

Sacramento River Temperature Task Group (SRTTG) Meeting

Thursday, July 25, 2019 | 1:00 pm – 3:00 pm

Meeting Summary

Participants

Charlie Chamberlin, FWS
Matt Brown, FWS
Miles Daniels, NMFS
Vadim Demchuk, SWRCB
Jim Earley, FWS
Randi Field, Reclamation
Sarah Gallagher, NMFS
John Hannon, Reclamation
Mike Harris, CDFW
Mike Hendrick, Reclamation
George Kautsky, Hoopa Valley Tribe
Liz Kiteck, Reclamation

Kenneth Kundargi, CDFW
Erica Meyers, CDFW
Mike Prowatzke, WAPA
Ryan Revnak, CDFW
Jeff Rieker, Reclamation
Alessia Siclari Melchor, SWRCB
Jim Smith, FWS
Mark Westbrook, Reclamation
Johnathan Williams, CDFW
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. Ryan confirmed observation of 471 winter run redds from aerial surveys; 95 redds are located downstream of the Sacramento River above Clear Creek confluence (station CCR). The ground crew found 110 shallow redds in twenty-four inches of water or less, 20 are in ten inches of water or less. The shallowest redd is located in 4 inches of water. Based on estimates, emergence of latest shallow redds are expected between October 25 and November 1.

Jim Smith from USFWS provided an update of monitoring; 1,900 carcasses have been collected and staff estimate that 30% of redds are located above the ACID diversion. The majority of the carcasses are three-year olds returning with few two-year olds reported. River water has been persistently turbid contributing to survey difficulties. The run continues to appear to be the highest since 2006 (2006 escapement was 17,205) and may be attributed to favorable ocean conditions in the last few years as well as very high river flows during outmigration in 2017. Some juveniles from early spawners in late April have already started emerging and have been caught in the Rotary Screw Traps at the Red Bluff Diversion Dam location, averaging approximately 10 fish a day. The hatchery return proportion of the total return so far is estimated at 34%, reduced from the past 4 to 5 years.

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.

The Operations Outlook suggests Keswick Dam releases are expected to increase in August to meet a USFWS BiOp RPA Fall X2 action. This action is currently under discussion awaiting a final decision on relaxation from all agencies; the expected operational outcome is currently uncertain.

Temperature Management

See Meeting Agenda and Handouts for reference materials.

Operations are in active temperature management utilizing Upper Temperature Control Device (TCD) and Middle gates. The Upper TCD requires 35 ft of water above the gate to protect it from structural instability; it is unlikely for years with high reservoir storage, like this year, to prematurely close an Upper TCD gate for structural instability reasons. However, it is unusual that the Upper gates are used this late in the season due to the high reservoir storage.

As reported in the last several months, the most recent Shasta Lake temperature profiles suggest the cold water pool volumes are still above average for similar historic time periods. Conditions still appear to be plentiful for future temperature management.

Preliminary modeling continues to show promising results. Remaining months appear to manage temperatures at or below 56°F at BSF and at or below 53.5°F at CCR. Cold-water-pool volumes and temperature management performance (e.g. TCD side gate timing) continue to suggest extremely favorable temperature performance this year.

Garwin Yip requested from Reclamation temperature model simulation runs which contain a temperature target of 53.5°F farther downstream of CCR. This request aims to determine the feasibility and possible impacts to extend favorable habitat to the winter run redds located downstream of the CCR gage (approximately 25% of monitored redds). Airport Road Bridge was suggested as a preferred location, although no current real-time monitoring is available. DWR previously operated a temperature gaging station at Airport Road, however due to access difficulties it was discontinued. Jeff Ricker suggested using a correlation with other real-time stations as a surrogate.

Additional Items

- Jim Smith informed the group over the past few years winter run were introduced into Battle Creek. More than 70 two-year olds had returned this year and next year returns are expected in the 400 to 500 range. It is possible that not all of the returning winter run will return to Coleman Fish Hatchery, some may stray into the main stem of the river, however this year no strays to the mainstem Sacramento River have been detected in the river surveys. Battle Creek fish are uniquely identified with adipose and left ventral fin clips, and CWT.
- Randi Field provided an update on Clear Creek temperature monitoring. Due to recent station equipment replacement and data transmission at IGO, Reclamation staff re-visited the site to verify temperature data collection. The station appears to be functioning properly. Staff noted wide variations in temperature in the cross section and approximately

200 feet upstream where the USFWS Hobo data loggers are located. Minor tributary inflow was reported at 70°F upstream of the IGO gauge.

- John Hannon provided an update on Reclamation's gravel augmentation projects. Twenty thousand tons of gravel are currently being injected into the Upper Sacramento River downstream of Keswick Dam and is expected to continue for the next three to four weeks.

Action Items

- Garwin Yip, on behalf of the fishery agencies, requested Reclamation to model a temperature simulation with target location below CCR (suggested Airport Road) at 53.5°F.
- Jeff Rieker indicated Reclamation will internally discuss modeling and evaluating possible repercussions of a temperature compliance further downstream. A response to the SRTTG is expected to follow.
- Jeff Rieker also requested NMFS to incorporate the 2019 redd distribution in the salmon mortality model.

Next Meeting

The next SRTTG meeting is scheduled for 1:00 pm., August 22, 2019, at the NMFS Office, 650 Capitol Mall, Sacramento, CA.