a near-term funding recommendation that was shared with the I/RG in 2022 which called for obtaining funding based on existing assessments and plans. As part of the recommendation, implementation would be completed at the local, regional, and watershed scale consistent with I/RG guidelines. The recommendation would require that the I/RG ensure optimization of efforts if funded and identify gaps for long-term funding, create and promote legislative fixes, and develop performance metrics.

Kevin explained that Tom also developed a table that includes strategies distilled from the scenarios to address each impact area. Strategies that appeared in all or most of the scenarios were highlighted.

A sub-group member noted that, to address the identified needs at a more granular level, work will need to be done to identify areas of focus and potential partners. The member proposed identifying groups capable of performing necessary work on the ground and providing resources. The sub-group can serve to address gaps in existing science and identify opportunities for collaboration across geographies.

Samantha thanked Kevin for the presentation and invited sub-group members to share any additional comments or questions. No additional comments or questions were shared. Samantha reminded sub-group members that they had agreed to review the presentation, scenarios, and the strategies captured in the table, as part of the process of identifying additional strategies to consider.

### [Mid-Columbia Steelhead Recovery Plan Presentation](#)

Samantha invited Steve Martin, Snake River Recovery Board, and Alex Conley, Yakima Basin Fish & Wildlife Recovery Board, to present on the Mid-Columbia Steelhead Recovery Plans. Samantha shared that the presentation aligns with Step Three of the SDM proposal, which reads:

*Identify any other actions that may need to be explored, that were not identified with the CBPTF Scenarios.*

Steve shared that the presentation would cover what occurred in the state of Washington in response to the Endangered Species Act (ESA) listing of steelhead in the Mid-Columbia, and across the entire state of Washington where salmon were listed under the ESA. The presentation would speak to what the plans contain, how the plans can inform SDM, and how existing knowledge and resources could be used to advance a pilot in the Mid-Columbia. The presentation began by outlining what a salmon recovery plan includes, stating that plans are required for all species listed under the ESA. The plans are developed at watershed or population scales before being incorporated into a larger recovery plan by NOAA that include hydropower, ocean, and other threats spanning multiple populations. The plans contain site-specific actions, costs, timeline strategies, objectives, and goals to address threats and limiting factors necessary to recover species. Under the Washington Way, the plans developed by regional recovery organizations brought together Tribes, local governments, and stakeholders with direction and analysis by National Oceanic and Atmospheric Administration (NOAA) and support from the state Governor's Salmon Recovery Office. Bringing together different perspectives and interests helped the Washington Way to inherently address SCEE values.

Steve and Alex provided an overview of the Mid-Columbia Forum, a roughly twenty-year collaborative effort between stakeholders and Tribes in Oregon and Washington to look at different local plans, identify federal actions, and advocate for resources to move steelhead toward ESA delisting. Steve reviewed accomplishments that have been achieved in the Mid-Columbia including instream, floodplain and riparian restoration, fish passage and stream flow improvements, and overshoot awareness at mainstem dams. There is an ongoing need to update plans and maintain efforts toward delisting, however cost is a prohibitive factor. The current status of recovery, and the existing needs, are summarized in the NOAA 5-Year Status Review.

Alex reviewed the progress made in addressing limiting factors in the Mid-Columbia, removing blockages, and restoring flood plains. Alex shared a bar graph highlighting adult steelhead abundance in the Yakima Basin from 1985 to present day. Steelhead abundance was shown to be increasing and, in many cases, exceeding the lowest aggregate delisting goal from the early 2000s through 2016. In recent years abundance has declined. Alex shared that ocean conditions are a contributing factor to decreased abundance, but that Mid-Columbia steelhead have dipped more significantly than many other salmonid species in the region.

There is a need for additional resources to increase the rate of existing restoration efforts, and key uncertainties that need to be addressed. A greater understanding is needed about the high smolt mortality in Mid-Columbia tributaries and the Columbia, and the high mortality of returning adults in the Columbia. A community of practitioners is needed to think through how best to focus restoration on habitat types and parameters to best support anadromy.

Alex reviewed the leading funding sources that are backing restoration efforts in the Mid-Columbia and shared that, while resources have increased, roughly 75% more investment is needed to achieve delisting.

The SDM sub-group shared the following questions and comments about the Mid-Columbia Steelhead Recovery Plans:

- A member asked about the amount of blocked area in the Mid-Columbia that has been opened to salmon between 1980 and 2020.
  - Alex shared that roughly 1800 miles have been opened which increased accessibility from 30-40% to about 80-90% if weighted by habitat length.
- A member asked if abundance response was commensurate with the areas unblocked.
  - Alex responded that, while that has not been closely analyzed, the best place to look for that information is the Upper Yakima where five major steelhead tributaries were opened. In that area the abundance response is commensurate.
  - Steve added that the removal of the Mill Creek fish barrier in Walla Walla is expected to be completed in the next four-five years. Pit tagging infrastructure has been installed and the Umatilla tribe is monitoring natural produced steelhead to assess how passable the area becomes. This should provide data on how commensurate abundance is for that area once it is unblocked.
- A member asked about the timeframe within which an unblocked area meets full potential for fish passage.
  - Alex shared that the initial response when removing some blockages was instantaneous and fish were observed within a year or two. However, the timeframe during which that response would be measured coincided with a crash in productivity.
- A member shared appreciation for the strategic thinking and approach taken in the Mid-Columbia Steelhead Recovery Plans.

Samantha thanked Steve and Alex for the presentation and the sub-group members for the thoughtful questions and discussion.

### Confirm Next Steps and Action Items

Samantha discussed scheduling for the next SDM Steelhead Pilot Project meetings with the sub-group members and identified a preferred timeframe for the meeting in December. Samantha shared that a next step for the sub-group will be to crosswalk the Mid-Columbia Recovery Plans with the CBPTF Phase 2 Report Strategies to identify overlaps and gaps. Sub-group members also expressed interest in revisiting the SDM framework at the December meeting, and potentially inviting a guest to share about their experience with SDM in another context. Samantha thanked the sub-group members for their participation and reviewed the final action items.

### Action Items

- **All:** Complete a brief feedback survey to share your thoughts/feedback on the meeting.
- **All:** Complete the Doodle polls to schedule the December, January, and February SDM Steelhead Pilot Project meetings.
- **All:** Review the CBPTF Scenario Actions strategies for familiarity.
- **All:** Plan to focus the December meeting on discussing the SDM methodology.
- **Steve/Alex:** Cross-walk the CBPTF Scenario Strategies and the Mid-Columbia Steelhead Recovery Plan strategies to identify synergies and gaps, and prepare a presentation for an upcoming sub-group meeting.

- **K&W:** Draft a summary of the CBC SDM Steelhead Pilot Project November 22 Meeting and share with the Sub-group by end of day 12/20.

*Meeting adjourned at 11:00am PT.*