BUREAU OF RECLAMATION

Sacramento River Group Summary

April 23, 2026

Participants

- California Department of Fish and Wildlife (CDFW): Travis Agpar, Mallory Boro, Sheena Holley, Matt Johnson, Erica Meyers, Crystal Rigby, Gary Zhao
- California Department of Water Resources (DWR): Ryon Kurth, Kevin Reece
- Friends of the River: Devon Pearse
- MBK Engineers: Lee Bergfeld, Catherine Morales-Sandoval
- National Oceanic and Atmospheric Administration (NOAA): Miles Daniels, Kyra Fitz, James Gilbert, Cyril Michel
- Nor-Cal Guides & Sportsmen's Association (NCGASA): James Stone
- Pacific States Marine Fisheries Commission (PSMFC): Jamie Chelberg, Darin Olsen
- State Water Resources Control Board (SWRCB): Matthew Holland, Jeff Laird, Diane Riddle, Craig Williams
- Sacramento River Settlement Contractors (SRSC): Thaddeus Bettner, Mike Deas
- U.S. Bureau of Reclamation (USBR): Jo Anna Beck, Elissa Buttermore, Randi Field, Ryan Lucas, Mandy Migura, Mechele Pacheco, Tom Patton, Derek Rupert
- U.S. Fish and Wildlife Service (USFWS): Matt Brown, Kaitlin Dunham, Bill Poytress
- Westlands Water District (WWD): Bradley Cavallo
- Western Area Power Administration (WAPA): Erik Mork
- Yurok Tribe: Chris Laskodi
- Kearns & West (K&W): Terra Alpaugh, Mia Schiappi, Anna Rossi

Summary of Actions

Welcome, Agenda Review, and Purpose

Mia Schiappi, Kearns & West, welcomed all participants.

Hydrology Update

Tom Patton, Reclamation, provided the latest forecast and implications for the Sacramento River system, and reported on current hydrologic conditions and dam operations. Patton presented the information contained in the meeting packet shared with the SRG. Sections below correspond to groups of graphs, images, and tables in the meeting packet provided by Reclamation.

Current Storage, Releases, Water Temperatures, and Current Operations: Daily CVP Water Supply as of April 22, 2026.

- Precipitation:
    - The Northern Sierra 8-Station Index is 48.7 inches, which is 103% of the average for this time of year. Different models indicate a chance for storminess through the end of April or first part of May.
    - Snow water content is at 11% of average in the North, 25% of average in Central Sierra, and 30% of average in the South. Current snowpack statewide is at 19% of April 1 and 22% of average to date.
- Reservoir Releases:
    - Trinity is experiencing pulse flow designated under the Trinity Record of Decision (ROD). Releases will increase on April 24, 2026, to 4,300 cfs, which is the peak for the season. This is a dry ROD year class for Trinity.
    - Keswick Dam releases to the Sacramento River are approximately 6,000 cfs. Keswick will increase to maintain diversions and downstream flows into the delta.
    - Reclamation is managing Wilkins Slough at 5,000 cfs through the season.
- CVP Storage and Inflow:
    - Trinity Reservoir storage is 129% of the 15-year average.
    - Shasta Reservoir storage is 112% of the 15-year average.
    - Folsom Reservoir storage is 125% of the 15-year average.
    - New Melones Reservoir storage is 120% of the 15-year average.
    - Accumulated inflow is good. Trinity has 925,000 AF, which is 127% of the 15-year average. Shasta has 3.7 MAF, which is 106% of the average. Folsom's

accumulated inflow is 105% of the average and New Melones is 94% of the average.

- Temperature Management:
    - The Shasta Temperature Control Device (TCD) is showing near-surface water temperature release at 54.8°F. The upper gates were opened marginally on April 16 but remain partially closed to prevent release of cold water this early in the season.
    - Clear Creek is maintaining a daily average of 55°F. Reclamation is working to keep Clear Creek temperatures below 58°F through the beginning of May before transitioning temperature management mid-May.
    - Poor weather on Tuesday April 21, prevented gathering Shasta temperature profile data. Data is being collected today, April 23, and will be distributed to the SRG once Reclamation has completed processing.

