BUREAU OF RECLAMATION

American River Group Notes

Conference Line: +1 (321) 209-6143; Access Code: 985 598 947#
Webinar: Join Microsoft Teams Meeting
Thursday, February 20, 2025

Action Items

Kearns & West

1. Redistribute the meeting handout with any revised materials received.

All

1. Provide comments on the ARG Annual Report as soon as possible to Spencer Marshall, USBR.
2. Review the October ad-hoc meeting summary and provide any further edits related to comments attributed to your organization.

Introductions

1. USBR: Carolyn Bragg, Drew Loney, John Hannon, Liz Kiteck, Mechele Pacheco, Myrna Girald Perez, Peggy Manza, Randi Field, Ryan Lucas, Spencer Marshall, Thomas Patton, Zarela Guerrero, Bogdan Maghiar-Garabet, Todd Plain
2. NMFS: Barb Byrne, Karlee Liddy, Rachael Alcala, Robert Sheffer, Sam Pyros
3. USFWS: Craig Anderson, Gabriela Dunn, Paul Cadrett
4. CDFW: Andrew Gaan, Crystal Rigby, Duane Linander, Emily Fisher, Erica Meyers, Gary Novak, Jason Julienne, Jennifer O'Brien, Nick Bauer, Travis Apgar
5. DWR: John Ford
6. SWRCB: Claudia Bucheli, Natalie Niepagen
7. California State Parks: N/A
8. EBMUD: I-Pei Hsiu, Max Fefer
9. City of Sacramento: Ryan Palmer, Anne Sanger
10. Sacramento County: N/A

11. Environmental Council of Sacramento: N/A
12. City of Folsom: Marcus Yasutake
13. City of Roseville: N/A
14. Cramer Fish Sciences: Kirsten Sellheim, Jamie Sweeney
15. PCWA: Ben Barker
16. PSMFC: Hunter Morris
17. SMUD: N/A
18. USACE: Casey Nyquist
19. cbec Eco Engineering: Chris Hammersmark
20. Water Forum: Ashlee Casey, Erica Bishop
21. Water Districts: Greg Zlotnick, Tom Boardman, Deanna Sereno
22. Regional Water Authority (RWA): N/A
23. Shingle Springs Band of Miwok Indians: N/A
24. CSUS: Dede Birch
25. Kleinschmidt Group: Craig Addley, Vanessa Martinez
26. WAPA: N/A
27. BKS Law Firm: Jennifer Buckman
28. Sunzi Consulting: Yung-Hsin Sun
29. Other: Rod Hall, Todd Plain

Announcements

- The power bypass discussion will be postponed to a future meeting due to bandwidth constraints.
- USBR noted that they are continuing to review the new requirements and Biological Opinion (BiOp) and will flag any differences in operations and share them with the ARG.

Housekeeping

- CDFW inquired about revisions to the October ad hoc meeting notes that were discussed during the January meeting.
    - Kearns & West reiterated that there was an action item for participants to review comments ascribed to them and provide any further edits, but no additional feedback was received following the January meeting.

Fisheries Update

CDFW Updates

1. Carcass Surveys
    a. Lower American River (LAR) carcass surveys concluded on 1/23/2025.
    b. A season total of 16,765 carcasses were processed. Of the carcasses processed in WY 2025:
        i. 49% were found in the range between Nimbus Basin and Sunrise Blvd.
        ii. 22% were found between Sunrise Blvd and El Manto Dr.
        iii. 17% were found between El Manto Dr and River Bend Park.
        iv. 7% were found in the Nimbus Basin.
        v. 5% were found between River Bend Park and Watt Ave.
2. Chinook spawning
    a. A season total of 1,620 females were assessed for spawn status.
        i. 82% of those were classified as Spawned
        ii. 12% were classified as Unspawned
        iii. 6% were classified as Partially Spawned
    b. While CDFW is currently working on analyzing the season's data, they provided a preliminary escapement estimate for the LAR of 43,186 fall-run Chinook salmon.
3. Redd surveys
    a. N/A
4. Nimbus Hatchery Operations Update
    a. Nimbus Hatchery recently released 470,000 steelhead yearlings at Sunrise Boat Launch between 2/10 – 2/13/2025.
    b. CDFW plans to release their parentage-based-tagging Chinook salmon fry later in February. Updates will be provided at the March meeting.
    c. CDFW is still in the process of observing steelhead, although the week of 2/24/2025 will be the last week of observation.
    d. CDFW has collected nearly 1.25 million eggs as of 2/20/2025.
    e. CDFW noted that they do not take an exact count of fertilized eggs because eggs in this stage are very susceptible to handling-related stress.

