

PARTICIPANTS

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

ACTION ITEMS

- CDFW to circulate November Fall Midwater Trawl (FMWT) Index when available.
- USFWS to circulate Longfin Smelt (LFS) Synthesis document for future discussion on the increasing November and December LFS catch proportions.

MEETING SUMMARY

- CDFW noted that there will not be a complete FMWT index until the new calendar year. The December 1st index should be used for calculating salvage thresholds during the interim period.

PART 1: Updates on Water Operations and Biological Updates

Relevant Actions & Triggers

USBR reported on anticipated Old and Middle River (OMR) management measures. At this point there are no controlling actions set for the region. The first one will be the Integrated Early Winter Pulse Protection action, and this cannot be initiated until December 1, 2021. CDFW reported on the Incidental Take Permit (ITP) Conditions of Approval that are currently in effect. Currently only 8.1.5.2 is in effect requiring SMT to conduct a risk assessment. Integrated Early Winter Pulse Protection (8.3.1) and Adult Longfin Smelt Entrainment Protection (8.3.3) can be initiated as of December 1st.

Proposed Action

OMR Management Measures	Requirement	Time Frame	Trigger	Triggered?
Integrated Early Winter Pulse Protection (“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 cfs	Dec 1 to Jan 31	(1) Running three-day average of daily flows at Freeport >25,000 cfs; and (2) Running three-day average of daily turbidity at Freeport ≥50 Nephelometric Turbidity Units (NTU ¹); 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.	Not active
OMR Management	Manage to a more positive OMR than -5,000 cfs	From the onset of OMR management to the end		Not active
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 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.	Not active
Larval and Juvenile Delta Smelt	Run hydrodynamic models and forecasts of entrainment, informed by the EDSM or other relevant survey data to estimate the percentage of larval and juvenile delta smelt 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 delta smelt are within the entrainment zone of the pumps based on real-time sampling of spawning adults or young of year life stages	Not active

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

OMR Management Measures	Requirement	Time Frame	Trigger	Triggered?
End of OMR Management	OMR criteria may control operations until June 30 (for Delta Smelt 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 reaches 77°F for 3 consecutive days	Not active

TTP Conditions of Approval

Condition of Approval	Requirement	Time Frame	Trigger	Triggered?
8.1.5.2 (Smelt Monitoring Team Risk Assessment) Triggered	Outlines contents for weekly risk assessments of Delta Smelt and Longfin Smelt (LFS) required under 8.1.5 and 8.1.1	Nov 1 st through June 30 th or until off-ramped by 8.8		Yes
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 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	Three-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 Smelt Monitoring Team 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.	Not active

Condition of Approval	Requirement	Time Frame	Trigger	Triggered?
8.3.3 (Adult Longfin Smelt Entrainment Protection)	After December 1, if an Integrated Early Winter Pulse Protection (Condition of Approval 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 if: Cumulative expanded salvage, Dec 1 st through Feb 28 th , exceeds most recent FMWT Index divided by 10, or SMT determines that there is a high risk of entrainment.	Dec 1 through Feb 28 th	Salvage threshold for WY 2022 is TBD.	Not active
8.4.1 (OMR Management for Adult Longfin Smelt)	The SMT shall conduct weekly risk assessments and decide whether to recommend and 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: 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	Onset of OMR management through Feb 28 th	SMT recommendation based on weekly risk assessment	Not active

Condition of Approval	Requirement	Time Frame	Trigger	Triggered?
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) Longfin Smelt larvae or juveniles are found in four or more of the 12 Smelt Larval Survey (SLS) or 20 mm stations in the central or south Delta, Or (2) Longfin Smelt 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	Not active
8.4.3 High flow offramp for Longfin Smelt	If triggered, Conditions of Approval 8.4.1 and 8.4.2 are not required or would cease if previously required.	Throughout OMR management	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.	Not active
8.5.1 Turbidity Bridge Avoidance	maintain daily average turbidity in Old River at Bacon Island (OBI) at a level of less than 12 NTU. If the daily average turbidity at OBI is greater than 12 NTU, 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 NTU.	After the first flush or Feb 1 until end of OMR management or until CDFW is in agreement that the action may be ended or modified.	Turbidity at OBI > 12 FNU	Not active

Condition of Approval	Requirement	Time Frame	Trigger	Triggered?
8.5.2 (Larval and Juvenile Delta Smelt Protection)	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 salvage of Delta Smelt exceeds 11 in three days, 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 -3,500 cfs.	Nov 1 st through June 30 th or until off-ramped by 8.8	When the five-day salvage of juvenile Delta Smelt is greater than or equal to one plus the average prior three years' FMWT index (rounded down). The 2021 FMWT index for Delta Smelt is not yet available.	Active, not triggered
8.8 (End of OMR Management)	If triggered, OMR Management would be off-ramped for Longfin and Delta Smelt.	From the onset of OMR management through June 30 th	Daily mean water temperature at Clifton Court Forebay is >25° C for three consecutive days.	Not active
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 Longfin Smelt, and from March 1 st through June 30 th for Delta Smelt	Larval Smelt are detected at SLS Station 716 during the period identified for each species, and/or when recommended by the SMT	Not active

Current Operations & Outlook

USBR and DWR shared operations updates from the Outlook. Their observations included:

- USBR Central Valley Office (CVO) reported dry conditions persisting this week through the next with a low probability precipitation event in the Shasta area on December 6th.

