



Salmon Monitoring Team (SaMT) Weekly Meeting

Teams call: 4/9/24 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).

Agenda Items

1. Introductions
2. Housekeeping
3. Updates on Water Operations and Biological Conditions
4. Open Discussion on Species Status
5. Live-edit Assessments (Proposed Action Assessment and ITP Risk Assessment)
6. Additional Considerations/Other Topics
7. Items to Raise to WOMT
8. Next Meeting

Agenda Item 2. Housekeeping

- Kearns & West provided a reminder to review the 4/8/24 email from Mia Schiappi that proposes strategies for efficient SaMT meeting discussion and avoiding unnecessary time extensions for meetings.

Agenda Item 3. Updates on Water Operations and Biological Conditions

- The Fish and Water Operations Outlook document was reviewed. Please refer to the Operations Outlook, PA Assessment, and ITP Risk Assessment documents. All flows and releases, unless otherwise noted, are reported as approximated daily averages.

- Sacramento River flows at Freeport is estimated at 36,260 cfs but appears to be encountering an issue with the gauge. Flow measurements are currently being averaged between various readings.
- San Joaquin River flows at Vernalis were 4,800 cfs as of 4/8/24 and is varying with the spring pulse flows. Flows could reach the high 5,000 cfs range by the end of the pulse period.
- Jones Pumping Plant exports are currently 970 cfs.
- Clifton Court Forebay (CCF) exports are currently 2,200 cfs.
- The Delta outflow index is approximately 45,500 cfs and is expected to decrease on 4/10/24 due to the precipitation from 4/4/24. CCF exports are expected to decrease to 600 cfs on 4/10/24 with the anticipated termination of the ITP 8.17 offramp.
- QWEST flow values are approximately +11,300 cfs and will increase slightly tomorrow before decreasing again. Flows are expected to remain in the range of +12,000 cfs to +6,000 cfs.
- Rio Vista flows are approximately 34,000 cfs and expected to decrease to mid-20,000 cfs range.
- OMRI is expected to range between +900 cfs and -2,500 cfs.
- Total San Luis storage is at 1.508 MAF and the state share is 553 TAF.
- D-1641's Port Chicago was triggered for April. The time-length estimate is 19-20 days with 4 days of carryover from March, but this timeframe will be confirmed on 4/9/24.
- For details on salvage that occurred in the past week please refer to the Operations Outlook, PA Assessment, and ITP Risk Assessment documents. Additionally, all salvage information can be found online at <https://filelib.wildlife.ca.gov/Public/salvage/>.

Actions Currently in Effect

- The Interim Operations Plan (IOP) is currently in effect resulting from a court order issued on 4/1/2024 and in effect until 12/20/2024 or until the Court issues a ruling on the 2024 IOP. Reclamation shall adopt the following provisions of the SWP ITP:
 - 8.5.2 Larval and Juvenile Delta Smelt Protection
 - 8.6.1 Winter-run Single-year Loss Threshold
 - 8.6.2 Early-season Natural Winter-run Chinook Salmon Discrete Daily Loss Threshold
 - 8.6.3 Mid- and Late-season Natural Winter-run Chinook Salmon Daily Loss Threshold
 - 8.6.4 Daily Spring-run Chinook Salmon Hatchery Surrogate Loss Threshold
 - 8.7 OMR Flexibility During Delta Excess Conditions
 - 8.8 End of OMR Management

