



Salmon Monitoring Team (SaMT) Weekly Meeting

Teams call: 4/22/25 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

- N/A

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 Condition of Approval (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 = $98,893 \times 0.5\% = 494.47$). 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 OMR 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 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.
- SWP ITP 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/SWP and 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). The final JPE Memo was issued on 1/10/25.

- The weekly loss threshold for the remainder of the season is provided below:
 - 4/2/25 – 6/30/25: 0 fish
- 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 average 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 loss threshold and continued export restrictions under the PA or COA are not required if the weekly loss threshold has consequently not been met.
- **SWP ITP Spring Delta Outflow Implementation (COA 8.12.1):** Permittee shall reduce exports from April 1 to May 31 each year to achieve the SWP proportional share (COA 8.7) of export reductions established by the ratio of Vernalis flow (cfs) to combined SWP and CVP exports, scaled by water year type, to provide incidental spring outflow.
 - In a critical water year type, the ratio of Vernalis flow to SWP and CVP combined exports shall be 1:1
 - In a dry water year type, the ratio of Vernalis flow to SWP and CVP combined exports shall be 2:1
 - In a below normal year, the ratio of Vernalis flow to SWP and CVP combined exports shall be 3:1
 - In an above normal or wet year, the ratio of Vernalis flow to SWP and CVP combined exports shall be 4:1

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) 4/23/25. Additional details and operations context shared at the 4/22/25 meeting include:
 - Feather River releases will decrease from 5,000 cfs to 4,000 cfs on 4/22/24. Releases will decrease further through the week.
 - Sacramento River flows at Freeport are approximately 35,000 cfs and decreasing through the week.
 - San Joaquin River at Vernalis flows were approximately 2,500 cfs on 4/21/25 and have been variable.

- Clifton Court Forebay (CCF) exports will remain at 600 cfs through the end of April.
- Jones Pumping Plant (JPP) is currently exporting 900 cfs.
- Delta Outflow was approximately 36,000 cfs as of 4/21/25 and will be decreasing through the week.
- QWEST was +6,400 cfs on 4/21/25. The 7-day average is +5,300 cfs.
- Rio Vista flows were approximately 30,000 cfs and will be decreasing through the week.
- OMRI is varying between -700 cfs and -1,700 cfs as of 4/22/25.
- X2 is currently 62 km and potentially climbing.
- CVP share of San Luis Reservoir storage is approximately 844 TAF.
- Total storage of the San Luis Reservoir is approximately 1.77 MAF.
- Questions and Comments
 - CDFW asked about the range of JPP exports and if it is due to I/E.
 - Reclamation confirmed it was due to meeting D-1641's I/E ratio.
 - CDFW noted that in the daily DWR summary, there was an increase on 4/20/25 at the CVP facility. Was this due to the increase in flow at Vernalis?
 - Reclamation said they've been pumping a minimum of 900 cfs for two days. On the third day, they increased exports to take advantage of pumping more water based on the 1-to-1 ratio for I/E.

Part 2: Open Discussion on Species Status

- N/A

Part 3. Live Edit Assessments

Natural Spring-Run Weekly Risk Assessment

- SaMT reviewed and updated the Natural-origin Spring-Run Weekly Risk Assessment.
- Questions and Comments
 - A DWR representative asked if the SWP CWT data is from 3/18/25.; other DWR staff confirmed that the last CWT report they had was from 3/18/25.
 - DWR shared that they have all data processed as of 4/21/25.
 - CDFW added that the fish in question was from a SCARF release. They're being released from April through the end of May.
 - DWR noted concern about the fish in Battle Creek causing a trigger.

Assessment for CVP and SWP Delta Operations on ESA and CESA-listed Species

- SaMT reviewed the PA Assessment for CVP and SWP Delta Operations on ESA and CESA-listed Species.
- Questions and Comments
 - NMFS asked about predicted loss on Figure 7 in the Assessment. At an OMRI of - 5,000 cfs, is the graph indicating an 85% chance that loss would occur versus a 76% chance?
 - Reclamation responded that the Tillotson model is generating loss numbers. A little under 40 would be the median predicted loss. The highest bar on the graph would be the highest percentile of expected loss. It's a way to look at uncertainty around the medians. The model doesn't take those outliers into account, so it's hard to get good predictions. The model might be a good predictor in March/April, but later in the year, it's unsure.

