REGIONAL TECHNICAL TEAM MEETING
FINAL SEPTEMBER MEETING SUMMARY

Date: Wednesday, 10 September 2025
Time: 9:00 AM to 10:40 AM
Location: Webinar

Members Present: Tracy Bowerman (USFWS), Catherine Williard (Chelan PUD), Ryan Klett (CTCR), John Arterburn (CTCR), Tom Kahler (Douglas PUD), John Crandall (Confluence Aquatics), Carlos Polivka (USFS), and Tracy Hillman (BioAnalyst Inc., Chair),

Others Present: Ryan Niemeyer (UCSRB), Ariel Edwards (UCSRB), Meghan Camp (UCSRB), Sean Welch (BPA), Mark Ingman (CCD), Justin Nielsen (Bureau of Reclamation), Amee Bahr (RCO), Christopher Cuhaciyan (Bureau of Reclamation), Jason Lundgren (Cascade Fisheries), Tim Hanrahan (River Sciences Center), Kristen Kirkby (Cascade Fisheries), Jeff Jorgensen (NOAA), Colin Forsyth, and Christina Barrineau (CCNRD)

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

Tracy Hillman reviewed action items from the August RTT meeting. Ryan Niemeyer shared that he has been involving the YN and CTCR in the planning for the 2026 Science Conference.

Tracy Hillman reported that the RTT approved Ryan Klett as a member to the RTT. Tracy Hillman also reported that the RTT approved Tracy Bowerman as the Vice Chair for the RTT.

RTT & UCSRB Updates

Science Conference Updates

Ryan Niemeyer provided updates on the 2026 Science Conference. He noted that there was some concern within the Steering Committee meeting about moving the conference to Leavenworth instead of keeping it in Wenatchee at the Convention Center. Ryan explained that the cost to use the Convention Center in 2026 is nearly double the cost of the last conference. Another concern was a lack of government-rate lodging in Leavenworth. Ryan has confirmed one 20-room block at government rates and will likely have two or three more hotels offering government rates. As a result, the conference will likely be in Leavenworth. Ryan also noted that during the Steering Committee meeting the group discussed sessions and plenary speakers.

Ryan shared the first draft of the artwork for the conference. The artist is Loreleil Kruger, who is a Yakama Nation Tribal Member and her website can be found here: https://luckyarrowcreations.threadless.com/.

Decisions:

- **None**

Action Items:

- **None**

Permitting Meeting in October

Ryan Niemeyer indicated that the upcoming permitting meeting will be on 20 October and will likely be held in the Winthrop Library Community Meeting Room. This will be a joint MRC meeting, with the first 30 minutes of the meeting dedicated to MRC business. MSRF will present on lessons learned during permitting the Sugar Reach project. Jim Fullerton from ORIA will discuss resources available as well as updates to the JARP form.

Decisions:

- **None**

Action Items:

- **None**

AFS Wenatchee

Ryan Niemeyer stated that he has been coordinating with Josh Williams, who is one of the planners for the WA/BC AFS meeting in Wenatchee in April 2026. He and Josh have been discussing an ESA spring Chinook/steelhead session during the AFS meeting. Ryan requested feedback from the RTT about this idea. Carlos agreed it would be great to host a session with a handful of talks. Tracy Hillman noted that Carlos should give his floodplain monitoring talk there (and at the 2026 Science Conference). John Arterburn suggested bringing the best of the best from the 2026 Science Conference to the AFS meeting. In addition, John A. and Ryan K. were already planning on attending and would like to present some of their work during an UC session.

Tracy Hillman suggested possibly expanding the session to include other UC salmonids. He indicated that someone from the Okanagan Nation Alliance could talk about restoring Sockeye Salmon in the Okanagan River basin. He said both Tom Kahler and Catherine Willard may have additional suggestions regarding Okanagan Sockeye Salmon. John A. agreed that making it more general would be more appropriate (and easier to include more talks).

Decisions:

- **None**

Action Items:

- **Ryan Niemeyer will draft a proposal for a symposium (session) for the WA/BC AFS meeting in Wenatchee and request feedback and comments on the proposal from the RTT.**

Lower Chewuch Reach Assessment

John Crandall presented on the updated 2025 Chewuch Reach Assessment. The impetus for a new reach assessment, given that there was a 2010 reach assessment, was partly because of the major wildfire in

the watershed as well as multiple restoration projects that have been completed since the 2010 reach assessment. The report includes the main report and several appendices, three of which were completed by the Bureau of Reclamation. There is also an appendix (memo) from the Yakama Nation on the effects of the Cub Creek fire on the watershed and fish habitat. The report includes geodatabases with modeling results, concept locations, and various shapefiles.

The reach assessment includes roughly 20 miles of stream. John highlighted that although there are many small creeks outside of the assessment area (e.g., Boulder Creek, Eightmile Creek, Falls Creek, Doe Creek, and Twentymile Creek), they contribute flow and sediment, which is crucial to in-stream habitat along the Chewuch River. The 20-mile segment is naturally confined by alluvial fans. In some tributary outlets, there are wider floodplains where the river is less confined and there is more potential for floodplain connections. John showed an image of modeled inundation, and it revealed that many of the reaches are naturally confined, while others have greater inundation at high flows.

