



Upper Sacramento Scheduling Team, Fall Flow Planning Subgroup Meeting Summary

Tuesday, October 8, 2024, 1:00–2:00 p.m.

Participants

- CDFW: Colby Hause, Doug Killam, Erica Meyers, Gary Zhao, Matt Johnson, Travis Apgar, Tracy Grimes, Michael Memeo
- DWR: Kevin Reece, John Ford, Ryon Kurth
- NMFS: Sam Pyros, Garwin Yip, Rachael Alcala
- USBR: Tom Patton, Lisa Elliot, Chase Ehlo
- SWRCB: Craig Williams, Jeff Laird
- SRSC: Anne Williams, Yuen Lenh
- USFWS: Craig Fleming, Matt Brown, Bill Poytress
- Kearns & West: Brittani Bohlke, Terra Alpaugh


Action Items

- Kearns & West will draft key points and the recommendation from this meeting and share it with the Shasta Planning Group (SPG) at their meeting today (10/8) [DONE].
- Kearns & West will cancel future USST meetings until they are requested [DONE].
- Reclamation (Tom Patton) will provide weekly email updates to the USST until meetings resume.
- Kearns & West will have a placeholder for future meetings (2025) to discuss the Gard model and other potential models/tools for estimating flow scenarios and dewatering [DONE].

Key Discussion Topics with Summary of Perspectives and Outcomes

Recap of Meeting Outcomes from October 1st

Kearns & West reviewed the outcomes and action items from last week's discussions and confirmed that the following action items have been completed:

- **KW** to draft email with elevation request to SPG
- **KW** to schedule the SPG to convene on Wed or Thursday. Ask of SPG: Pending the results of the fall run dewatering analysis showing a benefit, the fisheries agencies are asking the SPG to consider recommending dropping flows as quickly as possible (given ramping rates) to 6,000 or 6,500 cfs, with the understanding that this drop can be delayed if there is a heat wave causing CCR>53.5 degrees. Flows would be maintained into November at this level for as long as needed to meet the total decomp demands.
- **Tom Patton** to develop two scenarios, one dropping flows to 6,000 as quickly as possible and the other to 6,500 cfs.
- **Lisa Elliot** to run the fall run dewatering analysis on both new scenarios.
- **KW** to share new analysis with SPG.
- **Tom Patton** will reassess the forecast without assuming fall X2 demand to determine what the Delta needs will be. Based on this analysis and the SPG's direction, Tom will coordinate with **Anne Williams** to determine diverters' willingness to spread flows into November.
- **KW** to share  [2023 Reclamation analysis](#) of dewatering estimates vs. observed dewatering.

Kearns & West also reviewed the request that came out of the SPG's October 3 meeting:

- The SPG will reconvene today (10/8) to discuss the possibility of the following operations:
 - After the heat wave, decrease flows to 6,750 cfs until the late Oct winter run redd emerges.
 - After that, look for opportunities to decrease flows to 5,000 cfs as quickly as possible through the emergence of the early Nov winter run redds, while still maintaining 4,000 cfs at Wilkins Slough for diversions. Note, after last week's (10/1) USST meeting, there was new winter run data that showed two additional winter run redds that would get dewatered at lower flows.
- The SPG requested the following from the USST:

- Discuss the reasons the model is producing the fall run dewatering estimates it is (i.e., higher fall run dewatering at lower October flows) and why USST participants feel they may not be an appropriate reflection of reality.
- When is the model assuming the dewatering is occurring?
- What other model assumptions are impacting the results?
- Do we have any evidence to suggest what the spawning distribution this year will be? Do we know what caused the comparatively earlier distribution in 2021?

Fish Update

CDFW provided updates on current fall run observations:

- The conditions are still suitable for carcassing and turbidity is low. There have only been 13 carcasses since mid-September when winter-run ended; so a low year is expected. The bulk of the run will spawn mid-October to mid-November.
- CDFW referred members to Doug Killam's email explanation of how spawning timing distributions are generated and why an average distribution is the best approach.

Operations Update

Reclamation shared the results of the most recent analysis and members of the USST explored the SPG questions about why the model is producing the fall run dewatering estimates it is.

- Reclamation shared the results of the 6,000 and 6,500 cfs flow scenarios (which had been developed for the SPG last week) in addition to a new flow scenario at 6,800 cfs to address the SPG proposal of 6,750 cfs. The scenarios would drop flows at Keswick this weekend to 6,000, 6,500, and 6,800 cfs respectively. The 6,000 and 6,500 cfs scenarios would hold those flows into mid/late November; the 6,800 cfs would hold that flow through the end of October and then drop to 5,000 cfs through November 11th until the last winter redds have emerged, at which point it would drop to 4,000 cfs for winter base flows.
- Reclamation shared that lower flow scenarios (6,000 and 6,500 cfs) had higher rates of fall run dewatering (10% and 12.7%). Reclamation shared analysis that shows that dewatering increases significantly above 6,000 cfs; therefore, the longer you have flows above 6,000 cfs (e.g., into November), the more dewatering should be anticipated.
- The 6,800 cfs scenario had the same fall run dewatering estimate as the 7,000 cfs (9.8%), which is lower than the alternatives. It also protects the WR with a 10/24 emergence date and the one with a 10/11 emergence date. Reclamation explained that maintaining 6,800 cfs flows through the end of October enables them to meet in-basin decomp, habitat, CVP deliveries, and refuge demands without spreading decomp water demand into November. If there are opportunities to drop flows prior to the end October to minimize dewatering while meeting those demands, Reclamation will do so.

- Participants agreed that no one wanted to consider dewatering the winter run redd with an October 28th emergence date, which had not been identified when the lower flow scenarios were first requested.
- Reclamation explained that the Gard model cannot tell you when dewatering of redds occurs. It only shows the level where spawning occurs and the lowest level of flow the fish are exposed to, so it's difficult to say at what point in the hydrograph dewatering is occurring.
- Reclamation also explained that it is difficult to distinguish and evaluate the difference between dewatering estimates (ex: 10% vs 12%); in general, the model overestimates the number of redds dewatered.
- CDFW suggested that the Gard model be revisited and reevaluated next year. The Gard model is several decades old and there are new tools and measurements that may be more beneficial. Given that there appears to be a threshold around 6,000 cfs, the group could also establish some general guidelines for creating flow scenarios could be utilized each year.

Fall Flow Alternatives Review & Recommendation

Members of the USST voiced support for pursuing the 6,800 cfs scenario identified by the USST. They decided they did not need to reconvene unless there were opportunities to decrease flows sooner that should be discussed.

Next Steps

- Kearns and West will relay this information and the recommendation to the SPG at the meeting today (10/8).
- Future USST meetings will be canceled, and Tom Patton will send a weekly email update to the group.
- Kearns & West will put a placeholder for future meetings (2025) to discuss the Gard model and other potential models/tools for estimating flow scenarios and dewatering.

SPG Report Out (Post-Meeting)

Emailed by Kearns & West to the USST on 10/8 at 3:02pm:

- The SPG convened today to discuss your input and options going forward. They recommended and Reclamation agreed to proceed with the new 6,800 cfs-in-October scenario, with the drop to 6,800 cfs planned for this weekend. Reclamation did take their last available TCD action at Shasta yesterday, so they do not have any additional ways to address temperature in the River; if the heat wave continues and precludes a drop in flows over the weekend, SPG will confer again next week.