



Upper Sacramento Scheduling Team, Spring Pulse Flow Planning Subgroup Meeting Summary

Thursday, May 9, 2024, 9:00–10:00 a.m.

Members Attending

- CDFW: Doug Killam, Erica Meyers, Michael Memeo, Travis Apgar
- DWR: Kevin Reece
- NMFS: Stephen Maurano
- USBR: Karissa Bridges, Derek Rupert, Lisa Elliot, Elissa Buttermore, Tom Patton
- SWFSC: Cyril Michel, Flora Cordoleani
- SWRCB: Craig Williams
- SRSC: Anne Williams
- USFWS: Bill Poytress, Matt Brown, Craig Fleming
- Kearns & West: Terra Alpaugh, Eva Spiegel

Action Items

- CDFW will share the latest catch data from Spring and Battle Creeks prior to the May 16 SRTTG meeting.
- Spring Pulse Flow team members will participate in the May 16 SRTTG meeting to discuss modeling results and impacts on cold-water pool and make a final decision on third pulse.

Operations Update

Reclamation provided a brief update on the current conditions and operations:

- Reclamation reported that it is day three of the second four-day pulse flow. Flows will reach 11,000 cfs before down-ramping to 6,000 cfs.
- Shasta storage is dropping a little. Storage was over 4.4-million-acre feet prior to the start of the second pulse flow with inflows in the range of 7,000–8,000 cfs. Shasta is still only 6 feet from full capacity.

- Increasing temperatures are expected in the coming week before cooling some later next week. The long-range forecast shows a possibility of light precipitation around May 20 or 21.
- The Clear Creek pulse flow change order will go out on Tuesday, May 14 to begin the pulse on Thursday, May 16. Flows are currently at 200 cfs and will ramp up to 800 cfs on Friday, May 17 and held there through the weekend before ramping down to 200 cfs by May 27.
- The Clear Creek gage (CCR) is measuring 53.5 degrees Fahrenheit. Reclamation is evaluating when they need to open the Middle Gates to manage the temperature.
- Although Shasta has a sizable cold-water pool, there is not as much of the coldest water as there was last year, and it is important to consider long-term temperature needs. Temperature management will require opening the side gates this year. Reclamation is currently evaluating a number of potential scenarios, including altering diversions from the Trinity and adjusting flows from Keswick, to see if they can delay the opening of the side gates for temperature management.
- It is a good year cold-water wise but not a “strong” Tier 1 year. Reclamation clarified that the Tiers are based on the amount of cold-water pool, not just the total volume in the reservoir.
- The next temperature profile will be released on May 15 and will be used to run temperature models for the updates to the TMP.

Fish Passage Update

- USFWS reported that during the pulse flow April 24–28 there was an increase at the RBDD rotary screw traps in Fall-run catch and a slight increase in Spring-run catch; this increase occurred during the descending limb of the pulse. There has been a much larger jump in catch during the second pulse flow, corresponding with its peak.

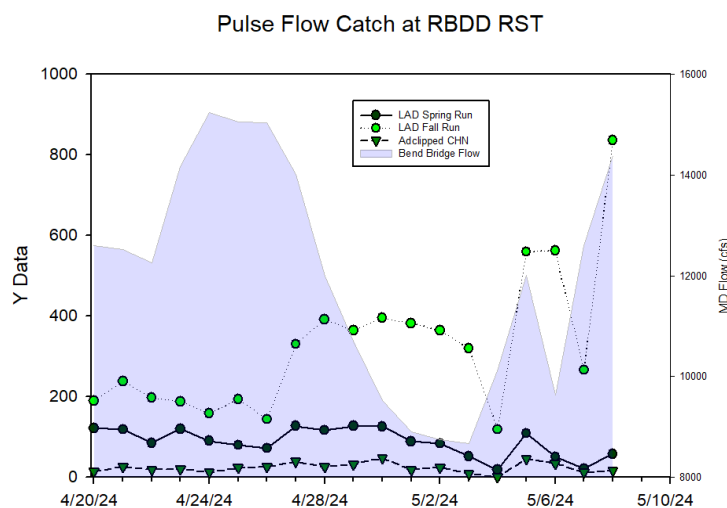


Figure 1. Pulse Flow Catch at RBDD RST.

