

Upper Sacramento Scheduling Team

Fall Flow Reduction Coordination

Wednesday, September 30, 2020 | 11:00 am – 12:00 pm

MEETING SUMMARY

Participants

Reclamation	Tom Patton, Josh Israel, Elissa Buttermore, Liz Kiteck, Randi Field, Mario Manzo, Allison Febbo, Kristin White, Ryan Everest, Cynthia Meyer
USFWS	Jim Earley, Matt Brown, Kristal Davis-Fadtke
NMFS	Flora Cordoleani, Stephen Maurano, Evan Sawyer, Garwin Yip
CDFW	Matt Johnson, Mike Harris, Ken Kundargi
DWR	Kevin Reece, Mike Ford, Brett Harvey
SWRCB	Diane Riddle, Matt Holland, Michael Macon
SRSC	Thad Bettner, Anne Williams
Kearns & West	Terra Alpaugh, Julie Leimbach, Alyson Scurlock

Action Items

- All to email Terra to join the spring pulse flow fish monitoring plan subgroup.
 - Terra to compile list of tentative members by next USST meeting on 10/6.
- Matt Johnson, CDFW to provide female spawner estimate by 10/9.
- CDFW to consider calculating dewatering flows in the Alternatives spreadsheet with room for error.
- NMFS to indicate dates to be careful of for redd dewatering and send to USBR/USST.
- NMFS/SWRCB to confirm whether they have a preferred alternative by 10/1.
- Reclamation/SRSC to provide information on contractual agreements and potential risks.
- USST to consider options for documenting beneficial impacts on fall-run.

Key Discussion Topics with Summary of Perspectives, Outcomes, and Agreements

Meeting Objectives

1. Collaboratively develop flow reduction alternatives that enjoy broad support from USST members
2. Test of support for any immediate changes to flows
3. Test support for any proposed (as relevant) long-term changes to flow releases
4. Shared understanding of interests and external conditions for fall flow scheduling

Spring Flows

Kearns & West stated that the spring pulse flows guidance document calls for the development of a fish monitoring plan and forming a spring pulse flow fish monitoring plan subgroup. The subgroup would meet approximately four times in October and November to assess the effectiveness at increasing juvenile migration if fish spring pulse flows are implemented. Reclamation aims to finalize

a fish monitoring plan sometime in December. Materials developed will be brought back to the USST for review by those who will not be involved in the subgroup. Kearns & West asked for USST members from different agencies to contact Terra if they would like to volunteer for the subgroup. Kearns & West aims to have a list compiled before the next USST meeting on 10/6.

Fisheries Monitoring Update

CDFW reported the following fisheries update:

- Four redds were dewatered when flows dropped to 6,800 cfs and things have been static since then.
- There is evidence of a new run of fish spawning in the river now.
- The carcass crew encountered 12 fresh carcasses last week, 17 carcasses yesterday, and are finishing one last section on 9/30.
- 12 new shallow redds were marked last week.
- A redd flight is scheduled for 10/1 but may be delayed due to smoke.
- CDFW still does not have an estimate of the number of river female winter-run.
 - They are expecting to provide an estimate by 10/9 at the latest.
 - CDFW spoke with Doug Killam about a possible guidance metric they could use. Doug looked at the average rate of expansion from the winter-run carcass survey over the last 15-20 years. The estimate on females is 55% but the swing the last few years has been 21-89%. With 2,972 female winter-run counted this year, those percentages suggest that the average number of redds would be 5,404 but could be as low as 3,600 or as high as 10,000.

Perspectives and questions shared by USST members included:

- USFWS asked how many total winter-run redds have already been dewatered.
 - CDFW reported 20 winter-run redds being dewatered as of last week.
- NMFS asked if CDFW thought the fish spawning in the river now were spring-run or fall-run.
 - CDFW suspects that there are both fall-run and spring-run spawning right now. They have recovered two Feather River springers with coded-wire tags. They are also seeing spawning on Clear Creek already and are taking tissue samples of all carcasses in September, however, there is no funding to genetically determine which run those fish are.

Operations Update

Reclamation gave the following operations update, including reviewing changes to the Alternatives spreadsheet:

- Flows are currently being held at 6,800 cfs at Keswick Dam.
- Temperature in the river is good. Air temperatures are warm, but there are no major heat waves forecasted, and there is a lot of smoke.
- New “Rampdown Rates” tab: Documentation has been added for what the ramping rates are for different flows at Keswick Dam. These are maximum guidelines and can be adjusted if there is a major concern for dewatering redds.

