BUREAU OF RECLAMATION

Salmon Monitoring Team (SaMT) Weekly Meeting

Teams call: 1/14/25 at 9:00 a.m.

Objective

Provide information to the Water Operations Management Team (WOMT), the U.S. Bureau of Reclamation (Reclamation) and California Department of Water Resources (DWR) on measures to reduce adverse effects from Delta operations of the Central Valley Project (CVP) and the State Water Project (SWP) on salmonids and green sturgeon. Final versions of the Proposed Action Assessment, and Fish and Water Operations Outlook will be posted to Reclamation's Delta Monitoring Work Group webpage, while final version of the Meeting Notes will be posted to Reclamation's Salmon Monitoring Team webpage. Meeting participants include representatives from: California Department of Fish and Wildlife (CDFW), DWR, National Marine Fisheries Service (NMFS), State Water Resources Control Board (SWRCB), Reclamation, and the U.S. Fish and Wildlife Service (USFWS).

Participants

- California Department of Fish and Wildlife (CDFW)
- California Department of Water Resources (DWR)
- NOAA National Marine Fisheries Service (NMFS)
- State Water Resources Control Board (SWRCB)
- U.S. Bureau of Reclamation (Reclamation)
- U.S. Fish and Wildlife Service (USFWS)
- Kearns & West (K&W)

Announcements

- The direction received from leadership is to continue SaMT's current activities. The SMT and SaMT groups will continue to meet on Tuesdays at 9 a.m. PT for the Weekly Operations Meeting.

Part 1. Updates on Water Operations and Biological Conditions

Relevant Actions & Triggers

- **Delta Cross Channel (DCC) Gate operations (PA 4.10.5.3)**: See Outlook and Assessment for more information.

- **SWP ITP/CVP PA Winter-run Chinook Salmon Annual Loss Thresholds (COA 8.4.3/PA 3.7.4.5.3):** DWR and Reclamation will operate Banks Pumping Plant and Jones Pumping Plant consistent with COA 8.4.3/PA 3.7.4.5.3 of the SWP ITP/SWP and CVP PA. These values are based on the final juvenile production estimate (JPE).

    - The natural-origin Winter-run Chinook salmon Annual Loss Threshold for this year is based on the initial length-at-date (LAD) identification of natural-origin older juvenile Chinook salmon and the thresholds described above. If genetic analysis of natural-origin older juvenile Chinook salmon observed in salvage at the SWP or CVP subsequently confirms that any given Chinook salmon is not genetically identified as a CHNWR that fish will not count towards the loss threshold. This threshold is loss of natural-origin winter-run Chinook salmon from the CVP and SWP greater than or equal to 0.5% of the winter-run Chinook salmon JPE (loss threshold = 98,893 x 0.5% = 494.47). If cumulative loss of natural-origin CHNWR in a brood year exceeds 50% of the annual loss threshold (loss > 247.24), then Permittee shall, in coordination with Reclamation, adjust south Delta exports to achieve a 7-day average of the OMR index no more negative than -3,500 cfs for 7 consecutive days. If a CHNWR is salvaged during the 7-day action, the action will be extended for another seven days. At the conclusion of the action, Permittee, in coordination with Reclamation shall revert to the weekly distributed loss threshold until the 75% threshold is reached or throughout the end of the OMR Management season If the 75% loss threshold (loss > 370.85) is exceeded AND the Winter-Run Chinook salmon Machine Learning Model predicts that an OMR index of -2,500 cfs would shift the model output to a classification of CHNWR absence with a minimum probability of absence prediction of 0.559 for 1 of 30 sub-models for any of the 7 most recent prediction days, then a 7-day average OMRI index of -2,500 cfs will be operated to for 7 consecutive days. Thereafter, each winter-run observed in salvage will trigger a 7-day OMR index of -2,500 cfs for 7 consecutive days IF the Winter-Run Chinook salmon Machine Learning Model predicts that an OMR index of -2,500 cfs would shift the model output to a classification of CHNWR absence with a minimum probability of absence prediction of 0.559 for 1 of 30 sub-models for any of the 7 most recent prediction days. The JPE has not yet been calculated for WY 2025; therefore, threshold values are not yet available but natural-origin winter-run loss is still being tracked until these thresholds are determined.

