BUREAU OF RECLAMATION

Smelt Monitoring Team Meeting Summary

Tuesday, November 12, 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

- None.

Advice to WOMT

- No advice to WOMT.

Announcements

- No announcements.

Meeting Summary

Part 1: Updates on Water Operations and Biological Conditions

Relevant Actions & Triggers

- There are no active actions or triggers at this time.
- The SWP and CVP are both operating to D-1641 standards.

The ITP Conditions of Approval in the table below are from the 2020 SWP ITP, this table will be updated with the 2024 SWP ITP Conditions of Approval as it becomes available.

OMR Management Season for smelts has not begun for the season. 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

Condition of Approval	**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 (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.	N/A	Not Active

[1] The current instrumentation measures turbidity in Formazin Nephelometric Units (FNUs).

Condition of Approval	Requirement	Time Frame	Trigger	Action Status
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. USFWS Memo/Technical Note 47: When the Secchi depth in the South Delta is less than 1 meter, USBR will operate to OMR no more negative than -3,500 cfs. When the Secchi depth in the south Delta is greater than 1 meter, USBR and DWR will operate to OMR no more negative than -5,000 cfs.	Not Active

Condition of Approval	Requirement	Time Frame	Trigger	Action Status
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

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	Not 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 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.	Not Active

Approval	Requirement	Time Frame	Trigger	Action Status
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.	Not Active
8.4.1 (OMR Management for Adult Longfin Smelt)	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: 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 28th	SMT recommendation based on weekly risk assessment.	Not Active

Approval	Requirement	Time Frame	Trigger	Action Status
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 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.	Not Active

Approval	Requirement	Time Frame	Trigger	Action Status
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	Not Active

Approval	Requirement	Time Frame	Trigger	Action Status
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 1st through June 30th 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 2023 September through December FWMT 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 ≥12°C and Secchi from the most recent SLS/20 mm survey is ≤1m averaged across the 12 stations (809, 812, 815, 901, 902, 906, 910, 912, 914, 915, 918, and 919)	Not Active
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.	Not Active

Approval	Requirement	Time Frame	Trigger	Action Status
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.	Not Active
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	Not Active

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

Review of Environmental Conditions and Survey Updates

CDFW delivered catch updates on relevant surveys to the SMT.

- SFBS is on the water for the November survey from 11/4/24-11/14/24.
    - Processing for the August through October surveys is complete. There are 585 total LFS detections with 249 LFS detections in the August survey, 236 detections in the September survey, and 100 detections in the October survey. Two LFS juveniles were detected in the Confluence region in the October survey.
- FMWT is currently on the water for their November survey (11/5/24-11/20/24) and are currently performing data verification and will release the data when complete.

USFWS provided catch updates for EDSM and Chipps Island Trawl.

- EDSM was on the water from 11/4/24-11/8/24, sampled at 36 sites, and detected 9 LFS (54-100 mm FL) all in Grizzly Bay.
    - The current DS abundance estimate as of 11/8/24 is 0* with a 95% CI (NA; NA).
        - An asterisk (*) is used to emphasize weeks when no Delta Smelt were caught, and NA is used to indicate that sampling did not occur or quantity could not be calculated.
- Chipps Island Trawl was on the water 11/4/24-11/8/24, sampled 21 stations, and did not detect DS or LFS.

CDFW shared the following salvage update.

- No osmerids were detected in salvage and operational variances were reported as follows:
    - On 11/4, Jones Pumping Plant was exporting 0 cfs and accordingly the Tracy fish collection facility did not conduct salvage at that time. On 11/5 there was no count for the 2200 or 2400 hours due to mechanical issues.

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

DS

- USBR suggested keeping risk low for DS for all life stages in all regions based on decadal distribution patterns and lack of detections.
    - CDFW, DWR, and USFWS concurred.

LFS

- K&W asked the SMT if they wanted to continue with having CDFW lead LFS updates
    - USFWS noted that makes sense because the state has the only active permitting document covering LFS, therefore the state should take the lead.

- CDFW suggested keeping risk for LFS low for all life stages in all regions based on historical distribution patterns and detections. CDFW did note that LFS had been detected in the Confluence region.
    - DWR, USBR, USFWS concurred.

Part 3: Live-edit Assessments

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

The SMT reviewed and discussed updates to Tables 2a, 3b, and 3c of the Weekly Fish and Water Operations Outlook which include the latest dates, detections, conditions, and data.

DS

- No changes

LFS

- USBR asked the SMT whether LFS were distributed upstream of the Confluence.
    - CDFW confirmed that there was were LFS detected in the Confluence region, but there have not been detections upstream of the Confluence.

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

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

- Abiotic Conditions
    - Updated to reflect current forecasted conditions for the week including weather and turbidity.

ITP Longfin Smelt and Delta Smelt Risk Assessment

- CDFW shared that the new ITP no longer requires conducting and sharing weekly risk assessments or performing live editing tasks.

Part 4: Additional Considerations/Discussion

Agencies reported no items for elevation to WOMT.

- CDFW asked USBR about the best way to coordinate suggested changes to SacPas, noting feedback about what information is displayed and how it is displayed.
    - USBR later clarified that CDFW should send their suggested changes to SacPas via email so that USBR can share the suggested changes with University of Washington site managers. USBR can then share the incorporated changes in the presentation to the SMT.

- CDFW asked the SMT and K&W about ITP presentation timing, suggesting rescheduling the presentation for 11/19/24 as the new ITP is already signed and now being implemented.
    - The SMT agreed to schedule the presentation for that time.
- K&W asked the SMT if the presentation on LFS/DS life history would be of interest and who could make that presentation.
    - USFWS noted that the SSA contains a lot of information on the DS and LFS life history.
- USFWS noted the benefit of these presentations for the SMT and suggested that SMT members also take time outside of the SMT meetings to familiarize themselves with necessary literature on DS and LFS.
    - USBR noted that it could be useful for SMT members to review literature references that are relevant to SMT triggers.
    - USFWS added that there would be crossover between the new and old Biological Opinions (BiOp) and suggested that the SMT become familiar with the new BiOP.
- The SMT discussed folder arrangement including structure and documentation that could be added to the SharePoint.
    - USBR offered to prepare a presentation that would cover key literature relevant to SMT-specific triggers for Delta Smelt.
- CDFW noted that there is another permit they are working on for LFS and could give a presentation on Relevant LFS literature after talking with their management.
- USBR shared a presentation on the 2019 PA.

Next SMT Meeting

The next SMT meeting will be held on Tuesday 11/19/2024 on Microsoft Teams.