- When flows are greater than 6,000 cfs, reductions in releases may not exceed 15% per day and no more than 2.5% per hour. Releases are currently in this range.
- When flows are between 4,000-5,999 cfs, reductions in releases may not exceed 200 cfs per day or 100 cfs per hour.
- When flows are between 3,250-3,999 cfs, reductions in releases may not exceed 100 cfs per day.
- Source information has been added to the spreadsheet for these guidelines. These guidelines are typically followed year-round unless there is a major flood event in the winter when the ramp down rates are greater.
- Daily timesteps have been added for flows for Alternatives 1, 4d, and 6a. Changes made on the daily tabs are incorporated into the weekly “Flow Scenarios” tab.
 - New “KES DailyFlows” tab. All days that have a proposed flow change are highlighted. This schedule can be fine-tuned.
 - New “Accr DailyFlows” tab. It is unclear when it will rain and how much. Accretions are estimated at 500 cfs right now.
 - New “Depl DailyFlows” tab. This gives an estimate of river depletions and what diversions are at this time of year on a daily timestep.
 - New “WLK DailyFlows” tab. This shows a sum of the flows at Keswick Dam plus the accretions and minus the depletions to give a computed estimated flow at Wilkins Slough.
- The spreadsheet has been narrowed down to three Alternatives.
 - Alternative 1 is based on a longer-term outlook forecast.
 - Alternative 4d was created by combining several of the Alternative 4s. This alternative has a slightly different flow pattern with similar depletions and accretions to Alternative 1 and maintains Wilkins Slough flows in late October at 4,000 cfs.
 - Alternative 6a holds flows higher initially and then drops flows more rapidly in mid-October.
- Fall-run and winter-run redds dewatering information was updated for the three Alternatives.
 - Alternative 1 anticipates 32 estimated winter-run redds dewatered and 13.6% of estimated fall-run redds dewatered.
 - Alternative 4d anticipates 27 estimated winter-run redds dewatered and 14% of estimated fall-run redds dewatered.
 - Alternative 6a anticipates 29 estimated winter-run redds dewatered and 11.8% of estimated fall-run redds dewatered.

Alternatives Discussion

Perspectives and questions shared by USST members included:

- Reclamation indicated that the differences between Alternatives 4d and 6a look fairly small. It appears that storage is fairly equivalent and that there are two winter-run redds that will be dewatered with Alternative 6a vs. 2.2% of fall-run redds dewatered with Alternative 4d, but both numbers are uncertain. They are looking for input from the fish agencies. Reclamation said that they would have to take actions from a contracting perspective if Alternative 6a is selected in order to get SRSC their diversions in November.

- USFWS pointed out that there is approximately 10,000 acre-feet of water less with Alternatives 4d compared to Alternative 6a and asked if it could have an effect on the cold water pool.
- Reclamation suggested that the difference in water is not very significant from a technical operator's standpoint.
- USFWS estimates that the 2.2% more fall-run redd dewatering with Alternative 4d compared to Alternative 6a, would amount to about ~200 fall-run redds.
- CDFW agreed that there is not much difference between the scenarios. Overall, in 2020 winter-run returns have been a pretty big based on the estimate/numbers, and Reclamation has been successful in temperature management. There have been redds dewatered, but the number has been limited by the USST's efforts. CDFW prefers Alternative 6a because it is better for fall-run due to flows being lower than Alternative 4d in the critical peak spawning period in October. CDFW said that they have had a very successful year for spawning and that it is time to start thinking about building storage and thinking about fall-run. If there is 10,000 acre-feet more water, it could make a difference if next year is a rough year. CDFW thinks the additional water savings in Alternative 6a offsets the 2 additional winter-run redds dewatered to a degree.
- CDFW also noted that at least some of the fish spawning in the "fall run" period are actually spring-run, a listed species, so there is good reason to be more protective of them than they might otherwise be.

Kearns & West asked for input from the other agencies on CDFW's preference of Alternative 6a.

