Sacramento River Temperature Task Group (SRTTG) Ad-Hoc Meeting
April 26, 2022, | 8:30 AM – 9:00 AM
Meeting Summary

Participants

Participants

Bill Poytress, USFWS
Crystal Rigby, CDFW
Craig Williams, SWRCB
Diane Riddle, SWRCB
Doug Killam, CDFW
Erica Meyers, CDFW
Eric Danner, SWFSC
Gabe Singer, CDFW
James Earley, USFWS
James Gilbert, SWFSC
Jason Roberts, CDFW
Jeff Laird, CDFW
Jo Anna Beck, Reclamation
John Hannon, Reclamation
Johnathan Williams, CDFW
Kimberly Holley, CDFW
Lauren McNabb, CDFW
Matt Brown, USFWS
Michael Macon, SWRCB
Mike Deas, SRSC
Michael Wright, Reclamation
Stephen Maurano, NMFS
Suzanne Manugian, Reclamation
Tom Patton, Reclamation
Thad Bettner, SRSC

Facilitation Team

Adam Fullerton, Kearns & West
Julie Leimbach, Kearns & West
Mia Schiappi, Kearns & West

Key Discussion Topics with
Summary of Recommendations and Outcomes

Action Items

1. Reclamation and Shasta Planning Group representatives - Clarify the process for direction and requests for technical input from Shasta Planning Group to the SRTTG
2. Julie, Kearns & West – communicate outcomes back to Jason and Diane for Shasta Planning Group
    a. No consensus on technical input
    b. Considered using 2021 and an aggregate of 2016-2021
    c. Concern that there is too much attention being paid to the uncertainty in redd distribution and TDM when it is only one of the uncertainties in the model.

Summary Outcomes

- The SRTTG maintained and supported the technical recommendation to use the following redd distribution as points of comparison:
    - 2021 redd distribution for 2022 TDM forecasts
        - Consistent with the results of the 4/14 SRTTG meeting and as shown in model results at the 4/21 meeting.
    - 2016-2021 redd distribution for a point of comparison
        - Consistent with technical recommendation first made on 4/18 by SRTTG members USBR, DFW, SWFSC and NMFS in response to an earlier Shasta Planning Group (SPG) request. This 2016-2021 point of comparison is also consistent with Reclamation's modeling in the 4/6 Draft Temperature Management Plan.

- However, the group did not converge around technical input for a method of averaging the years for the 2016-2021 point of comparison. Some group members recommended that a modeling team develop a method for averaging the years, so long as the same redd distributions are used to ensure comparability.
- A few members voiced concern about the variation in the number of redds observed and how that might influence the average across years.
- Some members expressed concern that this much attention was going into just this one area of uncertainty.
- Some members requested clarification about the process of communication of requests and technical input between SRTTG and SPG.

Shasta Planning Group
The Shasta Planning Group met on 4/25 and discussed the TDM modeling concept from last week's SRTTG meeting.

- The Shasta planning group was not agreeable to the idea of modeling 2021 redd distributions and identifying that TDM could be 10-20% higher.
- Shasta Planning Group would like SRTTG to identify two specific redd distribution scenarios.

Objectives of Redd Distribution Model Assumption
The group discussed the objectives of identifying 2 years for redd distribution assumptions.

- Reach 2 TDM model numbers representing a range from pessimistic to optimistic.
- Simple, communicable, layperson explanation and rationale
- Communicate redd distribution TDM uncertainty within the context of other uncertainties
    - We don't have historical data comparable to the anticipated river flows in 2022.
- Consistency applied across all model runs, to extent the model frameworks allow.

Redd Distribution Options
The group did not converge around technical input and there were some expressions of concern that this much attention was going into just this one area of uncertainty.

The group focused discussion on these two options for redd distribution years to inform the modeling for TDM.

1. 2021
    a. Most likely comparable year to 2022
    b. Paints an optimistic picture of TDM

2. 2016-2021
    a. Average aggregate
    b. Used in Draft TMP 2022
    c. Methodology
        i. Recommendation to use SWFSC redd distribution methodology
        ii. DFW and SWFSC discussed the disparity in run sizes between years, but neither recommended that it be weighed. Use a weighted average of the aggregate.
    d. Rationale:
        i. Includes a range of years
        ii. Includes 2016 and 2019 which had the highest TDM resulting from farther downstream redd distribution.
    e. Disadvantage:
        i. Averages wash out the distinctions in each year

ii. There was no other methodology suggested to address the drawback with the weighted average.

The group also briefly discussed these options:

3. 2019 as a single comparison year
    a. Rationale: same cohort, parents of fish migrating in 2022

4. Redd Distribution used in past years
    b. Composite 2012 – 2019

Redd Distribution Data Bias

Jason Roberts, CDFW, also raised concerns about the biases created by redd distributions data from aerial observations. He suggested considering switching to using female carcass data in the future.
Particular concerns with using redd distribution data include:

- Inconsistency of data collection on redd distribution
    - In certain years, aerial redd flights may not fly during all week which may bias where redds are observed
- Bias of redd distribution methods
    - Flight observations bias shallow areas

Technical Input on Redd Distribution Model Assumption

Some SRTTG members considered recommending the following options for redd distribution inputs to the models for 2022: 1) 2021 and 2) the averaged aggregate of 2016 -2021.

The only members who expressed explicit support for this option was NMFS and CDFW. We ran out of time to test the option with the rest of the members and there was no suggestion for extending the meeting nor meeting again on the topic.