



Sacramento River Group – Spring Flow Planning Subgroup Meeting Summary

Thursday, April 24, 2025, 12:00-12:45 p.m.

Participants

- CDFW: Colby Hause, Crystal Rigby, Erica Meyers, Tracy Grimes, Matt Johnson, Ryan Revnak, Travis Apgar
- DWR: Ryon Kurth
- NMFS: Paula Higginson, Stephen Maurano, Garwin Yip
- SWFSC: Cyril Michel, Flora Cordoleani
- SWRCB: Jeff Laird, Diane Riddle
- SRSC: Anne Williams
- USBR: Elissa Buttermore, Tom Patton, Brian Mahardja
- USFWS: Bill Poytress, Brett Galyean, Matt Brown
- WAPA: Erik Mork
- Kearns & West: Terra Alpaugh, Trisha Madayag

Action Items

- Reclamation to schedule the first pulse flow tomorrow (4/25) for a Tuesday (4/29) start.
- Reclamation to finalize the Operations Plan and share with the group.

Key Discussion Topics with Summary of Perspectives and Outcomes

Prior Meeting Recap

At the previous meeting, SRG members discussed their interests and constraints around timing of the three planned pulses. Members articulated rationale for a first pulse in week 5 to support hatchery releases, followed by equally spaced-out pulses in weeks 6.5 and week 8. Key remaining questions identified by participants included (a) how many days and at what flow to

maintain base flows between pulses in order to create enough contrast between the pulse and non-pulse periods while not endangering the fish by taking flows too low and (b) what peak flows could be reached for each pulse within the max ACID constraint. The facilitator asked participants to share any interests or concerns they have around the proposed timing of the pulses today, so that SHOT and Reclamation can make any final decisions on the pulse implementation and the associated monitoring can be scheduled.

Operations Update and Pulse Scheduling

Tom Patton, USBR, provided an update on the current conditions and operations.

- Current releases from Keswick Reservoir are at 6,000 cfs as of 4/22/25 and will hold at 6,000 cfs through the weekend.
- Storage at Shasta Reservoir is under 4.4 million acre feet (MAF), 6 feet away from the max pool.
- No rainstorms or heatwaves are in the forecast, and the temperature will increase into the 80s through early May.
- Inflows are at 9,000 cfs and are projected to increase next week potentially due to the forecasted heat and snowmelt. Initially, it looked like it would be drier this year, but some of the creeks may provide additional runoff to support the pulse flows.
- If a pulse were to occur in late April, releases would not decrease back down to 6,000 cfs. There is potential to decrease after the first pulse, but releases at Keswick would likely be 8-9,000 cfs in further into May.

Tom described the proposed three-pulse flow scenario, which he is referring to as Scenario M8, including:

- The first pulse at Keswick Dam is projected to be in the range of 10,000 cfs to 11,000 cfs initially. Based on estimates, this should bring Wilkins to 11,000 cfs. There is no indication that it would be necessary to increase to the range of 12,000 cfs to 14,000 cfs.
- The second pulse is projected to be in the range of 12,000 cfs to 14,000 cfs, and the third pulse is projected to be in the range of 14,000 cfs to 15,000 cfs. The last pulse will be pushing the maximum flow for the ACID diversion dam.
- Reclamation estimates this will cost ~100-120 TAF, much less than the initial estimates because base flows are higher than their earlier forecasts anticipated.
- Reclamation is still working on the final temperature management draft plan but will have it ready for review next week. So far, their analysis is showing no difference in TDM between pulse and no pulse scenarios in which they are targeting 53.5 degrees C at CCR.

Questions and comments related to pulse timing and coordination shared by subgroup members included:

- WAPA noted that if there is an opportunity for flexibility in pulse timing (e.g., selecting between two equally good options for fish), it is preferable for the energy market to schedule these higher releases and generate power during warm periods.
- SWFSC raised concern that ramping down to base flows between pulses would be nice to study design and learning purposes, but the fish should also not be harmed for the purpose of research. Is the base flow number what Reclamation would usually release in the absence of a pulse flow or is it lower?
- Reclamation confirmed that it is correct. The focus is maintaining a minimum of 5,000 cfs range at Wilkins. 18,000 cfs at Wilkins is the higher limit, above which flows may cause seepage issues. The Keswick release for base flow would correspond with current conditions. If there were no pulse flows, Reclamation would be ramping up for diversions to support flows in the Delta. This will still be occurring in between the three pulse flows.
- USFWS inquired about changing the timing of the Clear Creek pulse flow so that it aligns with the timing for the Sacramento release and if there are any operational issues regarding timing and impacts to flows at Wilkins. They also asked if lining up the Clear Creek flows would result in a higher peak in the Sacramento River or whether flows from Keswick would be reduced commensurate to the increased Clear Creek flows.
- The pulse of 800 cfs is currently scheduled for a May 16th release from Whiskeytown and would need to account for travel time to Clear Creek. The slow ramp down would begin on May 19th and would reach a base flow of 200 cfs on May 27th. Reclamation offered to ask Derek Rupert from Reclamation if there is flexibility in that timing. The only constraint timing-wise is that Reclamation tries not to make operational changes over the weekend due to staffing difficulties, although it can be worked around.
- Reclamation responded that the target is 11,000 cfs out of Wilkins and can increase as long it does not push 18,000 cfs, so it is likely that Keswick releases would be adjusted; however, they could adjust Keswick downward given the additional Clear Creek flow.
- USFWS proposed two alternative hypotheses to the group: (1) that aligning the pulses would be best to maximize the Sacramento pulse peak or (2) that staggering the pulses is preferable in order (a) to keep overall Sacramento flows higher in May (although that could impact study design and pulse/non-pulse contrast) and (b) so that Clear Creek's pulse period occurs when the Sacramento River is down such that Clear Creek's higher flow is an attraction for adults.
 - SWFSC noted that sandwiching between two pulses would be ideal since a Sacramento pulse would move adult Spring-Run upstream to find Clear Creek and for juveniles to go with the pulse.
- USFWS noted that the magnitude of the Clear Creek pulse is small compared to the Sacramento River flows; they supported the schedule in which a Clear Creek pulse occurs between the two Sacramento pulses.

- USFWS asked for clarification on column H in the Pulse Flow Schedule Spreadsheet and how it relates to the base flow targets at Wilkins and if the associated model accounts for downstream temperature effects through the Delta.
- SWFSC clarified that column H reflects estimated base flow targets at Wilkins that would reliably keep water temperatures below 20 degrees C, based on historical meteorological data. The values increase over time as temperature predictability increases. While not prescriptive, the values offer guidance for managing base flows if operational flexibility allows. The associated modeling focuses on Wilkins, but flow-related temperature reductions are observed downstream as well. Achieving these targets may be possible between the first and second pulse flow, but it may be challenging to hit those flows between the second and third pulse flows.
- NMFS noted that the American River Group has not decided yet, but they are contemplating a May 2nd or May 3rd pulse of 4,000 cfs.
- Reclamation shared that the first pulse flow from the Sacramento River has been scheduled to begin on April 29th; accounting for travel time, this will be good timing for a coordinated arrival downstream with the American River pulse.
- SWFSC asked for clarification that a representative from the Coleman Hatchery is present and can vouch if the first pulse still looks like a good time to synchronize their releases with.
- USFWS confirmed that they are in favor of a release next week to coordinate with a Coleman Hatchery release in Battle Creek and another release downriver.
- SWSFC suggested potentially considering scheduling the pulses with an extra buffer, since it is currently predicted to be below the 150,000 acre feet mark.
- Reclamation responded that the first pulse flow tomorrow (4/25) will be scheduled to be closer to 11,000 cfs rather than 10,000 cfs to create a buffer.

Reclamation reviewed the proposed scheduling for the pulse flows: for the first pulse flow on April 29th, it will be scheduled tomorrow (April 25th). For the second pulse to start on May 9th, it will be scheduled on May 7th. For the third pulse flow on May 20, it will be scheduled on May 16th. Reclamation asked the group for feedback regarding two questions:

- There is typically a release ramp up at midnight, and Reclamation asked the group if a midnight release would be ok or if there was a preference for daylight hours for the future pulses.
- USFWS confirmed that a midnight release works for Coleman Hatchery.
- NMFS inquired about the name of the current scenario.
- Reclamation responded that the current scenario is named M8.

Operations Plan Document Updates

Elissa Buttermore, USBR, provided an update on edits to the Operations Plan and asked for questions and feedback. Key changes include:

- Additional context was added in the “Uncertainties” section to address concerns about last year’s impacts from the weir and juvenile screening. The edits clarify that observed effects were more likely linked to the high magnitude flood control releases rather than Spring Pulse Flows.
- Hatchery release information was updated.
- Reclamation clarified the power cost impacts were lower during warmer periods.
- Updates were made regarding flow fluctuations, noting impacts on monitoring efforts for habitat restoration projects. Challenges in data collection and accurate spatial delineation were also highlighted.
- One habitat restoration project unaffected by pulse flows may be delayed due to the need for further coordination.
- A description of the conceptual M8 scenario was added and a recommendation that the SHOT continue to assess these scenarios, specifically with respect to water costs, due to ongoing forecast uncertainties.