

## Stanislaus River Fisheries Flow Discussion

**REVISED 1/31/2013**

**Date:** November 7, 2012

**Location:** US Bureau of Reclamation

801 I Street, Suite 140

Bay Delta Office Conference Room

Call-in information: **(303) 445-3916**, code **1111**

**Topics:** Fall fisheries flows on the Stanislaus River

### **Attendees:**

Sue Fry - USBR

J. D. Wikert - FWS

Tim Heyne - DFG

Tim O'Laughlin -

OID/SSJID

Patti Clinton - USBR

Drew Lessard - USBR

Richard Stevenson - USBR

Paul Fujitani - USBR

Patti Idlof - USBR

Melissa Vignau - USBR

Roger Guinee - FWS

Barbara Byrne - NMFS

Sierra Franks - NMFS

Andrea Fuller - FISHBIO

Bill Parris - OID

Karna Harrigfield - SEWD

Tom Fitzhugh - USBR

Elizabeth Kiteck - USBR

Ron Milligan - USBR

Kristin White - USBR

Andy Giudice - DFG (ph)

Gwen Buchholz - CH2M

(ph)

Janice Piñero - USBR

### **(Initial) Agenda:**

1. Spawning and rearing temperatures (October-March)
2. Fall attraction flows (October-November)
3. Spawning flows (November-March)
4. Rearing flows (December-March)

### **Purpose of the Meeting:**

Reclamation described the purpose of the meeting as to hold a dialogue about common points of understanding of agreements and disagreements. The meeting is not meant to ask the National Marine Fisheries Service (NMFS) of a regulatory decision. A regulatory decision will only be made once Reclamation submits a consultation package.

### **Meeting Notes:**

OID/SSJID - stated that they wanted to structure the meeting differently and wanted to discuss the issues by month for October through February. March was complex and not included in his agenda. Tim O'Laughlin handed out 1 set of graphs for each month showing the 2E flows versus his District proposal flows and also several figures on temperature results under various scenarios.

### **Handout Explanation**

- The 1<sup>st</sup> graph shows the modeled temperatures based on historic flows versus the modeled temperatures based on the Appendix 2E (Reasonable and Prudent Alternative) flows and an attempt to meet temperature requirements that is limited at a 1500 cfs release. This is a single year model only and both scenarios start at the same conditions.

This graph shows 1990 results only. The 1990 results do not account for a compound effect of meeting 2E flows year after year.

- On the first graph, there is a large water temperature drop in early July. Historically, Tulloch dam only had the capacity to release 1,250 cfs through its turbines at the bottom of the reservoir and flows above that had to be released from the spillway on top, which can match ambient air temperature and increase the overall water temperature. Once the flow drops below 1,250 cfs, then all releases were coming from the bottom fed turbines. This results in a lower temperature for flows 1,250 cfs and below. Recently, a third generator was added and can now release up to 2,000 cfs from the bottom of the reservoir. The use of this third generator has not been modeled, but Tim expects modeling to show that the temperature would drop by 2-3 degrees in the summer when the flows were over 1,250 cfs.
    - Currently, in the summer months, all flows will go through the turbines. Peak deliveries (to OID/SSJID) should be around 1,800 cfs. OID/SSJID expects that with a 300 cfs downstream flow requirement, the temp should be around 65°F for a daily average (not average daily maximum).
  - The water temperature drops drastically in the end of September. This drop results because, in this particular year's simulation, the flow is now coming out of Old Melones Dam which is at the bottom of the reservoir and, therefore, cooler. The head between the upstream and downstream sides of old Melones is great enough to allow the water to come out of the bottom gates. OID/SSJID noted that New Melones Reservoir water is typically 52°F except behind old Melones Dam.
- The first table, titled Figure 12, shows an exceedance table of temperatures using a modeled period of record by following either 2E flows alone or 2E flows and attempting to meet temperature requirements (with a maximum release of 1500 cfs).
  - The second table, titled Figure 7, shows the same exceedance table with 2 other scenarios including the Districts proposal and a plan to meet all temperature requirements with no flow maximum.
  - The last graph shows the October temperature exceedance under historical flows versus the Appendix 2E flows.

