



## Salmon Monitoring Team (SaMT) Weekly Meeting

Teams call: 2/27/24 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. Next Meeting

#### Agenda Item 2. Housekeeping

- N/A

#### 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 are approximately 67,000 cfs and expected to remain at this level for the next few days.

- San Joaquin River flows are approximately 8,400 cfs and are expected to decrease slightly, then increase with the Stanislaus River pulse before decreasing again.
- Clifton Court Forebay (CCF) exports were 3,100 cfs on 2/26/24 and will be 2,400 cfs on 2/27/24. Exports are targeting the OMRI of -2,500 cfs.
- Delta Outflow as of 2/26/24 was 124,000 cfs and is expected to decrease before increasing again with upcoming anticipated storms.
- QWEST is approximately +13,000 cfs and expected to range between +10,000 cfs and +16,000 cfs over the week.
- Rio Vista flows were 111,000 cfs on 2/26/24 and should decrease as the previous storm water recedes and then increase again with anticipated storms happening later in the week.
- 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 2/28/2023 and in effect until 3/31/2024 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<sup>1</sup>
  - 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.

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<sup>1</sup> The SWP ITP was amended for WY 2024 on 12/22/2023 which modifies the winter-run daily loss threshold calculations for COA 8.6.3. and furthermore, lowers the daily loss thresholds that were originally agreed upon in the 2023 IOP extension. Because this new amendment was not part of the original 2023 IOP Extension agreed to by Reclamation and the State and ordered by the Court on 2/28/2023, it is not included in the current operation of the 2023 IOP Extension. Operating the CVP to this new amendment would be inconsistent with the current court order; therefore, CVP will operate to COA 8.6.3, excluding the 12/22/2023 amendment but including WY 2023 SWP ITP amendment that was signed on 1/20/23, in to maintain operations under the 2023 IOP Extension.

- **ITP Winter-run Single-year Loss Threshold (COA 8.6.1):** DWR 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 below thresholds 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 -2,000 cfs.
  - 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  $\geq$  232.30). If 50% of the threshold is exceeded (loss  $\geq$  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  $\geq$  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 -2,000 cfs.
- **ITP Mid- and Late-season Natural Winter-run Chinook Salmon Daily Loss Threshold (COA 8.6.3):** From 2/1/24 – 2/29/24, DWR will operate Banks Pumping Plant consistent with Condition of Approval 8.6.3 of the ITP. The ITP Daily Loss Threshold for February is loss of older juvenile Chinook salmon from CVP and SWP greater than 0.00231% of the winter-run Chinook salmon JPE. If the threshold is exceeded (loss  $>$  5.43), 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) 2/28/24.

- 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: 1-10% Last week: 10-15%	Current: 75-94% Last week: 70-85%	Current: 5-15% Last week: 5-15%
YOY spring-run Chinook salmon	Current: 45-60% Last week: 50-65%	Current: 40-55% Last week: 35-50%	Current: 0% Last week: 0%
YOY hatchery winter-run Chinook salmon	Current: 95-100% Last week: 100%	Current: 0-5% Last week: 0%	Current: 0% Last week: 0%
Natural-origin steelhead	Current: 20-35% Last week: 35-60%	Current: 45-60% Last week: 35-50%	Current: 10-20% Last week: 5-15%

**Rationale for distribution**

- Wild winter-run Chinook Salmon
  - Data were not collected this week at the DJFMP monitoring sites. 10 winter-run were observed at the Lower Sacramento Trawl, some were observed upstream of the Delta at the Tisdale RST, and a high number of length-at-date (LAD) winter-run were observed in salvage. Since winter-run were observed at monitoring locations upstream and within the Delta and since LAD winter-run have been observed in salvage in high numbers over the previous week, SaMT estimates that an additional 5-9% of the wild winter-run Chinook salmon population have migrated into the Delta. After discussion, SaMT members decided keep the same range of fish that have exited the Delta past Chipps Island as 5-15% since Chipps Island data was not available this week.
- Wild spring-run Chinook Salmon
  - Data were not collected this week at the DJFMP monitoring sites. 10 wild spring-run Chinook salmon was observed at Knights Landing RST, 16 at the Lower Sacramento RST, 1 at Horseshoe Bend, and 1 at Winter Island according to the Fish Restoration Program monitoring sites. SaMT estimated the range of fish within the Delta increased by 5% this week to a total of 40-55%. Many LAD fall-run Chinook salmon have already been observed in salvage and in the RST's; therefore, SaMT estimates that observations in real-time monitoring sites may be low this year for spring-run.
- Hatchery winter-run Chinook Salmon