Figure 1 is a line graph showing pulse flow catch at RBDD RST from 4/20/24 to 5/10/24

for LAD Spring Run, LAD Fall Run, and Adclipped CHN. The graph shows both the Y Data and MD Flow in cfs for Bend Bridge.

- SWFSC asked if the catch numbers have been corrected for trap efficiency. USFWS noted that they have not; therefore, the passage should be assumed to be even higher than the raw numbers suggest, since trap efficiency is reduced with higher flows.

Spring Pulse Flow Scenario Review

Kearns & West’s facilitator opened the discussion and asked participants to consider if there is a reason not to conduct the third pulse flow and/or is there a reason to schedule the third pulse flow for week 7 instead of week 8 as outlined in the original recommendation. She noted that conducting the third pulse in week 8 allows for a control group to be released in week 7, which should improve their ability to differentiate the effects of pulses 2 and 3, and provides more time for new fish to be prepared to migrate.

- Reclamation noted that last weekend’s rain provided a “natural” pulse flow prior to the Keswick increase with Wilkins reaching almost 11,000 cfs at its peak. It will reach that level again in the next day or two with the pulse underway. In contrast, the third pulse will not receive much supplementation from the tributaries and SRSC diversions will increase. They expect to need releases at Keswick of 12,000–13,000 cfs to support the third pulse. This would result in end of May storage around 4.3 MAF.
 - Participating agencies expressed their preferences between implementation of the pulse in week 7 versus week 8:
 - USFWS expressed a preference for keeping the third pulse in week 8. They also noted that the end of April storage was higher than originally forecasted.
 - SWFSC expressed a preference for keeping the third pulse flow in week 8 instead of moving up to week 7, because of the possibility for precipitation and decreased temperatures, as well as the ability to have a control week between pulses.
 - DWR and CDFW expressed support for the original recommendation (week 8).
 - SWRCB supports keeping the third pulse in week 8, but expressed interest in what the projected storage difference would be as a result of implementation of the third pulse.
 - Reclamation said they would rerun the with and without pulse analysis for the updated Temperature Management Plan and discuss at next week’s SRTTG meeting. The initial analysis showed the three pulses increasing overall Temperature Dependent Mortality (TDM) by 5-10%. Reclamation acknowledged that releasing this water in May could have an impact on temperature control later in the season.
 - CDFW asked about the timing of pulling the middle gate and if there would be higher TDM impact if the pulse is after the gate is pulled.

- Reclamation will ramp down the second pulse tomorrow and if possible, plans to wait until the flow goes down to 6,000 cfs before they pull the middle gate. This allows them to minimize the cold water draw. Reclamation would reevaluate the need for leaving the middle gate open once the air temperature cools down. Ideally, they could close the middle gate during the third pulse.
- Another consideration for temperature management and use of the TCD at present is that they are currently operating under negative pricing. Negative pricing means they incur charges for generating power; as a result, they release water from the upper river outlets rather than the TCD which makes it more difficult to manage temperature. When negative pricing ends (i.e., when air temperatures go up and demand increases), it is easier to manage river temperature.
- Reclamation suggested that it is important to consider the long-term water temperature management impacts of initiating the third pulse flow. Using May 1 hydrology, Reclamation will update their analysis of the impact of the third pulse flow on their ability to manage temperature and resulting TDM. This will examine short and long-term impacts on the cold water pool, including the timing of side gate usage and the ability to keep the system cool into September and October. Reclamation reminded the group that once they open the side gates, there are no additional ways to manage temperature. This analysis will include updated forecasts that evaluated Trinity diversions and Keswick releases to determine what alternative operations could do for temperature management throughout the season.
- The group agreed that they will make a final recommendation on the third pulse in conjunction with the TMP discussion and additional modeling available at the 5/16 SRTTG meeting.

Next Steps

- Reclamation will present further analysis of the impact of the third pulse flow on the cold water pool during the SRTTG meeting next week.
- The group will discuss and determine whether to initiate the third pulse flow.

Adjourn

- Terra Alpaugh (Kearns & West) adjourned the meeting. She announced that the group would discuss their final recommendation as part of the SRTTG meeting on Thursday, May 16.