

# **Final meeting notes from the April 19, 2012 Sacramento River Temperature Task Group (SRRTG)**

## **Introduction**

Attendance list is attached to these meeting notes.

## **Fishery Update**

Jim Smith reported that it was too early for any specific information on the winter run adult return for this year. Carcass surveys will start on about May 1.

## **Hydrology & Operations update**

Thuy Washburn went over the handouts which included the daily CVP water supply, the drought outlook, reservoir conditions, snow water content, and the April 90% and the 50% forecast.

## **April Temperature model run**

Russ Yaworsky went over the upper Sacramento River preliminary temperature analysis. The 90% exceedance forecast indicate that Balls Ferry is a likely the control point through the fall. The 50% exceedance forecast indicate that Jellys Ferry is a likely the control point through the fall. Jim Smith suggest for the month of May to have Balls Ferry be the temperature control point and for the group to revisit this issue in the next meeting. Thuy Washburn agreed. The group did not object. For the month of May, the temperature control point will be at Balls Ferry of no greater than 56 degrees.

## **Matt Brown's Proposal**

Matt Brown (Fish and Wildlife Service (FWS), Red Bluff) introduced the discussion of the proposal by explaining that Clear Creek water temperature criteria for spring Chinook spawning and incubation was not met in each of the last three years. It was pointed out that the last year had record reservoir storage levels and that temperature targets should have been achievable.

Reclamation reports by Tracy Vermeyen evaluating the Temperature Control Curtains in Lewiston and Whiskeytown reservoirs stated "Consequently, peaking power operations should be avoided for Trinity and Carr Power plants during periods when release temperature restrictions are in effect". Study data provided were not 100% conclusive as temperature reduction existed in one case. Further study is certainly warranted. One major change has occurred in water operations since the study was performed and that is the significant reduction in imports from the Trinity River. It isn't reasonable, or prudent to extrapolate the study results based on this significant change.

Full power peaking (FPP) was defined as power generation operations where generation is scheduled over the peak hours of the day (0600-2200). Subject to the amount of daily water to be released on a daily basis, generation (and, therefore flow) may not be scheduled during the

non-peak hours (2200-0600). Partial power peaking is generation being scheduled over all hours of a day with hourly releases never dropping to 0 cfs. During baseline generation, power production is constant and does not fluctuate over various hours of the day.

Tracy Vermeyen (Reclamation, Denver Technical Services Center) said to Matt that “you did a good job doing your homework and I agree with everything that you’ve said”.

The group discussed aspects of the TSC evaluations including: the study was old and short term (more years would be useful), conditions have changed since then because less water is coming over from the Trinity River, and therefore an increased impact of ambient air temperatures on water temperatures “may” influence outcomes. Tracy said that the results from his evaluations took into account air temperatures and that his conclusions were made with all other things being equal at the time of the study, although less total water movement today could be impacted more by ambient temperatures.

Based on power plant discharge records, Matt suggested that FPP was avoided in 2000, 2001, 2003, 2004 and perhaps 2008. (This is very doubtful due to the tremendous value of generating over peak hours, but Reclamation can research/verify as needed since hourly generation schedules are archived).

Tracy queried why his recommendation was not being implemented in recent years.

Barry Mortimeyer (Reclamation, Chief of Power Operations Division in Sacramento) said that beginning January 1, 2005, Central Valley Operations became responsible for creating hourly power generation schedules as an integration contract with PG&E in place since the 1960s expired. From the year 2000, Reclamation provided “pre-schedules” to PG&E of the CVP generation and likely was scheduling the generation on peak and super-peak hours which was what the CVP system was design to do. The pre-schedules were generally accepted by PG&E without change.

Russ Yaworsky (Reclamation, Central Valley Operations (CVO)) said that the BOR water temperature model for Trinity and Sacramento River was calibrated using 2000 to 2004 data. Rod Wittler (Reclamation, Weaverville) said that a new water temperature model was being developed for Lewiston under the Trinity River Restoration Program. Did the old Lewiston water temperature model use the data from the period? Power peaking operations and significant reduction in Trinity River imports may negatively (or positively?) affect the accuracy of temperature modeling in the Trinity and Sacramento Rivers.

Tracy indicated that for evaluation purposes, it was important to archive powerhouse water temperatures, collect hourly water temperature and flow data, have loggers in the reservoir, and place temperature loggers upstream and downstream of the temperature control curtains and in locations between the Whiskeytown curtains. Before conclusions can be drawn based on an old report, gathering this information is prudent.

