



Trinity River Restoration Program (TRRP)

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TECHNICAL MEMORANDUM

TO: TRINITY MANAGEMENT COUNCIL

FROM: INTERDISCIPLINARY TEAM VIA ERIC PETERSON, SCIENCE COORDINATOR

CC: MIKE DIXON, EXECUTIVE DIRECTOR
JAMES LEE, IMPLEMENTATION BRANCH CHIEF

SUBJECT: SCIENCE PROGRAM PROPOSALS FOR FISCAL YEAR 2026

DATE: JUNE 11, 2026¹

The TRRP Science Plan ([Pickard et al. 2023](#)), approved by the TMC in March 2023, sets forward a process for Program scientists to develop proposals for targeted studies in addition to our standard long term monitoring efforts. The process begins a year ahead of the TMC budget meeting and typically involves a targeted Request For Proposals (RFP) managed by the Interdisciplinary Team (IDT), with guidance from the Scientific Advisory Board (SAB) at multiple points.

The IDT initiated this process toward Fiscal Year (FY) 2027 at a meeting July 16, 2025. At this meeting, the Science Plan directs that the IDT “Confirm Key Uncertainties and determine focus for upcoming funding cycle.” Although there was discussion of Key Uncertainties and possible specific research questions, the team concluded that we should forego the typical RFP process, because there would likely be proposals coming from the developing Environmental Flow Study, plus potential funding adjustments identified from ongoing Monitoring and DSS Reviews. As the year progressed, there were indeed numerous items identified across the two topics.

The IDT’s Environmental Flow Study subcommittee identified and ranked hypotheses for evaluating the first three years of implementing winter-variable flows (water years 2025-2027). Of these hypotheses, the majority can be analyzed based on existing data streams. However, seven of the hypotheses require additional data collection. Two of the hypotheses can be addressed by a single data collection effort, thus six proposals were written for data collection during fiscal year (and water year) 2027. These proposals have been reviewed by the SAB and are currently under revision. These revisions are minor and the SAB concurred that the overall projects are appropriate to the needs. Based on the SAB review, some cost reduction could be possible for the groundwater monitoring proposal; otherwise no adjustments to the proposed budgets are anticipated.

The Monitoring and DSS Reviews have been conducted by the IDT and technical workgroups over the past two years. These have provided a large number of recommendations, many of which have no funding implications and can be addressed through IDT and workgroup processes. However, some would result in adjustments to

¹ Minor edits made June 15, 2026

funding of various activities. The IDT developed an implementation plan for these recommendations, that partitions changes across fiscal years 2027 and 2028. Those that do have funding implications for fiscal year 2027 do not include data collection methodologies that deserve a proposal-and-review process. However, the SAB has reviewed a draft memo describing the review process, the reviews themselves, and the IDT's implementation plan.

Across these two topics, the IDT Science Proposal totals 11 items at a cost of \$553,400. Recognizing the likelihood of tough budgetary decisions for the TMC, the IDT met on May 4th to prioritize the items. This consensus decision was affirmed at a subsequent meeting on June 3rd. In order by priority, the IDT requests the following be approved for funding by the TMC:

1. **Monitoring & DSS: Cut funding for the Burnt Ranch Streamgage (*cost savings estimated at \$29,600 annually*).**
The IDT, Flow, and Physical Workgroups were unable to identify any use of data from this streamgage among contemporary TRRP analyses.
Affects an Interagency Agreement with USGS.
2. **Monitoring & DSS: Sediment Augmentation Monitoring Budget for Physical Workgroup (\$50,000 annually).**
The Physical Workgroup has had difficulties recommending annual sediment augmentation volumes and locations due to a lack of current information in the target areas. This funding would be under the annual direction of the Physical Workgroup for targeted surveys of topography, pebble counts, bulk density sampling, or similar geomorphic assessments.
3. **Environmental Flow Study: Tributary Synchronization (\$14,558, one-time).**
This study would address a highly ranked hypothesis regarding how synchronization flow releases match to tributary accretions in the restoration focal reach of the Trinity River.
Proposal developed by HVT/ARS.
4. **Environmental Flow Study: Benthic Macro-Invertebrates (\$124,129, two-years).**
This is a continuation of the existing BMI study through CPH to fully test responses to environmental flows (two hypotheses) by looking at disturbance, inundation, timing, and BMI production. Sampling would be continued through December of 2027.
Proposal developed by YT/CDFW/CPHumboldt
5. **Environmental Flow Study: Sediment Transport Above Tributary Junctions (\$34,315 one time).**
This study would address a hypothesis about sediment transport with seasonal changes to flows that better match tributary accretion.
Proposal developed by HVT/ARS
6. **Environmental Flow Study: Coarse Fine Sediment at Deltas (\$28,851 one-time).**
This study would address a hypothesis about sediment transport continuity from tributaries to the mainstem under synchronization flows and elevated baseflows.
Proposal developed by HVT/ARS
7. **Monitoring & DSS: Add Real-Time Turbidity Monitoring to 3 Streamgages (\$138,700 one-time, ca. \$12,000 annual afterward).**
Addition of real-time (telemetry) monitoring of turbidity at 3 mainstem gages: Limekiln, Junction City, and Above North Fork. This would enhance our understanding of wildfire impacts, fine sediment augmentation, environmental flow releases (including fishing impacts), and fine sediment discharge in the mainstem and inferred in specific tributaries.

USGS currently lacks capacity; monitoring to be established and performed by HVT/ARS.

8. Monitoring & DSS: Document the TARGETS 1-D Model (\$32,191 one-time).

TARGETS 1-D is a regular part of our annual flow DSS. Model documentation is limited to instructions on how to use the computing interface; no written documentation of model functionality exists (it is effectively unpublished). Furthermore, the model has been initially calibrated, but not further validated. This funding item would provide a validation analysis and report that fully documents model functionality.

Documentation to be completed by HVT/ARS.

9. Environmental Flow Study: Groundwater Dynamics (\$121,256 one time).

This study would address a hypothesis that groundwater dynamics will shift in response to changes in river flow releases, with both increases in winter and decreases in summer. A large volume of past data from across the partnership would be organized and analyzed, plus new data would be collected for water year 2027. SAB review questioned the need for additional data collection (still to be resolved), which could lead to some cost savings. This project was ranked lower than most Environmental Flow Study proposals because after years of data collection, there is strong understanding among program scientists that groundwater is closely tied to river surface elevation year-round. However, we are unaware of these observations being fully analyzed and documented.

Proposal developed by HVT/ARS

10. Environmental Flow Study: Merganser Predation of Salmonids (no funding requested, one time).

This study would monitor Common Merganser feeding behavior at a time when juvenile salmonid populations in the upper river are high with an analyses to identify if flow rates or turbidity appear to alter merganser population or feeding. Since this topic has not been researched on the Trinity before, it is effectively a pilot study to understand if further study would be valuable. It would be conducted by two undergraduate students as their senior project, under the supervision of Dr. Rob Blenk. This project was ranked lowest among the Environmental Flow Study proposals because it would provide only preliminary information and may be vulnerable to a variety of stochastic conditions.

Proposal developed by Reclamation/CPHumboldt.

Given that this does not request funding, the IDT anticipates the study will be conducted even if items above are not funded by the TMC.

11. Monitoring & DSS: Add Real-Time Temperature Monitoring to 3 Streamgages (\$39,000 one-time, ca. \$18,000 annual afterward).

Addition of real-time (telemetry) monitoring of water temperature at Coffee Creek, Junction City, and Hyampom streamgages. The Junction City site would provide better understanding of how water warms (or cools) with distance from Lewiston Dam. The Coffee Creek and Hyampom gages would provide contextual understanding of water temperature under unregulated conditions in the watershed. Coffee Creek would emphasize snowmelt-driven stream temperatures while Hyampom emphasizes rain-driven patterns. This ranked lowest because passive collection with temperature data loggers would provide sufficient data for analysis, though it would not foster regular communication among program scientists on water temperature observations.

Work to be completed by USGS.

Respectfully,

IDT as represented by

Eric Peterson

TRRP Science Coordinator