

Sacramento River Temperature Task Group

8/23/12

Objective: Provide advice to the Water Operations Management Team (WOMT) and National Marine Fisheries Service (NMFS) on measures to assist with improving and stabilizing Chinook population in the Sacramento River. Annually, Reclamation develops temperature operation plans for the Shasta and Trinity divisions of the CVP. These plans consider impacts on winter-run and other races of Chinook salmon, and associated project operations. SRTTG meets to discuss biological, hydrologic, and operational information, objectives, and alternative operations plans for temperature control. Once SRTTG has recommended an operation plan for temperature control, Reclamation then submits a report to the SWRCB. After implementation of the operation plan, the SRTTG may perform additional studies and commonly holds meetings as needed typically monthly through summer and into fall to develop revisions based on updated biological data, reservoir temperature profiles and operations data.

Attendees:

FWS: Matt Brown, Jim Smith, Craig Anderson

DFG: Alice Low, Patricia Bratcher

Reclamation: Thuy Washburn, Rod Wittler, Russ Yaworsky, Stacy Smith, Mary Suppiger

SWRCB: Kari Kyler

NOAA: Bruce Oppenheim, Garwin Yip, Seth Naman

WAPA: not present

FWD: not present

Hoopa: Shawn Ledwin

Yurok: Tim Hayden

Note Taker: Barbara Rocco, Independent Contractor

Agenda:

1. Introductions
2. Fishery update
3. Hydrology & Operations update
 - a. Daily CVP Water Supply Report ***
4. Discussion of recent temperature model runs
 - a. Temperature studies packet ***
5. Temperature Review for August
 - a. July and August monthly temp report ***
6. Partial Power Peaking for August -- update
7. Trinity Fall flows – update
8. Next meeting: Thursday, September 27th

Additional agenda item: fall flows on the Sacramento River.

Actions items: None

***handouts

Introductions: Roll call taken.

Fishery Update: The carcass surveys for winter-run Chinook are winding down now and will be completed by the end of next week. There are very few fish seen and spawning is nearly over. The run size is currently estimated between 2,000 and 2,500 total fish, but it will be a few months before the analysis for population estimates are completed. About 30% are hatchery fish from Livingston Stone. Redd surveys are also winding down. We're not seeing many redds now. The last outing was on 8/22; no redds were seen. Redds peaked on about 7/25 with 80 seen; the peak is later this year from last year. The overall distribution is well over 99% from the Highway 44 Bridge upstream. There has definitely been a coldwater advantage. At the Keswick trap, where brood stock was collected for Livingston Stone National Fish Hatchery, the last trap was on 7/21. The hatchery spawned 47 females and 37 males; spawning is now complete. On the juvenile side, there are more juveniles coming down as seen in the rotary screw trap in Red Bluff. The number has not yet increased yet but will increase in the next few weeks; catching roughly 25/day and will peak within the next month.

There are still no fall-run counts available. We get a lot of anecdotal information about fall-run Chinook in that people are catching a lot of fish right now, but no actual counts yet. We will get the first counts on Battle Creek in about a month; the weir just went in.

Hydrology & Operations (see handout):

Trinity: release 1,000 cfs; Keswick going down to 11,000 cfs on Saturday, 8/25/12. The American River is ramping down to 2,250 cfs on 8/24. Based on a 15-yr average, Trinity has 108% storage; Shasta has 98%, Folsom has 85%. The federal share at San Luis Reservoir is 169 TAF, or about 63%¹.

Forecast: July is the latest forecast available. Trinity storage a bit higher than forecasted; Shasta is a bit lower than forecasted. There is no August forecast because Reclamation doesn't normally work on new forecasts near end of summer; therefore, July is the latest forecast being used.

Temperature Model Runs (see handout): Yaworsky (Reclamation) presented the latest Shasta profile and temperature run for Jellys Ferry. The temperature run also includes representation of supplemental releases to Trinity of 28,000 af. The Jellys Ferry target is still possible through fall but conditions are not as good as forecast in July. There were higher releases in August than forecast. More was released to lower coldwater pool volume and because "depletions" were greater than expected, but the temperatures are still looking good. We are on track or close to on track for meeting temperature targets.

Temperature Review for July & August (see handout): Jellys Ferry: met every day in July at avg. of 54.6°F. August average is 55.6°F. IGO = 57.4°F

Partial Power Peaking for August: Yip (NMFS) provided a summary of the background on power peaking. The Sacramento River proposal is being reviewed. Reclamation indicated that there would be no full power peaking over summer. Reclamation and NMFS will coordinate to see whether it is possible to keep that commitment and, if not, what operations would be changed. An email was sent to WOMT with the final proposal, which was partial power peaking through 8/10. If a second unit at Carr comes online, Reclamation will go with

¹ There appears to be an error in the reported volume or percentage that was not corrected.

1 to 2 weeks of full power peaking, and evaluate reservoir temperature changes compared to no power peaking and partial power peaking.

Washburn (Reclamation): Since 8/1, Reclamation's goal was to do partial peaking when two units were back on at Carr. We did not get that until about 8/8. From then on, we had two units on and off because of testing and other issues. Until now, we've had 10 days of partial power peaking and no full power peaking yet. We will soon go to full power peaking. There are no data yet but Washburn will get that information to the group when data are available.

