

Meeting Summary

Trinity River Restoration Program (TRRP)



Interdisciplinary Team Meeting

2026-09-09 (Wednesday) 0900 – 1600

Location: Virtual

Note Taker:

Microsoft Teams transcript processed by AI and edited by Eric Peterson.

Attendance:

Eric Peterson (TRRP/USBR), Ken Lindke (CDFW), Patrick Flynn (Trinity County), Seth Naman (NMFS), James Lee (TRRP/USBR), Smokey Pittman (HVT/ARS), John Hayes (SAB), Steve Gough (USFWS), Kiana Abel (TRRP/DOI), Brad Nissen (USFWS), Mike Dixon (TRRP/USBR), Chad Martel (HVT), Jeanne McSloy (TRRP/USBR), Kurt Fausch (SAB), Oliver Rogers (TRRP/USBR), John Buffington (SAB), Karl Seitz (HVT), Scott McBain (HVT/ARS) Not all participated for the full meeting.

Action Items:

1. Continued from prior meeting(s):
 - Monitoring and DSS Reviews: revisions in progress.
 - Workgroup efforts on targets: in progress.
 - Peterson develop a web presentation of Obj/targ: pending
2. Peterson: include round-table updates requests in planning emails for agenda topics.
3. Peterson: Schedule an IDT meeting in October
 - SAB hiring (see below).
 - Environmental Flow Study RFP and FY28 science proposal.
4. **Group: participation requested for the LFA discussion at the TMC.**
5. Lindke/Peterson: Finalize and distribute the EFS memo.
6. Lindke/Peterson: Prepare a detailed RFP for FY28.
7. **Group: Reassess monitoring recommendation priorities and resubmit key proposals as needed.**
8. Lee: work with IDT and workgroups on optimizing environmental commitments.
9. Peterson: revise Functional River presentation per list of suggestions below.
10. Fish Workgroup: review LFA findings and LCM. Consider realistic inputs to LCM and potential for recalibration.
11. Peterson: timely dissemination of meeting notes.

Meeting Summary (Draft)

Trinity River Restoration Program (TRRP)



Agenda: Updates

The meeting opened with a focus on fostering broader engagement and collaboration across the program, emphasizing that the IDT is intended to guide both scientific and implementation directions. A roundtable provided updates on staffing, river conditions, ongoing monitoring, and project implementation.

- The data steward position has four candidates scheduled for interviews; the physical scientist position is about to be advertised.
- Additional vacancies remain, including a permitting specialist and a grants/agreements position.
- New environmental scientists have joined the CDFW Weaverville office, primarily working on steelhead and Chinook surveys.
- Staffing changes at partner agencies were noted, with some positions recently advertised and others pending.
- Implementation highlights included the nearing completion of the Sawmill project and progress on the Weaver Creek project, both involving significant habitat restoration and floodplain reconnection.
- The Evans Bar project is in the design review phase, with implementation planned for next year.
- A large wood storage facility is being developed at Lowden Ranch to support future channel rehabilitation projects.
- The turtle thermal project was delayed this year due to late timing of funding, and is planned for next year.
- The Willow Creek Weir is now consolidated between CDFW and HVT. Large numbers of Chinook have been trapped in recent weeks.
- A Klamath Flow Augmentation Release (KFAR) began near the end of August due to high ich infection rates of Chinook in the lower river and Klamath, although population numbers were low. The release may continue until September 21st.

Action Items/Decisions:

12. Continue this round-table in future, though Eric should include item requests in planning emails for agenda topics.



Agenda: Replacing John Buffington

Eric Peterson discussed the upcoming departure of a long-serving SAB member and the process for selecting a replacement. The selection committee will be formed from the IDT, and the group will seek broad input to identify candidates with expertise in physical sciences, particularly hydrology or riparian ecology.

- The selection process will mirror previous efforts, including targeted outreach and a formal application review.
- The group is encouraged to consider the desired expertise and diversity for the SAB.
- The timeline aims for a recommendation by the March TMC meeting, with contracting to follow.

Action Items/Decisions:

- Schedule an IDT meeting in October to establish priorities, assign selection committee, and initiate the selection process.

Agenda: TMC Agenda

Preparation for the upcoming TMC meeting included a review of the draft agenda and discussion of key topics.

- The agenda includes executive reports, workgroup summaries, hatchery updates, and presentations on river function and limiting factors.
- A science-on-tap event focused on native pollinators will replace the traditional TMC dinner.
- Field tours will focus on the Sawmill project.

Action Items/Decisions:

- IDT participation in the limiting factors analysis discussion.

Agenda: Workgroup Summaries

Meeting Summary (Draft)

Trinity River Restoration Program (TRRP)



Each workgroup provided a brief update on recent activities, ongoing projects, and upcoming meetings. The flow workgroup is focused on ramping rates and summer base flows, while the design team is reviewing restoration opportunities. The watershed workgroup is considering reactivation to improve coordination among restoration entities.

