MEETING SUMMARY, APRIL 10, 2013

Meeting Summary
FLOW / TEMPERATURE WORKGROUP
TRRP Office, Weaverville, CA
April 10, 2013

Participants

At TRRP office: Eric Peterson (TRRP, Flow workgroup coordinator); Rod Wittler (TRRP, Temperature workgroup coordinator); Robert Franklin (Hoopa Valley Tribe); Andreas Krause, Robin Schrock, and Ernie Clarke (TRRP).

Via webex: George Kautsky (Hoopa Valley Tribe); Joe Polos (FWS); Tim Hayden, Shane Quinn, and Aaron Martin (Yurok Tribal Fisheries); Wade Sinnen and Andrew Jensen (California Department of Fish and Wildlife); Bill Brock (Forest Service); Seth Naman (NOAA Fisheries); Teresa Connor (DWR).

Note taker: Ernie Clarke (TRRP)

List of Action Items Developed at the Meeting

Action Item: Martin, Hayden and Polos will provide support for extraordinary fish numbers for inclusion in the memo.

Summary Meeting Notes by Agenda Items

Intro with Review of Meeting Goals

Peterson welcomed the group and started with introductions. The meeting goal is to finalize the WY 2013 Trinity River flow schedule recommendation to TMC. Peterson proposed an updated agenda (attached) for the meeting. The group accepted the revised agenda as proposed.

Water Year Determination

Wittler presented on the water year determination. On April 9, 2013, DWR published the 50% exceedence forecast for the annual inflow into Trinity reservoir, 828 thousand acre-feet. This forecast indicates a Dry water year and corresponds to a restoration release volume of 453,000 acre-feet

Review of Dry Alt 3 and ROD

Peterson summarized the Dry ROD hydrograph:

- Ascending limb April 27-30 to 4,500 cfs.
- Peak release of 4,500 cfs for five days (May 1-5)
- Receding limb May 6 – June 26 with short benches for habitat assessment

Peterson summarized the Dry Alt 3 Hydrograph:

- Initiate ramp up on April 23 to 2,000 cfs.
- Maintain 2,000 cfs bench for 8 days (April 24-May 3)

- Peak release of 4,500 cfs for two-days (May 4-5)
- Mimic ROD-Dry hydrograph receding limb with short benches for habitat assessment

Compare and Contrast Alt 3 v ROD – Temperatures

Wittler presented temperature modeling results. In summary, juvenile salmonids will experience better temperatures further downstream earlier under Dry Alt 3 as compared to the ROD DRY hydrograph.

Compare and Contrast Alt 3 v ROD – Fish Habitat

Martin presented results of an evaluation of the expected change in fish habitat between the alternatives. Evaluated rearing habitat data developed from ten systemic sample units using two-dimensional hydrodynamic habitat models and seven channel rehabilitation sites (post-construction) using streamflow to habitat mapping data. This information was used to evaluate the difference in habitat between a 2,000 cfs release from Lewiston Dam (consensus Alt 3 recommendation) and winter base flow conditions at 300 cfs (the ROD alternative). Habitat area density (m^2 habitat/m river channel) was calculated for each site and the difference between the Dry Alt 3 habitat values versus the ROD Dry habitat values were calculated by subtracting the ROD Dry value from the Dry Alt 3 value for each site.. Values over zero depict an increase in habitat when considering Dry Alt 3. Five out of seven rehabilitation sites exhibited increases in both optimal and total habitat when comparing Dry Alt 3 to the ROD Dry values. Seven out of ten Two-dimensional model GRTS sites demonstrated increases in optimal habitat and five out of ten GRTS sites showed increases in total habitat. It should be noted that the largest differences occurred on the positive side and all negative differences were relatively small.

Kautsky commented that the change in temperature will also impact pre-smolt habitat but was not factored into the analysis.

> **Action Item: Martin, Hayden and Polos will provide support for extraordinary fish numbers for inclusion in the memo.**

Compare and Contrast Alt 3 v ROD – Geomorphology

Krause described the geomorphological analysis. The geomorphic differences between the ROD Dry Year and the Dry Alt. 3 hydrographs were assessed by evaluating bedload and suspended sediment transport observed during the dry year releases in 2007 and 2009. Bedload and suspended sediment transport rates are variable across the peak release within the same year and transport trends are variable between years.

