BUREAU OF RECLAMATION

Water Operations Management Team Notes

January 25, 2023

Members Attending

- USBR: Liz Kiteck
- USFWS: Jana Affonso
- CDFW: Brooke Jacobs, Kristal Davis-Fadtke
- NMFS: Stephen Maurano (acting)
- DWR: Molly White, Lenny Grimaldo
- SWRCB: Diane Riddle, Matt Holland

Topics/Actions

- Approval of Meeting Notes and Supporting Materials from last week
    - January 18, 2023 Notes: Comments/Edits due COB 1/26
    - January 19, 2023 Notes: Comments/Edits due COB 1/26
    - January 20, 2023 Notes: Comments/Edits due COB 1/26
    - January 20, 2023 WOMT PA Assessment: Comments/Edits due COB 1/26
- Upcoming Meetings
    - Salmonid Monitoring Team (meets weekly on Tuesdays): 1/31
    - Smelt Monitoring Team (meets weekly on Tuesdays): 1/31
    - Feather River Operations Group (meets monthly first and third Thursdays): 2/2
    - American River Group (meets monthly on third Thursday, and as needed): 2/16
    - Stanislaus River Watershed Team (meets monthly on third Wednesday): 2/15
    - Clear Creek Technical Team (meets quarterly on third Thursday): 3/16
    - Sacramento River Temperature Task Group: 2/23
    - Shasta Planning Group: not currently meeting

- Operational Updates
    - CVP: Trinity River releases are at 300 cfs. Sacramento River (Keswick) releases are currently at 3,350 cfs, dropping to 3,250 tomorrow. Clear Creek (Whiskeytown) releases are at 200 cfs. American River (Nimbus) releases are at 7,000 cfs today, dropping to 4,000 cfs by 1/30. Stanislaus River (Goodwin) releases will be 200 cfs by tomorrow. Reclamation's Delta pumping tomorrow will be at 5 units targeting 4,100 cfs. Federal share of San Luis Reservoir is 444 TAF.
    - SWP: Feather River (Oroville-Thermalito Complex) releases are at 950 cfs. Exports are targeting 9,500 cfs and scheduled to hold for next several days. Oroville storage is 2.21 MAF. State share of San Luis Reservoir is 667 TAF.
- Relevant Assessments
    - Weekly Fish and Water Operations Outlook 1/24/23 – 1/30/2023
    - 20230124 Proposed Action Assessment
    - SaMT ITP Risk Assessment Summary dated 1/24/2023
    - SMT ITP Risk Assessment Summary dated 1/24/2023
- Upcoming Actions
    - Reclamation:
        - No actions. No discussion items.
        - Comment: WOMT needs to have a clear process for informing everyone once a decision is made instead of just stating it in the notes. It can take days for the notes to be finalized and approved and, in the meantime, there is a lot of confusion about what the decision was.
    - FWS:
        - Delta Smelt Releases –The third and final experimental release for 2023 is happening this week. Cultured Delta Smelt are being released into deepwater ship channel. Details are in the PA Assessment.
        - Discussion Items
            - Discuss proposed plan for operations given ongoing high turbidity and requirements for Turbidity Bridge Avoidance measures to protect Delta Smelt
            - Expectations regarding SMT input to WOMT
    - CDFW:
        - Last week, DWR requested an ITP amendment in response to a higher than usual error rate in clipping/tagging of late-fall Chinook Salmon hatchery fish. The intent of COA 8.6.3 is to protect natural origin fish, and there is concern that unmarked hatchery fish could trigger OMR

responses. This amendment is for this water year only. COA 8.6.3 (Daily Loss Thresholds) would initially trigger if calculated loss of length-at-date (LAD) older juvenile Chinook Salmon exceeds the daily loss thresholds, but the amendment allows the OMR response to offramp if the LAD older juvenile is genetically tested (via Sherlock and GT-seq) and determined to not be a genetic winter-run.

- Discussion Item: Lack of a recommendation from SMT on OMR that are protective for DS.

- NMFS:
  - No actions. No discussion items. NMFS will abstain on OMR discussion items pertaining to Delta Smelt.
- DWR:
  - No actions.
  - Discussion Item: Lack of consensus on OMR advice.
- SWRCB:
  - No actions. No discussion items.

- Hydrology Update (DWR and Reclamation)
  - No hydrology update.
- Discussion Items
  - **Discuss proposed plan for operations given the turbidity bridge action – Update from last week:**

    DWR and Reclamation propose to operate to an OMRI no more negative than -5,000 cfs beginning tomorrow, 1/26. SMT discussed a range of OMR values from -2,000 to -5,000 but did not reach consensus on a recommendation.

