



Winter Flow Variability Action – Proposed for Implementation in 2022

Project Background

The Trinity River Restoration Program (TRRP or Program) is beginning a 30-day public scoping period to announce and explain a new flow management proposal on the Trinity River and is requesting input from stakeholders and interested parties.

Following the 2000 Record of Decision (ROD), the U.S. Department of Interior (DOI) established TRRP to restore the fisheries of the Trinity River affected by dam construction and related diversions of the Trinity River Division of the Central Valley Project¹. The Trinity River has also been impacted by past mining and timber harvest activities in the watershed, and these conditions are collectively addressed as well through TRRP's restoration efforts.



Photo 1. Trinity River release from Lewiston Dam (photo by TRRP)

Administered by the U.S. Bureau of Reclamation (Reclamation), the TRRP is a partnership of federal and state resource agencies, Tribes, and Trinity County. The Program works to restore the processes and attributes of an ecologically functioning river system, which should, in turn, recover diminished salmon and steelhead populations while retaining Trinity and Lewiston Dams' deliveries of water and power to California's Central Valley.

There are five primary components of TRRP's river restoration work:

1. **Variable annual instream flows:** releasing water from Lewiston Dam, based on the water year type², to mimic natural Trinity River flows and interact with downstream areas to enhance conditions for all life stages of fish and wildlife. These variable annual instream flows are also sometimes called "restoration releases".
2. **Channel rehabilitation:** restoring the functional floodplain of the river, which has been channelized and simplified by managed river flows and mining.
3. **Sediment management:** reintroducing gravel (aka coarse sediment) to the river. Gravel provides spawning areas for salmon and provides other habitat benefits. Gravel entering the river system upstream of the dam is blocked from being transported to the Trinity River below Lewiston Dam, creating a gravel deficit in the river over time. TRRP resupplies the river with gravel to make up for the dam's impact in blocking new gravel supplies that would otherwise be provided naturally.

¹ <https://www.usbr.gov/mp/cvp/>

² [TRRP uses five water year types to determine how much water will be available to the Trinity River each year. The five water year types are: Critically Dry, Dry, Normal, Wet, and Extremely Wet. A wetter water year means more water is available for restoration flow releases.](#)

4. **Watershed restoration:** addressing negative impacts that have resulted from poor land management in the basin. Watershed restoration activities include decreasing the input of fine sediment from Trinity River tributaries that can clog spawning gravels and fill deep areas of the river.
5. **Adaptive management:** monitoring, evaluating, and improving the effectiveness of river restoration actions.

The TRRP is proposing to change how variable annual instream flows are managed (Primary TRRP Component #1) with existing ROD water from Lewiston Dam. Since the implementation of the ROD, variable flow releases (aka restoration releases) have occurred after the water year type is determined in mid-April³. An approved hydrograph (i.e. water release schedule) developed by TRRP determines how much water is released daily during this period of elevated flows. Variable releases typically extend to early summer before returning to baseflow conditions and then remain at baseflow until the following April when a new water year is determined.



Photo 2. Young salmon on the Trinity River (photo credit Yurok Tribe Fisheries Department)

The current approach to implementing variable flows in the Trinity River results in cold water releases from Lewiston Dam that are out of sync from when the pre-dam Trinity River would have naturally received seasonal peak flows. Undammed tributaries to the Trinity River naturally flow higher during winter storm events, and as high elevation snowpack melts in early spring. Thus, natural contributions to the Trinity River from its tributaries are often receding by the time ROD flow releases from Lewiston Dam occur after mid-April.

The asynchrony between flow management and the natural variability of pre-dam flows has cascading impacts on the river's form and ecology, and perhaps the most detrimental of the impacts is to young salmon. Pacific salmon's life history has adapted to the natural seasonal variability of flows for millions of years. Current flow management keeps river conditions unnaturally cold, which suppresses metabolic rates during the key period of growth for young salmon. Later in the spring, the unnaturally cold river delays environmental cues that trigger smolts to outmigrate to the ocean before conditions in the lower Klamath become too warm to support salmon migration.