The Bureau of Reclamation digitized older aerial imagery for geomorphic mapping. By using these multiple years of older aerial imagery, the team was able to map the changes in geomorphic areas. Overall, the active channels have narrowed. In some places, however, expansion did occur. Landslides can blow out alluvial fans. There may be some changes that are not real but simply an artifact of the quality of aerial images. In addition, in some cases, it may be difficult to interpret the information and identify the cause of changes in geomorphic units.

Average streamflow has shifted in the last 30 years. Stream flows in the 2010s had an earlier and higher peak compared to 2000s and 1990s. One graph in the reach assessment includes discharge in 1990s, 2000s, and 2010s. The graph highlights how the amount of habitat available has shifted with the changes in flow. The reach assessment also included a map of burned area in early 20th century and compared it to early 21st century. There is almost 90% wildfire coverage in the Chewuch drainage from 2000 to 2024, compared to much lower coverage in the 20th century. John mentioned that in Eightmile Creek, the creek has cooled downstream for several miles. The temperature in the mainstem spikes above core summer habitat range (16 deg C). Tributaries contribute important cold water to reduce spikes in mainstem temperatures.

The reach assessment also highlighted projects that have been completed from 1996 to 2023. This includes a total of 31 projects: 18 in Chewuch-Pearrygin and 13 in Chewuch-Doe. There are 20 habitat complexity projects and 5 riparian/floodplain protection projects. These projects included over 1,000 pieces of large wood, 1 mile of side channel, and 175 acres of floodplain and riparian protection. A lot of the wood is in engineered log jams. About 25% of the project opportunities from the 2010 RA have been completed. The updated reach assessment includes graphs of wood pieces per mile and wood jams per mile and breaks those into natural and engineered log jams.

Watershed-scale metrics for REI were all unacceptable or at risk. These metrics have worsened since the 2010 reach assessment. Figures also compare 2010 and 2025 habitat REI metrics. Wood has improved in many reaches. Pool spacing has worsened. In the reach assessment, all REI metrics are compared to the 2010 metrics to identify which metrics have changed.

The updated reach assessment includes concept designs. This includes relative elevation models. Projects include engineered wood and natural wood jams. The reach assessment includes the geodatabases with the shapefiles of these designs.

Tracy Bowerman commented that the human disturbance REI riparian metric has gotten worse across many if not most of the lower Chewuch reaches. This highlights that development continues to occur.

John Crandall said this could be in part due to better data that captures more impact. But it also could be due to more housing and road development since these activities are occurring in the lower Chewuch. John said he wanted to go back and identify the reasons for this shift. He added that it was also challenging for scoring the REI metrics that were more qualitative because they are more subjective.

Jason Lundgren asked whether fire impacts are accounted for in fine sediment and canopy cover. John Crandall said the data are recent and therefore account for fire impacts. Jason Lundgren questioned how much of the canopy cover impacts were anthropogenic. John Crandall said canopy cover metrics include both natural and anthropogenic impacts and do not separate the cause of the impact. John Arterburn asked about the use of Bureau of Reclamation's green LiDAR. John Crandall responded that all the modeling – including the widths and depths – were based on the green LiDAR flown in 2022.

Sean Welch asked what habitat suitability index curves (HSCs) were used in the reach assessment. John Crandall responded that they used the most up-to-date Beecher and Caldwell curves. This included the *O. mykiss* and Chinook Salmon spawning and rearing curves. Sean asked whether the HSCs accurately represented the habitat used by fish in the Chewuch River. John Crandall said the key component that is often not captured in HSCs is cover. He added that the HSCs get you in the ballpark, but when the flows drop, the concentration of fish – especially for spring Chinook Salmon – is where there is cover. Sean questioned how much substrate impacts this predictability. Tracy Hillman commented that Chinook Salmon and steelhead fry tend to use substrate and submerged vegetation for cover. As they grow, they move into faster and deeper water and shelter themselves in larger substrate or wood. During winter, when water temperatures drop below 10-12˚C, these salmonids conceal themselves in the substrate or in wood during daylight hours. At nighttime, they may move out of cover and passively feed. Embeddedness is an important factor determining the quality of substrate cover.

Tracy Hillman asked John Crandall when he needed additional comments from the RTT. John Crandall said comments by Friday, 19 September would be appreciated. Tracy Hillman asked RTT members to send him comments on the reach assessment. He will compile the comments and share them with John Crandall. John Crandall encouraged RTT members to dig into the document and identify any issues or metrics that could be improved. He said any refining or fine-tuning of REI metrics could be beneficial.

Decisions:

- **None**

Action Items:

- **RTT members will send their comments on the Lower Chewuch Reach Assessment to Tracy Hillman by 19 September 2025.**

Tracy Hillman shared that the RTT meeting in October will be cancelled. The next RTT meeting will be on the 12 November 2025.

Meeting adjourned at 10:40 am