ATTACHMENT 4

Trinity River Restoration Program

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NC-150

MEMORANDUM

TO: TMC and TAMWG Members

FROM: Robin Schrock, Executive Director
Trinity River Restoration Program

SUBJECT: Executive Director's Report

DATE: June 9, 2014

This report provides updates on all major Program activities since the March 2014 meeting. The most significant Trinity River Restoration Program (TRRP) activity since the March meeting was release of the Phase 1 Review report: Review of the Trinity River Restoration Program following Phase 1, with emphasis on the Program's channel rehabilitation strategy. This important review document is available to download from our website.

2014 is a Critically Dry water year, the first since restoration flows began in 2004. The hydrograph is descending and will reach summer base flow of 450 cfs on June 26, 2014.

Budget Update

The TRRP FY2015 budget is about $50,000 less than last year's budget therefore, the opportunity for new activities in 2015 will be limited by our ability to redirect our efforts within the program as a whole. The program budget provided at this time describes all the anticipated activities for FY2015.

Organizational Update

- Rod Wittler by going on a 45 day detail to the San Joaquin River Restoration Program from July 21 – September 3, 2014.

- The U. S. Forest Service has engaged TEAMS staff from the Forest Service Enterprise Program to assist with planning and design of Trinity River Restoration Program projects proposed on Shasta-Trinity National Forest Service lands.

- The Lorenz Gulch River Access Area dedication was held on June 7, 2014. Participants enjoyed a raft float from Douglas city to Lorenz Gulch and a trail walk along the new channel and irrigated riparian revegetation area.

Implementation Update

- Implementation is planned for Upper Douglas City and Lower Junction City Channel Rehabilitation Project Sites, starting at the end of June 2014.

- Design Team is working on Channel Rehabilitation design feature effectiveness monitoring recommendations to assess long term evolution and design feature performance.

- The system-wide 2D hydraulic model was completed for the 40 mile restoration reach in May and model output/metrics from the model are in the process of being analyzed.

- The Bucktail Channel Rehabilitation Design at 90% by HVT Design Group project is on hold pending re-design based on internal/external comments. The Lower Junction City project NEPA environmental clearance was received in The Lower Junction City Design was completed in February 2014 by the Federal Design Group and the construction contract has been awarded to the Yurok Tribe Watershed Department and their sub-contractor. The Limekiln Gulch Channel Rehab Project has been removed from "on-hold" 90% Status; the Federal Design Group is working on updating analyses; implementation is anticipated for 2015.

- Bucktail Bridge NEPA Environmental Compliance is moving forward; Trinity County DOT is looking for funding opportunities and performing right-of-way coordination.

- Revegetation maintenance/irrigation is on-going for Lorenz Gulch, Lower Douglas City, Lower Steiner Flat, and Upper Junction City channel Rehab Projects.

Science Update

- A preliminary fiscal year 2015 science workplan has been prepared and integrated into the proposed budget. The SAB now has the opportunity to evaluate the entire 2015 proposed body of work and to provide input to the TMC.

- The IDT has been focused on the refinement of objectives, the developing scenarios for the fish production model, and implementation of the 2D hydraulic model. The group is charged with implementing the recommendations under the guidance of the TMC .

- The Fish workgroup and Design Team members have worked to resolve conflict in implementing the hatchery reach channel rehabilitation project by soliciting input from three independent outside experts. Given divergent internal and external technical input, technical staff is seeking TMC guidance on the path forward.

- Information is being developed to support a gravel augmentation permit renewal for the TRRP.

Public Outreach

New! Our Science Advisory Board has released the final Phase 1 Review report: Review of the Trinity River Restoration Program.: . The Trinity River Restoration Program has provided a News Release and the complete document may be downloaded from TRRP's data portal (24mb).