The TRRP proposes for Reclamation to shift a portion of the ROD water used for restoration releases to the winter period. In order to consider a change to the timing of Lewiston Dam releases that have been in place for nearly two decades, the TRRP will complete an Environmental Assessment (EA) to meet National Environmental Policy Act (NEPA) requirements and Reclamation will serve as the lead agency. The EA will evaluate and disclose

³ The water year type is determined by the Department of Water Resources' [B120 \(ca.gov\)](https://www.water.ca.gov/b120/) water supply forecast.

the potential environmental effects of releasing ROD water earlier (e.g., during the winter period). Reasonable alternatives that could satisfy the proposal's intent will be analyzed if they are determined to be feasible. At a minimum, the EA will analyze the effects of the Proposed Action and a No Action Alternative.

The purpose of this notice is to invite you to contribute to the NEPA process for the winter flow project by providing comments, suggestions, or concerns you may have about the project during a public scoping period, pursuant to 40 CFR § 1501.9⁴. This scoping notice includes a general description of the Proposed Action and the purpose of and need for the project to encourage your informed participation.

Winter Flow Variability (Proposed Action) Goals and Objectives

Moving a portion of the ROD volume released from Lewiston Dam to the winter period is intended to have the following benefits to the natural character of the Trinity River:

- Time restoration releases from Lewiston Dam to better match natural flow variability during winter and spring runoff events. Coinciding natural flows and Lewiston dam releases would enhance natural cleaning and transport of river gravels.
- Limit the impact that cold water from the dam has on the growth of juvenile salmon by shifting a portion of ROD water from Lewiston Dam to the winter period.
- Allow the river to naturally warm earlier in the season than currently occurs to provide the environmental cues smolts rely upon in timing their outmigration to the ocean.
- Provide elevated flows before salmon fry emergence to increase food availability and higher river levels after emergence to increase access to floodplain nursery habitats
- Move ROD water allocations earlier to maintain more consistent lake levels in Trinity Reservoir through the summer months.

Description of Proposed Action

Under the Proposed Action, Reclamation would shift a portion of the ROD water for release during the winter to two distinct periods termed the Flow Synchronization Period and the Elevated Baseflow Period (Figure 1).

Flow Synchronization Period: Between December 15 and February 15, ROD water equivalent to 60,000-acre-feet would be released from Lewiston Dam when forecasting tools at downstream gages anticipate a rise in river levels of 4,500 to 12,000 cubic feet per second (cfs). The maximum flow from Lewiston Dam during this period would not exceed 6,000 cfs. The optimal combination of natural and dam-regulated flows to the Trinity River resulting from this flow synchronization would be adjusted downward, as necessary, to prevent flooding or damage to downstream properties.

Elevated Baseflow Period: Between February 15 and April 15, ROD water would be released from Lewiston Dam based on the Department of Water Resource's B120 water supply forecast. Using the B120 would prevent the overuse of ROD water should the water year end up being drier than expected. During this period, a hydrograph would be developed by TRRP to schedule the elevated baseflow releases.

Under the proposed action, after April 15, the remaining ROD water would be released to the Trinity River using the same methodology that currently exists for the scheduling of restoration flows. The maximum winter

⁴ Council on Environmental Quality (CEQ) National Environmental Policy Act Implementation Regulations. 40 CFR Parts 1500–1508 (2020).

release of ROD water under the Proposed Action would differ from year to year based on the water year type, as follows:

- 60,000 acre-feet in a Critically Dry water year,
- 80,000 acre-feet in a Dry water year,
- 120,000 acre-feet in a Normal water year,
- 180,000 acre-feet in a Wet water year, and
- 220,000 acre-feet in an Extremely Wet water year