- Releases from Whiskeytown Dam on Clear Creek are currently 200 cfs. No modifications expected.
- Releases on the Sacramento River from Keswick Dam are currently 3,250 cfs. No modifications expected.
- American River releases from Nimbus Dam are holding at 550 cfs. No modifications expected.
- Releases from Goodwin Dam on the Stanislaus River are currently 200 cfs. No modifications expected.
- Jones Pumping Plant exports are currently 1,700 cfs and will decrease to 900 cfs on December 3rd.
- Delta Cross-channel (DCC) gates closed on November 30th in response to Rio Vista requirements from D-1641 and will remain closed due to the seasonal closure starting December 1st.
- DWR reported that Feather River releases are currently at 1,150 cfs and increasing to 1,300 cfs on November 30th.
- Freeport flows are near 6,000 cfs on November 30th and are expected remain steady into next week. The upcoming spring tide may reduce Freeport flows, but this could be balanced by increased inflows from the Feather River.
- San Joaquin River flows at Vernalis were 600 cfs on November 30th.
- Delta outflows as of November 29th were 3,000 cfs and will likely remain close to 3,500 cfs as dry conditions continue.
- The OMR Index is about -2,000 cfs, and are expected to become more positive (approaching -1,200 cfs) as USBR alters operations at Jones Pumping Plant on December 3rd.
- As of November 29th, QWEST was 1,400 cfs with the DCC gates open, but will decrease to 0 cfs as gates close.
- X2 is upstream of the confluence and will likely remain there as dry conditions persist.
- There were no updates to the survey status table.

Review of Environmental Conditions and Survey Updates

CDFW had no updates to share with the SMT.

USFWS reported that Enhanced Delta Smelt Monitoring (EDSM) Phase I sampling began November 29th.

CDFW provided a salvage update (November 23rd to 29th).

- No salvage to report this last week.

USBR shared environmental data updates as of November 29th.

- Three-station daily average water temperature: 13.17° C.
- Three-day running average discharge at Freeport: 6,208 cfs.
- Three-day running average turbidity at Freeport: 5.04 FNU.
- X2 is >81 km.
 - Estimated Sacramento River X2 is 94.5 km.
 - Estimated San Joaquin River X2 is 94.0 km.
- Weather forecast out of Antioch is sunny to mostly clear with east to northeast winds between 3 to 6 mph.
- Weather forecast out of Stockton is foggy to mostly clear with calm winds.

CDFW requested clarification on the net used and life stage targeted by EDSM Phase 1.

- USFWS replied that EDSM Phase I uses a Kodiak Trawl and targets adult Delta Smelt.

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

- USBR and CDFW noted there were no significant changes in conditions since last week.

PART 3: Live-edit Assessments

ITP Longfin Smelt Risk Assessment

- CDFW pointed out the upstream location of the X2 which suggests adult LFS will be distributed farther upstream when they stage in brackish water and migrate upstream to spawn. Based on the life history of the species it's expected that adults will be further up the Delta given the dry conditions.
 - CDFW noted that during similar climatic conditions last year, LFS larvae were not detected by SLS until survey 13 (i.e., late December).
 - The December SLS surveys this year will sample all stations, including Napa River for the first time since 2018.
- USFWS pointed out that the LFS Synthesis has a graph that shows a positive trend in the proportion of LFS detected during the November and December FMWT since the inception of the FMWT index, and suggested this merits deeper discussion by the SMT.
- CDFW added dates of DS and LFS detections to the Risk Assessment.
- CDFW added the following language to the Risk Assessment: "The probability that LFS will initiate a spawning migration increases as the season progresses. However, risk of entrainment remains low."
- CDFW shared new catch data from September and October. On October 11th, LFS were detected in the lower Sacramento River and six LFS (length not yet reported) were detected in the Sacramento Deep Water Shipping Channel.
 - CDFW noted that although the detections in the SDWSC are unusually early for freshwater, this area is not associated with an increased likelihood of entrainment. CDFW and DWR agreed.
 - CDFW remarked that LFS are typically not detected in salvage until spring and adult LFS are rarely detected in salvage.
 - New language was proposed: "The probability that LFS will initiate a spawning migration increases as the season progresses. However, risk of entrainment remains low. Recently released FMWT memo showed that LFS have been collected in the Sacramento Deep Water Ship Channel and the lower Sacramento River during October Sampling. This indicates that LFS are present within the Delta, however, there have been no detections within the central and south Delta. Adult salvage is rare and the SMT determined that adults are at low risk of entrainment. However, detections in the Sacramento Deep Water Ship Channel may indicate that spawning may occur further upstream than in wetter years."
- One CDFW member asked if anyone knew if LFS are known to hybridize with other species.
 - DWR suggested referencing [Fisch et al. 2014](#).
- USFWS requested CDFW update the ITP Risk Assessment once size data is available for the six LFS detected in the Sacramento Deep Water Ship Channel.

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

- USBR updated language in the Outlook to reflect last week's discussions on the expected distribution of DS, replacing "downstream of the confluence" with "in the vicinity of X2". USBR also updated the Outlook to note the detection of LFS in the Lower Sacramento River and Sacramento Deep Water Ship Channel.
- USBR updated the assessment to reflect the latest dates and data.

- The responses to evaluation questions 1 and 2 were updated to indicate the Integrated Early Winter Pulse Protection action is not expected to be triggered in the coming week and the likelihood of DS entrainment is currently low.
- No substantive edits were made to the Executive Summary.

Part 4: Additional Considerations/Discussion

Agencies reported no items for elevation to WOMT.