



REGIONAL TECHNICAL TEAM MEETING FINAL JULY MEETING SUMMARY

Date: Wednesday, July 10, 2024

Time: 9:00 AM to 11:30 AM

Location: Webinar

Members Present: Tom Kahler (Douglas PUD), Amanda Barg (WDFW), Shelby Fowler (USFWS), John Crandall (Confluence Aquatics), Brandon Rogers (Yakama Nation, Vice Chair), Steve Fortney (Gray & Osborne Inc.), Kate Terrell (USFWS), and Tracy Hillman (BioAnalysts Inc., Chair),

Others Present: Ariel Edwards (UCSRB), Ryan Niemeyer (UCSRB), Chevelle Yeckell (Okanogan CD), Tim Hanrahan (BPA), Meghan Camp (UCSRB), Christina Barrineau (CCNRD), Jeff Jorgenson (NOAA), Ameer Bahr (RCO), Cameron Thomas (CDLT), Eunice Youmans (CDLT), Steve Kolk (BCR), Paul Hessburg (USFS), and Steve Kolk (BOR)

Tracy Hillman reviewed the July RTT meeting agenda, and the agenda was approved by all RTT members present. Tracy Hillman reviewed the June draft meeting notes and members approved the notes.

RTT and UCSRB Updates

Introduce BPA Habitat Lead (Tim Hanrahan)

Tim Hanrahan introduced himself to the group. He is the BPA habitat lead in the Upper Columbia. He is a research geomorphologist and spent 19 years with PNNL and 12 years as a consultant. He also led a recent study in the Methow River basin evaluating fire impacts on stream restoration actions. Tim will coordinate with UCSRB staff, project sponsors, and the RTT.

Salmon Recovery Funding Board Grant Round

Ariel Edwards shared that all the proposed projects submitted this year under the SRFB general fund and Riparian fund will be funded. The State Review Panel identified one project of concern in the first round. We are waiting to hear from the Review Panel on their final decision, which should be within a week.

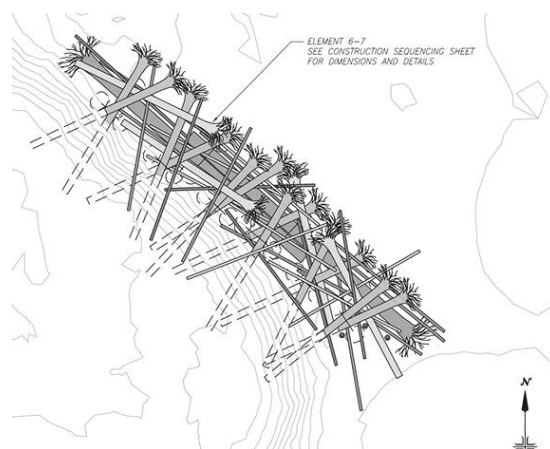
Updated Intrinsic Potential Layer

Ryan Niemeyer shared that the intrinsic potential (IP) layer is still being updated to reflect the process that was approved by the RTT. He will share the final IP layer once the modeled IP reflects what was approved by the RTT last year.

Large Wood Update from John Crandal

John Crandall shared that it is relatively easy to estimate the size of wood within naturally occurring jams; however, it is more difficult to estimate the size of wood in ELJs. Currently, if a piece of wood does not meet the required length and diameter criteria, it is not counted. Because several large pieces of wood in ELJs are buried in banks, it is difficult to determine whether a piece of wood in an ELJ meets the

criteria (see image below). It is easy to identify and count jams; it is difficult to count all large pieces within jams.



It was recommended to use the as-built designs to estimate the number of large pieces within an ELJ. Tracy Hillman recommended that if the as-built designs are not available, use only the diameter criterion to identify and enumerate large pieces. The RTT also discussed the need to look at changes in jams over time. The current approach is simply a snapshot in time. John Crandall noted that although the assessments are a snapshot in time, assessments can be repeated every 5 to 10 years.

The large wood and jam monitoring protocols were updated as follows:

- Use the following methods to identify large wood pieces in partially buried log jams:
 - Use the as-built plans to identify and enumerate qualifying pieces in engineered log jams.
 - If the as-built plans are not available (for engineered log jams) and the lengths of pieces cannot be assessed (i.e., they are buried in the bank), identify and enumerate qualifying pieces based only on their diameter.
 - Within a log jam, report the number and percentage of partially buried pieces that make up the log jam (e.g., of the 26 qualifying pieces in the log jam, 17 (65%) were partially buried [identified based only on diameter]).
 - Within a reach, report the number and percentage of qualifying pieces that exist within log jams (e.g., of the 286 large wood pieces in the reach, 218 (76%) were within 3 log jams).