Brown (FWS): In full power peaking, there is flow for part of the day and no flow for part of the day; partial peaking is when flows change during the day for peak hours. The water temperature out of Whiskeytown is lower than we've measure in the last 13 years. Regarding Carr, last year was full power peaking and this year there was only one unit on continuously with partial power peaking with two units later. We might have saved some cold water by using the upper unit earlier in the season, but having this continuous flow from Lewiston through Whiskeytown has dramatically improved water temperatures.

In the latter half of July, we transitioned from the upper outlets to blending both, and then going to the lower outlets. Since about mid-July, we've been more consistent with releasing/diverting a more stable volume through Carr. Since 8/13, we initiated supplemental releases to Trinity resulting in about 1,000 af more per day and lower temperatures. Lewiston release temperatures dropped by 2°F because of less residence time; will see a similar temperature drop in Carr releases as well.

IGO temps: Reclamation noted that from the data from 2000 to 2012, when less than 300,000 taf were released from Trinity during July to September period, in any one year, those years were not good for water temperatures. In the previous 4 years when there were temperature problems, we didn't bring more than 300,000 af over from Trinity. In years when Trinity brings over 300,000 taf during July to September then it's been a good year for cold water. This year it is projected for Trinity to bring over 300,000 taf of water through Whiskeytown.

Wittler (Reclamation): In our tracking from Lewiston to Trinity, from 7/25 through 8/12, we were releasing at about 53°F and very steady. On 8/13, it dropped to 49°F and has kept oscillating near 49°F from Lewiston to Trinity since then. We had 3°F drop with onset of supplemental flows down Trinity. At Douglas City, there was a 4°F drop, which is 16 miles downriver with onset of the supplemental flows. Temperatures now out of Trinity Dam are <46°F. Compared with previous years, the water temperatures from Trinity Dam releases are about the same but it was warm out of Lewiston for some reason—only about 6°F of heating in the river instead of the typical 10°F of heating. There was 1 day during which we believe that the smoke from the fires moderated the temperatures.

There may have been full power peaking in Trinity before 7/1.

Trinity Falls Flows: On 8/15, we had to be at 3,200 cfs. On 8/13, Reclamation went from 450 to 950 cfs. By 8/15, we were at an average of 3,200 cfs and then 3,382 cfs. We have been holding at 3,300 cfs since then, will be there for about 3–5 days, and will make a 50-cfs increase after that. CVO is using the Klamath gage as the best estimate. There were some issues with the gate but they were resolved before this started.

Fall flows on the Sacramento River: Smith (FWS) brought this up because he wanted to make sure that fall flows and fall-run Chinook get discussed “somewhere.” In the past SRTTG members talked about fall flows and the need to get to a stabilized flow. Should we be talking about this again? Is this the right group in which to discuss this, and if not, who should be working on this? Looking at the July forecast, there are pretty steep reductions in the mainstem Sacramento River that will dewater redds. We should encourage Reclamation to do whatever it can to bring flows down and stabilize them. Peak fall-run spawning is in November, and late-fall run begin after that. There are still eggs and fry in the redd area through February and March the following year.

From operations standpoint, Reclamation should get releases down as soon as possible at Keswick but it could be difficult because of water temperatures and conditions we must meet in the Delta.

It was noted that in the last few years, there has been a new water use for flooding rice fields, so in mid-October, there will be new water needs for this. Flows out of Shasta would increase to meet that need and water quality in the Delta. Also, FWS in agreement with other agencies, has used the B2 agreement to keep that flow up. Guinee and Anderson (FWS) have been notified about this.

This might need to be discussed in the B2 meeting. Anderson (FWS) mentioned that there might be a B2 meeting next Thursday to discuss this. Low (DFG) said that more preplanning would be better at this point because there could be a lot of fish spawning and there’s a potential for big problems this year.

Yip (NMFS): We definitely need frequent coordination between this group and the B2IT group. There needs to be more discussion of what we’re going to do if we use the water now and what are our needs. If B2IT requests higher releases at Keswick through winter for fall run, then the SRTTG group has to live with the decisions made at B2IT prior to the first SRTTG meeting in April in consideration of Shasta Reservoir and cold water pool management. One consideration could be how we determine time, location, and distribution of all runs and how to establish the coldwater compliance point. Do we carry the compliance point to where the winter run distribution is and assume that spring run will follow?

Low (DFG) mentioned that it’s the quantity and timing that need to be more steady than they are now. In some years, there are water temperature issues for fall run, but it’s more the drop in flows to provide temperature control. It’s also how much rainfall we get in fall and early winter.

The group decided that fall flows for fall-run would be discussed at a B2IT meeting. Anderson will send out a meeting notice to the B2IT group.

Annual Review: Yip (NMFS) reminded the members that the annual review is coming up and we need to ensure that we are progressing on the annual report for the technical team. We are targeting the end of September for all deadlines. The first draft for technical team report is due on 9/14. This allows enough time for the team to draft the report and for management to review it. If we put everything in writing, we don’t need to give presentations that duplicate what we’ve written. Some presentations will still be needed, such as that for the joint stipulation.

Comment: There was a general comment made that water temperatures have been managed very well in the last few months. Kudos for that! Even with the hot spells, we've kept it under the target.

Next meeting: September 27, 2012, at 1:00 p.m.