



American River Group

1:30 p.m.– 3:30 p.m.

Conference Line: +1 (321) 209-6143; Access Code: 985 598 947#

Webinar: [Join Microsoft Teams Meeting](#)

Thursday, December 15, 2022

Notes

1. Action Items
 - a. Barb Byrne, Ansel Lundberg, and Duane Linander – develop a draft outline for a 2022 Folsom Power Bypass Post Action Memo.
2. Introductions
 - a. USBR: Thuy Washburn, John Hannon, Ian Smith, Liz Kiteck, Spencer Marshall, Drew Loney
 - b. NMFS: Barb Byrne
 - c. USFWS: Craig Anderson
 - d. CDFW: Nick Bauer, Stephanie Ambrosia, Mike Healey, Gary Novak, Chris McKibbin, Duane Linander, Danny O’Donnell, Erica Meyers, Emily Fisher, Jason Julienne
 - e. SWRCB: Lauren Beaudin, Michael Macon
 - f. Water Districts: Greg Zlotnick, Michelle Banonis, Paul Helliker
 - g. City of Roseville: Sean Bigley
 - h. DWR: Mike Ford, Kevin Reece
 - i. WAPA
 - j. EBMUD: I-Pei Hsiu
 - k. SMUD: Ansel Lundberg
 - l. PCWA: Ben Barker

- m. FishBio
 - n. Water Forum: Erica Bishop, Jessica Law, Chris Hammersmark, Ashlee Casey, Liana Huang
 - o. PSMFC: Logan Day, Hunter Morris
 - p. CFS: Kirsten Sellheim
 - q. Shingle Springs Band of Miwok Indians:
 - r. Other: Rod Hall, DeDe Birch, Jennifer Buckman
3. Fisheries Update
- a. CDFW provided fisheries updates.
 - i. The season total for carcass surveys is 5,542 fish and observations have likely peaked. The fish are looking advanced with less fresh fish arriving.
 - ii. CDFW staff were surprised to see a redd in Section 3 in the Braden side channels at the William B. Pond park area. The peak number of redds observed so far for the season is 205.
 - b. CDFW provided hatchery updates.
 - i. 12/15/2022 was the last day for Chinook salmon spawning at the hatchery. Steelhead spawning begins the week of 12/19/2022.
 - ii. As of 12/12/2022 a little over 11.5 million eggs have been collected which is well on the way to meeting mitigation goals.
 - c. Cramer Fish Science provided updates on their redd surveys.
 - i. 1,100 redds have been observed with 670 of the redds being in the new Nimbus basin and Lower Sailor Bar restoration sites.
 - ii. There will be two more redd surveys the weeks of 12/19/2022 and 1/2/2023.
 - iii. Steelhead surveys will begin on 1/9/2022 and will occur every other week. Steelhead survey numbers should be ready to share during the February 2023 ARG meeting.

Questions/Comments

- CDFW asked for an interpretation of the carcass and redd surveys for those in the group that are not biologists.

- It is hard to give an explanation in the middle of the season because they do not have final numbers and making correlations does not make sense. If CDFW had to make an interpretation, they would say that the numbers are decent this year; not horrible, but not great.
- USBR asked about whether the hatchery has exceeded its goals and if there will be egg transfers.
 - CDFW responded that approximately 1.2 million excess eggs from the Nimbus Fish Hatchery were transferred to the Merced Fish Hatchery to help them meet their production goals. Very few fish had entered the Merced Fish Hatchery leading to concerns about meeting egg production goals using returns to the Merced Fish Hatchery. This transfer occurred over a number of days. No additional eggs will be transferred from the Nimbus Fish Hatchery to the Merced Fish Hatchery.

4. Operations Update

a. SMUD

i. South Fork American River Watershed

1. There have been approximately 17 inches of liquid water precipitation since October 1, 2022. This is 5 inches over the median to date.
2. Snowpack is above average at 140%. Runoff is below average at 72%.
3. There is 230,000 acre-feet (TAF) combined storage across the three largest reservoirs which is above last year's storage numbers.
4. Flows at Chili Bar on the South Fork American River for November averaged 390 cfs and totaled 23 TAF.
 - a. December flows have averaged 20 TAF with an average of 830 cfs.
5. SMUD will be minimally increasing releases in preparation of a small outage at Union Valley in January 2023.

b. PCWA

i. Storage:

1. French Meadows: 71 TAF
2. Hell Hole: 92 TAF
3. Combined Storage Totals:

- a. 163 TAF
 - b. Reservoir Capacity at 50%
 - c. WY23 Precipitation is 94% of average
- ii. They are still under a transmission induced generator outage for the 230kV transmission line. They are hopeful to have the generators turned back on by the end of December 2022.
 - iii. Snowpack is approximately 80 TAF.
5. Central Valley Operations

- a. American River releases are at 1,300 cfs.
- b. Folsom Reservoir storage is at 377 TAF.
- c. Inflows were at 700 cfs due to precipitation events. Most of the water was snowpack rather than rain.
- d. Water temperatures reached 56 °F starting on 11/20/2022. This is about 5 days earlier than previous years which is likely due to lower air temperatures.
- e. December temperatures at Folsom Dam are cooling as the lake destratifies.
- f. The seasonal drought outlook forecasts continued drought conditions even with the recent precipitation events.

