



State Water Resources Control Board

July 3, 2025

Levi Johnson
Central Valley Project Operations Manager
U.S. Bureau of Reclamation
lejohnson@usbr.gov

ORDER 90-5 SACRAMENTO RIVER TEMPERATURE MANAGEMENT PLAN

Dear Mr. Johnson:

This letter is in response to the U.S. Bureau of Reclamation's (Reclamation) Final Sacramento River Temperature Management Plan (TMP) submitted on June 24, 2025, pursuant to State Water Resources Control Board (State Water Board or Board) Water Right Order 90-5 (Order 90-5). The TMP is conditionally approved, as described below.

Background

Order 90-5 included conditions in the water right permits and licenses for Keswick Dam, Shasta Dam, and the Spring Creek Power Plant that obligate Reclamation to meet temperature requirements on the Sacramento River for the protection of Sacramento River fish species, including winter-run and fall-run Chinook salmon. Specifically, Order 90-5 requires Reclamation to operate to achieve an average daily water temperature of 56 degrees Fahrenheit (F) on the Sacramento River at Red Bluff Diversion Dam (RBDD), located 60 miles downstream of Keswick Dam, to protect aquatic habitat conditions for spawning, rearing, and migration needs of salmon and other native fish populations during periods when higher temperatures would adversely affect the fishery. If there are factors beyond Reclamation's reasonable control that prevent Reclamation from meeting 56 degrees F at RBDD, Reclamation is required to identify an alternative compliance location and prepare an associated TMP for consideration by the State Water Board.

E. JOAQUIN ESQUIVEL, CHAIR | ERIC OPPENHEIMER, EXECUTIVE DIRECTOR

Final TMP

Reclamation submitted its Final TMP to the State Water Board on June 24, 2025.¹ The Final TMP includes a forecasted operation for the irrigation season with Keswick Reservoir releases of 13,700 cubic-feet per second (cfs) in July, 13,500 cfs in August, and 8,000 cfs in September (TMP Table 2). The Final TMP relies on the May forecast and proposes to manage water temperatures to meet 53.5 degrees F at Clear Creek (CCR), which translates to meeting 56.0 degrees F under Order 90-5 at Ball's Ferry (BSF).

Reclamation provided modeling of temperature dependent mortality with a temperature target of 53.5 degrees F at CCR indicating stage-independent TDM levels of 0.6 percent (TMP Attachment 6). Additionally, modeling prepared by the National Marine Fisheries Service's (NMFS) Southwest Fisheries Science Center indicated stage-independent TDM levels of 6 percent at CCR (NMFS Modeling; TMP Attachment 7). In addition to the above, the final TMP includes measures to manage reductions in Keswick releases to reduce winter-run Chinook salmon redd dewatering and reduce the risk to fall-run Chinook salmon later in the year. With these provisions, the Final TMP was supported by the fisheries agencies (including NMFS, the U.S. Fish and Wildlife Service, and the Department of Fish and Wildlife).

Conditional Approval of the TMP

As discussed above, Reclamation's Final TMP indicates that its strategy of meeting 53.5 degrees F at CCR will likely result in average daily temperatures at or near 56 degrees F at BSF. The TMP also acknowledges that conservative modeling demonstrates there may be instances where meeting 56 degrees at BSF could require operations that are detrimental to optimal temperature management throughout the season (e.g., earlier side gate operations). Thus, it is our expectation that 56 degrees F average daily water temperature will generally be achieved at BSF unless doing so would entail an unacceptable risk to the attainment of other temperature management goals. I have determined that Reclamation's final TMP complies with Order 90-5 and is approved, subject to the conditions set forth below:

1. Reclamation shall notify the State Water Board within 72 hours if real-time conditions or ongoing evaluation indicate that daily average water temperatures of 56 degrees F will not be achieved at BSF and provide a description of the factors beyond Reclamation's reasonable control (e.g., extreme heat event, high temperature inflows downstream of Clear Creek) or other unanticipated

¹ We understand that the final TMP submittal was delayed due to formatting issues for accessibility. While this delay was less of a concern this year due to the relatively favorable temperature management conditions, the State Water Board requests that Reclamation submit the TMP as early as possible in the future and follow with a formatted version later if needed to avoid significant delays.

conditions that would make achieving 56 degrees F at BSF unreasonable because it would be detrimental to the fishery and overall temperature management throughout the temperature management season.

2. I reserve continuing authority to modify my approval of the TMP to ensure compliance with Order WR 90-5 in light of new information or changed circumstances.

Thank you for your continued cooperation and coordination on this matter. If you have any questions regarding this letter, please contact Craig Williams at craig.williams@waterboards.ca.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Eric Oppenheimer", is displayed on a light gray rectangular background.

Eric Oppenheimer
Executive Director, State Water Resources Control Board