They wait until eggs have reached the eyed stage to perform a more accurate count.

f. The rest of the spawns are based off a historical average of 6,700 eggs per female.

Questions/Comments

1. N/A

Cramer Fish Sciences Updates

1. LAR Spawning Surveys
    a. A total of 38 salmonid redds have been observed, including:
        i. 26 steelhead redds observed as of 2/3/2025;
        ii. 10 Chinook redds observed during the first survey in early January;
        iii. 2 unknown redds which were unable to be measured due to angler activity.
    b. An additional spawning survey was conducted the week of 2/17/2025, yielding 2 steelhead redds in the new Riverbend site.
    c. The majority of steelhead redds have been found in Nimbus Basin (54%) and approximately 12% have been in the newly restored Riverbend side channel.
    d. Cramer completed a stranding survey on 2/10/2025, following the reduction in river flows.
        i. Only one pool was found (six Chinook salmon fry carcasses were found at Sailor Bar Island below the boat ramp despite the good water quality of the pool).
2. Dissolved Oxygen (DO) Update
    a. The most recent DO data download was performed on 2/12/2025.
    b. DO is at levels considered healthy for salmonids at this time.

Questions/Comments

1. N/A

PSMFC Updates

1. Rotary Screw Traps (RSTs) are currently online and expected to be continuously operated 7 days per week.
2. No sampling occurred on 2/1, 2/2, 2/4, 2/5, 2/7, or 2/9-2/16/2025 due to heavy debris from flow changes and insufficient river velocity.

    a. The recent flow increase to 7,250 cfs has improved conditions for sampling.

3. As of 2/18/2025, a total of 18,425 fall-run, 17 winter-run, 2 spring-run, and length-at-date (LAD) Chinook salmon have been sampled.
4. As of 2/18/2025, a total of 2 fry (measuring approximately 28 mm) and 1 smolt O. mykiss have been sampled.
5. The highest number of Chinook salmon catch occurred on 2/6/2025.
6. Overall, fish size looks to be gradually increasing, but PSMFC is still seeing some yolk sack fry.

Questions/Comments

1. N/A

Operations Forecast

SMUD

The following updates were taken from the handout materials; no update was provided at the February meeting.

1. February 2025 precipitation totals 15.61 inches through 2/18/2025. Total average February precipitation is 9.29 inches.
2. Precipitation totals for WY 2025 are 33.24 inches, or 95.1% of average to date.
3. Total reservoir storage is nearly 75.4% full at approximately 286 TAF.
4. Snowpack is 64.5% of average at selected snow sensors.
5. Runoff into the storage reservoir basins is 148.7% of median as of 2/18/2025.
6. Chili Bar daily average releases are forecasted at the following flow rates:
    a. February: 2,681 cfs
    b. March: 2,169 cfs
    c. April: 2,512 cfs

Questions/Comments

1. N/A

PCWA

1. No updates were provided by PCWA for February.

Questions/Comments

1. N/A

Central Valley Operations

USBR

1. Precipitation for January totaled 1.1 inches.
2. February precipitation has totaled 16.4 inches as of 2/17/2025.
3. Current Water Year 2025 precipitation totals approximately 42.9 inches as of 2/18/2025.
4. Folsom Reservoir releases were recently increased to 7,200 cfs for flood management purposes.
5. Folsom storage levels are approximately 683 TAF as of 2/19/2025.
6. Accumulated inflow at Folsom for WY 2025 to date is 808 TAF, or 89% of the 15-year average.
7. Accumulated precipitation for the American River at Blue Canyon as of 2/17/2025 is 48.7 inches, or 121% of the 15-year average.
8. Three atmospheric river events have occurred from the end of January to approximately mid-February.
9. Mid-to-late February generally marks the coolest period for water temperatures on the American River, with downstream temperatures running below 50°F.
10. An isothermobath plot of Lake Folsom shows that the elevation of cold water has increased.
11. Folsom Dam storage levels are approximately 29% encroached, leading to the aforementioned increase in reservoir releases.
12. The controlling Minimum Release Requirement (MRR) for February is 1,400 cfs. The index-based (ARI index) is 1,118 cfs. However, USBR anticipates that the actual average monthly release at Nimbus Dam will be much higher as a result of having to make storage management releases.
13. At the 50% inflow/runoff exceedance operations forecast, the monthly American River release levels expected to be:
    a. February: 5,000 cfs
    b. March: 6,500 cfs
    c. April: 6,500 cfs
14. At the 90% inflow/runoff exceedance operations forecast, the monthly American River release levels are anticipated to be:
    a. February: 5,000 cfs
    b. March: 2,500 cfs

