



Smelt Monitoring Team Meeting Summary

Tuesday, June 18, 2024

Meeting Objective

To collectively assess how current operations and environmental conditions could be impacting Delta Smelt and Longfin Smelt and to provide information to Water Operations Management Team (WOMT) on the status of Delta Smelt and Longfin Smelt, their exposure to operations of the CVP and SWP, and their potential sensitivity to environmental and operational changes; i.e., assess changes in risk week-to-week.

Participants

- California Department of Fish and Wildlife (CDFW)
- California Department of Water Resources (DWR)
- State Water Resources Control Board (SWRCB)
- U.S. Bureau of Reclamation (USBR)
- U.S. Fish and Wildlife Service (USFWS)
- Kearns & West (K&W)

Action Items

- N/A.

Advice to WOMT

- N/A.

Announcements

- Due to the End of OMR Management as of 6/14/24, the SMT did not follow the regular agenda. As a result, CDFW and USFWS did not report on Delta Smelt or Longfin Smelt survey detections. CDFW did not report on operational variances. The SMT did not discuss risk to Delta Smelt and Longfin Smelt. The SMT did not live edit the Delta Smelt and Longfin Smelt tables in the Proposed Action Assessment or the ITP Risk Assessment.

- DWR, shared that the daily average temperature at Clifton court Forebay (CCF) exceeded the 25°C threshold for three consecutive days, thus ending OMR Management Season 6/14/24.
 - USFWS asked whether there was a website that shows the 3-day average temperature at Clifton Court and whether SacPAS or Bay-Delta Live had that information.
 - DWR suggested that CDEC should have the correct information.
 - Reclamation shared that the offramp is based on three consecutive days of temperature over 25°C.

Meeting Summary

Part 1: Updates on Water Operations and Biological Conditions Updates

Relevant Actions & Triggers

- CVP and SWP operators are targeting an Old and Middle River Index (OMRI) range of -2,500 cfs to -6,000 cfs.
- Reclamation and DWR proposed joint water project operations be conducted according to D-1641 requirements.

OMR Management Season for smelts has ended for the season based on three consecutive days of daily average temperature at Clifton Court Forebay exceeding 25°C. The table below summarizes the status of OMR Management Measures and Conditions of Approval on a week-to-week-basis through updates in the “Action Status” column on the far right. For full descriptions of OMR Management Measures and Conditions of Approval, please see the OMR Guidance Document or ITP.

Proposed Action

OMR Management Measures	Requirement	Time Frame	Trigger	Action Status*
Integrated Early Winter Pulse Protection (IEWPP) ("First Flush" Turbidity Event)	Reduce exports for 14 consecutive days so that the 14-day averaged OMR index for the period shall not be more negative than -2,000 cubic feet per second (cfs).	Dec 1 to Jan 31	(1) Running 3-day average of daily flows at Freeport >25,000 cfs; and (2) Running 3-day average of daily turbidity at Freeport ≥50 Nephelometric Turbidity Units (NTU1); or (3) Real-time monitoring indicates a high risk of migration and dispersal into areas at high risk of future entrainment or a spent Delta Smelt (DS) has been collected in monitoring surveys.	Off-ramped. Implemented 1/23/24-2/5/24
OMR Management	Manage to a more positive OMR than -5,000 cfs.	From the onset of OMR management to the end.	N/A	Off-ramped as of 6/14/24
Turbidity Bridge Avoidance ("South Delta Turbidity")	If the daily average turbidity at Bacon Island cannot be maintained less than 12 NTU, manage exports to achieve an OMR no more negative than -2,000 cfs until the daily average turbidity at Bacon Island drops below 12 NTU.	After the first flush or Feb 1 (whichever comes first) and until a ripe or spent female DS is detected or April 1 (whichever is first).	Average daily turbidity in Old River at Bacon Island (OBI) at a level of more than 12 NTU.	Off-ramped