Action Items:

- **Tracy Hillman will update the language in the large wood and jam monitoring protocols to include identification and enumeration of large wood pieces buried in ELJs.**

Review Current Fish Barrier Removal Board HUC 10 (Wenatchee River)

Ryan Niemeyer described the process for recommending a priority HUC 10 for the Fish Barrier Removal Board. Tracy Hillman proposed we follow the steps and convene the barrier workgroup. The workgroup can use the updated barrier prioritization tool to help identify the priority HUC 10. The RTT agreed to convene the barrier workgroup.

Decisions:

- **The RTT approved reconvening the Barrier Workgroup to identify and recommend a priority HUC 10 for barrier removal projects.**

Action Items:

- **Tracy Hillman and Ryan Niemeyer will schedule a Barrier Workgroup meeting.**

Science Considerations for Future Chelan Douglas Land Trust Projects

Cameron Thomas presented on how Chelan Douglas Land Trust is planning for climate change. Cameron said the Land Trust has been considering approaches for restoring and protecting watershed conditions under changing climatic conditions. He indicated that the Land Trust has a long history with the RTT and UCSRB, and the Land Trust wants to continue that relationship. They would like to share their thinking about climate change and seek expert input on options and concerns with climate change.

Cameron described some ways that climate change affects the current portfolio. With regard to terrestrial risks, climate change affects forest to non-forest transitions, results in larger and more severe wildfires, increases noxious weed expansion, and shifts species ranges. Regarding aquatic risks, climate change increases water temperatures, decreases cold-water refugia, increases large sediment pulses, entrenches channels, and changes precipitation patterns and delivery. Based on these risks, the Land Trust evaluated the RTT Prioritization Strategy to determine how the Strategy address climate change. The Land Trust is also evaluating how they pursue and select projects under climate change scenarios. The Land Trust hired the Washington Conservation Science Institute to review the Land Trust portfolio. The aquatic review focused on low-gradient streams and potential adjacent floodplains, road risk, and cold-water sources. The review is occurring within the entire Wenatchee Subbasin. The Land Trust is waiting for the final report. The Land Trust's focus is on aquatic resiliency, salmon and steelhead recovery, and Bull Trout habitat connectivity. Cameron said there is a need to develop larger projects.

Cameron then identified the following questions about future opportunities:

1. How can future acquisitions significantly improve riverine processes?
2. How can future acquisitions help cold-water fish reach spawning grounds and improve patch size and connectivity?
3. How can future acquisitions help reduce overall stream temperature?

Lastly, Cameron shared a list of articles that deal with climate change and restoration (see Attachment 1).

The RTT mentioned that they have a lot of data that could feed into the Land Trust's vision, including data on cold-water refugia in the Wenatchee and Methow subbasin. There is also a lot of information from reach assessments that can be used. The trick will be developing tools or ways to integrate the information in a way that can inform decisions. The RTT also mentioned the need for funding additional data collection and analyses. If uplands are included, they questioned what funding sources are available for doing upland work.

Jeff Jorgenson shared that Lisa Crozier from the NWFSC recently published a review of impacts of climate change on salmon by life stage: <https://www.mdpi.com/2410-3888/8/6/319>. There is a searchable database of the papers included in the Crozier paper. It's a little slow to load so be patient. It allows one to search the papers by keyword combinations. https://gwffl0-lisa439.shinyapps.io/my_rshiny_evol_try_3/.

The RTT thanked Cameron and the Land Trust for their presentation and discussion. Tracy Hillman recommended that the Land Trust and RTT continue to work toward a common goal. To that end, he

recommended that the Land Trust, Paul Hessburg, Ryan Niemeyer, and Tracy Hillman meet within a week or two to discuss next steps.

Action Items:

- **The Land Trust, Paul Hessburg, Ryan Niemeyer, and Tracy Hillman will schedule a meeting to discuss next steps in addressing climate change issues.**

Final Loup Loup Reach Assessment

Chevelle Yeckel and Eric Doyle presented on the final Loup Loup Creek Reach Assessment. Although the final document is not exactly like other reach assessments, it serves the same function and purpose. This reach assessment is a “hybrid” in that it uses EDT and therefore incorporates 20 years of data. It also serves the purpose of connecting the habitat data with “why” current conditions exist. The assessment identifies and develops potential projects and goes beyond other reach assessments in that it uses the BPA ATLAS scoring for assessing project feasibility. This reach assessment is also a “proof of concept” for the Okanogan subbasin and will be used to develop future reach assessments in the Okanogan.

Eric noted that comments from the RTT on the draft assessment recommended more complete hydrological analysis, sediment transport analysis, and hydraulic modeling. Eric said those activities are outside of the scope available for this project. The goal was to address the key information pieces and list those as recommendations and review criteria for proposals. Eric also mentioned that z-coordinate data were not collected in the cross-section surveys by CTCR. Instead, the CTCR relied on X and Y and visual keys to denote substrate changes. Eric said it appears channel incision is occurring. Chevelle and Eric shared the need with CTCR about collecting z-coordinates in the future.

