BUREAU OF RECLAMATION

American River Group Notes

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Webinar: Join Microsoft Teams Meeting

Thursday, September 18, 2025

Action Items

Introductions

1. USBR: Kevin Thielen, Randi Field, Ryan Lucas, Spencer Marshall, Mechele Pacheco, Carolyn Bragg, Brian Mahardja, Drew Allan Loney, Peggy Manza, Alexander Vaisvil
2. NMFS: Stephen Maurano
3. USFWS: N/A
4. CDFW: Emily Fisher, Nick Bauer, Travis Apgar, Gary Novak, Jennifer OBrien, Jason Julienne, Andrew Gaan, Crystal Rigby, Erica Meyers
5. DWR: John Ford
6. SWRCB: N/A
7. California State Parks: N/A
8. EBMUD: I-Pei Hsiu, Max Fefer
9. City of Sacramento: Ryan Palmer, Bryan Sanders, Anne Sanger
10. Placer County: Darin Reintjes
11. Sacramento County: N/A
12. Environmental Council of Sacramento: N/A
13. City of Folsom: N/A
14. City of Roseville: Sean Bigley
15. Cramer Fish Sciences: Kirsten Selheim
16. PCWA: Benjamin Barker
17. PSMFC: Hunter Morris, Logan Day

18. SMUD: Megan Peers
19. USACE: N/A
20. cbec Eco Engineering: Chris Hammersmark
21. Watercourse Engineering: N/A
22. Water Forum: Erica Bishop, Ashlee Casey
23. Water Districts: Michael Spencer
24. Regional Water Authority (RWA): N/A
25. Shingle Springs Band of Miwok Indians: N/A
26. CSUS: DeDe Birch
27. Kleinschmidt Group: Vanessa Martinez
28. WAPA: Eric Mork, Roman Delizo
29. BKS Law Firm: Jennifer Buckman
30. Sunzi Consulting: Yung-Hsin Sun
31. Kearns & West: Karis Johnston, Michael Ding, Mia Schiappi
32. Other: N/A

Announcements

1. Coordination amongst Reclamation and fisheries agencies is ongoing to develop an operations strategy to address Dissolved Oxygen at Nimbus Dam.

Housekeeping

N/A

Fisheries Update

CDFW Updates

1. N/A

Cramer Fish Sciences (Cramer) Updates

1. Dissolved Oxygen (DO)
    a. DO at Lake Natoma below Folsom Dam is very low at around 5 mg/L.
        i. Uptick in DO levels may be correlated with hydropower generation

b. Lake Natoma Powerhouse discharge is releasing 2,000 cubic feet per second (cfs). Lake Natoma spill through radial gates is releasing 0 cfs.

c. The loggers at Nimbus Basin have been showing a downward trend of DO, dropping below the 7mg/L stress threshold for salmon since August.

d. The logger at Watt Avenue is showing DO levels that are higher than 7mg/L due to temperature and downstream location.

2. Questions and Comments

    a. CDFW confirmed with Cramer that their cruises conducting surveys to measure DO levels have seen adult Chinook salmon populations. CDFW added that they have not seen any obvious signs of distress among the fish despite DO levels reaching below 7mg/L.

        i. Cramer confirmed that they have not seen any carcasses or behavioral issues.

    b. CDFW asked Reclamation how they plan on addressing low DO levels.

        i. Reclamation has two approaches to address the low DO levels below Nimbus Dam: 1) Adjusting spill via Nimbus 2) High level targeting operations starting October 1 to maintain DO levels above 7mg/liter.

        ii. Reclamation clarified that there are currently no planned operation plans to resolve issues at the hatchery below Nimbus.

Operations Forecast

SMUD

1. The cumulative precipitation is 85% of average.
2. No snowpack as of September 18, 2025.
3. Reservoir storage is at an average for this time of year, saving some water to maintain flexibility in the lower usable range during the overhaul Fall outages.
4. Near average releases for the 2026 water year until we see how the rest of the water year unfolds.

PCWA

1. French Meadows storage is at 87,000 AF of 136,405 AF, 63% capacity.
2. Hell Hole storage is at 117,000 AF of 207,590 AF, 56% capacity.
3. Combined storage is at 60% capacity and 100% of historical average back in the mid 60s.

