

Sacramento River Temperature Task Group (SRTTG) Meeting
Thursday, October 25, 2018 | 1:00 pm – 3:00 pm

MEETING SUMMARY

Participants

Craig Anderson, USFWS	Mike Prowatzke, WAPA
Matt Brown, USFWS	Ryan Revnak, CDFW
Charlie Chamberlin, USFWS	Jeff Rieker, Reclamation
Randi Field, Reclamation	Diane Riddle, SWRCB
Sarah Gallagher, NMFS	Jim Smith, USFWS
John Hannon, Reclamation	Thuy Washburn, Reclamation
Matt Johnson, CDFW	Mike Wright, Reclamation
Kenneth Kundargi, CDFW	Garwin Yip, NMFS
Duane Linander, CDFW	

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.

Fishery Update

Ryan Revnak from CDFW provided an update on their winter run redd dewatering and stranding surveys. CDFW is monitoring five remaining shallow redds. Ryan explained the monitoring spreadsheet emergence dates have been updated to reflect the actual observed temperatures rather than historical averages. This update predicts emergence of the last winter run redd on November 11th rather than November 16th. The four prior redds are expected to emerge on October 29th and October 31st. The thermal model uses an assumed accumulated thermal units (ATU) for 100% emergence or approximately ten days for juveniles to emerge from redds. The CDFW crew is out today to perform a stranding survey in three pools near river mile 296.5 (Highway 299/44 Bridge). In the last few days, approximately 450 (370 fish were actually handled) winter run fry were found in isolated pools and attempts were made to rescue stranded fish.

Jim Smith from USFWS provided an update on the Red Bluff Diversion Dam (RBDD) Rotary Screw Trap monitoring program. Through October 21st staff have counted the largest number of out-migrating winter run since 2013. Counts are over 707,000 fish so far. Early October rains centered near the Clear Creek drainage resulted in a significant turbidity event downstream as ash and debris washed down the watershed and into the main-stem of the Sacramento River. Juvenile counts coincided with the spiked turbidity event, however monitoring was also impacted by the increased turbidity. Jim anticipates a second peak of migration later and estimates it could be larger than the turbidity event.

Charlie Chamberlin from USFWS provided an update to Clear Creek activities. Spawning surveys are

on-going. Conditions on Clear Creek are poor as a result of the Carr Fire and much of the watershed was burned. Only 4 redds were identified and may be suffering after the ash/debris flow in early October. Surveys have been hampered by high turbidity and a significant part of the creek has not been observed. Several adult fall run did not survive the ash and debris flow earlier in October.

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. Past and expected future operations and forecasted conditions were also discussed. Seasonal release patterns from Keswick Dam were slightly higher than previous month expectations to prevent winter run redd dewatering. Releases from Keswick Dam have been reduced recently and are currently managed to 6,000 cfs. Further release reductions are being discussed. Reclamation is coordinating with the fishery agencies, as in past years, to balance de-watering winter run redds, winter run emergence, downstream flow for diversion access, de-watering fall run redds, and storage conservation. Between October 21st and 25th the USGS KWK station was not operational, this is the primary gage that Reclamation uses for operations. The outage at KWK was due to USGS GOES radio communication incompatibilities that impacted several thousand devices. During this period of time, Keswick operations used the KWK gage instead of the KES gage to make release adjustments or refinements at the dam. Reclamation was originally notified this issue would be resolved within 24 hours. USGS has confidence at the station KWK within plus or minus five percent of the actual. Reclamation recently installed flow meters at the Keswick facility and has confidence at KES within plus or minus two percent of the actual. After USGS recovered KWK communications, Reclamation returned operational comparison to the KWK gage. Reclamation did not make any estimation of potential fall-run dewatering during this period of time. Reclamation will notify agencies if long-term outages at KWK are expected in the future.

Temperature Management

See Meeting Agenda and Handouts for reference materials.

Active temperature management is continuing for a few more days: Reclamation is managing to 53.5°F daily average temperature (DAT) at the CCR gage and 56°F DAT at Balls Ferry. However, the water temperature target at the CCR gage has been difficult to meet following the precipitation event despite three TCD adjustments. All but one of the Pressure Relief Gates (PRGs) have been closed. Reclamation is seeking feedback on timing the last PRG closure. Temperature operations have been running with approximately a monthly mean daily average around 54.8°F, to date, in October at Balls Ferry. The approximate monthly mean daily average at the Sacramento River above Clear Creek (CCR) is 54.0°F DAT, to date, in October.

Temperature Studies

Reclamation completed just one model run using the 90% runoff exceedance forecast and the 10% historical meteorology (worst case scenario). Model run results are presented, however this is the period of known model limitations. End of September cold-water-pool volume information used to supplement known limitations of the temperature model in the fall period suggest caution at CCR.

Additional Items

- Whiskeytown operations are currently using the downstream IGO gage to make flow refinements at the dam. Real-time communications at Whiskeytown Dam are still not

recovered from the Carr Fire in July. Delay in communication recovery are a result of external communication party priorities and new equipment availability. A back up system is also planned for deployment. Releases will be officially ordered to 245 cfs to accommodate for system depletions from Whiskeytown Dam to the Igo gage.

- Fishery agencies have discussed tradeoffs and are in agreement that Reclamation can make Keswick Dam reductions beginning now down to 4,000 cfs. Releases down to 4,000 cfs will dewater the last winter run redd with an anticipated emergence date of November 11th. The desire is for stable flows downstream to prevent stranding. Given current Keswick flow conditions, release reductions can be reduced at most up to 200 cfs per day.

Action Items

- CDFW will distribute an updated winter run emergence spreadsheet.
- Reclamation will adjust operations at the Shasta TCD to close the last PRG and begin decreasing Keswick temperature and flow.

Addendum

- Following the USGS KWK gage outage and stored KWK data were retrieved, KWK and KES data were inspected and compared. In the beginning of the outage, where flows were stable, it appears that releases (7,250 cfs) as measured by KES were matching KWK. However, during the KWK outage Reclamation decreased releases and flows appear to be lower during this period of time of the flow reduction, 10/23 to 10/25, a period of approximately 50 hours (less on average 325 cfs, less a minimum of 470 cfs, and less a maximum of 110 cfs).

Next Meeting

SRTTG will adjourn for the season, however, Reclamation will send updates approximately the fourth week of the month. SRTTG meetings will commence in the spring (2018 meetings began in April). Please contact Randi Field if a meeting is needed in the interim.