



— BUREAU OF —
RECLAMATION

American River Group

1:30 PM – 3:30 PM

Conference Line: +1 (321) 209-6143; Access Code: 780 506 355#

Webinar: [Join Microsoft Teams Meeting](#)

Thursday, February 17, 2022

Notes

1. Action Items
 - a. KW – Share thiamine presentation and power point slides to ARG, SaMT, and SWT
 - b. All – Contact Crystal Rigby if any fish displaying possible thiamine deficiency are observed in traps
2. Introductions:
 - a. USBR: Ian Smith, Thuy Washburn, Liz Kiteck, Drew Loney, John Hannon, Spencer Marshall
 - b. NMFS: Barb Byrne, Katrina Poremba, Kristin Begun
 - c. USFWS: Paul Cadrett
 - d. CDFW: Crystal Rigby, Tracy Grimes, Jason Julienne, Duane Linander, Emily Fisher, Chris McKibbin, Paul Hoover, Gabe Singer, Greg Ferguson, Mike Healey
 - e. SWRCB: Lauren Beaudin, Michael Macon, Matt Holland, Chris Carr
 - f. PCWA: Ben Barker
 - g. EBMUD: I-Pei Hsiu, Max Fefer
 - h. SMUD: Ansel Lundberg
 - i. City of Folsom: Marcus Yasutake

- j. City of Sacramento: Brian Sanders
 - k. San Juan Water District: Paul Helliker, Greg Zlotnick
 - l. Westlands: Tom Boardman
 - m. City of Roseville: Sean Bigley
 - n. DWR: Mike Ford
 - o. WAPA: Mike Prowatzke
 - p. FishBio:
 - q. Water Forum: Ashlee Casey, Jessica Law, Erica Bishop, Chris Hammersmark, Clyde MacDonald
 - r. CFS: Kirsten Sellheim
 - s. PSMFC: Logan Day, Austin Galinat
 - t. Shingle Springs Miwok Band: Krystal Moreno
 - u. Kearns & West: Rafael Silberblatt, Mia Schiappi, Karis Johnston
 - v. CSUS: Dede Birch
 - w. Other: Rod Hall, Deborah Wardy (DOE), Jeni Buckman
3. Housekeeping & Announcements
- a. The final ARG Summary of Activities for Water Year 2021 should be distributed next week.
4. Presentation
- a. Rachel Johnson (SWFSC) and Amanda Cranford (NMFS) delivered a presentation regarding thiamine deficiency in Central Valley salmon. The presentation focused on testing, identifying the cause, assessing the impacts, freshwater microbial thiamine, developing treatments, and citizen science.
 - b. Researchers hypothesize that the thiamine deficiency seen in returning adult salmon that fed off the coast of central California in 2018 and 2019 was due to salmon disproportionately feeding on a booming anchovy population (anchovies produce an enzyme called thiaminase that breaks down thiamine).
- Questions/Comments:
 - Gut content analyses used to determine prey distribution are showing a lot of anchovies. A colony of Año Nuevo sea birds are also used to assess prey distribution (because they feed on a similar diet to salmon).

- There is not an official person or agency that collects thiamine data, however, as a lead for the Central Valley research permitting Amanda Cranford (NFMS) could be a point of contact when thiamine deficient fish are observed.
- There is no specific reason that researchers have found that explains why 2019 was such a large anchovy year.
- There is still a lot of speculation about what causes run-specific thiamine deficiency. Oxidative stress is a new theory that has potential to explain the variation in thiamine deficiency amongst different stocks.
- The type of thiamine effects observed in 2020 haven't been seen at the Nimbus Hatchery since treatment was started.

5. Fisheries Update

- a. CDFW reported that at the Nimbus Hatchery next week will be the last week of steelhead spawning. When spawning is complete the fish ladder will be shut down. Lot 1 eggs have been moved into indoor rearing tanks and the rest are still in incubation stacks. Chinook salmon have been moved into indoor rearing and will be ponded next month.
 - b. Steelhead redds are actively being observed. Survey crews have observed that the side channels at Sunrise and lower Riverbend are nearly disconnected and will likely be disconnected as flows decrease.
 - c. Both rotary screw traps are operating. Over the past week there has been an average of 700-800 fall-run juvenile Chinook Salmon per day with a peak on 2/16 of 2,248. All length-at-date fall run that are being caught are fry stage Chinook and average 36-37 mm long.
 - d. The first trap efficiency trial began on 2/15 and resulted in a trap efficiency estimate of approximately 10%.
- Question/Comments:
 - The steelhead generally move downstream when they are released, however, a few have been observed in the ladder (upstream of the release point) and it is possible that more will be observed when the ladder is shut down.
 - The only fish that have been observed in the rotary screw traps showing unusual swimming behaviors that may be associated with thiamine deficiency were observed in 2020. CDFW would like to be informed if unusual swimming behaviors that may be associated with thiamine deficiency are observed.

6. Operations Forecast

- a. SMUD provided an update on its operations. See handout for details.
 - i. SMUD is operating at an “above normal” scenario which is based on impaired flows from the Bulletin 120 forecast. They are releasing

more water for recreation and other flow requirements. They are above average in storage with the reservoirs at 70% storage.

- b. PCWA provided an update on its operations. See handout for details.
 - i. There has been an increase in storage of 7,000-acre feet. PCWA is currently in conservation mode and have been holding off on generation.
 - ii. There has been a loss of 22% of snowpack with a runoff efficiency of 62%. This may be indicative of how snowpack translates to storage. The sensors in the Tahoe-Truckee-Carson basin areas are showing 55-60% soil saturation, which is average but higher than last year.
 - iii. In their FERC license, the May forecast dictates project and recreation flow requirements for June through October 31. The current changes in flow may not accurately reflect what they will look like the rest of the year.
- Questions/Comments:
 - The “above normal” year is a function of the FERC licenses for the upper American River Project. There is a range within FERC licenses based on the 50% or median forecast for run-off that determine the operation criteria.

7. Central Valley Operations

- a. USBR provided an update on its operations. See handout for details.
- b. USBR is close to allowable storage and anticipate gaining storage due to the snowmelt.
- c. At Folsom Dam, as of today all shutters are down on Unit 1, no shutters are down on Unit 2, and the bottom shutter is down on Unit 3. both the bottom and middle shutters of units 1 and 2 are down. The next phase is to lower the bottom and middle shutters on Unit 2, and the middle shutter on Unit 3. Once reservoir elevation is high enough, Reclamation will then lower the top shutters of units 2 and 3, possibly leaving them partially deganged to put the bottom two panels down and leave the top panels out.
- d. Relative to the February 1 forecast, the February 8 forecast shows that projected Folsom inflows have decreased by 150,000 acre feet.
- e. The Operations 90% Outlook for American River releases is likely not accurate unless there is precipitation. While it is currently showing there will be releases for flood control, this may not be necessary due to the lack of precipitation and the absorbance of snowmelt into the soil.
- f. The Minimum Release Requirement (MRR) for February is 1,750 cfs. Releases are currently at 2,000 cfs and operators are looking for opportunities to drop

to the minimum - but that likely will not occur unless it rains (when runoff may relieve the need to release from Folsom to help meet Delta outflow).

- Questions/Comments

- Oroville's contribution will likely determine April and May outflows.
8. The next meeting is on Thursday, March 17, 1:30-3:30pm.