- **Delta Cross Channel (DCC) Gate operations (PA 4.10.5.3):** See Outlook and Assessment for more information.
- **ITP Winter-run Single-year Loss Threshold (COA 8.6.1):** DWR and Reclamation will operate Banks Pumping Plant consistent with Condition of Approval 8.6.1 of the ITP. These values are based on the juvenile production estimate (JPE). The final JPE for brood year 2023 natural-origin winter-run Chinook salmon has been estimated at 234,896. The thresholds below are based on the final JPE.
 - The ITP natural-origin Winter-run Single-year Loss Threshold for this year is loss of unclipped length-at-date (LAD) winter-run Chinook salmon from the CVP and SWP greater than or equal to 1.17% of the winter-run Chinook salmon JPE (loss $\geq 2,748.28$). If 50% of the threshold is exceeded (loss $\geq 1,374.14$), the required response is to reduce SWP exports by its proportional share, according to the coordinated operations agreement (COA), that would be required to reach a 14-day average OMR of -3,500 cfs. If 75% of this threshold is exceeded (loss $\geq 2,061.21$), the required response is to reduce SWP exports by its proportional share, according to the COA, that would be required to reach a 14-day average OMR of -2,500 cfs. If 100% of this threshold is exceeded (loss $\geq 2,748.28$), the required response is to immediately convene SaMT to review recent fish distribution information and operations and provide advice regarding future planned Project operations to minimize subsequent loss during that year.
 - The ITP hatchery-origin Chinook salmon Single-year Loss Threshold for this year is loss of clipped LAD 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 ≥ 232.30). If 50% of the threshold is exceeded (loss ≥ 116.15), the required response is to reduce SWP exports by its proportional share, according to the coordinated operations agreement (COA), that would be required to reach a 14-day average OMR of -3,500 cfs. If 75% of this threshold is exceeded (loss ≥ 174.23), the required response is to reduce SWP exports by its proportional share, according to the COA, that would be required to reach a 14-day average OMR of -2,500 cfs.
- **ITP Mid- and Late-season Natural Winter-run Chinook Salmon Daily Loss Threshold (COA 8.6.3):** From 4/1/24 – 4/30/24, DWR and Reclamation will operate Banks Pumping Plant consistent with Condition of Approval 8.6.3 of the ITP. The ITP Daily Loss Threshold for April is loss of older juvenile Chinook salmon from CVP and SWP greater than 0.00226% of the winter-run Chinook salmon JPE. If the threshold is exceeded (loss > 5.31), the required response is to reduce SWP exports by its proportional share, according to the COA, that would be required to reach an OMR of no more negative than -3,500 cfs for five consecutive days. DWR shall restrict exports in response to the initial LAD identification of natural older juvenile Chinook salmon and the thresholds described above. If genetic analysis of an individual natural 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 daily loss threshold has consequently not been met.

Weekly Fish and Water Operations Outlook, Current Operations

- SaMT reviewed and updated the Outlook document. The updated Outlook document will be distributed to the SaMT via email by close of business (COB) 4/10/23.
- SaMT discussed Fish Monitoring Gear Efficiency/Disruptions as addressed within the Operations Outlook and updated accordingly.

SaMT Estimates of Fish Distribution

- 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 YOY winter-run and YOY spring-run as well as natural origin steelhead at the real-time monitoring locations. These estimates are reported in the final Assessment document, available on the [Delta Monitoring Workgroup](#) webpage.

Location	Yet to Enter Delta	In the Delta	Exited the Delta past Chipps Island
Young-of-year (YOY) winter-run Chinook salmon	Current: 1-5% Last week: 1-5%	Current: 35-49% Last week: 45-59%	Current: 50-60% Last week: 40-50%
YOU spring-run Chinook salmon	Current: 10-20% Last week: 20-30%	Current: 50-70% Last week: 50-70%	Current: 20-30% Last week: 10-20%
YOY hatchery winter-run Chinook salmon	Current: 1-5% Last week: 1-10%	Current: 35-49% Last week: 50-69%	Current: 50-60% Last week: 30-40%
Natural origin steelhead	Current: 15-30% Last week: 15-30%	Current: 20-45% Last week: 25-50%	Current: 40-50% Last week: 35-45%

Rationale for Distribution

- Wild winter-run Chinook Salmon
 - 9 wild winter-run were seen exiting past Chipps Island, 1 at the Sacramento Trawl. Based on seasonal timing, a few observations at Chipps Island, SaMT estimated that an additional 10% of winter-run Chinook salmon in the Delta have exited past Chipps Island. The total in the Delta estimation was decreased to 35-49% and total exited the Delta increased to 50-60%.
- Wild spring-run Chinook Salmon
 - Approximately 15 wild spring-run Chinook salmon were observed at the Mossdale Trawl, 12 at the beach seines, 187 at the Sacramento Trawl, 164 at Knights Landing, 60 at the Lower Sacramento Trawl, and 606 at Chipps Island. However, due to a hatchery fall-run release from CNFH with only 25% marked from that release group, many of these LAD natural-origin spring-run may actually be mistaken for non-clipped hatchery fall-run Chinook salmon. Therefore, SaMT assumed that a large portion of the natural-origin spring-run observed at the real-time monitoring sites this week were non-clipped hatchery-origin fall-run. Although many of them were assumed to be non-clipped hatchery-origin fall-run, natural-origin spring-run are likely to have also been caught as well; therefore, SaMT estimated that the range of fish exited the Delta increased by 10% this week to a total of 20-30% based on seasonal timing and taking the

numbers from real-time monitoring stations with caution due to the hatchery releases that occurred. SaMT noted that the previous week's large numbers indicate that they are beginning to migrate out.

