

**Sacramento River Temperature Task Group (SRTTG) Meeting Thursday,
March 22, 2018 | 1:00 pm – 3:00 pm**

MEETING SUMMARY

Participants

Craig Anderson, USFWS	Duane Linander, CDFW
Miles Daniels, NMFS	Joe Pisciotto, CDFW
Randi Field, Reclamation	Mike Prowatzke, WAPA
Robert Franklin, Hoopa Tribe	Ryan Revnak, CDFW
Sarah Gallagher, NMFS	Diane Riddle, SWRCB
Greg Gotham, Reclamation	Jeff Rieker, Reclamation
John Hannon, Reclamation	Jason Roberts, CDFW
Michael Hendrick, Reclamation	Jim Smith, USFWS
Brooke Jacobs, CDFW	Mary Suppiger, Reclamation
Elizabeth Kiteck, Reclamation	Mike Wright, Reclamation
Dan Kratville, CDFW	Garwin Yip, NMFS
Kenneth Kundargi, CDFW	Paul Zedonis, Reclamation
Chris Kwan, SWRCB	

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 today is the first one of the season, and serves to begin the conversation that will develop a plan on how we will manage the system this year.

Fishery Update

Ryan Revnak – CDFW is currently performing Aerial REDD surveys every 2 weeks. The late fall spawning is winding down and juvenile migration is being monitored. Late fall and winter runs are being monitored for stranding events because of low tributary flows. Fry from late fall redds have emerged. CDFW is continuing to track juveniles that are still in the area and any activity as a result of the ACID dam installation in late February and early March.

Jim Smith – Hatchery Update at Livingston Stone – Winter run adults are showing up and staff are monitoring this year's returns for the captive brood stock program. The hatchery is currently catching fish: 22 females and 36 males are on hand to date; 16 of the females are hatchery fish, and all of the males are hatchery fish. Of total fish caught, seven females and 2 males were of natural origin. Most of the returning fish are hatchery fish, this was expected due to the poor hydrologic conditions three years ago during the drought and double the typical hatchery release. USFWS is still catching a few winter run at the Red Bluff rotary screw traps. The 2017 winter run egg to fry

survival estimate is somewhere between 38% and 42%. This is the 2nd highest they have ever estimated at Red Bluff. Those estimates coincides with the plentiful hydrologic conditions last year.

Hydrology & Operations Update

See Meeting Agenda and Handouts for reference materials.

Randi Field – Reclamation provided a review of system operations, temperatures, trends, Lake Shasta isothermal baths, Lake Shasta cold water pool volume, and the Shasta TCD configuration. Past and expected future operations and forecasted seasonal cooling conditions were also discussed. Releases from Keswick Dam are currently at minimum flows of 3,250 cfs for storage conservation. Reclamation is projecting that this storm brings up to 300,000 acre feet total in Shasta by early April. Although the current storms are a welcome change, the accumulated inflow into Shasta, to date, is just under 1.8 million acre feet, just 60% of the 15 year average. Precipitation for the year to date is over 30 inches, also just over 60% of average. There are no imminent concerns of flood control management at this time. Meteorologists are predicting the current storms could deliver up to 5 inches of precipitation in the Shasta basin, however longer range forecasts suggest below normal precipitation. Snow for the northern areas of California are estimated at only 42% of average to date.

Temperature Management

Reclamation is currently releasing from the upper and middle Shasta TCD gates to conserve cold water pool. Plans are formulated to switch to using all of the upper gates soon, possibly early next week. The delay is necessary to allow the reservoir to rise and provide more head/storage elevation in order to allow for this change. The short term forecast is suggesting there will be above normal air temperatures in the Redding area, and the long term temperatures will also be above normal. The current TCD configuration is: all 5 upper gates open, 3 middle gates open.

In general, recent conditions have been cool. The daily mean water temperatures at Balls Ferry, on average, were just over 50.0°F. The other monitoring stations have been approximately the same temperature. There is a storm system following the current event originating in the Pacific North West that should temporarily cool temperatures in the watershed. The current Shasta isothermobath shows that there is no strong stratification in the reservoir yet. Statistical analysis of the Shasta profile information show that the coldest pool (the volume less than 48°F) is well below average at this time to date. Shasta temperature profiles are being collected every 2 weeks at present.

Temperature Studies

As required by RPA action suite I.2.3, temperature modeling scenarios were developed to determine if the Balls Ferry location could meet a 56°F daily average temperature threshold May 15 – October 31. Scenarios were based on varied hydrologic conditions as measured on March 1st; using data similar to recent drought years. As expected, poorer hydrologic years project challenging temperature management seasons. Unfortunately, the March 1st model results do not account for the current storms that we are experiencing and have diminished value. Reclamation plans to update the model results in April when new hydrology and temperature profile information become available.

