

American River Group

Monthly Meeting Notes 11/19/20

1) Action Items

- CDFW will share data on the breakdown of the carcasses between fresh and old/moldy. They will circulate (or post on the CAMP database) a report comparing weekly carcass numbers over the survey period for several prior years of record.
- SMUD will share its projected releases for December with CVO as soon as they are produced.
- USBR will share an update on the fish hatchery construction in December as well as hatchery flyover footage.
- USBR will share draft of annual report for ARG review (aiming for 11/25).
- City of Sacramento will share the total volume of water they transferred as part of their groundwater substitution transfer at the December meeting.

2) Introductions

- **USBR:** Carolyn Bragg, Will De Grush, Zarela Guerrero, John Hannon, Levi Johnson, Peggy Manza, Spencer Marshall, Sarah Perrin, Liz Kiteck, Ian Smith, Thuy Washburn, Mike Wright
- **Water Forum:** Chris Hammersmark
- **SMUD:** Ansel Lundberg
- **PCWA:** Ben Barker, Darin Reintjes
- **PSMFC:** Cory Starr, Logan Day
- **SJWD:** Paul Helliker, Greg Zlotnik
- **CDFW:** Mike Healey, Jason Julianne, Morgan Kilgour, Tracy Grimes, Jeanine Phillips, Joel Craven
- **NMFS:** Barb Byrne
- **USFWS:** Craig Anderson, Paul Cadrett
- **SWRCB:** Reza Ghasemizedeh, Michael Macon
- **EBMUD:** I-Pei Hsiu
- **WAPA:** Mike Prowatzke
- **Westlands:** Tom Boardman
- **City of Sacramento:** Anne Sanger, Brett Ewart
- **City of Roseville:** Sean Bigley
- **Cal State Sacramento:** Dede Birch
- **Save the American River Association:** Felix Smith

- **Kearns & West:** Terra Alpaugh, Rafi Silverblatt
- **Independent:** Rod Hall

3) Fisheries Update: CDFW

CDFW shared results through Week 5 of the Fall-run Chinook Carcass Survey, which included a total of 128 carcasses, 78% of which were located on or above the weir and 21% of which were adipose clipped. CDFW observed that pre-spawn mortality decreased in Week 4, which is when the power bypass was initiated. For additional details, see page two of the handout packet.

CDFW hatchery staff reported that weekly steelhead losses have decreased significantly and are now in the single digits. Fall-run Chinook started spawning on November 2. The number of eggs collected at this point in the season is less than projected; staff anticipated ~3 million eggs by mid-November but have only collected ~1.2 million. On Monday, they began seeing more fish moving in but those fish are only about 10 percent ripe; there are currently about 1,400 Chinook in the holding pond. Hopefully, recent rains will move fish toward the hatchery. Staff expressed concern that they will not meet their 9 million egg goal. They have not yet discussed expanded the spawning window, but it is a possibility.

CDFW committed to sharing data on the breakdown of the carcasses between fresh and old/moldy. They also agreed to circulate (or post on the Comprehensive Assessment and Monitoring Program (CAMP) [database](#)) a report comparing total carcass numbers over the spawning period for several prior years of record. They shared a small snapshot of that comparison: for week 5 of the survey period, this year 43 carcasses were counted compared to 252 in 2019; 179 in 2018; and 320 in 2017. Hatchery staff shared that this matched observations in the hatchery: usually staff have to close the gate to the ladder regularly throughout the season once they have reached the maximum number of fish that can be processed at one time. This year they have kept the gate open continuously until this previous Monday (11/16).

4) Operations Forecast

a. SMUD

For details on the Upper American River SMUD Operations, including precipitation, reservoir storage, releases, and runoff forecast, see page three of the handout packet.

SMUD corrected the total precipitation numbers for November to 5.8 inches in the basin, up about three inches since the report was produced at the beginning of the week.

SMUD will share its projected releases for December with CVO as soon as they are produced.

b. PCWA

For details on PCWA operations, including reservoir and snowpack storage, power production, and recreation flows, see page four of the handout packet.

c. Central Valley Operations

For details on November CVO operations, including releases, storage, inflow, accumulated precipitation, and temperature management measures, see pages five and six of the handout packet.

Thuy Washburn introduced herself as the new Folsom CVO operator.

5) Central Valley Operations

a. Temperature Management

CVO staff referred to pages seven through eleven in the handouts in discussing water temperature management. Average air temperatures in October are usually 65° F; this year they remained above 67° F. CVO hoped that air temperatures in November paired with the power bypass would drive water temperatures down to 56° F earlier in the month. However, the recent storm kept air temperatures higher than CVO had hoped. As a result, water temperatures remain slightly above the target temperature of 56° F.