- Hatchery winter-run Chinook Salmon
 - CalFishTrack showed an additional hatchery winter-run Chinook salmon pass by the receivers in the Delta and exiting past Benicia Bridge. SaMT agreed that the big pulse of hatchery fish, according to CalFish Track detections have moved passed Benicia Bridge and we are likely seeing the tail end of the fish moving out. Therefore, SaMT decreased the range for hatchery winter-run that have moved into the Delta to 35-49% and increased the number exited to 50-60%.
- Natural-origin Steelhead
 - Natural-origin Steelhead were observed at the following locations: 1 at Tisdale, 2 at Butte Creek, 3 passing Chipps Island, 42 at Feather River, and 27 at Yuba, as well as in salvage every day last week. SaMT estimates an additional 5% have migrated past Chipps Island for a total of 40-50% for fish that have exited the Delta and 20-45% present in the Delta coming from both the Sacramento Basin and San Joaquin Basin.

Agenda Item 4. Open Discussion on Species Status

Salvage Update for 4/1 – 4/7/24

- Salvage and loss totals are detailed in the salvage update shared via email. Please refer to the email for specific figures.
- Both wild and hatchery steelhead continue to be seen daily in salvage.
- High numbers of winter-run LAD Chinook salmon were observed in salvage.
- High numbers of both wild (genetically-confirmed) and hatchery spring-run were observed in salvage.

Operations

- No operational variances or reduced counts were reported.

Agenda Item 5. Live-Edit Assessments

Proposed Action Assessment

- SaMT reviewed and updated the current week's Proposed Action Assessment document. The updated Proposed Action Assessment will be distributed to the SaMT via email by COB 4/10/24. The final assessment will be posted to Reclamation's [Delta Monitoring Workgroup](#) webpage.

ITP Risk Assessment

- The draft ITP Risk Assessment will be distributed on 4/9/24 with comments due COB Thursday (4/11/24). Past ITP Risk Assessments can be found at [CDFW's Water Project Operations](#) webpage.

Agenda Item 6. Additional Considerations/Other Topics

Discussion on Steelhead

- The 100% annual loss threshold for steelhead (December through March) has been exceeded for WY 2024. The April 1 – June 15 annual loss threshold for steelhead is at 84.6% of the 50% threshold. Steelhead continue to be seen daily in salvage.
- CDFW made an OMRI recommendation to WOMT this week. Specific language is included under Agenda Item 7.
- NMFS acknowledges that we are continuing to see high numbers of steelhead in salvage, and increasing exports will likely result in an increase in steelhead loss. We are approaching the 50% annual loss threshold and minimizing entrainment risk will reduce the risk of exceeding the loss threshold.

Discussion on Winter-run Chinook Salmon

- DWR noted that on 3/26/24, the CVP and SWP facilities transitioned from an OMRI of -500 cfs to a more negative OMRI of -1,500 cfs. OMRI was then further decreased on 4/1/24, targeting an OMRI of -2,500 cfs. DWR acknowledged that despite operating to a more negative OMRI, an increase in genetic winter-run Chinook salmon has not been observed.
- SaMT agreed that any increase in loss would not be beneficial to the winter-run population and would likely lead to an earlier exceedance of the incidental take limit. However, SaMT members disagreed on the magnitude of such impact on the winter-run evolutionarily significant unit and merit for using LAD winter-run as a way to manage winter-run.
 - CDFW notes the reason for using LAD winter-run rather than genetic winter-run is due to the SWP ITP that was signed and agreed to by DWR and CDFW, and with the current IOP, also Reclamation and NMFS. Since we do not have specific thresholds for genetic winter-run at the moment, the SWP ITP thresholds that are based on LAD are the only thresholds we have at this time that have been thoroughly analyzed to be protective enough for the winter.
- The incidental take limit (ITL) has not yet been exceeded for winter-run Chinook salmon; loss is currently around 87% of the ITL.

Agenda Item 7. Items to Elevate to WOMT

- CDFW will make the following request to WOMT:
 - CDFW continues to recommend an OMRI of -500 cfs due to the decreased salvage that was observed when operations were targeting an OMRI of -500 cfs. The SWP ITP COA 8.6.1 states that any subsequent loss should be minimized after the 100% Annual Loss Threshold is exceeded. CDFW acknowledges that loss is likely to decrease due to seasonal timing of winter-run in the Delta; therefore, CDFW will recommend a more negative OMRI than -500 cfs once risk of entraining LAD winter-run into the salvage facilities is no longer present. This recommendation is likely to also provide protections to steelhead as well which

may decrease the likelihood of exceeding the steelhead 100% annual loss threshold and ITL.

- USBR and DWR elevated any proposed OMRI changes to WOMT.

Agenda Item 7. Next Meeting

- The next SaMT Meeting is scheduled for Tuesday, 4/16/24 on Microsoft Teams.