- The hatchery-origin Chinook salmon Annual Loss Threshold for this year is loss of both LSNFH and Battle Creek clipped CWT winter-run Chinook salmon from the CVP and SWP greater than or equal to 0.12% of the winter-run Chinook salmon hatchery-origin JPE (loss ≥ 162.41 and loss > 3.44, respectively). If the 50% and 75% thresholds are exceeded, the same process will occur as what occurs for the natural-origin winter-run Chinook salmon (as discussed in above bullet).
- The final JPE was distributed on 1/10/25 for WY 2025. Hatchery-origin winter-run Chinook salmon have not been released yet in WY 2025.

- **SWP ITP/SWP and CVP PA Winter-run Weekly Loss Thresholds (COA 8.4.4/PA 3.7.4.5.4):**
  - DWR and Reclamation will operate Banks Pumping Plant and Jones Pumping Plant consistent with COA 8.4.4/PA 3.7.4.5.4 of the SWP ITP/CVP PA. These values are based on the product of the weekly percentage of natural-origin CHNWR present in the Delta, scaled to 100% (Table 4, Column E of the SWP ITP), and 50% of the natural-origin CHNWR annual loss threshold (COA 8.4.3/PA 3.7.4.5.3). Due to a final JPE being issued on 1/10/25, the weekly thresholds are updated below. The thresholds for the month of January are as follows:
    - 1/1/25 - 1/7/25: 0.56
    - 1/8/25 - 1/9/25: 0.56[1]
    - 1/10/25 - 1/14/25: 0.79[2]
    - 1/15/25 - 1/21/25: 3.21
    - 1/22/24 - 1/28/25: 3.21
  - If the 7-day rolling sum of loss exceeds the above thresholds in any given week, the required response is to reduce SWP and CVP exports to reach an OMR index of no more negative than –3,500 cfs for seven consecutive days. DWR and Reclamation shall restrict exports in response to initial LAD identification of natural-origin older juvenile Chinook Salmon. If genetic analysis of an individual natural-origin older juvenile Chinook salmon observed in salvage at the SWP or CVP indicates that it is not a winter-run, that individual shall not count toward the daily loss threshold and continued export restrictions under this COA are not required if the weekly loss threshold has consequently not been met.

[1] The Week 1 calculation is based on the interim natural-origin winter-run Chinook Salmon JPE of 69,795.
[2] Two values were calculated for Week 2 due to the natural-origin winter-run Chinook Salmon JPE becoming available on January 10, 2025. The first calculation (1/8-1/9) uses the interim natural-origin winter-run Chinook Salmon JPE of 69,795, whereas the second calculation (1/10-1/14) is based on the natural-origin winter-run Chinook Salmon JPE as described in the Winter-run JPE Subteam memorandum

Weekly Fish and Water Operations Outlook, Current Operations

- SaMT reviewed and updated the Outlook document. The updated Outlook document will be shared with SaMT via SharePoint link by close of business (COB) 1/15/25. Additional details and operations context shared at the 1/14/25 meeting include:
    - Sacramento River flows at Freeport are currently 37,900 cfs.
    - San Joaquin River at Vernalis flows are currently 1,342 cfs.
    - Clifton Court Forebay (CCF) is scheduled to be 1,600 cfs on 1/14/25 and will decrease to 800 cfs on 1/15/25 due to the bridge avoidance action triggered on 1/12/25.
    - Jones Pumping Plant is currently exporting 4,200 cfs and will decrease to 3,400 cfs on 1/15/25 in order to target the OMRI of -3,500 cfs.
    - Delta Outflow is at 33,100 cfs.
    - QWEST is +1,329 cfs and expected to range between +1,400 cfs to +2,600 cfs.
    - Rio Vista flows are currently at 28,000 cfs and are expected to range between 15,000 cfs and 32,000 cfs.
    - OMRI is -5,000 cfs but will increase to –3,500 cfs on 1/14/25.
    - SWP share of San Luis Reservoir storage is approximately 900 TAF.
    - CVP share of San Luis Reservoir storage is approximately 583 TAF.
    - Total storage of the San Luis Reservoir is approximately 1.487 MAF.
- SaMT estimates of the current distribution of listed Chinook salmon and CCV steelhead, as a percentage of each population, are based on recent monitoring data and historical migration timing patterns. Estimates this week are based on young-of-year (YOY) winter-run, YOY spring-run, and natural origin steelhead at real-time monitoring locations. These estimates are reported in the final Assessment document, available on the Delta Monitoring Workgroup webpage.

