

Sacramento River Temperature Task Group (SRTTG) Meeting
Wednesday, May 9, 2018 | 3:00 pm – 4:00 pm

MEETING SUMMARY

Participants

Craig Anderson, USFWS	Ken Kundargi, CDFW
Don Bader, Reclamation	Chris Kwan, SWRCB
Matt Brown, USFWS	Duane Linander, CDFW
Miles Daniels, NMFS	Michael Prowatzke, WAPA
Eric Danner, NMFS	Joe Pisciotto, CDFW
Vadim Demchuk, SWRCB	Ryan Revnak, CDFW
Randi Field, Reclamation	Diane Riddle, SWRCB
Robert Franklin, Hoopa	Jeff Rieker, Reclamation
Sarah Gallagher, NMFS	Jim Smith, USFWS
John Hannon, Reclamation	Mary Suppiger, Reclamation
Michael Hendrick, Reclamation	Mike Wright, Reclamation
Josh Israel, Reclamation	Garwin Yip, NMFS

Key Discussion Topics with Summary of Outcomes and Agreements

Meeting Purpose and Overview

Reclamation reiterated the meeting purpose: members of the Sacramento River Temperature Task Group are provided status updates on Sacramento River seasonal temperature targets and anticipated performance. This meeting is a follow-up from the last regularly scheduled meeting that occurred on April 26, 2018 to vet concerns raised in response to the temperature management proposal discussed at that meeting.

Fishery Update

Jim Smith provided a Livingston Stone Hatchery update. Staff spawned the first winter-run Chinook salmon earlier this week, otherwise there was no new information to report.

Ryan Revnak provided an update on activities. Through aerial redd surveys, staff identified 5 winter-run redds this season so far. All redds are at or above Highway 44 bridge at river mile 296.5. Weekly aerial surveys are expected to continue.

Temperature Management Plan Update

After the April 26th meeting, Reclamation heard concerns from NMFS about the latter plan. NMFS suggested a target of 53.5°F at CCR for the entire season.

Reclamation re-iterated the meeting's focus to establish what will be the proposed Sacramento River Temperature Management Plan for the 2018 season. Jeff Rieker stated NMFS expressed an interest in continuing to look at a temperature management plan that uses a target location where the redds are throughout the season. Reclamation highlighted the concerns of cooling the river down more than needed at BSF, which could deplete the cold water pool before the end of the season. Reclamation also was interested in a plan that targets the redds, but also limits the increased risk factor of depleting the cold water pool. NMFS suggested a target of 53.5°F daily average temperature (DAT) at CCR and Reclamation ran temperature model runs using the suggested target.

Modeling results suggest this goal can be met, however, it may take cooler water to get down to 53.5°F at CCR than it would to just meet 56°F DAT at BSF, especially in the fall. Reclamation proposed to implement NMFS' plan but to also evaluate increased risk factors of having warmer water temperatures in the fall.

Garwin Yip shared he would prefer to operate closer to the redds and stated the independent science panel from the annual review recommended this approach. He suggested this provides more control of water temperatures at CCR than down to BSF. Possible "off-ramps" would need to be discussed if the cold-water-pool is depleted prior to the fall.

Temperature Studies and Proposed Management Plan

See Meeting Agenda and Handouts for reference materials.

Randi Field discussed the real-time operations and the temperature model simulation results slides included in the handouts. In May, Reclamation increased releases from 8,000 cfs to 8,500 cfs from Keswick Dam due to agricultural diversions occurring sooner than anticipated. As a result, May monthly averages were adjusted in the temperature model input to a monthly average of 8,500 cfs to reflect the change. Results using the modified April Operational Outlooks continue to show favorable outcomes for meeting a target of 53.5°F at CCR. For real-time operations, Reclamation anticipates releases from Keswick Dam to be adjusted depending on requirements or demands in the system, resulting in increasing or decreasing releases.

