

**Sacramento River Temperature Task Group (SRTTG) Meeting
December 9, 2020 | 11:00 AM – 12:00 PM
Meeting Summary**

Participants

Alessia Siclari, SWRCB	Liz Kiteck, Reclamation
Allison Febbo, Reclamation	Kristal Davis, CDFW
Alyson Scurlock, Kearns & West	Matt Brown, USFWS
Bill Poytress, USFWS	Matt Holland, SWRCB
Craig Williams, SWRCB	Matt Johnson, CDFW
Diane Riddle, SWRCB	Michael Macon, SWRCB
Duane Linander, CDFW	Mike Prowatzke, WAPA
Elissa Buttermore, Reclamation	Mike Wright, Reclamation
Eric Danner, NMFS	Miles Daniels, NMFS
Garwin Yip, NMFS	Sheena Holley, CDFW
James Gilbert, NMFS	Stephen Maurano, NMFS
Jim Earley, USFWS	Suzanne Manugian, Reclamation
Jonathan Williams, CDFW	Tom Patton, Reclamation
Josh Israel, Reclamation	
Julie Leimbach, Kearns & West	
Lauren McNabb, CDFW	

**Key Discussion Topics with
Summary of Outcomes and Agreements**

Action items

1. NMFS Science Center – Long-term action to consider exploring the redd distribution over years.
2. CDFW – Develop comparison between actual and estimated fall-run dewatering to present at next SRTTG meeting.

1. Introductions

Julie Leimbach, Kearns & West, welcomed everyone, conducted introductions, and reviewed the meeting agenda.

2. Purpose and Objectives

The purpose and objectives for this meeting are to provide an update on current operations and report out from the Temperature Dependent Mortality (TDM) Subgroup on documentation of model runs.

3. Prior Action Items

Julie reviewed the prior action items and status:

1. KW – Distribute Upper Sacramento Scheduling Team Fall Flow Reduction Schedule and updated TDM table from Mike Wright – *Complete*.
2. Mike Wright, Reclamation – Apply TDM table to an example model scenario and develop a draft TDM table glossary – *In progress*.
3. Eric Danner – Develop context to introduce the TDM documentation for further collaborative input – *In progress*.
4. KW – Convene the TDM Model Documentation Subgroup – Meet to update the TDM model documentation based on input from the SRTTG and report back at the next monthly SRTTG meeting. Participants will include Eric Danner, Miles Daniels, Mike Wright, and Matt Holland – *Complete/On Agenda*.

4. Current Operations and Temperature Management

Tom Patton, Reclamation, presented the operations update.

- Reclamation has been making regular reductions in flow – flows at Keswick are down to 3,500 cfs and Reclamation is holding them there.
- Reclamation is concerned about being able to meet standards in the Delta given the dry conditions.
- There are no plans for future reductions until rainfall.
- The river temperature is very cold. Reclamation closed the side gates and opened all pressure release gates to try to conserve the small amount of cold water pool that remains.
- Water temperatures in Sacramento River at Clear Creek are in the 52-53°F range – the opening of the side gates will increase the temperature out of Shasta Reservoir, which will translate to warmer water in the river, but temperatures will not exceed 56°F.

5. Temperature-Dependent Egg Mortality Comparisons

Miles Daniels, NMFS Science Center, presented the temperature-dependent egg mortality comparison between the observed 2020 and simulated (2012-2019) redd distribution in time and space.

Individual group members discussed the following:

- The 0.75% change between the observed 2020 and simulated 2012-2019 redd distribution is small when considering that the small percentage likely falls within the range of model error.

- State Board’s request for analysis of the distribution of redds and changes over the last several years.
 - NMFS Science Center – Over the long term, there is significant spatial contraction upstream and there are issues with this data as aerial redd survey data is not entirely comprehensive.
 - There are two different issues with how you look at these analyses.
 - 1. What you are protecting in any given year and if you are managing to that particular distribution of redds.
 - 2. How much habitat you are protecting in any given year.
 - The concern is if we look at 2012 and 2020, the redd distribution continues to contract. In each year if you try to protect habitat where the redds are, the habitat you’re protecting is smaller and smaller which does not provide for habitat growth for winter-run for spawning.
 - NMFS Science Center took as a long-term action item due to their time constraints in the short-term.

6. TDM Background and Documentation

Mike Wright, Reclamation, reviewed the revised TDM background and documentation that is being developed by the TDM Subgroup.

Elissa Buttermore, Reclamation, provided an update on the SacPAS fish model.

- The University of Washington will create video demonstrations in a few months of how to use SacPAS, including how to run the fish model.

7. Upper Sacramento Scheduling Team – Recommendations for Final Flows Coordination Schedule and Spring Flows Update

Reclamation updated the latest Fall Flows spreadsheet.

- High and low estimates for Alternative 6a were included to account for possible errors or if the flow scheduled was not strictly followed.
- Fall-run dewatering estimates were also updated to show the range of sensitivities.

Individual group members made the following comments:

- State Board – Have surveys been conducted to determine the actual fall-run dewatering that occurred compared to the estimates that were generated?
 - CDFW reports the following numbers:
 - 600 shallow redds are still being actively tracked.
 - 482 redds have been remeasured.
 - 54 out of 482 redds have been dewatered.
 - 218 redds are in 6 inches of water.
 - Not sure how these numbers compare to the projections.
 - State Board – Suggested doing comparison between actual fall-run dewatering and estimates once work is done and final numbers are calculated.

- KW will add to agenda for next meeting.
- NMFS and Reclamation discussed the fall-run dewatering spreadsheet and clarified the calculations and source for the dewatering estimates. Reclamation's dewatering estimates in the spreadsheet take into account the estimates from Mark Gard's 2006 FWS report. The difference is that Reclamation's estimates take into account the timing of flow drops and the spawning timing of fish. It is an important clarification and interesting to note that the dewatering estimates generally run high. Reclamation hopes to incorporate all of that information into the year-end reports for fall and winter-run operations.

8. Shasta Cold Water Pool Seasonal Report

Elissa Buttermore provided an update on the Shasta Cold Water Pool Seasonal Report timeline.

- The next draft will be submitted to the Long-Term Operation agencies on 12/11 and comments are requested back by 12/18.
- Comments will then be incorporated, and agencies will have one last opportunity for review before finalizing by the end of the year.

9. Review Action Items

Julie noted that KW would send around the action items.

10. Post Meeting – Spring Flows Update

Due to time limitations, the Spring Flows Update was not provided in the meeting itself.

Reclamation sent the below email update after the meeting.

- The Spring Flows Study Plan draft is in progress.
 - NMFS and Reclamation had a meeting on 12/2 to discuss Reclamation's SacPAS and NMFS' CJS models (work to continue until next week on model runs).
 - The Spring Flows Study Plan draft (not dependent on modeling) will be presented and modeling results and comparisons will be discussed on 12/16.
 - Draft of all other sections (modeling language to draft study plan) will be completed by 12/23.
 - All comments will be integrated through an iterative process and plan will be finalized by 2/4.
- The Spring Flows Subgroup is working on a "library" of model runs in hopes of minimizing efforts and a sense of unpreparedness in the spring season.
 - The proposed scenarios will include turning the "knobs" for daily schedules by turning pulse duration, rate of flow change, pulse frequency, pulse release timing, and release quantity magnitude.
 - Goal is to finish developing the library by early spring (February - May 2021) so the group can identify achievable pulse flow scenarios based on current conditions.

- Identified the importance of Spring Flows Subgroup to be in close contact with SRTTG and USST to have discussions and make decisions in a timely manner to keep the ball moving forward.