



Salmon Monitoring Team (SaMT) Weekly Meeting

Teams call: 4/1/25 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 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 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 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 thresholds for the previous week and the upcoming weeks are provided below:

- 3/26/25 – 4/1/25: 3.63
- 4/2/25 – 6/30/25: 0.00
- 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 (Condition of Approval 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) 4/2/25. Additional details and operations context shared at the 4/1/25 meeting include:
 - Sacramento River flows at Keswick Dam are 8,500 cfs and will be decreased to 5,000 cfs by 4/9/25.
 - Sacramento River flows at Freeport are approximately 43,600 cfs as of 3/31/25 and expected to increase over the next couple of days due to recent storms.
 - San Joaquin River at Vernalis flows are approximately 3,000 cfs as of 3/31/25 and are expected to decrease over the next few days.

- Clifton Court Forebay (CCF) is exporting approximately 1,400 cfs as of 3/31/25 and expected to decrease to the range of 1,200-1,300 cfs on 4/1/25.
- Jones Pumping Plant (JPP) exports remain at 3,500 cfs.
- Delta Outflow was approximately 44,800 cfs as of 4/1/25, up from nearly 44,000 on 3/31/25.
- QWEST was +5,900 cfs on 3/31/25. The 7-day QWEST average is +6,400 cfs. Flows may reach +8,500 cfs over 4/3-4/4/25 before decreasing.
- Rio Vista flows were 38,000 cfs on 3/31/25 and are expected to increase over the next couple of days.
- OMRI is currently -3,500 cfs.
- X2 is at 61 km as of 3/31/25.
- CVP share of San Luis Reservoir storage is approximately 816 TAF.
- Total storage of the San Luis Reservoir is approximately 1.81 MAF.
- Questions and Comments
 - CDFW asked for a duration estimate of when the Delta Outflow Index might go below 44,500 cfs.
 - DWR responded that they estimate a duration of 7 days.
 - NMFS asked if OMRI will change to -5,000 in the upcoming days.
 - DWR has not heard any change indication from management at this time.
 - NMFS added that the Operational Intent in the Outlook states that "OMRI shall not be more negative than -5,000 cfs on a 7-day average..." Should this figure be corrected to -3,500 cfs?
 - DWR is unsure about this.
 - USFWS requested that SaMT and SMT members be alerted once the controlling OMRI is confirmed.
 - CDFW requested to also add Conditions of Approval 8.12 (Spring Outflow) to the first or second paragraph of the outlook due to the possibility of it controlling project operations during the upcoming week.
 - CDFW requested exports and OMRI figures for 3/29-3/31/25.
 - CCF exports: 1,494 cfs on 3/29/25; 1,495 cfs on 3/30/25; 1,390 cfs on 3/31/25.

- OMRI: -3,302 cfs on 3/29/25; -3,395 cfs on 3/30/25; -3,392 cfs on 3/31/25.
- CDFW asked if JPP exports remained at 3,500 cfs throughout the weekend.
 - Reclamation confirmed this.
- SaMT and SMT discussed the weekly Operational Intent in the Fish & Water Operations Outlook. CDFW requested to include COA 8.12 in effect from 4/1/25 - 5/31/25, and how it will be operated to, even if the COA is offramped at the moment due to the high-flow offramp.
 - DWR recommended that CDFW draft specific language about COA 8.12 to ensure it meets their needs. DWR can then update and modify as needed.
 - CDFW responded that DWR should draft this first as they are required to provide an Outlook; therefore, DWR staff who are familiar with permit conditions could create and update this information.
 - DWR shared understanding that the I/E ratio, per COA 8.12, constraints apply to the SWP and not necessarily to the CVP. They expressed caution in terms of the I/E applying to the State: there is discussion around if the I/E is offramped above the 3-day average (44,500 cfs), should the OMRI of -3,500 cfs continue to be applied, or should it be changed to a different number. Because of this, the Operational Intent seems to contradict itself. The OMRI of -3,500 cfs was onramped the previous week; it was going to be reviewed and discussed whether it should be continued or supplemented by another condition other than I/E.
 - CDFW replied that in order to comply with the ITP, they need an Outlook that speaks to which conditions are applicable at a given time and their current status. DWR will need to add in this information. To provide examples of the levels of specificity requested:
 - The I/E ratio, per COA 8.12, is currently in a high-flow offramp;
 - The OMRI to which DWR is operating per the weekly loss threshold;
 - The dates of DWR's operation to that OMRI condition that meets the requirements under the ITP;

- Clear indication of when the SWP and CVP are operating to different conditions.
- Include if either the SWP and CVP are operating to a health and safety minimum, rather than an I/E.
- DWR will revise the Outlook beginning the week of 4/7/25 according to the received feedback and requests.

