BUREAU OF RECLAMATION

Salmon Monitoring Team (SaMT) Weekly Meeting

Teams call: 1/10/23 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. Updates on Water Operations and Biological Conditions
3. Open Discussion on Species Status
4. Live-edit Assessments (Proposed Action Assessment and ITP Risk Assessment)
5. Additional Considerations/Other Topics
6. Next Meeting

Agenda Item 2. Updates on Water Operations and Biological Conditions

Storms are forecasted to continue throughout the week. The North Coast and Shasta Basin areas expect to receive up to 10 inches of precipitation. Northern sections of the Sacramento Valley can expect to see up to 5 inches of precipitation, with decreased amounts expected closer to the Sacramento Valley. The San Joaquin Basin is expected to receive under 2 inches of precipitation.

Clear Creek releases from Whiskeytown Dam remain at 200 cfs, with spillway releases occurring due to recent precipitation.

Sacramento River releases from Keswick Dam are at 4,250 cfs with the possibility of variation due to side flow.

Sacramento River flows at Freeport are approximately 80,000 cfs.

Sacramento River flows over the Fremont weir are expected to reach up to 50,000 cfs this week.

San Joaquin River flows at Vernalis are approximately 7,000 cfs and may reach up to 16,000 cfs through the week.

Clifton Court Forebay (CCF) exports are currently at 2,700 cfs with the potential to reach 6,000 cfs depending on San Joaquin River flows.

Feather River releases from Oroville Dam are currently at 950 cfs with no expected changes this week.

American River releases from Nimbus Dam are currently at 25,000 cfs with a change order in place to reduce to 20,000 cfs on 1/10/23. Releases may vary to manage for flood and increased side flows.

Stanislaus River releases from Goodwin Dam are currently at 2,500 cfs and are anticipated to vary due to increased precipitation and side flow.

The Delta outflow index is currently at 96,000 cfs with potential to reach 150,000 cfs this week.

Jones Pumping Plant exports are currently at 3,500 cfs and are expected to vary up to 4,200 cfs this week.

QWEST flow values are approximately 20,000 cfs. Flows are expected to vary throughout the week but remain above 10,000 cfs.

Rio Vista flows are approximately 76,000 cfs with the potential to exceed 100,000 cfs this week.

The tidal cycle is approaching the end of a neap cycle after the full moon on 1/6/23.

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:

- Delta Cross Channel (DCC) Gate operations (PA 4.10.5.3): Gates closed for the season on 11/28/22 to meet LTO Proposed Action. The gates will remain closed until May unless an opening is needed to meet D-1641 water quality requirements.

- OMR Management Season (PA 4.10.5.10.1, COA 8.3.2): Onset of OMR Management season began on 1/1/23 due to the exceedance of the 5% threshold for the winter-run Chinook salmon population presence within the Delta. Old and Middle River (OMR) flows cannot be more negative than -5,000 cfs on a 14-day average. Additional restrictions and changes to operations may be required per the PA and the CDFW Incidental Take Permit (ITP- COA 8.3.2).

- 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 JPE, which is currently in development.

    - The ITP natural-origin Winter-run Single-year Loss Threshold for this year is loss of unclipped length-at-date winter-run Chinook salmon from the CVP and SWP greater than or equal to 1.17% of the winter-run Chinook salmon juvenile

production estimate (JPE) (loss ≥ TBD). If 50% of the threshold is exceeded (loss ≥ TBD), 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 ≥ TBD), 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 length-at-date 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 ≥ TBD). If 50% of the threshold is exceeded (loss ≥ TBD), 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 ≥ TBD), 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 1/1/23 – 1/31/23, 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 0.00635% of the winter-run Chinook salmon JPE. If the threshold is exceeded (loss >2.84), 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.

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) 1/10/23.

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
Young-of-year (YOY) winter-run Chinook salmon	Current: 54-70% Last week: 59-75%	Current: 30-45% Last week: 25-40%	Current: 0-1% Last week: 0-1%
YOY spring-run Chinook salmon	Current: 80-95% Last week: 85-95%	Current: 5-20% Last week: 5-15%	Current: 0% Last week: 0%
YOY hatchery winter-run Chinook salmon	Current: NA Last week: NA	Current: NA Last week: NA	Current: NA Last week: NA
Natural origin steelhead	Current: 88-98% Last week: 95-99%	Current: 1-10% Last week: 1-5%	Current: 1-2% Last week: 0%

Agenda Item 4. Open Discussion on Species Status

Salvage Update:

Skinner Fish Facility reduced counts on 1/4/23 – 1/5/23 due to high fish numbers.

Chinook Salmon -Clipped

Clipped late fall run-sized fish were observed at the SWP and CVP. Clipped winter run-sized fish were observed at the SWP and CVP. Clipped fall run-sized fish were observed at the CVP. Non-clipped fish were included with clipped fish if a CWT was detected and reported.

Chinook Salmon -Non-Clipped

Non-clipped late fall run-sized fish were observed at the SWP and CVP. Non-clipped winter run-sized fish were observed at the CVP.

Steelhead

Clipped Steelhead were detected at the CVP facility on 1/4/23. Non-Clipped Steelhead were detected at SWP and CVP on 1/3/23, 1/4/23, and 1/6/23.

Green Sturgeon

A dead adult Green Sturgeon was found in the trash rack at the SWP facility on 1/4/23. A live adult Green Sturgeon was found on the trash at the CVP facility on 1/7/2023. The sturgeon has a head injury and is being held and monitored at the Tracy Fish Facility. It is being acoustically tagged today and will soon be released near Sherman Island.

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 1/11/23. The final assessment will be posted to Reclamation's Delta Monitoring Workgroup webpage.

ITP Risk Assessment

SaMT discussed the ITP Risk Assessment document. The updated draft ITP Risk Assessment will be distributed via email by COB 1/10/23 for review by SaMT members with comments due

COB Thursday 1/12/23. The ITP Risk Assessment will be finalized by COB Friday 1/13/23 and can be found at CDFW's Water Project Operations webpage.

Agenda Item 6. Additional Considerations/Other Topics

Update to winter-run machine learning model for predicting winter-run salvage

Presenter Jereme Gaeta and his team will likely not be ready to provide the entrainment model for this water year as they are focused on writing tasks; therefore, the model will most likely not be ready until WY 2024. The team confirms that, to date, the model is more predictive for actual genetic winter-run and is still predicting absence for this season with an increasing trend towards probability of low presence at salvage. SaMT members may contact Brian Mahardja (bmahardja@usbr.gov) or Jereme Gaeta (jereme.gaeta@wildlife.ca.gov) for more information.

Success rates of tag codes from recent hatchery releases

There was also a discussion on success rate of tag codes from hatchery releases. There is uncertainty in the identification of some untagged salmonids potentially due to either tag loss or poor-quality adipose clipping from hatchery releases made in the South Delta. Most of the unsuccessful tags were released out of Coleman National Fish Hatchery and the lower rates of tagging success were confirmed by hatchery staff for a few of the releases. Confirmation of origin of these fish will be through genetic identification. DWR will conduct genetics on all natural fish that are observed in salvage due to this issue.

Agenda Item 7. Next Meeting

Action Item: Towns Burgess to check with hatchery facility about the tagging rate of yearlings released in December.

Action Item: Kevin Reece to flag any observed, natural Chinook salmon identified as part of the San Joaquin River Restoration Program.

The next SaMT Meeting is scheduled for Tuesday, 1/17/23, immediately following the Joint Operations & Outlook 9 a.m. meeting.