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American River Group

Meeting Summary 3/19/20

1) Introductions

USBR: Carolyn Bragg, Zarela Guerrero, John Hannon, Levi Johnson, Liz Kiteck, Peggy Manza, Spencer Marshall, Sarah Perrin, Ian Smith, Mike Wright
Water Forum: Rod Hall, Tom Gohring
SJWD: Greg Zlotnick
SMUD: Ansel Lundberg
PCWA: Ben Barker
CDFW: Mike Healey, Duane Linander, Jeanine Phillips, Tanya Sheya, Jonathan Williams
NMFS: Barb Byrne
USFWS: Paul Cadrett
SWRCB: Julianna Specter, Michael Macon
EBMUD: I-Pei Hsiu
WAPA: Mike Prowatzke
Cramer Fish Sciences: Avery Scherer
HDR: Jeff Weaver
CBEC: Chris Hammersmark
CSUS: DeDe Birch
City of Sacramento: Anne Sanger
Kearns & West: Terra Alpaugh

2) Presentation on the 2017 Flow Management Standard (Jeff Weaver, HDR)

Basic Elements of the 2017 FMS

- (a) Minimum Release Requirements (MRR) Indices
- (b) MRR
- (c) Redd Dewatering Protective Adjustments (RDPA)
- (d) Spring Pulse Flow
- (e) Planning Minimum and Temperature Management

3) Fisheries Update

a. CDFW

Approximately 465,000 adipose-clipped broodyear 2019 steelhead (SH) released from Nimbus Hatchery at Sunrise Boat Launch February 19-21.

Nimbus Hatchery SH egg collection number: 544,000 kept eggs. Last three years have been 79-89% survival rate from eyed to ponded.



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793 adult SH have been trapped at Nimbus Hatchery. They are on track to achieve their release goals.

b. CFS

Conducted two spawning surveys in March: spawning is still low; saw 5 SH redds at the beginning of March but no SH redds this week.

First stranding survey this week: 4 pools – one at Upper Sunrise with 4,000 fish and a few smaller pools downstream with 20-25 fish per pool. Temperature in pools ranging from 9.7 to 12.4 degrees C; one pool had dissolved oxygen (DO) below 2, but it only had 2 salmon; the others had DO over 6.

CFS had asked USBR about funding to monitor the water quality in those pools twice a week. USBR is checking with acquisitions to see how they can fund those extra monitoring trips.

The pools are varied in size and characteristics: one was a side channel that had been dewatered and was sizeable with considerable complexity; another was relatively small.

The two lamprey redds observed during this week's spawning survey were at the most downstream area surveyed (Watt Avenue). Saw numerous likely lamprey redds throughout the day, but they did not have fish on them.

c. PSMFC [No representatives present; USBR staff read their written update]

Year to date, captured a total of 135,787 length-at-date (LAD) fall-run CH, 170 LAD winter-run CH, 20 natural origin SH button-up fry, and 1 smelt.

Unresolved questions: In the past, there has been genetic testing of fish trapped at the American River Rotary Screw Trap (RST). Has that been used to create a genetics-adjusted length-at-date curve? Or are there plans to create one this year?

4) Operations Forecast

a. SMUD

Good March precipitation: as of March 19, already received almost the total of average March precipitation -- just under 9 inches. However, still at 55 percent of average precipitation for the water year to date.

Combined reservoir storage (Loon Lake, Ice House, and Union Valley) is 58 percent capacity, 90 percent of the historical average. Ice House reservoir is relatively low

(34 percent capacity), because it is only being used for flow requirements while work is being done on Union Valley.

February releases: 372 cubic feet per second (cfs) average flows below Chili Bar; total 21,422 acre feet (AF) released. March 1-17 releases are higher: 511 cfs average flows below Chili



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Bar; total 17,215 AF released. On March 17, Chili Bar was releasing an average of 1,197 cfs.

Runoff into the storage reservoir basins is 67% of median to date through March 17.
Snowpack 29% of average.

Runoff forecast is holding steady with a spike anticipated due to a storm early next week.

b. PCWA

French Meadows Storage: 64 TAF (47% capacity, 90% of average); 50 cfs inflows to Middle Fork.

Hell Hole Storage: 91 TAF (44% capacity); steady inflows of ~50 cfs from Five Lakes and Rubicon. Hell Hole is at 77% of average due to work being done.

Combined storage for both reservoirs: 155 TAF (45% capacity, 83% of average)

Power production is limited.