Part 4. Additional Considerations/Discussion

Special Steelhead Study

- DWR provided their understanding of how steelhead are being counted and how they are tracking and calculating loss for the fish included in the special study. The fish are being used to determine their natal origin. Regarding the question about counting these steelhead for loss triggers: because these fish aren't being released solely for the purpose of a special study but being collected after the regular salvage process, the standard loss calculation will still apply to these fish. This is because they're being kept and not released so an additional value of one (+1) is added to the loss total.
- CDFW reiterated DWR's understanding.
- NMFS spoke with their leadership and were in agreement about counting towards annual loss but not weekly loss because it is for a planned study and the additional +1 loss would not be a result of exports.
- CDFW requested clarification on not changing database practices, but rather, just changing it after the weekly loss. The +1 would be included but then weekly loss would have to be back-calculated.
 - NMFS added that the intention of the weekly loss threshold is to make adjustments based on current loss, so it doesn't make sense to add +1 per study fish to the weekly loss.
 - One CDFW staff member is concerned about not including the +1 since they're being euthanized. It should be included in the database. Another CDFW staff member said they could include notes in the database for these fish.

- CDFW explained that salvage for steelhead is calculated as a fixed multiplier of the salvage. They have database functionality that allows them to mark the fish as accidentally euthanized, which adds a +1, or can note that they were part of a special study without checking that box.
 - CDFW noted that usually when they're dealing with special studies fish are released and there are extra fish in the system that could be subject to salvage or capture. But this is different because the special study is on the backside. The fish went through the normal salvage process, and then rather than being released, they're taken. Seems like they'd be subject to the same export and OMR conditions as all the natural fish.
 - DWR agrees that the fish should be accounted for as part of the weekly loss, using the standard loss equation because they are in the system and standard salvage is occurring. Multiple +1s could cause the trigger to be exceeded even though the standard loss would not have done so.
 - CDFW added that if these fish need a +1 added, and they're counted towards the total loss threshold, it seems more appropriate to just change the reports for the weekly loss threshold rather than change how its calculated in the database.
- CDFW noted that the thoughts shared at the 4/22/25 SaMT meeting differ from what NMFS leadership said. They request that the NMFS SaMT representative circle back with their leadership to discuss further. CDFW is more concerned with technical side and the database. To a CDFW staff member, each of these fish is considered to be a direct take rather than accidental take from being euthanized during salvage. If that's being accounted for, they should consider removing the fish from the database and add how many were taken on the backend of the loss threshold. [Adding up the number of euthanized fish] could be done in the weekly SaMT meeting notes or in an end-of-year summary but it wouldn't be recorded in the database. The fish wouldn't be noted as being sacrificed.
 - NMFS asked for clarification on handling the weekly loss totals. Will the +1 be omitted and the standard calculation used?
 - DWR does not deem it necessary to add a +1. Those fish do not seem like they would be tied to OMR management because the fish were taken for scientific research.
 - NMFS will discuss this with leadership and provide an update at the 4/29/25 SaMT meeting.
 - CDFW asked for a spreadsheet that lists which fish were taken, including dates and fork lengths associated with those fish, for tracking purposes.
 - DWR is trying to get that information and will pass along once available.

Steelhead Salvage vs Loss

- Kearns & West shared the form to be submitted to WOMT about the topic of steelhead salvage versus loss and reiterated that SaMT wanted to track with loss and not salvage. Kearns & West asked if any concerns remain before the form is submitted.
 - NMFS added a suggestion for amending the Proposed Action (PA) language to replace the word "salvage" with the word "loss".
 - NMFS requested that a section be titled "Recommendation" instead of "Next Steps".
 - USFWS requested to be listed as in agreement with the recommendation; their representative was absent from the 4/15/25 SaMT meeting.

Surrogate Release

- CDFW received approval from WOMT for the fourth YOY spring-run surrogate release.
- WOMT wants more advance notice on this process, therefore CDFW will notify SaMT as early as possible before a release occurs.
- CDFW anticipates another Coleman Hatchery release during the week of 4/28 that would be a good 5th YOY surrogate release. About 2 million fish would be released at Coleman Hatchery on the Sacramento River. Not all fish will be CWT-tagged.
- CDFW can send an email to WOMT if needed, or agencies can alert their WOMT reps.
- NMFS, Reclamation, and USFWS shared no concerns with the potential fifth release.

Items to Raise to WOMT

1. Kearns & West will submit a recommendation on behalf of SaMT regarding steelhead loss/salvage.

Next SaMT Meeting

- The next Weekly Operations Meeting will be on Tuesday, 4/29/25. If needed, SaMT will meet at the conclusion of the Operations meeting.

Action Items

- Kristin Begun, NMFS, to share details from the conversation around the special steelhead study with Garwin Yip, NMFS, and provide any additional information or updates to SaMT on 4/29/25.
- All to inform their WOMT reps that a fifth surrogate release will be discussed at the next WOMT meeting.
- Kearns & West to submit the Steelhead Loss/Salvage recommendation to WOMT.

- Crystal Rigby, CDFW, will share the pathology report for Stanislaus River fish that were shown to be affected by *C. shasta*.
- Kyle Griffiths, CDFW, will look into discrepancies on SacPAS related to Steelhead.
- Farida Islam, DWR, will look into and confirm, if possible, the genetics from the LAD winter-run fish documented on 3/18/25.