Subsections may be downloaded from these links: Main Report (2mb), Appendix A (1mb) – High Level Indicators, Appendix B (1mb) – GRTS, Appendix C (18mb) – Channel Rehab, Appendix D (0.3mb) – Metadata Report, Appendix E (1mb) – Habitat-Geomorphic Relationships, Appendix F (0.3mb) – Juvenile Fish Habitat Distribution, Appendix G (0.1mb) – Design Evolution, Appendix H (1mb) – Decision Support System.

Current Info! You may subscribe to Automated Flow Release Notifications (click here).

Public Presentation – June 9, 2014 Dr. Michael Meriglianon of the TRRP ~~Sceintitife~~Scientific ~~Advosry~~Advisory Board will give presentation on the recommendations

Save the Date

Monthly Coordination e-Mail: If you would like to be added to the TRRP e-mail list to receive this monthly update, please contact Deanna Jackson: dljackson@usbr.gov; 530-623-1800.

Calendar reminder: You can view upcoming events on the homepage or the calendar. http://www.trrp.net/calendar/

News Release

MP-14-105

Media Contact: Janet Sierzputowski, Reclamation, 916-978-5100, jsierzputowski@usbr.gov
Matt Baun, USFWS, 530-340-2387, matt_baun@fws.gov
For Release On: May 29, 2014

Independent Science Team Completes Review of Trinity River Restoration Projects

WEAVERVILLE, Calif. – The Bureau of Reclamation and the U.S. Fish and Wildlife Service announce that the Science Advisory Board of the Trinity River Restoration Program (Program or TRRP) completed its review of mainstem-river channel rehabilitation projects that have occurred on the Trinity River between 2005 and 2010.

Conclusions and recommendations for carrying out Phase 2 of the Program's channel rehabilitation strategy are included in the report, which is available at www.trrp.net. The review and recommendations in the report represent the culmination of over two years of analysis and synthesis by SAB members and their support contractors.

The SAB relied on reports and data collected by technical experts within the TRRP over several years. In addition, the SAB issued a draft report in November 2013 and solicited comments from TRRP partners. These comments have been addressed by the SAB, and the final version of the report has been revised accordingly.

The report concluded that substantial progress has been made and that rehabilitation projects are creating habitat and a more complex river, but the effects on fish production are unclear given limited data sets available to date. The SAB has identified areas where the TRRP can improve, specifically by tightly integrating activities around the Program's overarching goal of fishery restoration.

"I thank the Science Advisory Board for their work in reviewing the important restoration projects that have occurred in the mainstem Trinity River," said Robin Schrock, Trinity River Restoration Program Executive Director. "The Science Advisory Board has identified areas where the program can improve, and we look forward to working with our partners to ensure we carry out these important recommendations, which we wholeheartedly agree will help advance the recovery of this important fishery."

The TRRP consists of the following partner agencies: the Hoopa Valley Tribe, the Yurok Tribe, Trinity County, the California Resources Agency (Department of Water Resources and Department of Fish and Wildlife), the U.S. Forest Service, the National Marine Fisheries Service, the Bureau of Reclamation and the U.S. Fish and Wildlife Service.

Below is a Summary of Recommendations from the TRRP's SAB:
In going forward with Phase 2 of channel rehabilitation projects, the SAB recommends the following:

- Develop a Decision Support System, which is a series of linked physical and biological models that will allow the Program to: predict site and system response to alternative management actions in relation to the Record of Decision
- and stakeholder objectives; make such predictions in a timely fashion (ahead of monitoring results); focus and refine monitoring efforts; and provide a necessary tool for adaptive management. Additionally, it will help to better structure and integrate Program activities and increase the defensibility and transparency of management actions. The proposed DSS will shift the Program from the current focus on means objectives (i.e., creating fish rearing habitat) toward a focus on the fundamental objective (restoring in-river fish production) through a better understanding of the roles and synergistic effects of Program actions (management of flow, temperature, sediment and channel morphology) on fish production over space and time.
- Use the DSS to critically assess channel rehabilitation actions needed to achieve fish population objectives. What habitats are needed and in which locations of the river to achieve objectives at local and system scales in concert with other Program activities (management of flow, temperature and sediment)?
- Use the DSS to formally test the foundational hypothesis that a dynamic, complex channel can be created and that, together with other Program activities, will restore fish populations.
- Use the DSS to critically evaluate the change in design strategy that has occurred (i.e., minimal vs. intensive mechanical intervention). A key factor to quantify in this regard is the response time for creating desired channel conditions and fish populations. The desired response time greatly influences the type of management actions (i.e., size, frequency and degree of manipulation). Similarly, consider the potential benefits of several large projects vs. many small ones. Are large channel rehabilitation projects more effective at meeting Program objectives than small ones, and which objectives are best met by each approach?
- Phase 2 projects should continue to use opportunistic design strategies to promote dynamic alluvial reaches where possible, while working with local constraints on channel morphology in this semi-alluvial river. However, because the river is less alluvial than originally envisioned, a dichotomy of project designs may be needed (i.e., those that specifically drive geomorphic processes over time, producing dynamic habitat response in alluvial sections of the river vs. building static habitat features intended to persist over time in less alluvial reaches).
- Continue to use a diversity of design elements in Phase 2 projects. Although the effectiveness of specific rehabilitation projects and design elements could not be evaluated in terms of fish production due to data limitations, the various design elements all contribute to increased juvenile fish habitat and reduce habitat bottlenecks observed at modest flows. Side channels offer a potential means for maximizing habitat availability but may be more prone to aggradation, so their potential benefits depend on the dynamic longevity of such features, and they should only be located in reaches that have potential for anabranching morphology. In addition, diversity of design elements and associated habitats is recommended as this may promote species resilience to changing environmental conditions.

- Design objectives for Phase 1 projects initially invoked the Program's ROD and Integrated Assessment Plan objectives without demonstrating how they would be achieved. In contrast, recent efforts are more defensible—employing mechanistic, predictive models to evaluate as-built changes, design alternatives and site evolution. Phase 2 projects should continue these more rigorous efforts in combination with a DSS and fish production model.
- Incorporate into study plans metrics for quantifying juvenile fish numbers, growth and health as major components of fish population modeling for estimating annual in-river fish production, and examine the role of annual water temperature regimes with regard to fish growth and general health across years. As the river system evolves in response to post-ROD management actions, the Program's foundational hypothesis of juvenile rearing habitat being the primary limiting factor may be expected to change. Use the DSS and fish population modeling as a surrogate for the actual fish population to periodically examine alternative population limiting hypotheses. For example, (1) juvenile fish production vs. adult escapement and (2) carrying capacity of physical habitat vs. water temperature and its effect on fish growth and health.
- Better articulate program and stakeholder objectives and explicitly identify the relations among objectives. The current management actions tend to address means objectives (e.g., create habitat), rather than fundamental objectives (e.g., increase fish populations). As a result, disagreement about science is often conflated with disagreement about objectives, significantly hindering scientific advancement. Similarly, scientific disagreement should be explicitly
- incorporated into the process using alternative models that represent the alternative scientific hypotheses about system dynamics.
- Adopt rigorous hypothesis testing for Program activities and scientific investigations, which is critical for improving the effectiveness of such actions. Treat rehabilitation projects as opportunities to formally test the hypotheses and goals articulated by the ROD and IAP.
- Integrate workgroup activities to better achieve Program objectives. The workgroups include interdisciplinary membership but need better coordination and exchange of information across workgroups (development of a DSS should facilitate this integration). In addition, the internal review process of Program reports should be streamlined to disseminate findings more rapidly. Publication in peer-review journals also is encouraged to both have peer input and to better disseminate Program findings.
- Develop a system-wide, one-dimensional sediment routing model in concert with existing sediment transport monitoring and additional tracer studies to more finely resolve the sediment budget and the fate of gravel augmentation.

For additional information, please contact Robin Schrock, Executive Director, Trinity River Restoration Program, at rschrock@usbr.gov or 530-623-1800 or visit www.trrp.net.