



— BUREAU OF —
RECLAMATION

American River Group Notes

Conference Line: +1 (321) 209-6143; Access Code: 596 336 817#

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Friday, September 11, 2026

Action Items

- K&W to circulate meeting presentations including prior-year's SDM report, Brian's documentation of model fixes, and Reclamation's presentation on temperature modeling profiles, and operational outlook information.
- All to reach out to Brian and K&W if interested in participating in the temperature-dependent mortality model expert elicitation.
- All to review last year's alternatives and come prepared to discuss potential 2026 alternatives and start dates at the September 17 ARG meeting.
- All to coordinate internally to confirm organizational interest in participating in objective weighting exercise.

Introductions

1. BKS Law Firm: N/A
2. California Department of Parks and Recreation: N/A
3. Carmichael Water District (CWD): N/A
4. CBEC Engineering: N/A
5. CDFW: N/A
6. City of Folsom: N/A
7. City of Roseville: N/A
8. City of Sacramento: N/A
9. Cramer Fish Sciences: N/A
10. CSUS: N/A
11. CVP SOD Ag Districts: N/A

12. DWR: N/A
13. EBMUD: I-Pei Hsiu
14. Environmental Council of Sacramento: N/A
15. Kleinschmidt: Vanessa Martinez
16. NMFS: Carrie Skorcz, Paula Higginson, Sam Pyros
17. PCWA: Benjamin Baker
18. PSMFC: Hunter Morris
19. Sacramento Regional Water Authority: N/A
20. Shingle Springs Band of Miwok Indians: N/A
21. SJWD: Michael Spencer
22. SMUD: N/A
23. Stantec: Sarah Hamilton, Stephanie Theis
24. Sunzi Consulting: N/A
25. SWRCB: Travis Dennis
26. USACE: N/A
27. USBR: Bogdon Maghiar Garabet, Carolyn Bragg, Drew Loney, John Harrison, Kevin Thielen, Kristen Hiatt, Mandy Migura, Mechele Pacheco, Myrna Giraldo Perez, Tony Yang
28. USFWS: Craig Anderson
29. WAPA: Eric Mork
30. Water Districts: N/A
31. Water Forum: Ashlee Casey, Erica Bishop
32. Watercourse Engineering: Mike Deas
33. Other: Brian Mahardja, Craig Addley
34. Kearns & West: Karis Johnston, Katy Kennedy

Temperature Modeling Updates

Kevin Thielen, Reclamation, provided an update on current Folsom Reservoir conditions and temperature modeling to inform development of potential power bypass alternatives for the 2026 structured decision-making (SDM) process.

- Folsom Reservoir continues to decline, although the rate of decline is slowing as releases are reduced. Current releases are approximately 2,100 cubic feet per second (cfs), with a planned reduction to 1,800 cfs on September 15 and approximately 1,600 cfs in October.
- Current reservoir temperature conditions are generally comparable to recent years and fall in the middle of the historical range. Surface temperatures are cooler than last year, while temperatures at depth are somewhat warmer, resulting in somewhat less cold-water volume than last year.
- The no bypass modeling scenario continues to show that temperatures may begin to decrease in October, but that reaching the November target of 59F will be difficult without additional temperature management actions.
- Reclamation modeled four Automated Temperature Selection Procedure (ATSP) schedules (ATSP 38-41), with October targets ranging from 65 to 68F while maintaining the existing September and November targets.
 - Earlier shutter removal generally results in cooler October temperatures.
 - Using the cold-water pool earlier can result in somewhat warmer temperatures in November.
 - Under ATSP 38, most modeled years require all shutters to be removed in early October, although meteorological conditions can prevent the reservoir from reaching the 65F target during warmer periods.
- Reclamation noted that power bypass is considered the last available option for obtaining cooler downstream temperatures. If shutters can be removed to achieve the desired temperature, Reclamation would remove the shutters before implementing a power bypass.
- Seasonal forecasts indicate a slight likelihood of warmer-than-average temperatures for October through December. Reclamation noted that the warmer forecasts reference meteorologies which may therefore be particularly relevant when developing alternatives.
- Reclamation anticipates approximately 7-8 power bypass alternatives across the four reference meteorologies. The group discussed whether reducing the number of scenarios could allow additional bypass/ATSP combinations to be modeled; however, the proposed number of scenarios was generally considered sufficient based on previous years' work.

