

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

- Interested Smelt Monitoring Team (SMT) members should contact USFWS to be added to the distribution list for Delta Smelt (DS) experimental release updates.

MEETING SUMMARY

PART 1: Updates on Water Operations and Biological Updates

Relevant Actions & Triggers

USBR reported on anticipated Old and Middle River (OMR) management measures. There are currently no relevant actions or triggers for OMR management. The first one will be the Integrated Early Winter Pulse Protection action, and this cannot be initiated until December 1, 2022. CDFW reported on the Incidental Take Permit (ITP) Conditions of Approval (COA) that are currently in effect and whether they have been triggered. CDFW noted that starting December 1, 2022, COA 8.3.1 (Integrated Early Winter Pulse Protection) and 8.3.3 (Adult Longfin Smelt Entrainment Protection) can be considered. The descriptions below are intended as summaries and do not provide all the details related to each action or trigger. For full descriptions, please see the OMR Guidance Document or ITP as needed.

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 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 (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 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.	N/A	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 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.	Not active
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.	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 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	Not active

ITP Conditions of Approval

Condition of Approval	Requirement	Time Frame	Trigger	Triggered?
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 1 st through June 30 th or until off-ramped by 8.8	N/A	Active
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 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.	Not active
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 if: Cumulative expanded salvage, Dec 1 st through Feb 28 th , exceeds most recent Fall Midwater Trawl (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 water year (WY) 2022 is one.	Not active

Condition of Approval	Requirement	Time Frame	Trigger	Triggered?
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 28 th	SMT recommendation based on weekly risk assessment.	Not active
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.	Not active
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	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

Condition of Approval	Requirement	Time Frame	Trigger	Triggered?
8.5.1 Turbidity Bridge Avoidance	Maintain daily average turbidity at 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 agrees that the action may be ended or modified.	Turbidity at OBI > 12 FNU	Not active
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 DS 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 DS is greater than or equal to one plus the average prior three years' FMWT index (rounded down). The 2022September FMWT index for DS was zero.	Active, not triggered
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 30 th	Daily mean water temperature at CCF is >25° C for three consecutive days.	Not active

Condition of Approval	Requirement	Time Frame	Trigger	Triggered?
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 1 st through June 30 th for DS	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 reported on weather conditions noting a change in the prevailing weather pattern with precipitation today and intermittent showers this weekend. Most precipitation is forecasted to fall over the North Coast, Smith basin, and the central Sierra. The valley floor is expected to receive one to two inches over the six-day forecast period. Despite precipitation, rivers and tributaries are not expected to respond significantly.
- Releases from Whiskeytown Dam on Clear Creek are currently 200 cfs. No changes expected for the next seven-day period.
- Releases from Keswick Dam on the Sacramento River are 3,900 cfs. No changes expected for the next seven-day period.
- Releases from Nimbus Dam on the American River are 1,400 cfs and holding. USBR is evaluating the potential to decrease flows for storage conservation purposes.
- Releases from Goodwin Dam on the Stanislaus River have returned to a baseflow of 200 cfs after the recent conclusion of fall pulse flows.
- Federal facility exports are at 900 cfs, an increase to 1,800 cfs would require changes in the system that do not appear likely.
- Delta Cross Channel (DCC) gates closed on Monday, October 31st and will re-open on Friday, November 4th with a closing scheduled for next Monday, November 7th.
- Requirements for November: Rio Vista and outflow are required at 3,500 cfs.
- DWR reported that Feather River releases are 2,400 cfs with minor changes expected.
- October 31st Freeport flows were approximately 7,200 cfs and will likely fluctuate.
- San Joaquin flows at Vernalis were 1,900 cfs on October 31st and will decrease over the week.
- State facility exports averaged 500 cfs for the previous week.
- Delta outflows were close to 6,000 cfs on October 31st and will decrease in the near term as San Joaquin River inflows recede from pulse flows.
- On October 31st QWEST was 3,500 cfs, but values will fluctuate as DCC gates open and close.
- The daily OMR Index is near -1,200 cfs and will remain variable with San Joaquin flows and gross channel depletions.
- The Grant Line barrier will be breached around November 7th.
- The Old River at Tracy barrier will be breached around November 4th.
- The Middle River barrier will be breached mid-November.

- The False River barrier was breached the morning of November 1st.
- No edits to the survey table.
- The Fish and Water Operation Outlook was updated to reflect recent detections:
 - DS
 - Two adult detections:
 - EDSM
 - August 16th at 63 mm in the Sacramento Deep Water Shipping Channel (SDWSC).
 - September 21st at 75 mm in Grizzly Bay.
 - Biological material was sent to the UC Davis Genomic Variation Laboratory (GVL) to support DS genetic population models, which should also confirm species. Results are pending.
 - LFS
 - October San Francisco Bay Study
 - Subadult detections in Lower Sacramento River, the confluence, and downstream of the confluence.
 - Adult detections in Suisun Bay and Marsh.

