Outlook

[TRRP Flow Workgroup] Ramping rates during Winter Synchronized flows

From trrp_flow@googlegroups.com <trrp_flow@googlegroups.com>
on behalf of
Kyle De Juilio <kdejuilio@yuroktribe.nsn.us>
Date Tue 12/23/2025 10:26 AM
To TRRP Flow Workgroup <trrp_flow@googlegroups.com>
Cc Peterson, Eric B <ebpeterson@usbr.gov>; Dixon, Michael D <mdixon@usbr.gov>

Hello all,

Congratulations on another year of progressive flow management under the WVF project! The synchronized flow that is occurring starting tomorrow will help to clean the bed and keep fine sediment suspended, with the hopes of improving incubation conditions for the redds that were constructed this fall. As well as performing many other ecological services, such as recruiting leaf litter to the channel to support the BMI shredder community that is most active at this time of year, scouring the bed to make available habitat for BMI fish forage species, recharging local ground water aquifers, scouring riparian plants and dispersing their seeds, and connecting and creating habitat for the long term benefit of rearing juvenile salmonids.

I wanted to bring attention to one area of the action which I think can be improved by the flow workgroup. These are the ramping rates from the 2000 EIS. These ramping rates were designed with the flow action under the ROD in mind and with the impaired channel prior to restoration. The ramping rates are protective of stranding fry, but they do not reflect ramping rates observed under winter storm conditions, at a time of year where the majority of fry have yet to hatch and are not vulnerable to being stranded. The artificially slow ramp up rates limit our ability to synchronize flows for peak physical benefits and constricts timelines for notification. While the ramp down rates extend impact to fishermen and the dependent economy by limiting access, building local opposition. There could be additional benefits yet to be documented, both physical and biological, to the faster rates of change observed around rain driven peak runoff events.

Changing these rates during the synchronization period, could benefit both the action and the local economy and has precedent and justification in natural hydrology of the Trinity River. I would suggest that this is an area where significant progress can be made in a short amount of time. Current ramping rates are based on discharge, while under natural hydrology rising ramping rates are based on antecedent soil saturation conditions and rate of precip/runoff (which are largely the same for the types of events that we are trying to mimic = Saturated with high rates of runoff) and falling ramping rates are based on flow history (time since rise) and runoff (precip and temperature). I'm confident that this group could develop and justify different ramping rates for this novel flow action of synchronized storm flow release that are appropriate to the action and the time of year, or perhaps the models that we use for our trigger are predicting these rates of rise and fall and this information could help to generate a release schedule that would improve our synchronization efforts and allow conditions to reflect even better those that are occurring in the rest of the watershed. Hopefully this could be accomplished through a letter to file or Supplemental Information Report under NEPA. This type of advancement using runoff forecasting to shape flows would be a step towards many of our shared goals of having real-time flow management, and a possible use case to develop that type of management ability and realize it's potential.

Thanks to all of you and Merry Christmas!

Kyle

P.S. While I know that significant progress has been made in recent years, and we are still learning about this new action, I believe that you should never let it rest until your good gets better, and your better gets best! TRRP on three! Go Bears!

www.yuroktribe.org

Kyle De Juilio
Senior Fisheries Restoration Design Biologist
Yurok Tribe - Fisheries Department
Design and Technical Services Program (TSP)

Mobile: 707-954-5087
Email: kdejuilio@yuroktribe.nsn.us