1 The current instrumentation measures turbidity in Formazin Nephelometric Units (FNU).

OMR Management Measures	Requirement	Time Frame	Trigger	Action Status*
Larval and Juvenile Delta Smelt	Run hydrodynamic models and forecasts of entrainment, informed by the Enhanced Delta Smelt Monitoring (EDSM) or other relevant survey data to estimate the percentage of larval and juvenile DS that could be entrained. If necessary, manage exports to limit entrainment to be protective based on the modeled recruitment levels.	On or after March 15 of each year until off-ramp criteria are met.	If QWEST is negative AND larval or juvenile DS are within the entrainment zone of the pumps based on real-time sampling of spawning adults or young of year life stages. USFWS Memo/Technical Note 47: When the Secchi depth in the South Delta is less than 1 meter, Reclamation will operate to OMR no more negative than -3,500 cfs. When the Secchi depth in the south Delta is greater than 1 meter, Reclamation and DWR will operate to OMR no more negative than -5,000 cfs.	Active, Not Triggered
End of OMR Management	OMR criteria may control operations until June 30 (for DS and Chinook salmon), until June 15 (for steelhead/rainbow trout), or when the species-specific off ramps have occurred, whichever is earlier.	During OMR management to June 30, or when the DS temperature off ramp has been reached.	DS: when the daily mean water temperature at Clifton Court Forebay (CCF) reaches 77°F for 3 consecutive days	Active, Triggered on 6/14/24

ITP Conditions of Approval

Condition of Approval	Requirement	Time Frame	Trigger	Action Status
8.1.5.2 (Smelt Monitoring Team Risk Assessment)	Outlines contents for weekly risk assessments of DS and Longfin Smelt (LFS) required under 8.1.5 and 8.1.1.	Nov 1st through June 30th or until off-ramped by 8.8	N/A	Off-ramped by COA 8.8 on 6/14/24

Condition of Approval	Requirement	Time Frame	Trigger	Action Status
8.3.1 (Integrated Early Winter Pulse Protection)	Reduce south Delta exports for 14 consecutive days to maintain a 14-day average OMR index no more negative than -2,000 cfs, and convene the Smelt Monitoring Team (SMT) within one day of triggering. After maintaining a 14-day average OMR index no more negative than -2,000 cfs for 14 days, Permittee shall maintain a 14-day average OMR index no more negative than -5,000 cfs, initiating the OMR Management season.	Dec 1 to Jan 31	3-day running average daily flows at Freeport greater than, or equal to, 25,000 cfs, AND Three-day running average of daily turbidity at Freeport is greater than, or equal to, 50 FNU OR The SMT determines that real-time monitoring of abiotic and biotic factors indicates a high risk of DS migration and dispersal into areas at high risk of future entrainment.	Off-ramped on 2/5/24
8.3.3 (Adult Longfin Smelt Entrainment Protection)	After December 1, if an Integrated Early Winter Pulse Protection (COA 8.3.1) has not yet initiated, Permittee shall reduce south Delta exports to maintain a 14-day average OMR index no more negative than -5,000 cfs and initiate OMR Management (Condition of Approval 8.3) if: Cumulative combined LFS salvage (total estimated LFS counts at the CVP and SWP salvage facilities beginning December 1 through February 28 exceeds the most recent Fall Midwater Trawl (FMWT) LFS index divided by 10, Real-time monitoring of abiotic and biotic factors indicates a high risk of LFS movement into areas at high risk of future entrainment, as determined by DWR and CDFW SMT staff.	Dec 1 through Feb 28th	Salvage threshold for water year (WY) 2024 is 46.4.	Off-ramped as of 1/1/24 due to initiation of OMR season by COA 8.3.2

Condition of Approval	Requirement	Time Frame	Trigger	Action Status
8.4.1 (OMR Management for Adult Longfin Smelt)	<p>The SMT shall conduct weekly risk assessments and decide whether to recommend an OMR flow requirement to minimize entrainment of adult LFS. The SMT may provide advice to restrict south Delta exports for seven consecutive days to achieve a seven-day average OMR index within three risk categories:</p> <p>Low risk: OMR between - 4,000 cfs to -5,000 cfs Medium risk: OMR between -2,500 cfs to -4,000 cfs High risk: OMR between - 1,250 cfs to -2,500 cfs</p>	Onset of OMR management through Feb 28th	SMT recommendation based on weekly risk assessment.	Off-ramped as of 12/18/23 due to detection of larval LFS by Smelt Larva Survey (SLS) 12
8.4.2 (Larval and Juvenile Longfin Smelt Entrainment Protection)	If triggered, it will restrict south Delta exports for seven consecutive days in order to maintain a seven-day average OMR index no more negative than -5,000 cfs and convene the SMT to recommend an OMR flow limit between -1,250 and - 5,000 cfs.	January 1st through June 30th or until the temperature offramp occurs	(1) LFS larvae or juveniles are found in four or more of the 12 Smelt Larvae Survey (SLS) or 20 mm stations in the central or south Delta, or (2) LFS catch per tow exceeds five larvae or juveniles in two or more of the 12 stations in the central or south Delta. The relevant stations are: 809, 812, 815, 901, 902, 906, 910, 912, 914, 915, 918 and 919.	Off-ramped by COA 8.8 on 6/14/24