Table 1. Fish Distribution Table

Location	Yet to Enter Delta	In the Delta	Exited the Delta
Young-of-year (YOY) winter-run Chinook salmon	Current: 40-45% Last week: 45-50%	Current: 55-60% Last week: 50-55%	Current: 0% Last week: 0%
YOY spring-run Chinook salmon	Current: 75-85% Last week: 80-90%	Current: 15-25% Last week: 10-20%	Current: 0% Last week: 0%
YOY hatchery winter-run Chinook salmon	Current: N/A Last week: N/A	Current: N/A Last week: N/A	Current: N/A Last week: N/A
Natural origin steelhead	Current: 95-97% Last week: 97-98%	Current: 2-4% Last week: 1-2%	Current: 1% Last week: 1%

Justification for Fish Distribution Estimates

- YOY winter-run Chinook salmon
    - SaMT reviewed the RST data and determined that winter-run were caught in real-time monitoring stations in the Delta, including Knights Landing RST, the Sacramento beach seines, the Tisdale RST, and the Sacramento trawl.
    - Based on data numbers and historical timing, SaMT chose to increase the amount of winter-run in the Delta by 5% for an updated total of 55-60% in the Delta.
- YOY spring-run Chinook salmon
    - SaMT reviewed the RST data and determined that approximately 180 spring-run were caught in real-time monitoring stations in the Delta, including the Lower Sacramento trawl, Lower Feather River RST, Knights Landing RST, Butte Creek RST, and the Sacramento beach seines.
    - Based on the numbers, SaMT increased the number of spring-run in the Delta by 5% for a total of 15-25%.
- YOY hatchery winter-run Chinook salmon
    - No releases of hatchery-origin winter-run have occurred so far this season.
- Natural origin steelhead
    - A few steelhead were observed in the Lower Sacramento RST and the Tisdale RST.
    - Based on these numbers, SaMT increased the number of steelhead in the Delta by 2% for a total of 2-4%.
    - NMFS noted that fewer number of steelhead indicate a greater percentage significance than those of Chinook salmon.

Part 2: Open Discussion on Species Status

Coleman Hatchery Spring-Run Surrogates

- CDFW reported that the third release group of hatchery yearling spring-run for COA 8.4.4/PA 3.7.4.5.4 were expected to occur mid-January.
    - This process will require review by SaMT before elevation to WOMT.
    - Due to a lack of expected precipitation in the forecast, the hatchery staff are able to hold those fish through February.
    - CDFW reached out to USFWS to get an update on the mid-January release for the yearling spring-run surrogates from Coleman National Fish Hatchery (CNFH). USFWS mentioned that CNFH has the means to house the late fall-run Chinook salmon (yearling spring-run Chinook Salmon surrogates) until February if SaMT wanted to wait for a storm event to release these fish with.

    - CDFW relayed this information to SaMT and shared that they had concerns with waiting until February for a storm event due to Shasta Reservoir releases dropping and hydrological conditions worsening which would impact the survival of these fish through the Delta.
- Considering the ITP and the PA, there could be concern about overlapping the YOY and yearlings, and releasing them too late in the season would not be ideal.
- Survival is anticipated to be higher in conjunction with a storm event and/or higher Shasta releases (i.e., 8,000+ cfs).
- SaMT debated on whether to capitalize on the higher Shasta releases or wait to see if a storm event develops at the risk of not having enough water and flow present if a storm event does not materialize.
- Questions and Comments
    - DWR expressed concern with holding the yearlings too long, because when they reach the smolting stage, intake of hatchery feed decreases. A more advanced state of smoltification would cause them to outmigrate more quickly to reach salt water. While willing to wait a short time for a storm event, DWR acknowledged the flow decrease at Shasta and therefore, it may be beneficial to release them sooner than later. If the wait for a storm stretches to three weeks or greater, it might be detrimental to the yearlings.
    - CDFW agreed with DWRs concern and agreed that releasing these fish sooner rather than later would probably be best. CDFW recommended that each agency alert their WOMT representative to inform them of this discussion so that they are aware of it before the WOMT meeting and can make a final decision on when to release these fish.