Part 2: Open Discussion on Species Status

Spring-run Surrogate Release #3

- CDFW is proposing to utilize the Feather River release of spring-run on 4/9/25 as their third spring-run YOY surrogate release.
- The release is planned for 1 million fish; half of them will be CWT-clipped, which is similar to the previous 2 spring-run YOY surrogates groups.
- CDFW will share details via email with WOMT and requests SaMT members to notify their WOMT representatives of the pending release. Any questions can be directed to Crystal Rigby, CDFW.

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
 - CDFW stated that due to the limited real-time monitoring stations in the Delta and the upper Sacramento, it's likely that the spring-run Chinook salmon catch is lower. Seasonal timing indicates that we're likely to see a lot of spring-run moving into the Delta throughout the month of April; therefore, CDFW believes that exposure level for routing into the central Delta should be categorized as High. CDFW shared drafted language to be added into the assessment.
 - DWR noted that their staff may disagree with the High categorization.
 - CDFW supported their statement by sharing that this is how exposure level would be monitored in previous ITP Risk Assessments because exposure level is classified as the amount of fish moving downstream and into the Delta. Due to seasonal timing, there would likely be over 50% of spring-run either in the Delta or moving into the Delta, which constitutes a majority of spring-run. With exposure categorized as High, and routing probability rated as Low, overall risk would be Medium.
 - DWR will take the categorization and proposed language into consideration and acknowledge the differing viewpoint in the assessment.

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

- SaMT reviewed and updated the Assessment for CVP and SWP Delta Operations on ESA and CESA-listed Species.
- Reclamation noted that the assessment stated that no hatchery winter-run Chinook salmon were captured in the previous week, but there were actually some observed at the SWP on 3/31/25. Reclamation asked SaMT members if they would like this topic to be addressed at WOMT and added that hatchery and natural-origin winter-run loss is now on the downward trend and is expected to be near zero within a week or two.
- Questions and Comments
 - CDFW mentioned that if another hatchery-origin winter-run was observed in salvage that it should be noted in the assessment.
 - Reclamation has already alerted their WOMT representative and estimates that the resulting OMRI recommendation will be -5,000 cfs.
 - Reclamation asked SaMT if anyone had the exact number of winter-run that were observed at the SWP; they are only counting the wire-tagged fish from Livingston Stone Fish Hatchery.
 - SaMT members concluded that the notification email only mentioned “a winter-run-sized clipped” fish at the SWP. The report covered 3/28-3/31/25.
 - CDFW alerted SaMT that that hatchery-origin winter-run was sent from Geir’s summary spreadsheets and is reporting **length-at-date** (LAD) winter-run Chinook Salmon, **not coded-wire-tagged** (CWT). Due to the SWP not having all of the updated CWT codes read due to the sheer number that was observed over the weekend, LAD was reported instead of CWT. Due to so many of the fish over the weekend that was observed at the CVP being San Joaquin origin spring-run Chinook Salmon, it is likely that that LAD hatchery-origin winter-run chinook salmon is a hatchery-origin from the San Joaquin.
 - Reclamation will update the assessment accordingly once more information is shared.
 - DWR asked for clarification on what the OMRI requirements should be given the new information and when the OMRI would return to -5,000 cfs.
 - CDFW relayed that the advice given to WOMT last week of operating to no more negative than -2,500 cfs from CDFW was elevated to the Directors last week because WOMT could not make a final determination. The issue has not yet been resolved or finalized at the Director’s level. The -3,500 cfs OMRI was intended to last through 3/30/25 based on COA 8.4.4 (weekly loss threshold) being triggered and operated to from 3/24/25 – 3/30/25. CDFW asked for clarification on the water operations call for what was currently controlling but clarification was not provided.