Jeff stated that Reclamation accepted the management strategy of a compliance location of 56°F DAT at BSF and an operational study targeting 53.5°F DAT at CCR as a viable option, however, "off-ramps" would need to be developed and finalized. In 2016, Reclamation tracked the cold water pool of 49°F degrees as an operational "off-ramp" trigger and suggested this may be useful for this season. Also in the past, SRTTG monitored a 10% deviation of predicted cold-water-pool of 49°F compared to actual. Jeff suggested if actual cold-water-pool resources are of concern or if we hit the 10% deviation, then the group should re-evaluate conditions to offer the greatest confidence of sufficient cold water resources through the fall. No additional concerns were raised by SRTTG members on the suggested "off-ramp" trigger or monitoring scheme.

NMFS-Science Center modeling, using the temperature model output files from Reclamation, estimated temperature dependent mortality using 53.5°F at CCR for the whole season at 11% mortality rate compared to rates of 22.5% or 23% targeting 53°F at CCR through May and 56°F at BSF for the rest of the season. Garwin requested Reclamation run the 90% exceedance with 10% Local 3-Month Temperature Outlook (L3MTO) and the 50% exceedance with 10% L3MTO for the other scenarios. Reclamation provided runs using the most stringent data, the 10% historical meteorology, in lieu of the L3MTO. Garwin stated that NMFS had requested four model runs to be part of the Sacramento River Temperature Management Plan package for transparency. Reclamation plans to provide all of the standard model runs for consistency.

Garwin also had concerns regarding the Keswick Dam releases in the Operation Outlooks and if Reclamation would consider releasing 12,000 cfs in July instead of 13,000 cfs in light of increased releases in May. Garwin was concerned with potential winter run redd de-watering in the fall. Jeff stated Reclamation was not planning on running additional scenarios based on the current runs demonstrated ability to meet the target temperatures. Reclamation's Bay Delta Office had stated modeled estimates of the Keswick Dam release of 13,000 cfs as compared to the 12,000 cfs release

in July had about a 1.5% of increased de-watering risk. Jeff also confirmed in the fall Reclamation tends to operate the system more in response to real-time information such as updates given from CDFW surveys.

SRTTG members were agreeable to the overall proposed temperature management plan and flexibility. Reclamation anticipates to send the discussed temperature management plan to NMFS with a copy to all of the other agencies. Reclamation also plans to run the models throughout the summer based on new lake profiles, prior to SRTTG meetings, or more often if needed.

Other Topics

Jim Smith commented on the late September and October uncertainty information. This information is new to the model results table and requested a discussion at a future meeting regarding how this is calculated. Randi responded that these predictions are based on historical data and sometimes take into account a mix of compliance point locations from the past. Jeff agreed with the need for additional refinement explaining likely variability as different compliance point locations are factored into the relationship and opportunity to explore non-linear relationships. Despite the coarseness, this was Reclamation's attempt to capture the uncertainty during the late September and October time frame when the temperature model has known limitations.

Dianne Riddle requested the isothermobaths used in the modeling. Randi stated the isothermobaths are posted on the CVO website at <https://www.usbr.gov/mp/cvo/vungvari/sactemprpt.pdf>. In two weeks, at the regularly scheduled SRTTG meeting, Reclamation will provide statistical evaluations of the current isothermobaths, compared to historical. Operational forecasts will also be provided at the regularly scheduled SRTTG meetings.

The Clear Creek pulse flow will begin at the end of this month. Matt Brown stated the pulse is a series of 2 peak flows, similar to past flows occurring since 2010. The primary objectives are to encourage spring-run Chinook to move up further up into Clear Creek and to emulate spring flows. This year the flows are designed to be similar to natural flows. USFWS will monitor the weirs and will perform snorkel surveys before and after the pulse flows to determine if the fish are moving upstream. There will be a decrease in flows before surveys begin.

Next Meeting

The next regularly scheduled meeting is May 24, 2018 from 1:00 pm to 3:00 pm, in Sacramento at the SWRCB office.