The water temperatures taken in six profile locations in the reservoir reveal that the lake is beginning to de-stratify and that colder water (the volume less than 56° F) is diminishing. The temperature of water released from the lower river outlets is about 54° F and from the bottom shutters is about 58° F; CVO anticipates the temperature will meet in the middle around 56° F. Only 8 TAF of water less than 56° F remains. NMFS asked whether the full 8 TAF is accessible; CVO said they believe it is mostly accessible, but they are not sure what portion might be below the outlets.

The power bypass proposal requested a power bypass for up to four weeks or until water temperatures reached 56° F. NMFS and CDFW acknowledged that when they drafted the proposal, they assumed that water temperatures would drop to 56° F before the end of the four week period. CVO agreed that they thought they would end the bypass early, but now it looks like they will execute the full four-week bypass and end it on 11/25. CVO noted that the 11/25 is the end date of the bypass as proposed by the fisheries agencies but also clarified that they will have run out of cold water at that point; they anticipate that the water coming out of Folsom next week will be warmer.

CVO hopes that cooler weather this weekend will drive the water temperatures down to the desired 56° F water temperatures. CVO will ramp down the bypass over two days (250 cfs/day). CVO confirmed that ending the power bypass will not change the overall volume of releases from Folsom, just will change the blend of water being released.

CVO observed that the ARG should consider the likelihood that this kind of situation will happen more frequently in the future; they should likely assume a warmer fall climatology. CDFW agreed that it may be time to revamp the temperatures used in the modeling so they are more reflective of recent temperatures. CVO said that there are temperature model updates underway and updated climatology should be part of that.

CVO hopes that fish are delaying their arrival due to warmer temperatures. While USBR has not done aerial spawning surveys of the entire river, it appears salmon are holding above the weir for the time being.

b. Exceedance Forecasts

For the 90 and 50 percent exceedance forecasts, refer to page 12 of the handouts. CVO anticipated that they would end the month close to the 90 percent forecast.

90 percent runoff exceedance outlook: The end-of-month storage is forecasted to be 321 TAF; CVO anticipates it will be closer to 319 TAF. CVO plans on keeping releases at 1,250 cfs for November and December.

MRR is not yet provided for January. January MRR is based on the Sac River index, which is not available until December. A better forecast will be available in January once snow survey results are available. The proposed releases of 1,125 cfs are based on the assumption that hydrology will remain very dry; however, the amount they can ramp down between December and January is limited in order to protect salmonid redds. CDFW asked how much water levels will decrease with a reduction from 1,250 to 1,125 cfs; CVO estimated a couple inches.

NMFS noted that this will be the first December/January transition implemented under the new BiOp, which implements a revised FMS. NMFS requested that CVO provide in the ARG handouts the calculations for the FMS Minimum Release Requirement (MRR). NMFS reminded the group that there is an index-based MRR and an MRR with redd-dewatering protective adjustments (for an RDPA-based MRR), and whichever one is higher is implemented. CVO agreed to calculate an estimate in December though they cautioned that it will be imprecise. The forecast is available on the 8th or 9th of the month.

50 percent runoff exceedance outlook: The end of December storage forecast in the 50 percent forecast (403 TAF), as compared to the end of December storage forecast in the 90 percent forecast (297 TAF), reflects the difference that would result from more normal precipitation over the next month.

6) Discussion

Hatchery Update

Based on the last update received, USBR reported that construction of the fish ladder was expected to be finished ahead of schedule in December 2020, though that progress could have been slowed by recent rain events. USBR will provide further details at the December ARG meeting.

USBR biologists said that fish are currently congregating at the bottom end of the fish ladder. CDFW asked if that was sufficient for USBR to believe the ladder will work. USBR stated that demonstration that fish utilize the entire ladder would be ideal.

Annual Report Update

USBR is awaiting the last section of the WY 2020 annual report and hopes to send out a draft for ARG review by 11/25. CVO reminded the ARG that this year's power bypass will be incorporated into next year's (WY 2021) annual report.

Groundwater Substitution Transfer Update

City of Sacramento provided an update on their groundwater substitution transfer, which ended last week. They had proposed a transfer of 18 TAF; ultimately, they transferred 11

TAF in the first three months and an additional ~3 TAF in the last month and a half, for a total of between 14 and 15 TAF. They will share an exact volume next month. They had hoped to extend the transfer through the end of November, but DWR requested they stop due to other facility needs.

- 7) **Next ARG Meeting:** Thursday, December 17, 2020 from 1:30 PM – 3:30 PM