4. 7-day daily average for MFAR at R11 is 600 cfs.
5. 7-day daily average for NFAR at ARPS is 635 cfs.
6. Not many accretions
7. Over the last 14 days, PCWA released approximately 15,000 AF from storage.
8. Combined storage on September 18, 2025 is 89% of historical average at 182 TAF.
9. The Middle Fork Project (MFP) will be offline for annual maintenance starting October 1, 2025 and returning online October 31, 2025. During the maintenance period, releases will be close to FERC minimum safety for dams.
10. Lake Spaulding precipitation for 2025 is slightly better.
11. Recreational releases will continue until the end of the month.

Central Valley Operations

Current Releases

1. Current releases are below the 15-year median and slightly below water year 2024.
2. Reclamation is targeting 1,700 cfs for September.
3. Reservoir storage is slightly below the recent average of 457 TAF at 96% of the 15-year average.
4. Folsom Daily Operations Since September 1st
    a. All releases have been pushed through power plant turbines.
    b. Inflow fluctuates based on upstream releases, causing power to oscillate as real time controller balance keeping Lake Natoma's water elevation within dam limits and outflow steady at 1,800 cfs.

Storage

- Accumulated inflow is slightly below the average. Folsom is at 85% of 15-year average accumulated inflow.
- Precipitation levels held steady.
- Folsom drawdown has significantly slowed due to unexpected increase in inflow from upstream reservoir releases.

Temperature

- Since the last ARG meeting, Watt Avenue has mostly been between 67 °F and 68 °F degrees. 68 °F is the target for the current automated temperature schedule procedure (ATSP).

        - Temperatures exceeded thresholds on August 25th and 26th due to heatwaves.
- There was an outage in Unit three from September 1 to 2, which has since been resolved.
- Isothermobaths
    - There were software issues which delayed access to the correct profile information, however, contingencies are in place to ensure this does not affect the Power Bypass SDM efforts.
    - An updated profile was available on September 3, showing the same general trend.
    - The surface of the reservoir remains hot.
- Minimum Required Release (MRR)
    - An expanded table showing MRR through December will be circulated.
    - The current MRR calculated for the next three months is approximately 992 cfs.
    - The actual monthly Nimbus release for August was at 2,609 cfs.
- Operational Outlook
    - 50% Exceedance
        - Assumes some early-season rain over the next three months.
        - Projected end-of-year storage: 395 TAF.
        - Releases for October–December: 1,700 CFS.
    - 90% Exceedance
        - Assumes no early-season rain (drier conditions).
        - Projected end-of-year storage: 343 TAF.
        - Releases above MRR, with October–November at 1,250 cfs.

Discussion

Nimbus DO Objective

- Reclamation shared the request for a Lower American River DO action, citing how the downward trend of DO levels has been continuously highlighted since the stratification of the Folsom reservoir.
    - At previous meetings, Cramer Fish Sciences and the Water Forum have posited that it could be a reoccurring seasonal phenomenon or just a characteristic of the system.

- Beginning October 1st, Reclamation and BDO management will use carcass survey results to guide high level targeting.
- Reclamation highlighted scheduled outages at the Nimbus Power Plant, which begins on September 26, 2025.
    - The plan is to route water around turbines and split it between Gates 1 and 18.
    - The overall volume of that bypass will be reduced when the powerplant is back in service after October 2, 2025.
    - Reclamation will develop a plan for intended releases and spill to coordinate with Cramer and the Water Forum on their anticipated field schedule.
- CDFW provided an update on conditions at the hatchery.
    - The hatchery has been dealing with fish health challenges resulting from low DO levels, high water temperatures and pathogen outbreaks.
    - Any DO objectives for water downstream of the Nimbus Dam does not benefit the hatchery.
    - The hatchery has implemented short term treatments and plans on conducting another round of treatments with medicated feed.
- Questions and Comments
    - Reclamation added that the 7mg/L minimum threshold is just a baseline, and they can probably achieve DO levels higher than that.
    - CDFW asked whether an earlier starting date had been considered, given that October 1st may be too late to save holding adult fish already in the system.
        i. Reclamation said the date was identified based on carcass surveys. It was not a hardline date, just a recommendation. Earlier action will be taken if DO levels drop dangerously low.
        ii. Reclamation also clarified that the decision to start on October 1st is to address the primary concern that gravel DO may be 1-3 mg below DO levels in water columns. They also explained that October 1st is already a few weeks earlier than the earliest date of October 12th that had been identified based on carcass surveys.
        iii. CDFW recommended discussing a threshold that would trigger earlier action to protect holding adults.
        iv. CDFW confirmed with Water Forum that the literature review and follow up from Reclamation.