Review of Environmental Conditions and Survey Updates

CDFW delivered catch updates on relevant surveys to the SMT.

- SLS sampling will begin the week of December 5th.
- The FMWT and San Francisco Bay Study have not detected DS.
- FMWT detected five LFS in September for a monthly FMWT Index of seven.

USFWS provided catch updates on EDSM and Chipps Island Trawl.

- EDSM will sample all strata Monday through Thursday this week.
- EDSM is in Phase Three and has captured 22 LFS between 45 to 100 mm. The most recent LFS detection was October 20th in Suisun Marsh with two juveniles at 65mm and 70mm, and one adult at 97 mm.
 - DS abundance estimate for last week was zero given no detections.
- Chipps Island Trawl will sample Monday, Wednesday, and Friday. There have been no DS detections since January. One LFS has been caught so far this WY on October 14th at 62 mm.

CDFW provided a salvage update (October 24th to the 30th).

- No DS or LFS have been detected at either facility this WY.

USBR shared environmental data updates.

- Three-station daily average water temperature: 16.68° C.
- Three-day Freeport discharge: 7,149 cfs.
- Three-day Freeport turbidity: 1.87 FNU
- Current daily average turbidity at OBI: 1.79 FNU
- Current turbidity at OBI: 1.60 FNU
- QWEST: 3,162 cfs
- Average X2 is estimated to be at approximately 96.2 km.
- Rain today expected to accumulate to 0.5-inch, with showers continuing tomorrow, and Saturday to Monday. South winds from 13 to 23 mph shifting to west winds in the afternoon and gusts up to 30 mph. Evening southwest winds from 17 to 22 mph and gusts up to 29 mph.

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

CDFW noted that the most recent DS detections in August and September occurred in regions outside the risk of entrainment. The incoming storm system may cue fish in Suisun Bay to start moving upstream.

DWR reported that the first DS experimental release will occur the week of November 28th with ~13,000 fish expected to be released as part of 50/50 hard and soft release. The next releases are scheduled for the weeks of January 9th and 23rd with a total of ~43,000 fish for all three releases.

CDFW noted that in October Bay Study detected two subadult LFS in the lower Sacramento River. Furthermore, October 14th was the first detection of a juvenile greater than 60 mm at Chipps Island which is a possible indication of migration being imminent for adults. During WY 22, the first juvenile greater than 60 mm was detected at Chipps Island on November 15th (i.e., one month later than this year). This might suggest an earlier migration will occur this season. Also, fish are displaying a greater range in size (42 to 100 mm). Lastly, X2 is about 10 km further upstream this year as compared to last year at this time, which may result in spawning occurring further east.

CDFW noted the SLS and 20 mm surveys will expand into San Pablo Bay this year.

- SLS will have 15 new stations.
- 20 mm survey will have 14 new stations.

No actions or conditions of approval were triggered this week and the SMT did not make any recommendations.

PART 3: Live-edit Assessments

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

USBR reviewed proposed changes to the PA Assessment, which include the latest dates, detections, and data as well as the following updates:

- Life stages: subadults and adults.
- Biological conditions: notes that subadult DS are expected to be present in the SDWSC and downstream of the confluence of the Sacramento and San Joaquin Rivers.
- Abundance estimate: notes the most recent DS detection was in Suisun Marsh Stratum (Grizzly Bay) on 9/21/22.
- Current distribution: real time data is currently limited to EDSM sampling and Chipps Island. The Bay Study and FMWT do not offer real time data and only provide data as available.

ITP Longfin Smelt Risk Assessment

The SMT reviewed and discussed updates to the ITP Risk Assessment for LFS, which include the latest dates, detections, and data as well as:

Advice to WOMT and LFS Executive Summary

- Life stages: subadults and adults.

Section 1-A: Risk of entrainment into the central Delta and export facilities for DS and LFS in the Sacramento River and Confluence

Delta Smelt

- Subadults and adults exposure risk: Low
- Subadults and adults routing risk: Low

- Overall risk: Low

Longfin Smelt

- Subadults and adults routing risk: Low
- Overall risk: Low

Section 1-B: Risk of entrainment into the export facilities for DS and LFS in the central Delta

Delta Smelt

- Subadults and adults exposure risk: Low

Longfin Smelt

- Subadults and adults exposure risk: Low

Part 4: Additional Considerations/Discussion

Agencies reported no items for elevation to WOMT.