Agenda: Water Year 2027 Flow Recommendation

Patrick Flynn reviewed the Flow Workgroup recommendation continuing the Winter Flow Variability Project for Water Year 2027, consistent with the established paradigm and ongoing evaluation efforts. The recommendation is supported by ongoing data collection and hypothesis testing. The group reached consensus to forward this recommendation to the TMC.

Action Items/Decisions:

- Forward the flow workgroup's recommendation to the TMC.
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Agenda: Environmental Flow Study

Ken Lindke discussed the Environmental Flow Study, a major focus for the coming years, with a comprehensive set of hypotheses developed to evaluate the effects of winter variable flows. The group discussed the process for developing study plans, data needs, and the importance of timely analysis and reporting.

- Thirty hypotheses have been developed, spanning fish, riparian, geomorphology, and macroinvertebrates.
- Most data collection for FY27 is funded, with analysis and reporting planned for FY28.
- The RFP process will be more specific, with detailed requirements for data sources, formats, and analysis methods.
- Completing analyses efficiently will be a high priority for TRRP and the IDT in coming years.

Action Items/Decisions:

- Finalize and distribute the memo summarizing hypotheses and study plans.
- Prepare a detailed RFP for FY28, specifying data and analysis requirements.



Agenda: Monitoring and DSS Review

Eric Peterson reviewed the status of monitoring and decision support system (DSS) reviews, identifying funded and unfunded proposals and discussing priorities for FY28. Topics included turbidity and temperature monitoring, out-migrant survival studies, and validation of habitat models.

- Some monitoring proposals were not funded and may be resubmitted for FY28.
- Coordination with Fish and Wildlife Service may address some data needs for water temperature.
- The group emphasized the importance of aligning monitoring efforts with program priorities and available resources.

Action Items/Decisions:

- Reassess monitoring priorities and resubmit key proposals as needed.

Agenda: Fiscal Year 2028 Science Plan

Planning for the FY28 science plan is underway, with a focus on integrating environmental flow evaluation, monitoring reviews, and recommendations from the limiting factors analysis.

Action Items/Decisions:

- FY28 science planning is on a good track.
- Prepare for an October IDT meeting to finalize the Environmental Flow Study RFP and further plan the FY28 science proposal.

Lunch

Agenda: Review of Implementation Environmental Monitoring

James Lee reviewed the process for tracking and documenting environmental commitments associated with restoration projects. A crosswalk is being developed to align

Meeting Summary (Draft)

Trinity River Restoration Program (TRRP)



commitments across NEPA, CEQA, and permit requirements, with input from workgroups expected.

- The crosswalk will identify duplicative or conflicting commitments and propose improvements.
- Documentation and tracking systems are being developed to ensure compliance.

Action Items/Decisions:

- Complete the crosswalk and circulate a draft for workgroup review.
 - Solicit input on best practices and feasible approaches to meeting commitments.
 - Develop a tracking system for implementation monitoring.
-

Agenda: Evaluation of the TRRP Water Year Probabilities

Seth Naman presented a detailed analysis of water year classification methods, highlighting the limitations of the current bimodal approach and proposing alternatives based on statistical distributions. The group discussed the implications for flow management and the need for further modeling.

- The current system may overrepresent wet years and underrepresent typical conditions.
- Alternative classification methods could improve alignment with actual hydrologic data.

Action Items/Decisions:

- Evaluate the effects of alternative classifications on flow allocations and management.
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Agenda: Functional River Analysis

Eric Peterson presented a functional river analysis (coauthored by Seth Naman and others), comparing TRD re-consultation flow management alternatives using a suite of hydrologic and ecological metrics. The analysis identified alternatives that best align with natural hydrology and support channel maintenance, habitat inundation, and temperature objectives. The presentation is to be given to the TMC and feedback was requested.



Recommendations for edits

- **Explicitly state that Alternatives 1 and 7 are included for analysis purposes only** (i.e., as bookends), and were not seriously considered for implementation. This helps prevent confusion about their practical relevance.
- **Walk through how to read each graph, especially box-and-whisker plots and correlation graphs.** Not all TMC members may be familiar with these visualizations, so a brief explanation of axes, quartiles, and what the numbers mean is important.
- **Indicate for each metric whether a higher or lower value is better.** Some metrics (e.g., correlation, flashiness, base flow index) have different interpretations, so add a clear legend or verbal explanation for each.
- **Consider reducing the number of detailed graphs/slides.** Focus on summary slides and key findings, as these are likely to be of most interest to the TMC. Detailed graphs can be included in an appendix or backup slides for reference. [\[2026-09-09...\(combined\) | Word\]](#)
- **Highlight the summary slide(s) that compare alternatives on key metrics.** These should be emphasized as the main takeaways for decision-makers.
- **Explain what “correlation” means in this context and what the values represent.** Provide a simple definition and describe the range of possible values (e.g., 0 = no correlation, 1 = perfect correlation).
- **Clarify the meaning of terms like “geomorphic function,” “synchronization with watershed hydrology,” and “inundation benefits.”** Briefly define these terms when first introduced.

