



Salmon Monitoring Team (SaMT) Weekly Meeting

Teams call: 4/16/24 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

- Optional WOMT/SMT/SaMT Coordination and Communication Meeting
 - An optional meeting invitation was sent to SaMT and SMT members from Leif Goude, USFWS, for Friday, 4/19/24, from 2 – 3pm.
 - The purpose of the meeting is: “to provide a summary of the water operations and information that developed after the SMT and SaMT meetings and help support the next week’s discussions. This is an opportunity to get updates from WOMT and ask questions to support the following week’s [Proposed Action] Assessment.”

- Anyone wishing to attend who did not receive an invitation may reach out to Mia Schiappi, Kearns & West (mschiappi@kearnswest.com) to be added to the invitation. Invitation recipients are also welcome to forward the meeting invitation to colleagues.
- A couple of key takeaways from the 4/12/24 meeting are included here:
 - The SWP facility may be at minimum exports of 600 cfs through the end of May.
 - The CVP facility will reduce exports by 100 TAF for spring outflow.

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.
- Feather River releases decreased to 6,000 cfs on 4/15/24. Releases may continue to release through the week or a pulse flow may be implemented.
- Releases at Keswick Dam, increased from last week and are currently at 8,000 cfs; Anderson Cottonwood Irrigation District (ACID) has completed their in-river activities.
- Sacramento River flows at Freeport are approximately 31,600 cfs but may increase slightly on 4/16/24 but are generally expected to decrease over the course of the week.
- San Joaquin River flows at Vernalis were 5,700 cfs as of 4/15/24 and are expected to decrease slightly before an expected increase due to the Stanislaus River pulse flow.
- Maintenance activity is scheduled for Jones Pumping Plant (JPP) from 4/16 – 4/18/24. There will be zero pumping for 4-8 hours during these days and 2-units (1,800 cfs) for a portion of remaining hours; daily average exports will range between 900 cfs to 1,000 cfs.
- Clifton Court Forebay (CCF) exports are currently 600 cfs with no anticipated change this week.
- The Delta outflow index is approximately 42,900 cfs and is generally expected to decrease after 4/18/24.
- QWEST flow values are approximately +13,500 cfs and a general decrease is expected after 4/19/24.
- Rio Vista flows are approximately 29,000 cfs and expected to decrease through the week.
- The state share of San Luis storage is 546 TAF.
- Discussion Questions
 - CDFW asked: What was the operating provision for 4/4 – 4/10/24 (i.e, COA 8.17 or COA 8.6.1)?

- DWR responded: It was a mixture of the -2,500 OMR (COA 8.6.1) and maintaining outflow above 44,500 cfs (COA 8.17); however, maintain outflow isn't necessarily operating to COA 8.17 but rather trying to remain above the outflow requirement in COA 8.17 so that is it not triggered.
 - Reclamation responded: Federal exports are operating under the 2024 IOP.
- 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. 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 \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 -2,500 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) 4/17/23.
- 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: 30-44% Last week: 35-49%	Current: 55-65% Last week: 50-60%
YOU spring-run Chinook salmon	Current: 10-20% Last week: 10-20%	Current: 45-65% Last week: 50-70%	Current: 25-35% Last week: 20-30%
YOY hatchery winter-run Chinook salmon	Current: 1-2% Last week: 1-5%	Current: 9-18% Last week: 35-49%	Current: 80-90% Last week: 50-60%
Natural origin steelhead	Current: 10-25% Last week: 15-30%	Current: 20-45% Last week: 20-45%	Current: 45-55% Last week: 40-50%

Rationale for Distribution

- Wild winter-run Chinook Salmon
 - 5 wild winter-run were seen exiting past Chipps Island; none were seen at any additional locations. Based on seasonal timing and a few observations at Chipps Island, SaMT estimated that an additional 5% of winter-run Chinook salmon in the Delta have exited past Chipps Island. The total in the Delta estimation was decreased to 30-44% and total exited the Delta increased to 55-65%.
- Wild spring-run Chinook Salmon
 - 297 wild spring-run Chinook salmon were observed at Chipps Island as well as at several other locations. 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 5% this week to a total of 25-35% based on seasonal timing and taking the numbers from real-time monitoring stations with caution due to the hatchery releases that occurred. Historical data shows that there are typically 88% past Knights Landing and 29% past Chipps Island by mid-April.
- Hatchery winter-run Chinook Salmon
 - CalFishTrack showed a couple winter-run Chinook salmon that have yet to enter the Delta. A few more were seen passing through the Delta receivers. An additional 1-2 fish were seen passing Chipps Island. Because even fewer fish are being seen than during the previous week, SaMT agreed that peak outmigration for the hatchery winter-run release group has ended and most have moved out of the system. SaMT decreased the range for hatchery winter-run that have moved into the Delta to 9-18% and increased the number exited to 80-90%.
- Natural-origin Steelhead

- Natural-origin Steelhead were observed at the following locations: 5 at Butte Creek, 5 at the Mossdale Trawl, zero at Chipps Island, and several at Feather River and Yuba, as well as in salvage every day last week. SaMT estimates an additional 5% have migrated past Chipps Island for a total of 45-55% for fish that have exited the Delta.