Salvage Update

- No wild Chinook salmon or steelhead were observed in salvage.
- Hatchery spring-run and late fall-run Chinook salmon from broodstock origins were observed in salvage.
- One fish from the San Joaquin Restoration Program was observed in salvage.
- Hatchery steelhead were observed in salvage during the reporting period.

Hatchery and Collection Facility Operations

- No operational variances were reported.

Part 3. Live Edit Assessments

ITP Risk Assessment

- SaMT reviewed the draft ITP Risk Assessment.
- The final ITP Risk Assessment can be found on CDFW's Water Project Operations webpage.

Part 4. Additional Considerations/Discussion

Georgiana Slough Salmonid Migratory Barrier

- CDFW asked for an update on the Georgiana bioacoustic fish fence (baff) and if they've started operating using bubbles at this point in time?
    - DWR responded that the bath bubble curtain is not yet operational. The compressor had to be custom-made and repairs and safety modifications are also being conducted. There is not a specific timeline for when it will be working, but crews are working diligently to amend the issue.
    - DWR also had the second release for their effectiveness studies last week. Data can be found on CalFishTrack.

Presentation: 2024 CVP PA & SWP ITP

- CDFW and Reclamation provided a presentation that compared the 2020 version of SWP ITP with the new 2024 SWP ITP and CVP PA.
- The presentation focused on the Conditions of Approval (COAs) that are specific to Chinook salmon and steelhead.
- A detailed list of COA updates can be found in the presentation slides distributed along with the SaMT meeting notes.
- Questions and Comments
    - CDFW asked if the 75% threshold action takes place, once it concludes, do [operations] go back to a -5,000 cfs OMRI restriction, or does it increase back up to -3,500 cfs or higher?
        - CDFW responded that it is likely operations would return to an OMRI of -5,000 cfs per COA 8.4.4., unless it is triggered a second time, in which case OMRI Could return to -2,500 cfs. In other words, if the 75% threshold is reached and zero winter-run Chinook salmon are seen after the 7 days of -2,500 cfs OMRI, operations would revert to a protective flow of -5,000 cfs.
    - DWR asked Reclamation about comparing weekly loss versus annual loss for steelhead.
        - Reclamation confirmed that they'll be using loss numbers for the annual figure and then compare salvage to loss for the weekly loss thresholds.

- CDFW asked about triggers based on salvage, and requests that any requests for changes to the weekly Salvage Report be communicated to Kyle Griffiths.
- CDFW asked about how this affects future SaMT meetings and if it's necessary to convene regarding meeting thresholds. Will the new process simply be a notification to WOMT when a threshold is met? Do triggers need to be agreed upon during meetings going forward?
    - CDFW confirmed that convening as a group isn't necessary when thresholds are triggered for winter-run Chinook Salmon, including the 50% loss threshold. However, each week SaMT will meet to discuss spring-run Chinook Salmon. If SaMT or anyone on the call would like to propose a more positive OMRI for spring-run, they would notify their WOMT representative and that would be decided at the WOMT meeting.
    - Reclamation added that per the PA, there are only about five instances where an assessment or group meeting may be required, excluding the weekly spring-run assessment.

Discussion on Future SaMT Meetings and Documentation

- CDFW asked for a status update on the conducting of weekly SaMT meetings following the Weekly Operations calls. Has Reclamation been given any clear direction on this?
    - Reclamation is still awaiting guidance from the subdirectors. They were told to remain with the status quo for the time being and continue editing the assessment each week.
    - CDFW is willing to combine items into one assessment (Proposed Action + ITP) if Reclamation obtains direction from management that states it is appropriate to do so.

Items to Raise to WOMT

- N/A

Next SaMT Meeting

- The next SaMT Meeting is scheduled for Tuesday, 1/21/25 at 9 a.m.

Action Items

- Kearns & West to post the presentation to the SaMT folder.
- SaMT members to alert their WOMT representative to the potential for an upcoming spring-run yearling release from Coleman National Fish Hatchery in an attempt to take advantage of higher releases from Shasta and avoid the risk of waiting for a future storm event to bring precipitation to the Central Valley. At the current time, there are no storms forecasted for the area.