Agenda: Limiting Factors Analysis Debrief

The meeting concluded with a debrief on the limiting factors analysis, focusing on model calibration, data gaps, and the relative importance of ocean survival, out-migration survival, and habitat availability. The group discussed the need for further calibration, improved data inputs, and targeted research to address key uncertainties. To ensure capture of details, a custom AI prompt was used to organize the following summary.

Deliverable Status

- Peterson said the deliverables were sent to the IDT by email but have not been posted to the DataPort yet (probably within the week).
- McSloy performed an AI review of the Life Cycle Model code. Although no issues were found that would impact the results, there were several minor details identified. Cramer Fish Sciences has made a few corrections to the code where

Meeting Summary (Draft)

Trinity River Restoration Program (TRRP)



needed and confirmed proper function where other questions were raised. Adjustments should be complete in the live online model.

- Peterson emphasized that the lack of major issues identified in the AI analysis gave him strong confidence in the functionality of the code.

Model Calibration and Data Issues

- Lindke raised concerns about the model's calibration, specifically questioning why the baseline escapement of adults was around 9,000 fish, which seemed lower than long-term averages. Asked whether this discrepancy was addressed in the final model and noted that the documentation was difficult to follow and lacked detail on calibration and validation methods.
- Hayes explained that calibration periods for different life stages were not aligned, which could explain discrepancies in model outputs. He noted that the modelers had to use whatever monitoring data was available, which led to holes in the calibration.
- Peterson stated that the calibration was focused on recent data, which included years of poor returns, and expressed the need for scrutiny and possible recalibration of the model, especially when using it for purposes beyond the initial scope.

Model Functionality and Application

- Flynn asked about the use of the model in the DSS context and hydrograph development, and whether others had experience using it.
- Lindke suggested that the model is not very sensitive to differences among hydrographs proposed, and that within the range of hydrographs, the Limiting Factors Analysis (LFA) would treat them similarly. He also pointed out that the model's weekly time steps and blunt flow categories limit its ability to distinguish among hydrograph alternatives.
- Peterson discussed a review he did of the statement that sudden warming has negative impacts on outmigrant populations. The LFA analyzed 3 temperature scenarios, which did not match real river temperatures (even the 'cold' scenario was warmer in reaches 1 and 2 than reality) and the temperatures were uniformly applied across the 3 reaches in the model. Tracing these analyses involved referencing a graph in Appendix E and two tables in Appendix B. The review illustrated the need to match model weeks to calendar weeks. He suggested testing real-world input values for model calibration, and the potential for the fish

Meeting Summary (Draft)

Trinity River Restoration Program (TRRP)



workgroup to explore these issues further. He noted that the model's outputs are limited by the blunt categorization of flows and temperatures.

- Hayes proposed that the model could be run with more realistic hydrographs by converting the time axis to weeks relative to emergence, as required by the model input.

Data Gaps and Research Needs

- Peterson highlighted data gaps, such as rearing capacity, density-dependent growth and survival, and size-selective mortality. He suggested seeking collaborative efforts with universities and graduate students to address data gaps, given budget constraints.
- Lindke emphasized the challenge of measuring carry-over effects and noted that some data gaps are difficult or impossible to address empirically. He also pointed out that some gaps, like egg-to-fry survival, are sensitive to study effects and hard to estimate accurately.
- Martel shared that recent efforts have allowed tagging of smaller fish (down to 65 mm) using eel lamprey acoustic tags, but noted the difficulty of tagging fish below that size.

Interpretation of Limiting Factors

- Peterson stated that the bottom line of the limiting factor rankings (ocean survival, outmigration survival, habitat availability) seems solid and aligns with expectations. He noted that habitat availability was interpreted as physical space, but acknowledged that it is a complicated term.
- Lindke pointed out that habitat availability is a complicated term, as it can mean physical habitat, temperature, or food availability, and emphasized the need to tease apart these factors. He also noted that the amount of physical space available is dependent on flow regime, and that these factors need to be considered separately.

Recommendations and Next Steps

- Peterson expressed the need for iterative scrutiny and possible recalibration of the model, especially when using it for purposes beyond the initial scope.
- The fish workgroup should discuss how to apply the model and whether recalibration is needed.

Meeting Summary (Draft)

Trinity River Restoration Program (TRRP)



- Seek collaborative efforts with universities and graduate students to address data gaps, given budget constraints.
- Patrick Flynn requested timely dissemination of meeting notes for follow-up.