c. April: 2,000 cfs

Questions/Comments

1. PSMFC asked how long flood control releases will be in effect.
    a. USBR responded that flood releases may last through the end of February; however, USBR will check conditions the week of 2/24/2025 to see if adjustments are needed and if decreases can be made in early March. Conditions on the long, extended forecast are dry.

Presentation: Central Valley Project (CVP) Water Temperature Modeling Platform (WTMP)

1. Highlights from Sunzi Consulting and USBR's presentation on the WTMP are included below. Additional details can be found in the presentation slides shared with the ARG.
    a. The WTMP project process began in 2020 and has gone through several stages of development up to the current implementation stage in early 2025. Rollout of the WTMP is planned for November 2025, with adoption in December 2025 and full application in 2026.
    b. Detailed information about the project can be found on the project website: https://www.usbr.gov/mp/bdo/cvp-wtmp.html
    c. Facilitated Adoption
        i. USBR plans to adopt the WTMP as the standard set of tools for supporting CVP temperature management.
        ii. The platform houses various temperature models, a central database with procedurals for data processing, user interfaces, and utilities to support different levels of users.
        iii. Due to the heavy lift of developing the platform, the functions do not include full buildout of multiple fishery applications or biological modeling.
        iv. Facilitated Adoption will be a process of onboarding. During the adoption phase, the WTMP will not be used for decision-making purposes by USBR for water temperature management.
        v. Facilitated Adoption schedule with the ARG and Sacramento River Group (SRG)
            1. Feb – Mar 2025: Process introduction and setting expectations
            2. Apr – Oct 2025: WTMP parallel analysis

3. Nov 2025: Historical reanalysis; rollout event providing access to the WTMP and supporting materials, currently planned for 11/6/2025

vi. Facilitated Adoption is not:

1. A formal review process;

2. A training course.

d. Rationale for adopting the WTMP

i. The legacy tool Iterative Coldwater Pool Management Model (iCPMM) is no longer able to support USBR's needs as it is no longer supported from the model-developer standpoint. USBR believes the WTMP promotes best science practices.

ii. Water temperature management is a key component of groups such as the ARG with the objective of meeting CVP goals, which include the environmental goal of fishery habitat objectives and delivering quality products to support USBR's mission of predicting water temperature to support CVP operations.

iii. The WTMP addresses existing modeling challenges, such as:

1. Disparate data sources

2. Model input development

3. Model and model simulation

4. Post-processing

5. Model documentation

6. Transparency

e. WTMP Unique Features & Scope

i. The project team applied modeling framework and guidance from the California Water and Environmental Modeling Forum (CWEMF) in the development of the WTMP.

ii. The WTMP will provide the environment for customized modeling for unique facilities and functions for team members with different roles

iii. Consistent CVP-wide applications

iv. Adaptive selection of models to meet analysis needs

v. Centralized data management system for efficiency and quality; allows for data to be model-ready, as this is often a time-consuming component of modeling

vi. Versatile automated output functions for efficient reporting

vii. Open development process and tool/data access

viii. Model domain:

1. Shasta-Trinity-Sacramento river system
2. Folsom-American river system
3. New Melones-Stanislaus river system

ix. Project scope: Database, Analytics, Reporting Support

Questions/Comments

1. NMFS asked about roles within the WTMP. Are fish biologists expected to assume a role as model operators and perform other tasks within the WTMP, since they are a category of professionals who frequently deal with temperature model output? Or would a CVP operator run data on a monthly basis to bring to the ARG?
    a. USBR responded that both are options, it mostly depends on the comfort of the individual in using the model. The project team intends to publish training guides and videos to help novice temperature modelers utilize the model.
2. USBR praised the project team for the design and development of the WTMP.

Next Meeting

The next regularly scheduled ARG meeting is on Thursday, March 20. The meeting will be virtual.

The WTMP presenters plan to share a Part 2 information session at the March ARG meeting. Topics to be covered include: model selection, calibration, verification, and uncertainty.