#### **October-November Issues:**

- **OID/SSJID Views:**
  - The District stated that October water temperature objectives cannot be met and this issue also bleeds into November.
    - Water temperature doesn't seem to delay migration either.
  - The District also stated that fall attraction flows are not needed
    - OID's view is that there is no benefit or functionality of high October flows. Water temperatures during the fall are a direct result of ambient air temperatures and therefore cannot be controlled through reservoir releases. Also, Stanislaus flows cannot affect dissolved oxygen in the ship channel.
    - When we release the pulse flow in October, half of the fish have already passed through, so they are coming with or without the pulse flow
  - OID has done hydraulic modeling and no San Joaquin River water makes it into the Bay. Before the biological opinions in 2009, October wasn't a high pumping month because most pumping was done in the winter. The BOs have limited pumping in late winter and pushed more pumping into the fall and early winter. NMFS stated

that water temperatures in the Stanislaus River drop when the flows increase to 1500 cfs.

- The District's proposal is hold 250 cfs October through February in all water year types with no pulses or water temperature requirements. OID does not recommend temperature control in October through February and proposes to allow the water temperature to follow the ambient air temperature pattern. OID also does not propose a fall pulse flow.
- The State Board requirement for a pulse flow at Vernalis is partially met by Merced and Tuolumne releases due to their FERC requirements. OID feels that Reclamation has no requirement to release water from New Melones Dam to meet flows at Vernalis in the fall. Reclamation may feel differently. OID feels that the only Stanislaus River requirements for Vernalis flows imposed on Reclamation occur from February through June.
- General Comments
  - Several people questioned the purpose of the meeting and Reclamation indicated that the meeting was to both discuss fishery flows and to develop a sustainable operations plan for the Stanislaus River, but the Remand process, which needs a revised plan of operations for New Melones Dam, has a tight timeline. Reclamation is scheduled to provide a draft consultation package to USFWS and NMFS on March of 2013.
  - USFWS asked if a Revised Plan of Operations should include Anadromous Fish Restoration Program (AFRP) (b)(2) flows. The District stated that if studies by Reclamation and FISHBIO are correct, then 250 cfs provides enough habitat all year. The District also stated 250 cfs October through February is meant to cover both Steelhead and AFRP needs. USFWS noted that the AFRP flows are higher than 250 cfs in certain time periods.
  - CVO stated that a Revised Plan of Operation should be developed to address the needs of both the threatened steelhead and also unlisted fall-run Chinook salmon. CVO suggested that all demands need to be included in this revised plan in order to perform an accurate carryover analysis.
  - NMFS will follow up with a clarification of how the NMFS BiOp considered effects of the project plus RPA actions on fall-run Chinook (in particular, Stanislaus River fall-run Chinook salmon) as related to the analysis for Killer Whale. NMFS also noted that as part of the remand process, the Killer Whale analysis would be updated. SEWD stated that if these meetings are intended to result in a sustainable operations plan for New Melones Dam, then they would like to see the fisheries agencies justify the needed flows. USFWS replied that they will try to bring more justification to the next meeting
  - CVO noted that issues often arise with meeting the water temperature requirements in the fall when there is a drastic drop in night time temperatures, and the night time temperatures are both extreme and there is no real "average" temperature.

#### **December through February Issues:**

- The District asked why does the RPA have steelhead pulses in January and February? The pulses are very small but the water cost is high. NMFS responded that the January and February pulses were meant to mimic a natural storm event in the basin, add variability, help outmigration and bring some nutrients back into the river. There is more of a benefit if this happens due to a natural event. Page 50 of the amended RPA's explains the reasoning for the pulse flows.
  - According to the California Department of Fish and Wildlife, there is difficulty in discerning the effects of San Joaquin flows on juvenile rearing in the delta. Each river has a signature so they can distinguish fish that reared in the tributaries versus the delta, but it's difficult to separate fish that reared in the San Joaquin

River versus the Delta. Also, the past 2 return years have been about ½ hatchery fish.

- The RPA's has a 56°F target for incubation, although it's tagged in the RPAs as migration criteria

### Next Steps

- The next meeting will be held on November 29th at 9am, and will be covering fish needs during March, April and May. Following that meeting, the final meeting will be on December 12th to discuss June, July, August and September flows. March and June are both difficult because they are flip months.
- The November meeting will cover Stanislaus River flows and what those flows mean for Vernalis.
- NMFS raised the possibility of discussing in the December meeting how to manage not meeting the water temperature requirements and also talk about the timing of maximum water temperatures and releases.
- On November 27, the fishery agencies are presenting information to the Stanislaus tributary groups with more detailed information. SEWD noted that the same information should be given to both groups.