



Salmon Monitoring Team (SaMT) Weekly Meeting

Teams call: 2/20/24 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.
- Keswick Dam releases will increase to 25,000 cfs on 2/21/24.

- Sacramento River flows at Freeport are 57,200 cfs and is expected to increase over the next few days due to precipitation, however most additional flow will go through the Yolo Bypass.
- San Joaquin River flows were 7,300 cfs on 2/19/24, reached 10,000 cfs on 2/20/24, and are expected to increase over the next 2-3 days. Peak flows may reach 12,000-13,000 cfs.
- Clifton Court Forebay (CCF) exports are 2,200 cfs as of 2/20/24 and are targeting the OMRI of -2,500 cfs. Exports are likely to increase this week in proportion to the increase in San Joaquin River flows.
- Delta Outflow as of 2/19/24 was 62,600 cfs. Flows may potentially reach 100,000 cfs with recent and upcoming precipitation.
- QWEST was approximately +13,000 cfs and is expected to increase over the week, potentially reaching over +17,000 cfs.
- Rio Vista flows were 49,400 cfs on 2/19/24 and could potentially reach 100,000 cfs due to precipitation.
- 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 Threshold¹
 - 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

¹ 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.

- **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 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 January is loss of older juvenile Chinook salmon from CVP and SWP greater than 0.00231% for February 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) 2/21/24.
- 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: 10-15% Last week: 10-34%	Current: 70-85% Last week: 65-80%	Current: 5-15% Last week: 1-10%
YOY spring-run Chinook salmon	Current: 50-65% Last week: 55-70%	Current: 35-50% Last week: 30-45%	Current: 0% Last week: 0%
YOY hatchery winter-run Chinook salmon	Current: 100% Last week: 100%	Current: 0% Last week: 0%	Current: 0% Last week: 0%
Natural-origin steelhead	Current: 35-60% Last week: 50-74%	Current: 35-50% Last week: 25-40%	Current: 5-15% Last week: 1-10%

Rationale for distribution

- Wild winter-run Chinook Salmon
 - A few wild winter-run Chinook salmon were observed this week in the real time monitoring sites. 3 at Knights Landing RST, 4 at the Sacramento Trawl, 6 at Chipps Island Trawls, and a few at EDSM 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% of the wild winter-run Chinook salmon population have migrated into the Delta. After discussion, SaMT members decided to extend the range of fish that have exited the Delta past Chipps Island by an additional 5% as well, due to recent high flows and observations at Chipps Island.
- Wild spring-run Chinook Salmon
 - A few wild YOY spring-run Chinook salmon were observed this week in the real time monitoring sites. Approximately 20 wild spring-run Chinook salmon were observed at the Lower Feather River RST as well as 3 at Knights Landing RST. The Lower Sacramento RST was not trapping during the previous week; however, due to the high flow events it is likely that the Lower Sacramento RST would have caught spring-run if they were actively trapping. The first YOY spring-run Chinook salmon was also caught in the CVP export facility; therefore, SaMT

estimated the range of fish within the Delta increased by 5% this week. 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
 - There have been no acoustically tagged hatchery winter-run observed as of 2/20/24.
- Natural-origin Steelhead
 - One Steelhead was seen at Butte Creek, 5 at the Sacramento Trawl, 1 at West Suisun Bay, and quite a few were observed in salvage. None were seen at Chipps Island. Looking at historical data, 24% are typically seen past Chipps Island by mid-to-late February. SMT recommended to expand the range to 5-15% for fish that have exited the Delta past Chipps Island and expand the range of fish in the Delta by 10% to a total of 35-50% due to high flows and the number of Steelhead observed in salvage.

Agenda Item 4. Open Discussion on Species Status

Salvage Update for 2/12/24 – 2/18/24

- Salvage and loss totals are detailed in the Salvage update shared via email. Please refer to the email for specific figures.
- No hatchery Chinook were observed.
- Genetically confirmed wild fall-run Chinook salmon were observed, along with spring-run LAD, genetically-confirmed spring-run, genetically confirmed late-fall-run, and winter-run LAD. All four of the genetically-confirmed spring-run were classified using genetic population structure analysis, but were also found to possess the “late” run-timing genotype at the Greb1L region of the genome, which has been shown to be strongly associated with either fall-run or late-fall run phenotypes. Spring-run and winter-run phenotypes are typically associated with the “early” run-timing genotype for the Greb1L region, indicating the assignment of these fish is uncertain and needs further investigation.
- Both hatchery and wild steelhead were observed.
- No reduced counts or operational variances were reported.
- The SWP facility collected 2 white sturgeon, measuring 318 mm TL, and 315 mm TL.

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 2/21/24. 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 2/20/24 with comments due COB Thursday (2/22/24). Past ITP Risk Assessments can be found at [CDFW's Water Project Operations](#) webpage.

Agenda Item 6. Additional Considerations/Other Topics

- N/A

Agenda Item 7. Next Meeting

- The next SaMT meeting will be held on Tuesday, 2/27/24 on Microsoft Teams.