Condition of Approval	Requirement	Time Frame	Trigger	Action Status
8.4.3 High flow offramp for Longfin Smelt	If triggered, COA 8.4.1 and 8.4.2 are not required or would cease if previously required.	Throughout OMR management season	When river flows are (a) greater than 55,000 cfs in the Sacramento River at Rio Vista or (b) greater than 8,000 cfs in the San Joaquin River at Vernalis. If flows subsequently drop below 40,000 cfs in the Sacramento River at Rio Vista or below 5,000 cfs in the San Joaquin River at Vernalis, the OMR limit previously required as a part of Conditions of Approval 8.4.1 and 8.4.2 shall resume.	Off-ramped by COA 8.8 on 6/14/24
8.5.1 Turbidity Bridge Avoidance	Maintain daily average turbidity at OBI at a level of less than 12 FNU. If the daily average turbidity at OBI is greater than 12 FNU, Permittee shall restrict south Delta exports to achieve an OMR flow that is no more negative than -2,000 cfs until the daily average turbidity at OBI is less than 12 FNU.	After the first flush or Feb 1 until end of OMR management or until CDFW agrees that the action may be ended or modified.	Turbidity at OBI > 12 FNU	Off-ramped

Condition of Approval	Requirement	Time Frame	Trigger	Action Status
8.5.2 (Larval and Juvenile Delta Smelt Protection)	<p>If triggered, this Condition of Approval will restrict south Delta exports for seven consecutive days in order to maintain a seven-day average OMR index no more negative than -5,000 cfs and SMT members will meet to assess the risk of entrainment. The SMT may provide further advice to restrict exports in order to maintain an OMR index more positive than -5,000 cfs. In their assessment, SMT members will determine if risk of entrainment is low, medium, or high; subsequent OMR restrictions will be based on level of risk. Furthermore, if trigger (2) or (3) are met, this Condition of Approval will restrict south Delta exports to maintain a seven-day average OMR index no more negative than -3,500 cfs until the average Secchi depth is greater than 1 meter in the south Delta stations in a subsequent SLS or 20 mm survey. If average south Delta Secchi depth continues to be less than or equal to 1 meter in a subsequent SLS or 20mm survey, then Permittee shall continue restrictions and request a risk assessment by the Smelt Monitoring Team to determine if additional advice and subsequent restrictions are warranted and provide advice to WOMT.</p>	Nov 1st through June 30th or until off-ramped by 8.8.	<p>(1) When the five-day salvage of juvenile DS is greater than or equal to one plus the average prior three years' FMWT index (rounded down). The 2023 September through December FWMT index for DS was zero.</p> <p>Or (2) when a larval/juvenile DS is detected in SLS/20 mm</p> <p>Or (3) the 3-day average water temperature at Jersey Point is $\geq 12^{\circ}\text{C}$ and Secchi from the most recent SLS/20 mm survey is $\leq 1\text{m}$ averaged across the 12 stations (809, 812, 815, 901, 902, 906, 910, 912, 914, 915, 918, and 919)</p>	Off-ramped by COA 8.8 on 6/14/24

Condition of Approval	Requirement	Time Frame	Trigger	Action Status
8.8 (End of OMR Management)	If triggered, OMR Management would be off-ramped for LFS and DS.	From the onset of OMR management through June 30th	Daily mean water temperature at CCF is >25° C for three consecutive days.	Active, Triggered on 6/14/24
8.12 (Barker Slough Pumping Plant Longfin and Delta Smelt Protection)	Barker Slough Pumping Plant will reduce exports so the maximum 7-day average is <60 cfs.	From January 15 through March 31 in dry and critical water years for LFS, and from March 1st through June 30th for DS	Larval Smelt are detected at SLS Station 716 during the period identified for each species, and/or when recommended by the SMT.	LFS: Off-ramped. DS: Not active due to Above Normal water year type forecast as of 5/14/24.
8.17 (Export Curtailments for Spring Outflow)	Reduce exports from April 1st to May 31st each year to achieve the SWP proportional share of export reductions established by the ratio of Vernalis flow to combined CVP and SWP exports, scaled by water year type, to provide incidental spring outflow.	April 1st through May 31st	The three-day average Delta outflow is less than 44,500 cfs	Off-ramped. Implemented 4/10/24-5/31/24.

Not active: The COA could become active in this season, but the on-ramp conditions have not been met.

Active, not triggered: The on-ramping condition has been met, but the trigger condition has not been met.

