

Sacramento River Temperature Task Group (SRTTG) Meeting

Thursday, March 28, 2019 | 1:00 pm – 3:00 pm

Meeting Summary

Participants

Craig Anderson, USFWS
Vadim Demchuk, SWRCB
Randi Field, Reclamation
Mike Harris, CDFW
George Kautsky, Hoopa Valley Tribe
Kenneth Kundargi, CDFW
Duane Linander, CDFW
Peggy Manza, Reclamation

Mike Prowatzke, WAPA
Ryan Revnak, CDFW
Jeff Rieker, Reclamation
Alessia Siclari Melchor, SWRCB
Jim Smith, USFWS
Craig Williams, SWRCB
Mike Wright, Reclamation
Garwin Yip, NMFS

Key Discussion Topics with Summary of Outcomes and Agreements

Meeting Purpose and Overview

Members of the Sacramento River Temperature Task Group (SRTTG) are provided status updates on Sacramento River seasonal temperature targets and anticipated performance. In addition, the Sacramento River Temperature Management Plan is developed and monitored as part of State Water Board Order 90-5 and the NMFS Biological Opinion Reasonable and Prudent Alternative (RPA) actions.

Fishery Updates

Ryan Revnak from CDFW provided an update of current activities. CDFW is planning on beginning fish surveying when river flows recede.

Jim Smith (USFWS) provided an update of the Livingston Stone Fish Hatchery activities. Fish collection has been interrupted, as activities are temporarily stopped when Keswick flows are greater than 30,000 cfs. Approximately 14 fish had been collected; ten winter run chinook females and six males. Fish trap numbers from yesterday include approximately 20 fish and about 5 spring run. Females collected may be upwards of 30. Fish collection is expected to recover opportunities lost during the period of high flows in March.

Jim also provided an update to Clear Creek; monitoring has been curtailed due to high flows, flash flood potential, and high turbidity.

Overview of Correspondence

Jeff Rieker from Reclamation provided an overview of the correspondence between Reclamation and NMFS. In February, RPA I.2.3 initiates the transmittal of the operational outlooks, checks on the end of September Shasta storage projection, and the temperature performance potential at Balls Ferry. Both Reclamation and NMFS are in agreement that information conservatively suggest Balls Ferry will be met at 56°F all season. Reclamation is preparing to develop the draft Sacramento River Temperature Management Plan. The process begins with this meeting and will continue through

May. Reclamation intends to have a draft plan available at the next SRTTG meeting. Following, Reclamation will share the draft at a stakeholder meeting. Comments will be solicited from all parties. Reclamation anticipates to submit a final plan by May 15th. A public stakeholder meeting is planned for May 6th from 1pm to 3pm in Reclamation's Regional Office on Cottage Way in the conference room near the cafeteria.

Reclamation and NMFS will pursue clarifying meteorology temperature model assumptions in the future. Reclamation is concerned that using extreme meteorology (10 percent exceedance probability as was used in the past) with the 90 percent exceedance runoff hydrology is possibly evaluating highly unlikely conditions. At present the agreed upon 30 percent meteorology exceedance probability is being used.

Garwin Yip from NMFS commented there is still interest in a potential spring Sacramento River pulse this year and he will request more information from the NMFS science team. NMFS is also requesting, as in recent years, for Reclamation to manage temperatures at the Sacramento River above Clear Creek (CCR station), even though the official standard will be set at Balls Ferry.

In addition, Jeff stated Reclamation is not intending on operating to the new Biological Assessment this year as NEPA documentation has not yet been completed. Reclamation plans to continue operations under the 2009 Biological Opinion as amended in 2011.

Hydrology and Operations Update

See Meeting Agenda and Handouts for reference materials.

Randi Field from Reclamation reviewed system operations, temperatures, trends, Lake Shasta isothermal baths, Lake Shasta cold water pool volume, and the Shasta Temperature Control Device (TCD) configuration.