v. Water Forum expressed appreciation to Reclamation for developing a plan and including them in the conversation. Water Forum affirmed commitment to support Reclamation's efforts.

vi. When evaluating DO levels to protect holding fish, CDFW recommended considering compounding effects of high temperature and low DO including low survival of eggs and increased rates of disease.

vii. NMFS mentioned that the holding adult DO issue is widespread and also affects Shasta Dam. They recommended Reclamation to research high head dams.

viii. Reclamation mentioned timeline constraints and requested help to conduct an immediate synthesis of DO levels for holding adult fish. Reclamation asked CDFW to provide studies and expand the conversation with the broader ARG group.

ix. Reclamation mentioned that Central Valley Chinook studies would be most effective in convincing management.

- NMFS asked for more specificity around DO target levels
    i. Reclamation clarified that the target is a daily minimum and not being less than 7mg/L.

Power Bypass Structured Decision Making (SDM) Update

- Reclamation discussed timelines, latest updates, and revisions while presenting on the refined list of fundamental objectives and Temperature Dependent Mortality (TDM) models. Details can be found in the presentation slides shared with the ARG.
- Reclamation highlighted the removal of the Nimbus Hatchery Impact from the SDM's 2025 list of fundamental objectives due to CDFW staffs' time constraints. The team intends to re-incorporate it into next year's SDM framework.
    - They are uncertain about how to reconcile the impacts and suggested discussing low DO thresholds for bypass releases with Reclamation's management team.
- Reclamation shared results from the TDM Models expert solicitation effort and thanked participants for their effort
- Less support will be needed from the ARG, as the SDM is almost finalized. The last step is the initial temperature model run by Kleinschmidt.
- Reclamation reminded participants that Watt Avenue water temperature results would be updated by Monday (9/22) based on Kleinschmidt's estimate. The updated version will also include initial bypass runs.
- Questions and Comments

- Reclamation aims to forward temperature profiles to Kleinschmidt by the end of day, with the caveat that data will be on a handheld device and must be manually entered. Kleinschmidt will run the initial temperature model for bypass alternatives.
- For the upcoming SDM meeting, Reclamation said that they will primarily want to review the no-bypass temperature forecast from the study and identify alternatives to run for Reclamation to consider.
- WAPA, asked what the differences were between environmental mitigation and enhancement and whether the TDM model weights are related to those differences.
    - BDO suggested that the question would be better answered by Reclamation's management team, explaining that it relates to their prioritization framework of the objectives. Prioritization will also depend on the outcomes of the initial temperature model run. BDO added that there may not be a single explanation for the priority order, as cost, fish impact, water delivery, and other factors will be considered.

CVP Water Temperature Modeling Platform (WTMP) Update

1. The CVP WTMP Team presented a September update of the WTMP. They presented the parallel analysis and water temperature at Watt Avenue portions of the effort. Details can be found in the presentation slides shared with the ARG.
2. The CVP WTMP provided information on their upcoming rollout event. General information about the WTMP can be found on their website and presentation sides shared with the ARG.
3. Questions and Comments
    a. WAPA asked if the ResSim model is on a daily timescale and whether it represents the full CVP, just the Sacramento River, or just the American River?
        i. ResSim is run on an hourly timescale and for the American River system. For Sacramento River system, there is a separate ReSim model configured for the Sacramento system, and a W2 model for Shasta. More will be discussed in the upcoming Sacramento River Group (SRG) meeting.
    b. WAPA asked if there are plans to create a system-wide model that doesn't only measure temperature impacts but also reservoir management
        i. Reclamation responded not currently, suggesting that the question fits better within a planning conversation instead of a shorter operations discussion. Reclamation recognized the general direction of WAPA's question and clarified that for meeting specific

temperature targets they rely on specialized models. Reclamation added that the WTMP includes specific tools for each CVP basin.

ii. The CVP WTMP Team followed up with an explanation of the WTMP's objective, which is to have a unified approach and tool for the CVP's temperature management in the Sacramento, American and Stanislaus river systems. Note that the temperature management reach in the Sacramento River system does not cover the entire Sacramento River.

Next Meetings

1. Power Bypass SDM Meeting – September 22, 2025
2. Regular Monthly ARG Meeting – Thursday, October 16, 1:30-3:30