Questions/Comments

- NMFS asked how cold the reservoir usually gets and whether it varies year to year.
 - USBR responded that it varies from year to year and generally begins to warm up in March.
- NMFS commented that using the MRR equation is very precise, however, there was an exchange between USBR and NMFS in which USBR said they cannot be so precise during implementation and would be using 1,300 cfs rather than the 1,326 cfs from the MRR calculation. NMFS did not object to the 1,300 cfs minimum release. NMFS suggested that they include a footnote in the packet to show why the minimum release is not exactly the MRR.
 - Jennifer Buckman, counsel for several water contractors and RWA, clarified that the water users believe the minimum reservoir releases in the 2017 MFMS and were intended as a floor and should be considered the minimum flow; if operational adjustments are needed, they should be made to err higher than the MRRs.
 - USBR responded that they are unable to get exact flows, there is a +/- 5% variation. The actual release from Lake Natoma ranged from 1,325 cfs to 1,357

cfs. There were no days in November that were below 1,326 cfs. Although the change order says 1,300 cfs, actual releases will likely be higher.

- The Water Forum recognized that there are practical considerations to take into account when translating from the MFMS to actual releases; and indicated that the suggestion to work at ARG on a standard procedure or policy on the amount of variation was not needed.
- Ms. Buckman commented that she understands that USBR can't release water to the single cfs but there is a big (roughly 4.5 TAF over three months) difference between 1,326 cfs and 1,300 cfs in terms of water delivered to benefit fish, and this request to go below the flows prescribed in the 2019 BiOp during fall spawning was concerning. Ms. Buckman noted that it is good that the flows actually remained above the MRR for the full period and reiterated her understanding that the water users want to see full compliance with the 2017 MFMS as incorporated into the 2019 BiOp, including the MRRs.
- CDFW commented that they would like to see this exchange recorded in the meeting notes.
- CDFW asked whether the Redd Dewatering Protective Adjustment record for January is based on the 1,326 cfs or the 1,300 cfs?
 - USBR responded that the January calculation is based on the Sacramento River Index (SRI). If there is a controlling number that needs to be used it would be 1,326 cfs.
- CDFW commented that they are concerned about dropping flows in January and February because of redd dewatering.
 - NMFS commented that you cannot drop to more than 70% of the December number. A 30% drop is still problematic, but there is a cap.
 - The Water Forum commented that the MFMS says that the 70% exceedance is required to be used.
- NMFS suggested that this topic be postponed until a time when the actual flows do fall under the MRR.
 - The Water Forum agreed but would like to figure out a better path forward.

6. Folsom Power Bypass Results

- a. USBR would like to get a sense of the real impacts and benefits that resulted from the power bypass. In part, this is based on inquiries from power users who are interested in better understanding the relationship between power losses and benefits to fish.
 - i. NMFS noted that NMFS and WAPA prepared a presentation for the IEP Data Science Work Team to show the outcome of the Fall 2021 bypass. It would be great to have a post-action report be standard practice when the bypass is complete. Although it may not be

possible to determine the real egg mortality numbers, it should be possible to use actual temperatures to run the egg mortality model and compare that to CDFW's egg mortality data based on modeled water temperatures used during bypass planning. SMUD might be able to calculate how much power was actually lost. NMFS is open to working on this effort. There needs to be some thinking about which data to put in the model. A "Power Bypass Review" subgroup committed to pulling together options for the January meeting. It might also make sense to include an interpretation section in the report. For example, NMFS believes that the power bypass was successful as temperatures were better than expected and there was improved redd survival in the early season when temperatures dropped from the power bypass.

- ii. SMUD commented that they support the idea of developing a report to better understand what happened with the power bypass. Some of the work regarding power losses has already been done by CVO.
 - iii. USBR commented that they would like to see how many fish were in the river, and how many redds were present.
 - iv. CDFW commented that there were positives, but there were still some water temperature impacts based on poor conditions prior to the power bypass. Early on at the Nimbus Fish Hatchery, the first few egg lots had higher instances in egg mortality and although this cannot be tied directly to any one thing, it only occurred during the first lots indicating that adults having to hold in the lower American impacted egg quality. The fish in the river likely experienced similar situations. They cancelled their first spawn that was scheduled for November because they did not have enough ripe fish due to conditions in October.
 - v. NMFS commented that the analysis provided in support of the power bypass request used a "super-cohort" approach, which is an aggregate spawning distribution from 2014-2016. Now that we know when fish spawned in the river, we can use the observed time. They would like to know when the 2022 data would be available to use.
 1. CDFW responded that they try to update their data on a weekly basis. It is updated to CalFish. This is raw data; the mark recapture study will occur at the end of the season. The raw data does include information for the recapture rate.
- b. Topics to include in the post action report: egg growth, pre-spawn mortality, power loss, cost of power loss, redd count, hatchery impacts.

The next regularly scheduled ARG meeting is on Thursday, January 19 from 1:30 p.m.– 3:30 p.m.