Precipitation and snowpack have all been well above average in the Sacramento River basin as well as most all of California. In the Sacramento River watershed snowpack is 155 percent of the April 1st average. Wet conditions have persisted and Shasta Lake continues to encroach into the flood control space. Higher releases from Keswick Dam are in response to evacuating water encroached in the flood control space, despite spring refill curves allowing incrementally more storage.

Reclamation tentatively plans to slowly reduce releases in mid-April to afford Anderson Cottonwood Irrigation District an opportunity to install flash boards at their diversion facility. Other "in-river" activities (habitat and gravel injection) are also being coordinated for the end of the month.

Randi suggests focusing more attention on the 50 percent runoff exceedance Operational Outlook as more representative of current conditions. Hydrology and operations will again be updated in April. The short term precipitation outlook is above average and there is potential for significant rainfall April 6th and 7th. Reclamation is expecting to adjust operations in response to any additional inflow into Shasta Lake to manage the flood control space. Conditions are also continuing to warm which may yield additional snow melt runoff. Up to 1-2 inches of rain is expected in Redding today through tomorrow.

Temperature Management

See Meeting Agenda and Handouts for reference materials.

Active temperature management has concluded for the season. Releases from Shasta Lake are now high enough to be made from Upper TCD Gates to rebuild cold water pool reserves. Temperatures have been relatively stable and gradually increasing over the month responding to seasonal warming. The most recent Shasta Lake temperature profiles suggest improvements in the cold water pool volume.

Cold water pool volumes are meeting or exceeding average conditions for similar time periods. Conditions appear to be plentiful for future temperature management.

Preliminary modeling shows promising results, however, April and May consistently indicate warming in the farther reaches. It is suspected that modeled warming side flow “events” warm water below Keswick which can’t be controlled early in the season. Balls Ferry is the upstream temperature control point in the RPA, although. 53.5°F at CCR is proposed under future temperature control operations. This addresses spatially where the majority of the redds (spawning and rearing) have been located. Another indicator of cold-water-pool volume and temperature management performance is TCD side gate timing, it is not expected until late September/early October.

Draft Temperature Management Plan Development

Reclamation anticipates providing a draft temperature management plan at the April SRTTG meeting. The expected temperature management plans to target 53.5°F at CCR with 56°F at Balls Ferry as the official temperature target. Reclamation believes the potential to meet the objective this year is promising. Jeff Reiker also addressed the issue of requests for Reclamation to extend the cold water potential farther downstream as a result of better hydrology this year. Jeff mentioned in years 2005-2006 Reclamation targeted 56°F farther downstream, however, this resulted in an overextension of the cold water resource and the target needed to be returned upstream to manage the remainder of the season, highlighting the risk downstream spawning that can’t be supported with the cold-water-pool resources. Jeff solicited feedback from the group in preparation of April’s SRTTG meeting.

Additional Items

- A question was raised regarding information on Reclamation’s most recent issue of the Biological Assessment. The link provided is to the [Bay Delta Office: Updates to the Coordinated Long-Term Operation of the CVP and SWP and Related Facilities](#).
- Contact Randi Field if you are interested in attending the Sacramento River Temperature Management Stakeholder meeting on May 6th from 1pm – 3pm at the Mid Pacific Regional Office on Cottage Way in the conference room near the cafeteria.
- Reclamation announced completion and satisfactory testing of new flow meters at Keswick Dam. As of March 8, 2019, KES is now being used instead of KWK for operations.
- As a result of high flows and active weather patterns, turbid conditions may persist in the near future impairing visibility and impacting fish surveys and monitoring.
- The topic of cold-water-pool thermodynamics was also discussed. Current modeling development may be able to address long-held assumptions regarding cold-water-pool “turn-over”, join the Upper Sacramento Temperature Modeling Technical Committee.
- Reclamation solicited feedback on alternate temperature management plans other than targeting 53.5°F at CCR with 56°F at Balls Ferry as the official temperature target.

Next Meeting

The next SRTTG meeting is scheduled for 1:00 pm., April 25, 2019 at the Joint Operations Center, room 302.