- NMFS said that they appreciate the additional analysis and that there may be room for better understanding the impacts to the cold water pool going forward. There's not a simple way to compare potential impacts to 200 fall-run redds to two winter-run redds because they are different populations. NMFS suggested that the calculations should be made with room for error going forward, such as adding a couple hundred cfs as a buffer to dewatering flows and by incrementally ramping down in smaller amounts and remeasuring when there is a redd that is close to being dewatered. NMFS said that they appreciate Reclamation for their protection of winter-run redds up until this point.
 - Reclamation said that when the last flow drop was scheduled for 6,600 cfs, they stopped at 6,800 cfs to try to protect redds from dewatering. They think they have already implemented NMFS's suggested approach in the past and can continue to do so. They think flow drops can be made in smaller increments in the future and can try to do them during times where staff are out on the river.
 - NMFS thanked Reclamation for being careful about flow drops up until this point and said that they would email the USST indicating a few dates where the estimated dewatering flows come close to dewatering redds.
 - Reclamation asked NMFS if they specifically endorse Alternative 6a.
 - NMFS opted not to endorse a specific alternative. NMFS asked to clarify their role in the USST, which was understood to be to provide technical assistance in support of Reclamation's decision making. In this capacity NMFS' suggestion has been to do additional analysis but NMFS said that they were not providing a specific

recommendation. NMFS declined to provide a recommendation beyond the information and technical assistance noted above, but did not object to the alternatives being presented. At USBR's request, NMFS will meet internally and report back to the group with more specific technical assistance regarding the Alternatives.

- Kearns & West asked if there was a deadline to make a decision by, as it sounded like Reclamation was looking to make changes quickly.
 - Reclamation said that Alternative 6a requires coordination with SRSC and that they want to leave time for them to plan for the contracting logistics.
 - SRSC said the sooner the better for making a decision as there are quite a bit of logistics involved. They are in support of Alternative 6a. SRSC appreciates CDFW's comments in terms of managing multiple species and needs.
- USFWS said that they in general support Alternative 6a. There are many different concerns and runs, but Alternative 6a it does appear to improve conditions for fall-run in the Sacramento River. USFWS said the USST needs to think more about how to document beneficial impacts on fall-run redds this year, if possible. It would also be helpful to know more about contractual constraints that may exist between Reclamation and SRSC so they can be planned around in future years.
- SRSC said that Alternative 6a has 10,000 acre-feet more in water and that is real savings. If they are short going into the spring next year, every drop will count for cold water. SRSC suggested continuing to plan six to nine months ahead. Alternative 6a provides benefits to species now but also when looking forward at 2021.
- DWR said that they align with CDFW's opinions of Alternative 6a. Their gut reaction is to protect every winter-run possible, but they agree with assessments of potential water savings and that the spawning in the river could also be spring-run. DWR think the tradeoff is appropriate for protections of new spawners and the cold water pool.
- SWRCB inquired about how real the flow releases are relative to the cold water pool discussion.
 - Reclamation said that the calculations for flow releases assume that they will exactly adhere to the flow release schedule on the daily tab. If cuts are not made starting tomorrow, numbers could be different. The numbers in the spreadsheet are projected if flow operations followed the daily flow schedule exactly. If there was a pause between reductions, the 10,000 acre-feet of additional water in Alternative 6a could erode rapidly since it is a small number and there is uncertainty surrounding the fall period.
 - SWRCB noted that Alternative 4d drops to 6,543 cfs and Alternative 6a drops to 6,600 cfs this week and asked if there was really a difference between the two.
 - Reclamation said that 6,543 cfs is the average for Alternative 4d when flows drop from 6,600 cfs to 6,500 cfs over seven days, incorporating ramp down rates. If they waited one day or if flows were held at 6,800 cfs for three days, the the 10,000 acre-foot difference in storage between the alternatives could change significantly.
 - SWRCB said that they wanted to hear NMFS' thoughts before they weighed in.

- Reclamation said that Alternative 1 drops flow significantly to 6,000 cfs while Alternatives 4d and 6a look very similar until 10/8 or 10/9. 10/16 is when even more significant changes will be made to lower flows..
- SWRCB said that it sounds like there is concurrence on moving forward with Alternatives 4d and 6a.
- SRSC said they would appreciate if they did not wait until the next meeting to make a decision as discussions have already been ongoing for a month.
- NMFS and SWRCB will have a conversation and report back to the USST.

Post Meeting Follow Up

After the USST on 9/30, NMFS clarified via email that they do not object to Alternatives 4d or 6a and see either as reasonable actions since both alternatives are anticipated to be within the proposed action for CVP LTO. Additionally, SWRCB said they were in a similar place as NMFS on the 1:00 pm WOMT call but that they supported CDFW's recommendation. After hearing from both NMFS and SWRCB, Reclamation has made the decision to move forward with Alternative 6a.

Next Meeting

Tuesday, October 6, 10:00-11:30 am