- LSNFH made an acoustically tagged release on 2/16/24 that coincided with the final LSNFH hatchery-origin winter-run release. SaMT did not have this information last week during the meeting; therefore, no estimation was conducted. No detections were seen on CalFishTrack passing Benecia Bridge and only 1 fish was detected near the Delta. However, because hatchery-origin winter-run tend to move out of the system quicker than natural-origin winter-run, SaMT estimated that up to 5% of hatchery winter-run have moved into the Delta.
- Natural-origin Steelhead
  - Data were not collected this week at the DJFMP monitoring sites; however, quite a few were observed in salvage. Looking at historical data, 50% are typically seen past the Beach Seines by late February, and 27% are typically past Chipps Island at this time. SaMT recommended to expand the range by 5% to a total of 10-20% for fish that have exited the Delta past Chipps Island and increased the estimate of fish in the Delta by 10% to a total of 45-60% due to high flows and the number of Steelhead observed in salvage.

#### **Agenda Item 4. Open Discussion on Species Status**

##### ***Salvage Update for 2/19/24 – 2/25/24***

- Salvage and loss totals are detailed in the Salvage update shared via email. Please refer to the email for specific figures.
- A glitch in CDFW’s system caused an erroneous salvage report to be created. A corrected report will be distributed when available. The issue appears to be affecting collection of DNA races of the same length and count.
- Almost every combination of run (both genetically confirmed and non-confirmed) and clipped status for Chinook salmon were observed at the facilities during the reporting period.
- A missed count occurred at the CVP facility on 2/25/24 due to operator error.

#### **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 2/28/24. 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 2/27/24 with comments due COB Thursday (2/29/24). Past ITP Risk Assessments can be found at [CDFW’s Water Project Operations](#) webpage.

## Agenda Item 6. Additional Considerations/Other Topics

- CDFW inquired about inconsistencies in the genetic data distributed to SaMT, including salvage timing and fork lengths. Was it merely preliminary information that will later be corrected?
  - DWR responded that those errors are possible given the number of materials to be frequently updated and the number of communications to the lab. Most recently, DWR shared an email with Cramer Fish Sciences and the Calaveras Big Trees Association (CBTA) containing corrections and fork lengths (FLs). DWR will forward that email to CDFW. SaMT members are welcome to contact DWR if other errors are noted going forward.

## Agenda Item 7. Items to Raise to WOMT

- WOMT is continuing to discuss how to minimize entrainment of Steelhead through March.
  - At the request of WOMT, Reclamation included table 6(c) to the Proposed Action Assessment to help inform decision making related to minimizing the entrainment of Steelhead.
  - CDFW asked: Is the salvage/loss in the 25%, 75% and median columns on Table c representing weekly or daily loss?
    - USBR responded that it represents weekly loss.
  - SWRCB requested that the table include ranges of OMRI between -2,500 cfs and 0 cfs to more accurately understand the median, including a -1,500 cfs model run.
  - SaMT agreed that having an incremental stepdown from -2,500 cfs to a more positive OMRI may be beneficial for decreasing loss of steelhead at the export facilities. SWRCB, USFWS, DWR, CDFW, and NMFS decided that WOMT would be best suited for determining the magnitude of the stepdown approach (i.e -2,500 cfs to -2,000 cfs, or -2,500 cfs to -1,500 cfs), and that WOMT would be best suited for determining the threshold of loss at the facilities at which a further increase in OMRI would occur (i.e increasing OMRI from -2,000 cfs to -1,500 cfs when steelhead loss exceeds a certain threshold during the week and/or day) USBR was not comfortable including the stepdown approach in the Proposed Action assessment; therefore, they only agreed that a more positive OMRI may be beneficial for decreasing loss of steelhead at the export facilities.
  - The SaMT discussed a recommendation to WOMT regarding the 100% exceedance for Steelhead and the preferred OMRI and decided to include the following sentence in the Proposed Action Assessment: “SaMT recognizes any change of OMR more positive than -2,500 cfs may reduce salvage and loss.”

## Agenda Item 8. Next Meeting

- The next SaMT meeting will be held on Tuesday, 3/5/24 on Microsoft Teams.