The dry year data from 2007 and 2009 was analyzed to compute the total sediment transport that occurred across the first 5 days of the peak flow releases of approximately 4,500 cfs. The total sediment transport was again computed for the first 2 days of the peak release and compared with the total transport across the 5-day peak.

The analysis shows that between 40% and 60% of total suspended and bedload sediment transport occurs in the last three-days of a 5-day peak release for both observed years and at all four of the sampling stations combined.

Limiting the 4,500 cfs peak flow release to 2 days as proposed by the Dry Alt-3 hydrograph will reduce the total sediment transport by 40% to 60% as compared to the 5 day peak release in the ROD Dry Year hydrograph.

Franklin commented that there is an interplay between sediment transport, supply and flow that the physical workgroup needs to further evaluate in the future.

Discussion about the location, implication of the sediment transport transects to the Program area.

Discussion about the disharmony between Rush Creek and the mainstem.

Consensus on hydrograph to recommend to TMC

Based on the analysis shared, the following participants fully supported the recommendation of Alternative 3 given the above average year class of juvenile fish in the river: Franklin, Hayden, Naman, Jensen, Connor, Polos, Sinnen, Brock.

Franklin and Hayden pointed out that while they supported Alternative 3, there was also evidence in support of the ROD dry year hydrograph.

Kautsky was in agreement with most aspects of Alternative 3, despite concerns that the supporting analysis does not go far enough. He is concerned about (a) potential temperature impacts on juvenile growth and (b) speculative departure from the ROD hydrograph. Despite his concerns, he is willing to support the proposal.

There was discussion that while the technical recommendation was to forgo sediment transport objectives to emphasize fish habitat objectives in this unusual year, TMC ultimately would weigh in on objectives.

There was discussion of how to monitor the influence of the habitat bench.

TMC Memo/DOI Memo/Finalizing the Flow Recommendation Plan

Members summarized concerns with the memo.

Adjourn 10:30 AM

DRAFT VERSION DATE 4-9-13

FLOW WORKGROUP MEETING AGENDA

Apr 10, 2013
8:30 AM
TRRP Office, Weaverville
WEBEX: web-link
Call in: 1-408-792-6300
code = **579 125 159**

Coordinators:	**Eric Peterson, Rod Wittler**
Desired Outcome:	Finalize WY 2013 Trinity River flow schedule recommendation to TMC • review evaluation of Dry Alt 3 • consensus recommendation of either Dry Alt 3 or ROD Dry
Please read/review:	Draft flow scheduling technical memorandum (to be emailed afternoon/evening April 8th)
Please bring:	Updated flow scheduling considerations and comments on proposals

Agenda Items

Time	Topic	Discussion Leader
8:30	Intro with Review of Meeting Goals	Peterson
8:45	Water Year Determination	Wittler
9:00	Review of Dry Alt 3 and ROD	Peterson
9:15	Compare and Contrast Alt 3 v ROD – Temperatures	Wittler
9:30	Compare and Contrast Alt 3 v ROD – Fish Habitat	Hayden / Martin
9:45	Compare and Contrast Alt 3 v ROD –Geomorphology	Krause/Shea
10:00	Any Further Technical discussion of Dry Alt 3 proposal	Wittler / Peterson
10:15	Consensus on hydrograph to recommend to TMC	Wittler / Peterson
10:30	TMC Memo/DOI Memo/Finalizing the Flow Recommendation Plan	Peterson / Wittler
11:00	Adjourn	Peterson

2013 Scheduling Calendar:

~~Feb. 1 Proposal template distributed~~
~~Feb. 25 MEETING – Schedule considerations~~
~~Early March: Temperature modeling of ~ water year types, ROD hydrographs~~
~~Mar. 8th: Updates (if any) to forecasts to be distributed.~~
~~Mar. 14th: DEADLINE - Flow Schedule Proposals due and disseminated~~
~~Mar 14-27: Temperature modeling of priority proposed flow schedules~~
~~Mar 28th: MEETING – Flow WG discussion and consensus recommendation to TMC~~
~~Apr. 1: TAMWG meeting~~
~~Apr. 2-3: TMC meeting~~
Apr. 10: Backup meeting
Apr. 12: TMC conference call
Apr. ?: DOI Approval
Apr. ?: USBR News Release (last year was Apr. 19th)
Apr. ?: Flows begin to increase