

Smelt Monitoring Team – Tuesday, June 27th, 2023

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

- CDFW to share guidance on triggering Condition of Approval (COA) 8.5.2 in instances when it is not possible to sample all 12 Central and South Delta stations.

MEETING SUMMARY

PART 1: Updates on Water Operations and Biological Updates

Relevant Actions & Triggers

The OMR Management Season will end on Friday, June 30th.

Incidental Take Permit (ITP) COA 8.5.2 (Larval and Juvenile Delta Smelt Protection) is no longer triggered, based on the 20-mm Survey 8 average Secchi depth for the Central and South Delta stations. CDFW noted that while only 11 of the 12 Central and South Delta stations were sampled, the trigger for COA 8.5.2 is based on a 12-station average Secchi depth. CDFW has requested guidance from their management and legal prior to next season and will update the SMT with any clarifications. CDFW pointed out that given the projected Old and Middle River (OMR) Index range for the rest of the month, COA 8.5.2 was unlikely to control operations.

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 \geq 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	Off-ramped 1/17/23; triggered 12/31/22, implemented 1/3/23 to 1/16/23

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

OMR Management Measures	Requirement	Time Frame	Trigger	Triggered?
			or a spent Delta Smelt (DS) has been collected in monitoring surveys.	
OMR Management	Manage to a more positive OMR than -5,000 cfs.	From the onset of OMR management to the end.	N/A	Active as of 1/17/23
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 by detection of a ripe female by Spring Kodiak Trawl (SKT) 2; Triggered 1/17/23 to 2/8/23
Larval and Juvenile Delta Smelt	(1) Reclamation will operate to an OMRI no more negative than -5000 cfs. (2) Reclamation will operate to an OMRI no more negative than -3500 cfs.	On or after March 15 of each year until off-ramp criteria are met.	(1) 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. (2) If QWEST is negative AND Secchi depth in the south Delta is less than 1 m.	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	Not active

IIP 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

Condition of Approval	Requirement	Time Frame	Trigger	Triggered?
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 1/17/23; triggered 12/31/22, implemented 1/3/23 to 1/16/23
8.3.3 (Adult Longfin Smelt Entrainment Protection)	After December 1, if an Integrated Early Winter Pulse Protection (Condition of Approval (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 28th	Salvage threshold for water year (WY) 2023 is 40.	Off-ramped 12/31/22 with triggering of COA 8.3.1

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.	Off-ramped with detection of LFS larvae in Smelt Larval 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 off-ramp occurs	(1) LFS larvae or juveniles are found in four or more of the 12 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.	Active, not triggered by SLS 6 or 20mm Survey 1 through 8 (3/21/23-present); triggered by SLS 4 on 2/16/23; by SLS 5 on 2/28/23; temporarily off-ramped by COA 8.4.3 (3/2/23-3/21/23)
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.	Active, triggered 3/2/23 to present

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 April 1	Turbidity at OBI > 12 FNU	Active, not triggered; Triggered 1/17/23 to 2/8/23; 2/15/23 to 2/17/23; 2/21/23 to 2/26/23; 3/17/23 to 4/1/23; off-ramped 4/1/23
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 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.	Nov 1 st through June 30 th or until off-ramped by 8.8	(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 2022 September through November FMWT index for DS was zero. Or (2) when a larval/juvenile DS is detected in SLS/20 mm 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)	Active, not triggered; Triggered 3/18/23 to 5/11/23 and 6/7/23 to 6/26/23 by (3) Jersey Point 3-day average water temperature exceeded 12°C and SLS survey 6 and 20mm Surveys 1 through 4 and 7 Secchi depths were less than 1m.

Condition of Approval	Requirement	Time Frame	Trigger	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.	Active; not 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; water year type is wet as of 05/01/23; off-ramped for LFS 4/1/23