In addition to the original proposal, the group agreed to also evaluate the performance of the Lewiston TCC. Rod said he had recently looked at the Lewiston TCC and it looked OK, but he thought it would be really good to check it.

Paul Hauser (Trinity Public Utility District and member of Trinity Management Advisory Council) was very concerned that impacts to power generation be evaluated. Paul said the costs of avoiding full power peaking on power generation would be large, and could potentially result in CVP power generation not being economically feasible. Paul said that documenting the costs to power generation would be easy. Compensation for foregone power generation was discussed. Paul cited examples of compensation which came from the private sector. Jim Smith (Fish and Wildlife Service, Red Bluff) said that the CVPIA gave fish and wildlife mitigation a higher project purpose within the Central Valley Project than power generation. Garwin Yip (National Marine Fisheries Service (NMFS), Water Operations Chief in Sacramento) questioned how to measure the economic impact to the fishery downstream. Barry indicated he agreed with Jim Smith as to the higher purpose of fishery restoration within the context of the CVPIA but cost impacts and mitigation of such costs should not be ignored since there are occasions where foregone generation has been reasonably compensated by fishery interests.

Paul suggested that replacing the Oak Bottom TCC might be all that is required to meet the temperature criteria. Paul said that the power users would consider funding for replacing the Oak Bottom TCC. Matt said that the curtain could not be replaced in time for this summer and that in the future temperature criteria may be more difficult and may require implementation of both measures.

To clarify the workings of the SRTTG, Matt read from the RPA guidelines which state that “in the event that there is not consensus at the working group level, the workgroup leader shall convey the options and summary of the technical discussion to NMFS for consideration”. If there is agreement then the group leader would forward within one day the groups advice and biological rationale to NMFS for review. The recommendation would then go to the WOMT for discussion. The WOMT decision is then required within 1 day.

The group decided without dissent to continue evaluating the proposal. Seth Naman (NMFS, Arcata) and Tricia Bratcher (Department of Fish and Game, Redding) stated that the proposal should be implemented. Tim Hayden (Yurok Tribe, Trinity River Fisheries Division) said that implementing the proposal would help Reclamation in meeting its treaty obligations to the Yurok Tribe. Reclamation water and power operations suggested that there isn't enough data to proceed with prudent decision making at this stage and further analysis is recommended.

As soon as temperature recording devices can be acquired and installed, power generation at Carr would be scheduled to compare the temperature impacts of no peaking, partial peaking, full peaking and no discharge operations. One desired outcome would be to quantify the flow level necessary at the Oak Bottom curtain to restrict warmer water from filtering back towards the Carr Power plant when generation is reduced or stopped. Either a minimum flow amount or time duration curve would be a desired result of further testing.

Matt read the wording of the RPA guidelines for the technical team that the team leader is responsible to insure brief notes of each meeting be recorded, including issues considered, recommendations made, and key information on which the recommendations are based. The meeting notes shall be delivered within two days of the meeting.

Thuy Washburn (Reclamation, CVO) said that BOR did not have the staffing to take notes during the meeting. The group agreed that it would be difficult for the group leader or other active participants to take notes. Matt said that the CCTT has a dedicated note taker. Matt said that most SRTTG meetings did not have as involved note taking requirements as this meeting. Garwin said he has been talking with Donna Garcia (Reclamation, CVO) about the need to improve communication and coordination in the RPA Technical Groups, including having note takers and better notes.

Matt said that the RPA guidelines require that the group establish a regular meeting schedule at the beginning of the year. Future meetings were scheduled for the 4<sup>th</sup> Thursday of every month starting with May 24<sup>th</sup>.

**Actions items:**

Thuy will work with NCAO to determine the cost and schedule of replacing the Oak Bottom TCC

Matt will provide the proposed action to forward to NMFS.

Matt will provide meeting notes for the full power peaking proposal discussion.

Matt will provide equipment for water temperature monitoring.

Barry will work with Matt to develop scenarios to test the hypothesis of variable Carr generation amounts and associated impact on water temperatures at the Oak Bottom curtain.

Barry will check to see what temperature probes are currently installed at generator penstocks and if there is “real-time” access to those temperatures.

Thuy will check to determine what temperature studies are to be performed at Lewiston.

Matt will commit to collecting water temperature data but will discuss with NCAO if they would rather do the work using the hydro-techs that already download temperature on the reservoirs.

Tracy [dependent on funding] will develop scheduling for the experimental power operations and sampling locations for water temperatures.

Next Meeting: Thursday, May 24, 2012 at 1:00 pm