    - DWR said that it is infeasible to reduce turbidity at Bacon Island below 12 FNU by adjusting exports.
    - DWR stated that their interpretation of the intent of Turbidity Bridge Avoidance was to prevent DS from moving into the OMR corridor. Based on literature (CITE), DWR stated the average movement time for Delta Smelt is 21 days. Because First Flush began on 1/3, DWR believes DS are at the tail end of their migration into the Delta. The goal now should be to make sure fish stay out of the OMR corridor, but that is not possible to determine with low detection. DWR thinks -5,000 cfs is protective.
      - DWR agreed to provide literature citations to support the rationale and include a more thorough science-based justification such as was articulated during the meeting. [This written justification was provided on 1/27 and is included as an Attachment]

        - No Reclamation fishery biologists were available to comment.
    - FWS reminded the group that the PA allows for Reclamation and DWR to determine that -2000 cfs OMR restrictions beyond the initial 5 days will not result in turbidity lower than 12 FNU at Bacon Island, and would implement an OMRI level that is deemed protective but is not more negative than -5,000. Moving forward, FWS recommends that Reclamation and DWR provide a more concise written justification of the proposed change in OMR addressing feasibility and protectiveness, than what was provided last week. A more concise justification can still provide relevant information to SMT to consider in its deliberations. This will help with tracking the actions and monitoring conditions in real-time.
    - CDFW raised concerns about continued high exports setting up spawning conditions for Delta Smelt in the OMR corridor which could result in higher larval and juvenile losses later in the season.
        - DWR responded that after 21 days, Delta Smelt should have dispersed widely and don't move much after that point. If flows drop and then there is another storm, we may expect additional movement.
- WOMT was able to reach consensus (with NMFS and the State Water Board abstaining) on approving Reclamation and DWR's proposal to operate to a 5-day average OMRI of -5,000 cfs for one week starting on 1/26, while monitoring conditions closely and with the additional considerations voiced by FWS and CDFW, detailed below.
    - Reclamation and DWR propose to operate to an OMRI of -5,000 cfs beginning 1/26.
    - FWS agrees with the proposed action for this week, with the assumption that the new scientific justification that DWR shared today be documented and included in the WOMT notes to support the rationale. Moving forward, FWS would like to discuss a better process for such proposals.
    - CDFW agrees that it is very important that the additional information that DWR proposed be detailed in the WOMT notes, but that this would not be the preferred process going forward. The process this week raises concern in that no written rationale was provided by Reclamation and DWR, and there was no opportunity for SMT to review and consider the additional scientific justification provided verbally at WOMT. CDFW remains concerned about sub-adult and adult entrainment while turbidity remains high. CDFW stressed that WOMT needs to be taking these decisions seriously and tracking conditions closely.
    - NMFS and Water Board Abstained.
- Expectations regarding SMT input
    - Moving this discussion item for next week
- Lack of a recommendation from SMT on OMR that are protective for DS. Lack of consensus on OMR advice.
    - Moving these discussion items to Friday WOMT Meeting (to be scheduled)

- Action Items
    - Schedule meeting on Friday to discuss process for initiating and responding to proposed OMR changes
    - DWR to review notes and provide text and literature citations to fully capture what was stated verbally during the meeting in order to (1) justify why turbidity reduction is infeasible and (2) present the scientific rationale for why OMR no more negative than -5,000 is protective for Delta Smelt.
    - WOMT will review notes from meetings on 1/18, 1/19, and 1/20 by COB 1/26.

Elevation Items

- No elevation items to the Directors.

Next Meeting

- Friday, January 27, 10:30-11:30 am (Off-cycle meeting)
- Wednesday, February 1, 1-1:50 p.m. (Regular weekly meeting)

Attachment – Rationale for Proposed Operations being Protective of Delta Smelt

As provided to WOMT on 1/25/2023, please see DWR and Reclamation's justification for the operations of no more negative than -5000 cfs (on a 5-day average):

- The Projects have operated at -2000 cfs for 19 consecutive days (first flush @ 14 days and turbidity bridge @ 5 days). The Projects operated to OMR no more negative than -3500 cfs for an additional 5 days thereafter. The cumulative effects of these actions reduced the entrainment footprint of the Projects for a period that extends through average upstream movement period of delta smelt (23.6 days see Sommer et al 2011; also see Grimaldo et al. 2009)

- Once Delta Smelt move upstream, they have limited movements (Polansky et al. 2017). Therefore, the risk of additional delta smelt moving into the interior Delta or getting entrained at the Projects is likely low

- DWR pointed out that the 2008 FWS BiOp had an offramp for OMR triggers once SJR flows elevated above 10,000 cfs. As of 1/25, SJR flow (@ Vernalis) was 17,462 cfs. SJR flows peaked above 24,000 cfs last week and remained over 20,000 for six consecutive days between 1/18 and 1/23. Data pre-2008 shows that when SJR flows reach such high levels, adult entrainment and calculated proportional losses are relatively small (Kimmerer 2008; Smith et al. 2022) because delta smelt distribution shifts seaward away from the influence of the Projects.

- DWR and Reclamation propose that the Projects operating to -5000 cfs OMR will not create conditions that results in any additional movement of delta smelt into the interior Delta. DWR noted the intent of first flush and turbidity bridge was never to expect zero salvage or zero fish movement into the interior Delta as delta smelt are capable of swimming to upstream locations under high outflows (Gross et al. 2021). The intent was to severely reduce a large proportion of the delta smelt from moving into the entrainment zone which historically (pre-2009 FWS BiOP) led relatively high proportional population losses.