Questions/Comments

- Brian asked whether the group should determine the ATSP before developing bypass alternatives.
 - Kevin recommended considering the ATSP and bypass alternatives together because the temperature impacts downstream are not yet known. For

example, maintaining a higher October temperature target could potentially conserve cold water and result in colder November temperatures.

- Craig noted that the group evaluated many scenarios last year and should use those results to inform this year's alternatives. He also noted that the number of scenarios is limited by the size of the available cold-water pool.
- Ashlee noted that the proposed 7-8 bypass scenarios are consistent with the level of analysis conducted in previous years.

Structured Decision-Making (SDM) Process

Brian Mahardja reviewed the remaining steps in the SDM process, including alternatives formulation, modeling and analysis, and development of results for Reclamation's consideration.

- The SDM process includes defining the problem and objectives, developing alternatives, analyzing consequences and tradeoffs, and reaching a decision. The group has an opportunity to identify additional objectives, but the window for incorporating new objectives into the analysis is closing.
- The next step is to define alternatives, including different shutter removal strategies and power bypass timing.
- The group can provide updated weights for the temperature-mortality models used in the SDM. The models vary in their sensitivity to temperature, with the Martin model showing the greatest sensitivity to warming.
- Brian noted that fixes were made to the models following last year's analysis and that the changes were documented in a report.
- Brian noted that the level of effort anticipated to participate in updated weighting for the temperature-dependent mortality models will depend on how deeply participants review the supporting materials. Participants will receive a summary of the models and the underlying reports and will individually provide weights and justification. Brian will compile the responses and distribute anonymized justifications, and reviewers will respond to questions and reconsider their weights if appropriate.
- To conduct a new expert elicitation to update weighting for the temperature-dependent mortality models, there will need to be 5-6 diverse experts participating. All who are interested in participating are encouraged to reach out to Brian and K&W.
- The September 17 ARG meeting will be used to begin discussing and formulating potential alternatives. Participants do not need to have final alternatives prepared

for September 17 but should be prepared to discuss acceptable alternatives and potential start dates.

- A decision on the alternatives will be needed before the start date of any alternative being modeled. Alternatives should be identified in time for modeling to begin the week of September 21, allowing results to be available before the end of September.
- Last year's alternatives will be shared to help inform the discussion.
- Once alternatives are modeled, the resulting outcomes will be evaluated through swing weighting. The previous objective weights were approximately 0.5 for hydropower generation, 0.4 for Chinook, and 0.1 for steelhead. Objective weights represent the relative importance assigned to outcomes and will inform the tradeoff analysis.
- Participants may provide weights if they represent their organization's perspective. Participants should consult with their respective management before submitting organizational weights.

Brian reviewed the Shiny application used during the previous SDM process.

- The application allows users to explore temperature outcomes, compare alternative performance, assign objective weights, and rank alternatives based on those weights.
- The publicly hosted version has not been updated to incorporate recent model fixes, although the GitHub repository remains available for users who can run the application locally.
- The application demonstrates how changing objective weights can affect the relative ranking of alternatives.

Questions/Comments

- Craig asked whether there was a documentation of last year's SDM process and analysis.
 - Brian shared that he believes the report is available on the BDO website and that it can be shared with the group.
- Wes asked suggested temperature-dependent weights could be applied to the models based on specific temperature ranges, rather than applying a single set of weights.
 - Brian noted this was for further consideration as part of the temperature-dependent mortality analysis.
- Stephanie asked whether documentation is available explaining how the previous model weights were developed.
 - Brian confirmed that the weighting process is documented in the report.