Reservoir Profiles and Cold-Water Pool: Graphs on Isothermobaths-2026, Graphs on Cold Water Pool Volume, Percent Exceedances (1998-2023):

- Shasta Reservoir:
    - Shasta's isothermobath plot shows warmer surface temperatures with cooler temperatures moving down.
    - The cold water pool volume for the ≤52°F temperature profile is a bit below average for this time of year and is comparable to wetter and average years.
    - The cold water pool volume for the ≤50°F and ≤48°F are trending toward 2015 and 2022 drought years. This is of high concern as Reclamation relies on cooler deep water pool temperatures to maintain temperatures later in the season.
    - Shasta is near the 75% exceedance mark for this time of year for the cold water pool volume for the ≤52°F temperature profile.
    - The ≤50°F temperature profile is closer to 90%.
    - The ≤48°F temperature profile is below the 95% exceedance. Reclamation is taking this into consideration for discussions about best management for this type of year.
- Trinity Lake:
    - Trinity Lake's isothermobath plot looks good with reservoir near 90% capacity.
    - The cold water pool volume for ≤52°F warmed during March but is still comparable to wetter years. It is around the 50% exceedance mark.

    - The cold water pool volumes for ≤50°F and ≤48°F are both above average. Both are around the 50% exceedance mark.

- Whiskeytown Lake:
    - Whiskeytown Lake warmed at the surface in April. Current temperatures are higher than normal for this time of year. Reclamation is raising Whiskeytown to summertime levels at the end of May and will otherwise continue moving water though Whiskeytown to keep temperatures down.

90% Exceedance Forecast:

- Shasta is at 4 MAF for the end of April 2026. In September, volume is predicted to be 2.2 MAF, which is slightly up from the March 2026 forecast.
- For releases, Sacramento is forecasted with higher flows through summer, peaking in July and August before dropping to minimum releases through the winter. Trinity's end of September storage is forecasted for just under 1.4 MAF. The current 90% exceedance has placeholder estimates for August and September releases. Flows have been updated with the latest schedule of dry ROD flows.
- This forecast will be used for the Draft Temperature Management Plan next week.
- For the Delta Summary, Tracy is pumping 260 TAF in August with minimal pumping in the early part of summer.

50% Exceedance Forecast:

- Under the 50% Exceedance Forecast, conditions are slightly better than the 90% exceedance scenario. The adjusted Shasta inflows make the April 2026 forecasts for 90 and 50 similar.
    - The 50% Exceedance Forecast shows Shasta with slightly better storage than the 90% exceedance. At this time of year, there is minimal variability in forecast or runoff.
- Trinity is trending towards 1.6 MAF of storage by the end of September.
- Flows at Keswick are similar for April, with releases up to 13,500 cfs in July before tapering off to 3,250 cfs at the end of the season.

Monthly Precipitation Outlook:

- This is an April prediction for May, showing an equal chance of above or below average precipitation for most of the U.S. The PNW is trending below average.

Monthly Temperature Outlook:

- Temperature is predicted to be above average for May across most of the U.S.

Seasonal Temperature Outlook:

- The July-September predictions show above average temperatures for Western states.

Questions and Discussion

- SWRCB asked when Reclamation would distribute the updated temperature profiles. They also wanted to confirm that the new profile would be used for the Draft Temperature Management Plan (Draft TMP).
    - Reclamation confirmed that the updated profile should be available to SRG members by the end of the week. Reclamation will distribute the profile to SRG when it is fully processed. The new temperature profile for Shasta will be used in the Draft TMP while Trinity and Whiskeytown profiles from April will be used.
- SWRCB also asked for confirmation that the 90% exceedance forecast is being used for the Draft TMP.
    - Reclamation confirmed the April 90% exceedance forecast is being used.
- The Yurok Tribe asked if the diversion schedule included the Spring Creek having only one operational unit.
    - Reclamation replied yes and explained that the one active unit at Spring Creek is maxed out in May through September. The second unit at Spring Creek is not expected to come back online until January 2027.