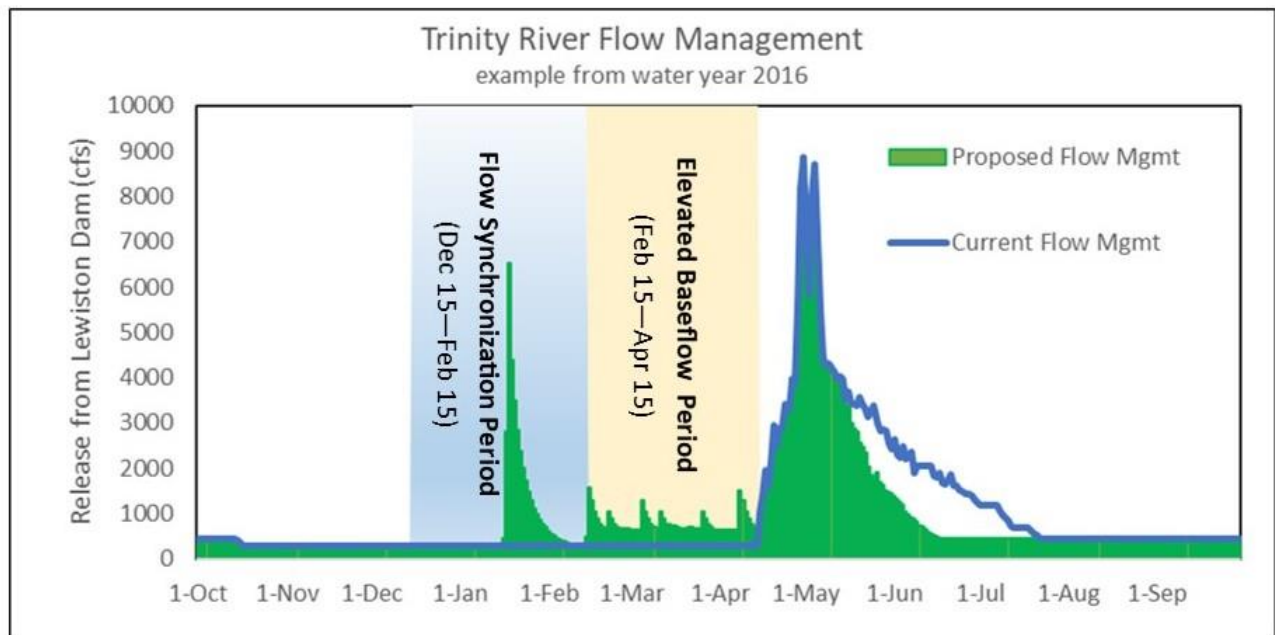


Figure 1. The Proposed Action to current flow management, using the wet water year in 2016 as an example. The blue line represents the hydrograph (i.e. water release schedule) that was implemented in 2016. Green represents the timing of water releases that would occur under the Proposed Action.

Possible Impacts

Possible impacts related to this management action that will need to be assessed through the EA include:

- Impacts on hydropower generation
- Impacts on water delivery to the Central Valley
- Recreational impacts, including fishing, rafting, and boating
- Risk of flooding through the management action
- Impacts on cultural resources and historic properties
- Biological impacts to the fishery, wildlife, vegetation, and wetlands

Proposed Project Schedule

- **Public Scoping:**
May 18 – June 18, 2021
- **Draft EA for public comment:**
September 2021
- **Final EA and Flow Decision:**
November 2021
- **Proposed implementation:**
New flow management under the proposed action would begin December 15, 2021.

To Comment on this Winter Flow Project Scoping Proposal:

- Send your comments via **mail** by June 18, 2021, to:
Winter Flow Scoping
C/O TRRP
P.O. Box 1300
Weaverville, CA 96093
- OR send your comments via email by June 18, 2021, to fgutermuth@usbr.gov.
- Only comments postmarked or emailed by June 18, 2021, will be fully considered by TRRP to meet the Project's NEPA timeline per DOI Secretarial Order 3355.

How to Participate in the Winter Flow Scoping Process

The TRRP is seeking information or analysis related to winter flow management. All comments submitted via mail and email will be considered. Full citation of referenced literature is requested to ensure and expedite its retrieval. After the scoping comment period, TRRP will review the scoping comments and determine key issues.

- Project information and updates are available at: <https://www.trrp.net/restoration/flows/winter-flow-variability/>.
- Send your comments via mail or email to the addresses above
- For all submittals, please include Winter Flow Scoping Comment in the subject line and the following information:
 - Your name and address (telephone and email address are also suggested)
 - Project-specific comments about the Proposed Action. Please include supporting information that would help identify issues, develop alternatives to respond to those issues, or predict the environmental effects of the proposal.
- Comments received will be considered part of the public project record for this proposal and will be available for public inspection.