Active, triggered: The trigger condition has been met.

Off-ramped: This COA could no longer become active in this season.

* [Glossary](#)

Current Operations & Outlook

- Releases from Whiskeytown Dam on Clear Creek are currently 500 cfs with a range of 175 cfs to 500 cfs for a Spring attraction pulse.
- Releases from Keswick Dam on the Sacramento River are currently 9,000 cfs with a range of 9,000 cfs to 10,000 cfs for the week.
- Releases from Oroville Dam on the Feather River are currently 4,500 cfs with a range of 2,000 cfs to 5,000 cfs for the week.
- Releases from Nimbus Dam on the American River are 3,500 cfs with a range of 3,500 cfs to 4,000 cfs for the week.
- Releases from Goodwin Dam on the Stanislaus River are currently 2,500 cfs with a range of 1,500 cfs to 2,500 cfs for the week.

- Jones Pumping Plant is currently exporting 2,700 cfs with an anticipated range of 2,700 cfs to 4,200 cfs.
- The State facility (SWP) is currently exporting 800 cfs with an anticipated range of 300 cfs to 3,000 cfs.
- Expected Daily OMR Index Values are between –2,500 cfs to –6,000 cfs.
- Sacramento River flows at Freeport range between 13,000 to 16,000 cfs.
- San Joaquin River flows at Vernalis range between 2,000 to 3,500 cfs.
- The Delta Outflow index ranges from 9,000 to 12,000 cfs.
- X2 is 73 km.
- Delta Cross Channel (DCC) gates opened on 6/14/24 and will be tested on 6/21/24.

Review of Environmental Conditions and Survey Updates

- N/A.

Part 2: Open Discussion on Species Status (Structured-Unstructured Time)

Due to the End of OMR Management as of 6/14/24, the SMT did not discuss risk to Delta Smelt and Longfin Smelt.

Part 3: Live-edit Assessments

2025 OMR Guidance Document

Kearns & West opened a discussion on SMT recommendations related to the OMR Management Document as requested by Reclamation.

- DWR asked whether request for feedback on the OMR Guidance Document is inclusive of the Proposed Action (PA) for the new Long-Term Operations (LTO) of the Central Valley Project (CVP) and State Water Project (SWP) which are still being drafted.
 - K&W elaborated that that any SMT feedback on the OMR Guidance Document at this point would appear to be happening in parallel with development of the PA for the new LTO and assumes some level of knowledge about those new documents.
- CDFW shared that they felt that SMT feedback on the OMR Guidance Document would be more constructive at the beginning of next season when the state ITP has been drafted and its contents are known by SMT members; that would enable more productive feedback on the Guidance Document. Accordingly, CDFW suggested that the SMT postpone this topic and instead consider feedback on the OMR Guidance Document in November 2024 at the beginning of the WY2025 SMT season.
 - DWR agreed with CDFW's proposal. DWR elaborated that, on the ITP side, having the conversation in the fall makes sense given that the ITP is scheduled to

be finalized and distributed before the start of the next SMT season. DWR is unsure about the federal timeline.

- CDFW added that the role of the SMT in the new PA and ITP is not yet determined.
 - DWR noted it is possible that there will be changes to the role of the SMT and other technical teams.
- Reclamation agreed to check with management to see what the intention was for requesting SMT feedback on the OMR Guidance Document at this time given that the new PA is not available to all members of the SMT and would be critical in determining SMT feedback on the OMR Guidance Document.
 - Pending additional rationale for requesting feedback on the OMR Guidance Document in the absence seeing draft or final PA or ITP documents, the SMT agreed to table the discussion of the OMR Guidance Document until the 2024/2025 SMT season.

Review of Tables 2 and 3 of the Fish and Water Operations Outlook

- N/A.

Proposed Action Weekly Evaluation of Delta Smelt, including Distribution, Abiotic Conditions, Risk Assessment Questions, and Executive Summary

- N/A.

ITP Longfin Smelt and Delta Smelt Risk Assessment

- N/A.

Part 4: Additional Considerations/Discussion

Agencies reported no items for elevation to WOMT.

Evan Carson, Population Geneticist at USFWS, presented to the SMT on the preliminary results of a study examining the hybridization of Delta Smelt and Wakasagi. The presentation included an overview of the Culture and Supplementation of Smelt (CASS) funded study to evaluate the above topic for better understanding of hybridization in the wild and avoid risk to the Delta Smelt broodstock

Next SMT Meeting

The final SMT meeting of the 2023/2024 season will be held on Tuesday 06/25/2024 on Microsoft Teams.