Plans for the Draft Temperature Management Plan

Tom Patton, Reclamation, provided an update on the Draft TMP. Because of poor weather, the most recent Shasta profile is currently being captured today rather than Tuesday. The delay in finalizing the April forecast will delay the Draft TMP by a week. The April 90% exceedance forecast will be used as the basis of the Draft TMP. Like previous years, Reclamation will work to schedule a meeting for the SRG to discuss the Draft TMP when it is completed.

Questions and Discussion

- SWRCB asked when the Draft TMP discussion meeting would take place.
    - Reclamation shared they are aiming to distribute the Draft TMP by Wednesday, April 29, and have a meeting scheduled for that Thursday or Friday. Reclamation does not anticipate the updated Shasta profile to be significantly different than last month's profile.

Flow Planning Updates

Tom Patton, Reclamation, shared that the delayed forecast prevented discussion Tuesday regarding additional pulse flows. The group instead focused on the preliminary results from the first pulse in early April. While it is difficult to assess the baseline and therefore predict pulse cost, it is estimated that the pulse cost 50 TAF, about 15 TAF more than the

original prediction. The group is meeting next Tuesday, April 28, to discuss potential future pulses, including one within the next two weeks.

Elissa Buttermore, Reclamation, added that the group reviewed the outmigration survival of acoustically tagged juvenile salmon. Survival is low for release groups. Overall, survival was better for pulse groups (0.5%) versus pre-pulse groups (0.4%). The Shiny application on SacPAS that predicts juvenile outmigration survival has been updated.

The group did not discuss wild O. mykiss benefits. USFWS tagged about 4 O. mykiss, releasing them before the pulse, but they have remained close to the release point.

Elissa shared the 2026 Sacramento River Spring Pulse Flow Scenario Evaluation and the CalFishTrack for SRG's reference.

Questions and Discussion

- Kearns & West asked for confirmation that there would be temperature modeling ready for Tuesday April, 28 pulse flow discussion.
    - Reclamation said it was possible, but the group may have to move forward with pulse decisions without the temperature modeling. The updated forecast and observed conditions can support decision-making.

Sacramento River Fish Monitoring Update

Jamie Chelberg, Pacific States, provided an update on Sacramento River fish monitoring. The carcass surveys are concluding and so far, include 215 late Fall-run and 10 Winter-run. All the Winter-run carcasses are from pre-spawn mortality from otters. Fall redds have moved into their first Winter-run survey this week.

The total salmon rescue count for the year is about 9,100, including 50 Winter-run, 10 Spring-run, and 9,000 juvenile Chinook. There was a small rescue after the pulse flow.

USFWS Fish Conditions, Forecasts and Hatchery Updates

Brett Galyean, USFWS, provided an update on Coleman Fish Hatchery via email.

- Coleman is planning to conduct releases later this year, in November or December.

Kaitlin Dunham, USFWS, provided an update on the Livingston Stone Hatchery.

- Trapping is going well. There are three months left for Livingston to meet its quota, but the hatchery continues to meet its goals every week.
- Livingston has 55 female Winter-run and 76 Winter-run males on station at Keswick. There are 4 female Spring-run and 3 male Spring-run from the Keswick trap. The goal is to obtain 75 spawning females from Keswick.

Bill Poytress, USFWS, shared an update on juvenile fish at Red Bluff.

- This is a quiet period on the percent of fish passing.

- Winter-run are at about 100% cumulative passage. Spring-run are around 86% cumulative passage. Fall-run are around 78% for cumulative passage. The late Fall run just started and are at about 12% passage.