Current Operations & Outlook

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

- Releases from Whiskeytown Dam on Clear Creek are currently 150 cfs.
- Releases from Keswick Dam on the Sacramento River are 9,500 cfs.
- Releases from Nimbus Dam on the American River are 4,000 cfs with no anticipated changes.
- Releases from Goodwin Dam on the Stanislaus River are currently 1,500 cfs. A temporary reduction to 800 cfs is scheduled for Friday, June 30th. Flows will gradually increase back to 1,500 cfs on July 4th, then decrease again July 7th, before returning to 1,500 cfs.
- Delta Cross Channel (DCC) gates opened on June 23rd after Vernalis flows dropped below 20,000 cfs and will remain open.
- Jones Pumping Plant is currently exporting four units.
- The State facility will export 1,000 cfs today prior to starting an herbicide treatment. Exports will be 0 cfs on June 28th and 29th and return to 1,000 cfs on June 30th. Exports will then eventually increase to 6,680 cfs.
- Feather River releases are currently 2,500 cfs and will be reduced to 2,300 cfs later today.
- Sacramento River flows at Freeport are 15,200 cfs and will decrease through the week.
- San Joaquin River flows at Vernalis were 13,000 cfs and are anticipated to decrease to 12,000 cfs by the end of the week.
- Flows at Rio Vista were 8,300 cfs as of June 27th and are anticipated to decrease.
- Delta outflows are approximately 33,000 cfs and will likely decrease through the week.
- QWEST is 9,600 cfs.
- X2 is approximately 66 km.
- Tides are currently emerging from a neap cycle. Strong spring tides will occur with the next full moon on July 7th.
- As of June 26th, the expected daily OMR Index values through the end of the month are between +925 and +2,000 cfs.
 - June 24th OMR at USGS gauge:
 - Daily: -604 cfs
 - Five-day: 201 cfs
 - 14-day: 1,957 cfs

- June 24th OMR Index:
 - Daily: -1,018 cfs
 - Five-Day: 921 cfs
 - 14-Day: 3,344 cfs
- June 26th OMR Index:
 - Daily: -3,215 cfs
 - Five-Day: -1,308 cfs
 - 14-Day: 1,907 cfs

Review of Environmental Conditions and Survey Updates

CDFW delivered catch updates on relevant surveys to the SMT.

- 20-mm Survey 7 was on the water from June 5th to the 9th. New detections are as follows:
 - LFS Juveniles: 55 at Station 404 in the Carquinez Strait
- 20-mm Survey 8 was on the water from June 19th to the 22nd.
 - 12 stations were dropped due to boat issues, including Station 918 in the South Delta.
 - No osmerids were detected in the 11 Central and South Delta stations sampled.
- The final 20-mm Survey of the season will be on the water next week, July 3rd to the 6th.
- Summer Townet Survey 1 was on the water June 12th to the 15th.
 - LFS Juveniles: 206
- Summer Townet Survey 2 is on the water this week, June 26th to 29th.

USFWS provided updates on the Enhanced Delta Smelt Monitoring Program (EDSM) and Chipps Island Trawl.

- EDSM 20-mm larval surface trawls sampled June 12th to the 15th.
 - LFS
 - Suisun Bay: One (Fork Length (FL) = 33.3 mm)
 - Suisun Marsh: Three (FL = 32.5 to 33.0 mm)
- EDSM 20-mm larval surface trawls sampled June 20th to the 23rd.
 - Catch data is pending QA/QC
- EDSM will begin Phase 3 Kodiak trawling next week (July 3rd).
- DJFMP Chipps Island Trawl sampled June 20th to the 23rd completing 30 tows.
 - No detections.
- DJFMP Chipps Island Trawl is sampling this week on Monday, Wednesday, and Friday.

CDFW provided a salvage and qualitative larval sampling update (June 19th to the 25th).

- Salvage
 - No DS or LFS were detected at either facility.
- Facility Operations
 - State Facility
 - Counts were reduced on June 19th, 23rd, and 24th due to high fish numbers.
 - Federal Facility
 - Counts were reduced on June 25th due to high fish numbers, including extraordinarily high numbers of common carp and splittail (e.g., >100,000 fish within a 2-hour period on June 26th).
 - Staff are relying heavily on weight-based estimations and have consistently reduced count times to 10 minutes out of every 2 hours.

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

Delta Smelt

USBR and CDFW noted that environmental conditions continue to be favorable and risk has not changed since last week. DS spawning is ending.

Longfin Smelt

CDFW noted that environmental conditions continue to be favorable and risk has not changed since last week. LFS spawning has ended.

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 Proposed Action (PA) Assessment, which include the latest dates, detections, conditions, data, and reflects the discussion documented in Part 2 above.

ITP Longfin Smelt and Delta Smelt Risk Assessment

The SMT reviewed and discussed updates to the ITP Risk Assessment for DS and LFS, which include the latest dates, detections, conditions, data, and reflects the discussion documented in Part 2 above.

Part 4: Additional Considerations/Discussion

No items to elevate to WOMT.