Agenda Item 4. Open Discussion on Species Status

Salvage Update for 4/8 – 4/14/24

- Salvage and loss totals are detailed in the salvage update shared via email. Please refer to the email for specific figures.
- Wild steelhead continue to be seen in salvage.
- Total wild steelhead observed in salvage from 10/1/23 through 3/31/24 is 1,555 fish.
- Winter-run LAD and older juvenile-sized Chinook salmon were observed in salvage.
- The majority of Chinook salmon observed during the reporting period were spring-run and fall-run-sized.
- One adult-sized Chinook salmon (measuring 472 mm) was observed at the SWP facility.
- Questions / Comments
 - CDFW shared that Chinook salmon with a pink upper-caudal fin that are being observed in salvage are from an efficiency trial being conducted for the Mossdale Trawls.

Operations

- A miscount was reported at the CVP facility on 4/14/24 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 4/17/24. 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 4/16/24 with comments due COB Thursday (4/18/24). Past ITP Risk Assessments can be found at [CDFW's Water Project Operations](#) webpage.

Agenda Item 6. Additional Considerations/Other Topics

Discussion on CVP and SWP Operations

- CDFW asked if the terminology *minimum allowed combined pumping* is simply implying combined exports measuring 1,500 cfs or does it mean something different? What is considered to be "minimum"? Concerned that this language is too generic.

- Reclamation had intended to capture minimum stance with that terminology but noted that there is no one specific measurement of exports to apply.
- CDFW asked if Reclamation can provide what exports will be for the current week.
 - USBR responded that through discussions with upper management, the stance has been taken for the single unit at the federal facility. That is what Reclamation is operating to for the week. No additional direction was provided from upper management.
 - CDFW asked about the federal facility increasing to two units and that the exports are listed as a range of zero to 1,800 cfs in the operations outlook which would be higher than a single unit.
 - Reclamation responded that the maintenance activity is where the change in unit operation on an instantaneous timeframe. The daily average exports will remain the same. It's approximately 970 cfs (1 unit) for the daily average but because of maintenance activity, there will be zero pumping for a portion of time. Outside of maintenance hours, exports would increase to approximately 1,800 cfs (2 units), for a portion of the day, in order to meet the daily average.
 - CDFW expressed concern over the potential loss of benefits due to the increase of exports from 970 cfs to 1,800 cfs and suggested the possibility of elevating this concern to WOMT or rather just flagging this to their management in case they weren't aware of this.
 - CDFW asked about specifics on the timing of the export increases considering that fish are generally more mobile during nighttime hours. This could be a potential concern for SaMT.
 - Reclamation confirmed maintenance work that could include dive inspections will be conducted during daytime hours, therefore export increases would occur at night.
 - Suggestion from CDFW to list the range of pumping units as zero to two.
 - Reclamation stated information in the Outlook for Jones pumping contained this information in terms of flow rate (cfs).

Discussion on Spring-run Chinook

- DWR noted that in the recent past, many spring-run Chinook Salmon were re-evaluated by the newer population genetic panels as being fall or late-fall run, but genetic testing has lagged.

Other Topics

- CDFW asked if agencies are not providing advice to WOMT would it be fine with them to provide a sentence on abstaining from providing a recommendation and also a sentence on why they are abstaining.
 - This item remain unresolved and will be taken up at a later meeting.

Agenda Item 7. Items to Elevate to WOMT

- CDFW will make the following request to WOMT:
 - CDFW recommends continuing to operate to a positive OMRI this week due to the decreased salvage of LAD WR that has been observed since operations targeted a positive OMRI over the previous week. 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 less positive OMRI once risk of entraining LAD winter-run into the salvage facilities is no longer present. This is likely to also provide protections to steelhead as well which may decrease the likelihood of exceeding the steelhead 100% annual loss threshold and Incidental Take Limit (ITL).
- NMFS, DWR, and USFWS acknowledge that we are continuing to see steelhead in salvage, and increasing exports will likely result in an increase in steelhead loss, increasing the risk of exceeding the steelhead annual loss threshold and ITL. Increasing exports would also increase the risk of exceeding the winter-run ITL.

Agenda Item 8. Next Meeting

- The next SaMT Meeting is scheduled for Tuesday, 4/23/24 on Microsoft Teams.
- There may be an option for a hybrid meeting at DWR's downtown office, where the Interagency Ecological Program (IEP) will be held. More details will be sent out and coordinated via email.