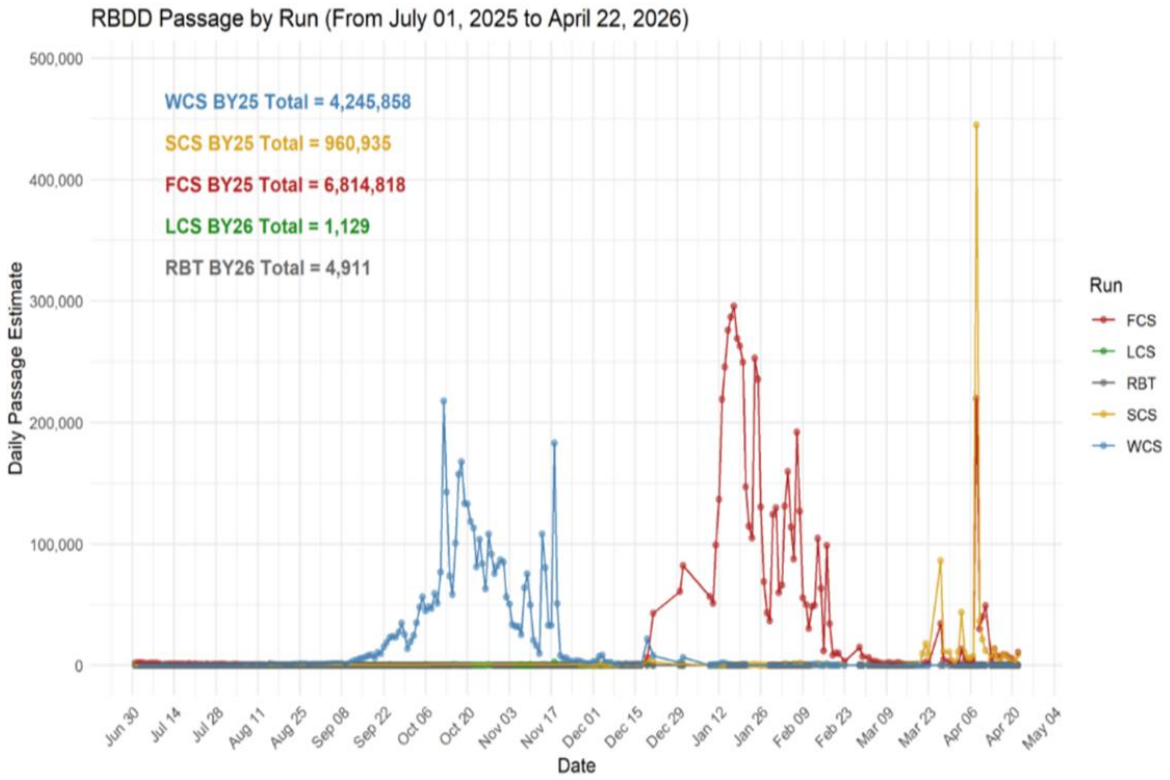

Figure 1. RBDD Passage by Run (From July 01, 2025, to April 22, 2026).

Figure 1 depicts daily fish passage estimates at Red Bluff Diversion Dam (RBDD) by salmon run from July 1, 2025, through April 22, 2026. Winter-run Chinook passage peaks in the early fall (September–October), followed by a pronounced fall-run peak in winter (December–January). Spring-run passage appears later, with a sharp spike in April. Late fall-run and rainbow trout passage remain comparatively low throughout the period. Total seasonal passage is highest for fall-run Chinook, followed by winter-run, with much smaller totals for the remaining runs.