Updates:

Jeff Rieker –reiterated this year will not result in the same favorable conditions as last year; last year’s cold water pool volume is not available. Reclamation is looking to achieve the highest survival rates this season with the cold water pool resource that is available. Reclamation wants to work with everyone to come up with a plan that utilizes the cold water pool in the most effective manner. As a result of poorer hydrologic conditions, a pilot study will not be considered at this time. Preliminary model results also suggest we may see warm tributary runoff in early spring upstream of Balls Ferry. Reclamation is seeking a reasonable management plan to address this and establish a compliance point that can minimize the likelihood of increased temperatures later in the season. Reclamation wants to use SRTTG as the primary forum to create a plan for this year and emphasize in-person meetings as essential in the development process. Reclamation will also address the SWRCB letter received mid-March. Reclamation is looking to host a workshop next month to solicit other stakeholder feedback and expand input into the planning process.

Jeff also provided some background on the types of contracts: settlements and exchange contractors, and project service and allocation status. The current forecasts suggest the Shasta water year totals continue to be a non-critical water year, therefore Reclamation anticipates Sacramento River Settlement Contractors receive full allocations.

Reclamation proposed the following activities for developing the 2018 temperature management plan:

1. Update Operations Outlook and Temperature profile data following April 9th issue of DWR B-120 hydrology/runoff estimates
2. Stakeholder Workshop in April TBD to solicit feedback on temperature management ideas
3. SRTTG Technical Meeting April 19 to review operations and temperature management scenarios
4. SRTTG Meeting April 26 to finalize proposed temperature management plan

Additional Comments

CDFW and SWRCB commented on the scope of the operational outlooks, noting that fall release projections are indicative of stranding risks. Reclamation routinely truncates months with minimal hydrologic and operational confidence; this month March through August are presented. However, Reclamation will include an expanded scope of the operational outlooks for future meetings.

SWRCB requested Reclamation to provide isothermobath graphical updates for Shasta, Trinity and Whiskeytown when data become available. Reclamation will update and modify the “Sacramento River Temperature and Flows” web link and notify the SRTTG when this is complete.

SWRCB commented that when the April model results are available they would like to investigate an operational scenario that avoids side gate usage. The thought is that this would avoid situations where it’s too late to make adjustments to avoid side gate operations. Reclamation recommends using the side gates. The side gates, under typical conditions, are part of the Shasta TCD capabilities of providing cold water downstream and the most efficient use of the cold water pool resources.

CDFW commented the preliminary model results attempting to meet Balls Ferry projected temperatures which were “not good enough” suggesting that projected fall temperatures warmed beyond desirable thresholds. Reclamation reiterated that the model results were developed to test

performance at Balls Ferry, and results therefore indicate that under that particular set of conditions another location farther upstream may be preferred as the compliance location.

NMFS is requesting consideration of a Spring Pulse Flow on the Sacramento River; details such as pulse timing and volume are still uncertain (depends on real-time hydrologic and fisheries conditions). Reclamation will review and consider proposals submitted for this year, however, none have been provided to date.

CDFW suggested that CalSim should be used to model real-time system-wide operations to differentiate water source and use. CalSim is a long-term (historical 1921 to 2003) comparative planning tool. Instead, Reclamation uses a more flexible spreadsheet model compatible with available forecast information for real-time operational planning.

Next Meeting

Reclamation will host a SRTTG technical meeting on April 19, 2018. This meeting will contain a morning session to review CVP Operations and an afternoon session to discuss developing the 2018 temperature management plan. Meeting time and location TBD.

The next regularly scheduled meeting is April 26, 2018 from 1:00 pm to 3:00 pm, location TBD.

Comments received on Draft Notes

Dan Kratville 4/19/2018 responded to the CDFW suggestion to use CalSim for operational planning:

This was in reference to the identification of water demand proportions within a given flow from Shasta. A mass balance program adds up demands and then meets those demands with a flow from Shasta. Reclamation claimed they cannot identify the amounts of water allocated to specific demands with the current spreadsheet model. If this is true I am not sure how the spreadsheet model works for planning or scenario comparisons. With a mass balance model like CalSim, you know exactly what the demands are and where that water is coming from. This information is needed for adequate planning by all parties involved in this process.

Reclamation plans to cover CVP Operations and topics such as this during the SRTTG technical meeting on April 19, 2018.