Sizeable snowfall occurred recently, totaling 30-35 TAF of additional snowpack. Gained 16 inches over 3 days at the Dolly Creek snow pillow.

Total precipitation 32 inches (53% of average); 9.7 inches in March (87% of average). Next week's storm forecasted to be weaker than the last one; anticipated to be a two part storm—part one to drop one inch within the project area through Monday night and a colder part two to bring 0.75 to 1 inch between Tuesday and Thursday.

c. Central Valley Operations

February was the driest February on record. Last week's precipitation event has resulted in an increase of 32 TAF storage in Folsom Reservoir (Folsom) thus far from increased runoff. Expecting a better forecast in April due to increases in snowpack and storage.

ARG had two conference calls in the last month about whether to cut releases out of Folsom to conserve the cold water pool for the summer. The group agreed it was prudent to cut from 1,750 cfs to 1,500 cfs. Current releases are steady at 1,500 cfs because of uncertainty about the standards governing in April; did not want to drop lower (which could impact reds) and then have to increase releases again in April to meet outflow standards for the Delta. Will reevaluate in April when there is more information on the governing standards and updated hydrology and storage.

5) Central Valley Operations

a. Temperature Management and flows

Will soon begin active cold water pool management but cannot put in upper shutters until there is storage of at least 600 TAF. Shuttters will improve ability to meet temperature objectives.



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It is questionable whether storage will reach 600 TAF. USBR has not discussed de-ganging the upper shutters to allow them to be put in at a lower storage volume; there would be concerns about damage to the shutters, but USBR may need to consider it depending on the April forecast. If they have that conversation, USBR will reach out to the Water Forum to assist with modeling needed to assess the cost/benefit ratio of de-ganging.

Folsom releases at 1,500 cfs. Storage: 454 TAF (80% of average). Still 110 TAF until the flood control rule mandates releases so there is plenty of room for additional storage before flood management releases would need to be made.

Accumulated precipitation at Blue Canyon 29.23 inches to date, up from 2 inches last month.

The river is very cool. 52 degrees F at the beginning of the month. Temperatures are very responsive to ambient conditions.

In February, Folsom was isothermal with a gradient of only 4 degrees between the bottom and top of the reservoir. Now beginning to stratify, with a 9 to 10 degree F difference. This stratification will continue over the next two months until the reservoir is fully stratified. Therefore, the sooner the upper shutters can be installed the better to maintain the cooler temperatures.

Almost all the reservoir (425 TAF) is less than 58 degrees F. Temperature at the sill is 49.2 degrees F.

b. **Exceedance Forecasts:** Draft March Outlook (based on inflow to the reservoir as of March 1)

Today's outlook will include the forecasted MRRs based on the new FMS.

90 percent runoff exceedance outlook: entered March with storage of 447 TAF; forecasted to end March with 445 TAF, so actual inflows may exceed the forecast. April's forecasted storage is 485 TAF, which would be the highpoint for the year, and May is 467 TAF.

485 TAF is about half the reservoir capacity; hope that next month's forecast will project storage closer to 600 TAF given improved snowpack.

March, April, and May MRRs are 964 cfs, which would be very low and would impact many redds, though releases at that level would save significant cold water pool. MRRs decrease in June (887 cfs) because there are no longer concerns about eggs/alevins in redds. Anticipate that next month's forecast will have slightly higher MRRs.

Second half of the Winter-run Chinook salmon hatchery production may be released from Livingston Stone National Fish Hatchery next week, and it usually takes them about two weeks to move from the release point in Redding down to the Delta. Unless there are extremely dry conditions, USBR is likely to hold American River flows at 1,500 cfs through the first week of April, especially since it takes DWR time to assess the hydrology and calculate Chipps days.



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50 percent runoff exceedance outlook: storage peaks at 535 TAF in May, a month later than the 90 percent forecast and above the 500 TAF threshold. The MRRs are the same as in the 90 percent forecast and releases are slightly higher overall, with a higher peak in July that represents increased exports.

6) Discussion

a. Flow Reduction

No proposal now. Discuss with the fish agencies after Reclamation has completed the April forecast.

b. COVID-19

ARG meeting will be held via webinar next month as well. Need to prioritize the health of the contractors in the field; recognize that field surveys and other information could be impacted, which could result in a lack of some of the information usually available for operational decisions.

7) **Next Meeting:** Thursday, April 16, 2020 from 1:30 PM – 3:30 PM