Tracy Hillman asked if a reach assessment is proposed in Upper Loup Loup, could the sediment transport analysis and hydrologic analysis be completed at that time? Chevelle responded yes. She also noted that those analyses could be included in restoration project applications.

Monitoring Web App Discussion

Ryan Niemeyer shared that RCO is currently developing a monitoring web map. UCSRB staff attended a Council of Regions meeting yesterday where Nathan Han with TerrAdapt, who will be developing the web map, shared more information. This map will be similar to the web map developed by the Pacific Salmon Foundation for British Columbia ([LINK](#)). A workshop will be held on 23 July to discuss the development of the Web Map (see info below). UCSRB staff will track these developments and share them with the RTT to determine if there are additional needs for a monitoring web map.

July 23rd salmon habitat monitoring workshop details:

- Date: Tuesday, 23 July 2024
- Time: 10 am-12 pm
- Location: Zoom
- Register at: <https://us02web.zoom.us/meeting/register/tZwrduyuqDojHNIqrpWpYRaj4flrjnAiEL-z>

Review Updated Operating Procedures (Reach Scoring Rules and Conflicts of Interest)

Tracy Hillman walked through the updates to the RTT Operating Procedures. This included clarifying the criteria for a member to vote, abstain, or recuse themselves on decision items. The RTT approved the

updated operating procedures. Tracy Hillman also reviewed the scoring rules for reaches without ranks. During the review of proposals in June, the RTT decided to override scores of “0” for projects located within reaches with no rankings based on the spatial extent of the proposed project. That is, a proposed project that extends beyond a single reach would be given a higher score (score = 4) than a project that is located within a single reach (score = 1). A proposed project that extends beyond more than one reach is likely to address limiting factors and threats across a larger spatial scale than a proposed project located in one reach.

Decisions:

- **The RTT approved the updates to their operating procedures.**

Meeting adjourned at 11:35 am

Attachment 1

Citations Considered by CDLT Regarding Climate Change and Restoration

- Battin, J., Wiley, M.W., Ruckelshaus, M.H., Palmer, R.N., Korb, E., Bartz, K.K. and Imaki, H. 2007. Projected impacts of climate change on salmon habitat restoration. *Proceedings of the National Academy of Sciences*, 104(16), pp.6720-6725.
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- Bilby, R.E., Currens, K.P., Fresh, K.L., Booth, D.B., Fuerstenberg, R.R. and Lucchetti, G.L. 2024. Why Aren't Salmon Responding to Habitat Restoration in the Pacific Northwest? *Fisheries*, 49(1), pp.16-27.
- Bisson, P.A., Rieman, B.E., Luce, C., Hessburg, P.F., Lee, D.C., Kershner, J.L., Reeves, G.H. and Gresswell, R.E. 2003. Fire and aquatic ecosystems of the western USA: current knowledge and key questions. *Forest Ecology and Management*, 178(1-2), pp.213-229.
- Bisson, P., Hillman, T., Beechie, T. and Pess, G. 2024. Managing Expectations from Intensively Monitored Watershed Studies. *Fisheries*, 49(1), pp.8-15.
- Fullerton, A.H., Torgersen, C.E., Lawler, J.J., Steel, E.A., Ebersole, J.L. and Lee, S.Y. 2018. Longitudinal thermal heterogeneity in rivers and refugia for coldwater species: effects of scale and climate change. *Aquatic Sciences*, 80, pp.1-15.
- Isaak, D.J., Luce, C.H., Horan, D.L., Chandler, G.L., Wollrab, S.P. and Nagel, D.E. 2018. Global warming of salmon and trout rivers in the Northwestern US: road to ruin or path through purgatory? *Transactions of the American Fisheries Society*, 147(3), pp.566-587.
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- Merz, J.E., Pasternack, G.B. and Wheaton, J.M., 2006. Sediment budget for salmonid spawning habitat rehabilitation in a regulated river. *Geomorphology*, 76(1-2), pp.207-228.
- Palmer, M.A., Bernhardt, E.S., Allan, J.D., Lake, P.S., Alexander, G., Brooks, S., Carr, J., Clayton, S., Dahm, C.N., Follstad Shah, J. and Galat, D.L. 2005. Standards for ecologically successful river restoration. *Journal of Applied Ecology*, 42(2), pp.208-217.
- Rieman, B.E., Smith, C.L., Naiman, R.J., Ruggione, G.T., Wood, C.C., Huntly, N., Merrill, E.N., Alldredge, J.R., Bisson, P.A., Congleton, J. and Fausch, K.D. 2015. A comprehensive approach for habitat restoration in the Columbia Basin. *Fisheries*, 40(3), pp.124-135.
- Roni, P., Pess, G., Beechie, T. and Morley, S. 2010. Estimating changes in coho salmon and steelhead abundance from watershed restoration: how much restoration is needed to measurably increase smolt production? *North American Journal of Fisheries Management*, 30(6), pp.1469-1484.