



Upper Sacramento Scheduling Team, Fall Flow Planning Subgroup Meeting Summary

Tuesday, September 3, 2024, 1:00–2:30 p.m.

Participants

- CDFW: Colby Hause, Crystal Rigby, Doug Killam, Mark Gard, Tracy Grimes, Travis Apgar
- DWR: Mike Ford, Ryon Kurth
- NMFS: Garwin Yip, Stephen Maurano, Sam Pyros
- USBR: Chase Ehlo, Derek Rupert, Elissa Buttermore, Karissa Bridges, Peggy Manza, Tom Patton
- SRSC: Anne Williams, Yuen Lenh
- SWRCB: Craig Williams, Jeff Laird
- USFWS: Bill Poytress, Craig Flemming, Matt Brown
- Metropolitan Water District: Corey Phillis
- Unknown: Rachael Alcala
- Kearns & West: Eva Spiegel, Terra Alpaugh

Action Items 9/03

- Mark Gard (CDFW) will share his PPT presentation [DONE].
- Tom Patton (Reclamation) will include quantified impacts on storage of the alternatives within the “daily flow tab” of the spreadsheet. [DONE]
- Tom Patton (Reclamation) will update the Alternatives Spreadsheet and share with the group by EOW. [DONE] Scenarios should include:
 - a. A scenario that reflects the anticipated pattern of flows that will be needed to supply rice decomposition demand.

- b. A scenario with a September average of 7,500 cfs and in October the lowest possible flatline flow during the rice decomp period.
 - c. A scenario that shows the lowest possible drop in September flows.
 - d. A scenario that moves some rice decomposition demand into early October and some into November (potentially two scenarios: one October modifications only; one Oct and Nov)
- Reclamation BDO will run the semi-automated analysis of dewatering estimates of Tom's new scenarios. [DONE]
 - Tom Patton (Reclamation) will talk with the Contracting office about the potential to extend rice decomp into early November, including the lead time and information needed. He will report information back to the group via email. [DONE]

Action Items Review from 8/27

Action item 1: Chase Elho (Reclamation) to share presentation slides with K&W to distribute. Update: Shared.

Action item 2: Tom Patton (Reclamation) to add scenarios to alternative spreadsheet that reflect a larger drop in flows in September. Update: Tom is working on this and will send an updated alternatives spreadsheet with more refinement before EOW.

Action Item 3: KW to cancel Sept 10 and Sept 24 meetings. On October 1, USST to decide whether to proceed with biweekly or weekly meetings going forward. Update: September 10 meeting added back to the schedule.

Action item 4: Tom Patton (Reclamation) to continue to produce and distribute alternatives analysis spreadsheet weekly.

Fishery Monitoring Update

- CDFW reported that they are currently tracking 16 shallow redds. One redd already emerged. The crew will be out remeasuring today but does not expect drastic changes given flows at 9,000 cfs and the level of water over each redd.
- CDFW reported that emergence dates for fish that spawned in August are predicted to be between October 30 and November 23. By the first week in November, all the redds that would be potentially dewatered at 5,000 cfs will have emerged.

Operations Update and Alternative Spreadsheet

- Reclamation reported that flows would be cut at Keswick tonight from 9,500 cfs to 9,000 cfs. Given that diverters continue to reduce diversions, Reclamation will make additional cuts to flows but nothing had been scheduled to date.
- Reclamation estimated that the average flow for September would be 8,000 cfs. Flows are estimated to be about 6,000 cfs by the end of September.
- Reclamation reported that some cuts have been made on the American River but that the remaining large cuts will be at Keswick with the goal to cut as much and as fast as possible. The exact rate will depend on how fast the diverters' rate of diversion falls.
- The CVP and SWP are managing to an 8,000 cfs outflow standard for X2. The federal and State Projects are achieving that differently: Reclamation prefers to reduce exports so that they can decrease flows and still meet the standard; the State increased flows today from the Feather River to 8,000 cfs to continue exports and pumping in the Delta.
- Reclamation reported that storage at Shasta has fallen to just over 3 million acre-feet over the weekend; they are aiming to maintain above 2.8 MAF storage at the end of September, which would result in holding flows at 4,500 cfs over the winter.
- Redds are not anticipated to be dewatered until flows reach about 5,000 cfs. Reclamation said it would keep flows as high as needed until the last redd has emerged and will also keep the agreed upon buffer (250 cfs). The alternatives spreadsheet has flows at 6,000–6,500 cfs for October.
- CDFW clarified that they have updated the dewatering estimate for those redds from 5,000 cfs to 4,500 cfs. 5,000 cfs would therefore be protective of all the winter run redds and ok for the fall run as well.
- USFWS emphasized their focus on flow reduction for fall-run redds, which start spawning in October: getting flows lower sooner will help protect them.
- Reclamation reported that the earliest rice decomp diversions would begin in early October and is expected to peak in the second half of the month. GCID, the largest diverter, may take a large amount for rice decomp this year. Estimates are that maximum diversions would be in the range of 2,000–3,000 cfs in the second half of October. Flows will need to be in the range of 7,000 cfs at Keswick to meet those needs. Then, starting in November, flows would be cut back as fast as possible, though because of the predicted emergence dates, they will hold off going below 5,000 cfs until after November 12.

- SRSC noted that September is too early for rice decomposition; a limited amount of the diversion water could potentially be shifted from late to early October; shifting water to November would require a contract amendment, since they only have coverage to divert water from April to October (except in years when Term 91 is not active). SRSC suggested that the refuges might have the ability to shift some of their demand from October.
- USFWS noted that Reclamation's analysis of fall run impacts does not reflect the possibility of dropping flows in September, then raising them for diversions in October, and then dropping them again.
- Reclamation discussed the fact that action would need to be taken if the group would like to request the diverters to spread rice decomp into November. A request would need to be put into Reclamation Contracting Office, environmental compliance analysis would need to be done, and an agreement would need to be made with diverters.
- CDFW and USFWS asked Reclamation to find out whether a shift of diversion water into November would be feasible. The fisheries have all been shut down because fall run numbers are so low.
- Reclamation reminded folks that the fall run dewatering estimates are not reliable as exact numbers but can be used to reliably compare across scenarios.

Special Presentation: Sacramento River redd dewatering modeling

Mark Gard (CDFW) gave a presentation on his work modeling redd dewatering in the Sacramento River. Gard's initial analysis was published in 2006.

- His recent research used the following methods
 - 2017 Green LIDAR and 2018 bathymetry used for terrain
 - Water surface elevation profile measured to calibrate model
 - Validated against redd data
 - Simulated flows of 3,250–13,000 cfs
- The model looking at depth showed 19 Winter-run redds from 2023. He looked at the model output and at the specific location of the redd to determine where depth drops below 6 inches. He examined the actual depth and the simulated model depth. He ran an alternative to analyze actual redds dewatered 2021–2023 and found that only three of the 17 matched actual to simulated and that there was not a pattern to the difference.

- Gard said that at this point, the 2006 data is still the best to use for population scale dewatering estimates.
- Gard observed that the river channel has changed due to high flows and gravel injection projects.
- He suggested that the agencies determine their end goal:
 - a. If they want to predict whether individual redds will be dewatered, they need updated river bathymetry.
 - b. If they want to update the 2006 estimates, they will also need substrate mapping for the entire river.
 - c. It would be useful to measure velocity because survival may be reduced by reductions in velocity.