- DWR asked if any action has been taken in response to the hatchery threshold exceedance.
 - CDFW noted that the 50% loss was exceeded on 3/18/25 and a resulting 7-day action was taken from 3/21-3/28/25. The 75% threshold that requires an OMRI of -2,500 cfs did not occur due to the Winter-run Machine Learning Tool predicting that an OMRI of -2,500 cfs would be under the 0.559 threshold (as stated in the ITP, it would need to be above 0.559). However, because of the 100% loss threshold that states SaMT meets and provides advice to WOMT on operations, SaMT's advice to WOMT for the OMRI adjustment needed to be approved by WOMT before any operational change was made. Since that decision hasn't yet been resolved, SaMT is unsure what OMRI is being operated to right now.
- SaMT discussed providing advice to WOMT as a group versus acting individually to raise the item to WOMT.
- DWR stated that in the absence of another salvage event, they would not see a need, from a hatchery perspective, to have a more positive OMRI. However, if OMRI was shifted to a more negative figure and additional hatchery fish are observed, that would change their assessment.
- CDFW provided recent modeling and data to support their advice:
 - CDFW presented the updated results from the winter-run predictions tool:
 - If operating to an OMRI of -6,250 cfs or -5,000 cfs, the model predicts both low and high presence.
 - If operating to an OMRI of -3,500 cfs, the model predicts only low presence.
 - If operating to an OMRI of -2,500 cfs, the model predicts both absence and low presence.
 - Since the model predicts a possibility of absence at OMRI of -2,500 cfs, CDFW believes that operating to an OMRI of -2,500 cfs would minimize subsequent hatchery-origin winter-run loss, which is the intent of the 100% loss threshold.
 - CDFW presented historical hatchery-origin Chinook Salmon loss data that showed dates of when the last hatchery-origin Chinook salmon was observed in salvage from WY 2010-WY 2022. Based on historical hatchery-origin winter-run Chinook Salmon data, the average day that hatchery-origin Chinook salmon are not observed in salvage anymore is April 11.
 - Since operating to an OMRI of -3,500 cfs, no hatchery-origin Chinook Salmon have been observed in salvage.

- Based on the modeling results, historical data, and recent salvage data, CDFW recommends operating to -2,500 cfs through 4/11/25 in order to minimize subsequent loss of hatchery-origin winter-run in salvage. After 4/11/25, CDFW recommends SaMT to convene and reassess operations.
- Questions and Comments
 - DWR asked if the historical salvage data shows presence and probability of salvage for length-at-date (LAD) natural-origin winter-run Chinook salmon or for hatchery winter-run.
 - CDFW clarified that the data is CWT hatchery winter-run releases from Livingston Stone.

Part 4. Additional Considerations/Discussion

SacPAS Website

- USFWS asked if the SacPAS website is being updated on a regular basis. For many, SacPAS is a primary tool for obtaining current and accurate data. USFWS checks the site daily for OMRI values, but it appears the last update was on 3/29/25.
 - Reclamation believes the site automatically pulls data each morning from real-time gauges. They will check into this to confirm.
 - The Water Board added that it's not unheard of for the site to be a couple of days behind.
 - USFWS countered that they have seen lapses in updates longer than two days.

Items to Raise to WOMT

- CDFW will raise the third YOY spring-run Chinook salmon surrogate release to WOMT. The release is scheduled for 4/9/25.
- Reclamation has already notified their WOMT representative about a LAD hatchery-origin winter-run Chinook salmon that was captured at the SWP on 3/31/25.
- Recommendations from SaMT agencies regarding exceedance of annual hatchery winter-run threshold (See COA 8.4.3 and Ops Outlook Table 3a)
 - CDFW – An OMRI of -2,500 cfs until April 11, 2025 and reassess after that date.
 - Based on the data that CDFW currently has which includes updated modeling runs, relevant loss data from the past weeks, and historical data.
 - NMFS – Recommends an OMRI no more negative than -3,500 cfs.
 - Since the intent is to minimize subsequent loss, remaining at -3,500 cfs or more positive would better avoid additional loss than targeting a more negative OMRI.

- DWR - In the absence of another salvage event of hatchery winter-run, there is no need to have a more positive OMRI. However, if OMRI changes and an increase of hatchery winter-run increases this recommendation could change.
- Reclamation and NMFS SaMT representatives ask for clarification on the interpretation for Steelhead Weekly Loss Threshold (See Ops Outlook Table 2a).
 - The threshold language states "7-day rolling sum of steelhead salvage exceeds loss of 120 fish"
 - Clarification is needed on whether the exceedance is based on "loss" or "salvage."
- USFWS will notify their WOMT representative with a recommendation regarding exceedance of annual hatchery winter-run threshold.

Next SaMT Meeting

- The next Weekly Operations Meeting will be on Tuesday, 4/8/25. If needed, SaMT will meet at the conclusion of the Operations meeting.

Action Items

- Chase Ehlo, Reclamation
 - Finalize Outlook to be sent to WOMT.
 - Check the SacPAS site for update frequency.
- Kearns & West to share the list of requests for the revised Fish & Water Operations Outlook with Mike Ford, DWR.
- Mike Ford, DWR, to apply the requests to the Outlook beginning the week of 4/7/25.