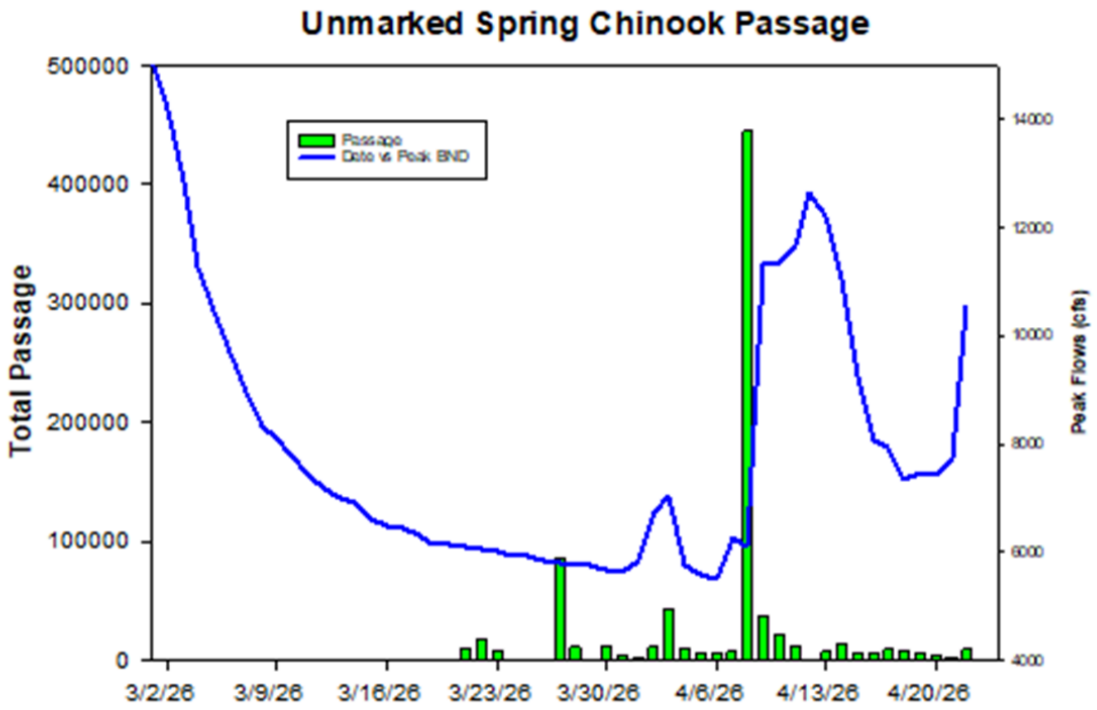

Figure 2. Unmarked Spring Chinook Passage.

Figure 2 shows the relationship between river flow and the passage of unmarked spring Chinook salmon (length-at-date) over time (March–April 2026). The blue line represents daily peak river flow (in cubic feet per second), while the green bars show the number of unmarked Chinook passing the monitoring point each day. Flows start high in early March, then steadily decline before rising again in early April. Fish passage remains low through most of March and early April, with a sharp spike in early April that coincides with a rapid increase in river flow.

WTMP Model

Mechele Pacheco, Reclamation, Ryan Lucas, Reclamation, and Yung-Hsin Sun, Sunzi Consulting, shared a final presentation on the WTMP Model progress. The WTMP rollout happened in February with great participation, including multi-agency modeling specialists.

The Facilitated Adoption Process involved the adoption of water temperature modeling platform to support temperature management. The package with the platform includes a variety of temperature models and a centralized database, user interface, and an ability to support various levels of users. The package does not have fisheries biological modeling in response to temperature management. The adoption is an onboarding process. As the platform is deployed in WY26, there will be opportunities for operations groups, SRG, and ARG to concur with the determination and support for modeling transition. The Adoption Process is not a review process. Prior engagement and peer review were used during the review process. It is also not training. Training was conducted after the initial rollout and

there are support materials available to users adopting to process. This process involved monthly engagement from the ARG and SRG, with 2 introductory sessions and 8 sessions of parallel analysis with legacy models.

The historical reanalysis compared the WTMP simulated water temperature to the observed water temperature and assessed if calibration was needed. The setup utilized the 5/20/25 profile and storage for initial condition, observed meteorological data, and observed releases.

The ResSim model performed very well in tracking the progression of temperature through the season. While there were slight differences early in the season, this is attributed to the first gate change of the season. Later in the season in mid-September, the model drops the temperature below observed temperatures before re-aligning with observed temperatures.

The Shasta profile showed the model predicting the right outflow temperatures and doing so for the right reasons. The profile for the Sacramento River above Clear Creek showed good outflow. The Shasta outflow was correct and had warming moving downstream that aligned with observed temperatures. The W2-ResSim performed slightly better than the ResSim model on outflow modeling and downstream modeling and better on profile modeling. The results do not indicate a need for model recalibration.

The WTMP is moving forward with application in WY26 management season, with continued development and refinement. Questions about WTMP progress can be directed at Ryan Lucas, Reclamation. If people have feedback, they can submit it via this survey.

Additional Announcement & Review Action Items

Tom Patton, Reclamation, shared that Matt Brown is retiring from USFWS and thanked him for his participation on the SRG.

The next SRG meeting is scheduled for Thursday, May 28, from 1:00-3:00 pm PT.

Adjourn