

Sacramento River Temperature Task Group (SRTTG) Meeting
Thursday, April 26, 2018 | 1:00 pm – 3:00 pm

MEETING SUMMARY

Participants

Craig Anderson, USFWS	Liz Kiteck, Reclamation
Matt Brown, USFWS	Chris Kwan, SWRCB
Miles Daniels, NMFS	Duane Linander, CDFW
Ammon Danielson, WAPA	Joe Pisciotto, CDFW
Eric Danner, NMFS	Ryan Revnak, CDFW
Vadim Demchuk, SWRCB	Jeff Rieker, Reclamation
Randi Field, Reclamation	Jason Roberts, CDFW
John Hannon, Reclamation	Jim Smith, USFWS
Brooke Jacobs, CDFW	Mary Suppiger, Reclamation
Ken Kundargi, CDFW	Mike Wright, Reclamation

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 to provide status updates on Sacramento River conditions, establish seasonal temperature targets, and evaluate risks to anticipated temperature management performance.

Fishery Update

Jim Smith from USFWS provided a Livingston Stone Hatchery update and information: 48 females and 79 males have been captured to date. The Hatchery has increased their goals for the season to capture 60 females and 120 males. They are projected to meet those goals. They have not started spawning the winter run yet. The ACID trap is currently operating in order to collect brood stock. To date, one female was caught, but found ripe and released.

Ryan Revnak from CDFW provided an update of monitoring activities. The 3rd aerial flight of the season for winter run and carcass surveys will take place next week. Agency staff have yet to see any winter run redds or carcasses to date. Three weeks ago prior was marked as the last of the fall run.

Hydrology & Operations Update

See Meeting Agenda and Handouts for reference materials.

Randi Field from 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 weather conditions were also discussed. Releases downstream from Keswick Dam are currently at

6,000 cfs. Current storage conditions in Shasta Lake are just shy of 4.2 MAF and approximately 2.5 MAF of accumulated inflow to date. Just over 36 inches of rain for the season have been reported, approximately 64% of average. Flood control operations are no longer a concern; USACE requirements for flood space are now zero. NWS is forecasting normal chances of precipitation in the 14 day outlook. Starting tomorrow, there is a slight chance of precipitation over the weekend. Releases are scheduled to go up to 7,000 cfs for water temperature management and downstream demands. According to the 8-Station Index and Snow Water Content for April 2018, we did cross over the water year 2014 precipitation total. Precipitation totals are just slightly better than the drought years. The basin is drier than during a normal year, with 24% of the average to date in April for snow water content. Conditions are better than during the drought, but not ideal. According to the CVP Operations Outlook, storage conditions are looking fairly decent at the end of September with storage volumes likely between 2.35 MAF and 2.65 MAF at the 90% and 50% exceedance outlooks, respectively. Monthly releases will peak at a monthly average of 13,000 cfs in July and then are expected to decrease to 6,000 cfs by end of October at the 90% exceedance outlook.

In addition, spring refill of Whiskeytown will be delayed by 2 weeks and is expected to be full at the end of May. Inflow conditions and forecasts indicate the Trinity River classified as a “critical dry” year on that system.

Temperature Management

Reclamation is currently releasing water from all of the upper gates and one of the middle gates (opened over the weekend) of the Shasta TCD to meet the Balls Ferry (BSF) temperature compliance point as a result of lower flows and higher air temperatures. Despite preparing the TCD gate change and several increases in release ahead of a warming trend, water temperatures at BSF were still over the 56°F limit. Some cooling was delayed as a result of lag time. Total upper tributary side flows are still near 1,000 cfs and are likely contributing to the difficulty in cooling down the river at the BSF gage. The short term forecast is suggesting there will be chance of thunderstorms in the Redding area over the weekend with slight cooling and then lead into a return to warmer temperatures. The long term forecast, of lower confidence, still shows that temperatures will be above normal in the next three months.

The current Shasta Isothermobath shows conditions in the reservoir have improved slightly. The top layers of water at all reservoirs are expected to start warming. The next Shasta profile will be collected next week. Shasta temperature profiles are being collected every 2 weeks at present, after mid-month they will be collected weekly.

The Lake Shasta Isotherm Statistics Plots show conditions are looking better than during the drought period. The cold-water-pool volume less than 48°F is still lower than average. Reclamation will monitor this, but there isn't any expectation this cold-water--pool will improve.

Temperature Studies

As requested, Reclamation provided model runs that attempt to target 53°F daily average temperature (DAT) in the Sacramento River above Clear Creek (CCR). The model indicated some difficulty in achieving temperature compliance at this target location in the spring and summer months. Randi stated that as a result of the assumed spring meteorological conditions, when the model is forced to target 53°F DAT at CCR, it shows that we would need to open up a side gate in order to achieve that target in the early spring months. Reclamation anticipates that approximately 700,000 AF of cold water less than 56°F will be left at the end of September.

Jeff Rieker from Reclamation began the discussion of developing the water temperature management plan for this season. Jeff stated when looking at the 53°F DAT at CCR model run that tapping into the side gates early would be problematic to increase risk of losing temperature control in the fall. Targeting 56°F DAT at BSF appears to make sense, however this pre-spawning season appears difficult to manage during periods of lower flows. Jason Roberts from CDFW also expressed concern with targeting 53°F DAT at CCR throughout the whole season due to early TCD gate changes. He stated that he is fine with changing the plan to target 56°F DAT at BSF. Jason also stated that he would be ok with a plan that if 56°F DAT at BSF is exceeded, then CCR must be at or below 53°F.

Jim Smith from FWS requested additional clarification on how to implement a plan with a conditional target or a moving control point or target temperature and would that be for the whole season or not? Additional discussion was pursued on the topic of a spawning trigger for temperature targets, however there were concerns about the practical logistics of implementing a spawn trigger. The group discussed a proposal to target 53°F DAT at CCR in May and then 56°F DAT at BSF from June forward. This proposal captures the group concerns articulated by Jason Roberts' comment that it isn't a good use of cold water to manage for warm spring side inflows and it may be difficult to achieve operationally.

Jeff suggested a timeframe for development of this plan and to work with NMFS further regarding their requirements. Jeff said that Reclamation will have to look at the model runs and figure out logistically how to go about working with the fisheries agencies in determining the procedures to implement this type of proposal.

Jason Roberts then commented that Garwin Yip from NMFS, who was not present on the call, texted him with concerns about the proposed plan for water temperature management. Reclamation reiterated a plan for a follow-up discussion with NMFS.

Updates:

Jeff Rieker was interested in feedback from the SRTIG group with regard to information that Dr. Anderson presented yesterday on managing to dynamic temperature/oxygen needs based on life stage and how it could be used. There was broad interest of support to avoid increasing the risk of late season temperature warming. There was further discussion, by Jim Smith of FWS, who recalled a similar concept applied during the late

80s or 90s. Unfortunately, there was insufficient information collected to confirm the action for management. Some suggested this type of strategy would require additional monitoring, staffing, and could be applied as a drought option. Others noted that sufficient studies should be completed before the next drought occurs in order to make that potential a reality. Jeff suggested a follow-up targeted discussion at a later date.

Next Meeting

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

Future meetings will be held in other areas to encourage more in-person participation. The May meeting will be downtown Sacramento (location TBD) and the June meeting will be hosted by USFWS in Red Bluff.