Smelt Monitoring Team Meeting Summary

Tuesday, December 10, 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 (Reclamation)
- U.S. Fish and Wildlife Service (USFWS)
- Kearns & West (K&W)

Announcements

- The data source for 3-day average turbidity at Freeport on SacPAS for the First Flush trigger has been updated to use daily values from CDEC instead of the 15-min data to come into alignment with the data operators are using.
- USFWS reminded the SMT that the Biological Opinion (BiOp) have been finalized and are available online.
- Reclamation reported that K&W did not need to draft a meeting summary when the SMT does not meet to discuss risk.
- K&W asked the SMT if they were clear about what conditions or circumstances would lead to a need for a virtual meeting vs handling the meeting via email over the holiday season.
    - Reclamation noted that subdirectors would address any larger things that come up. There will not be any Outlooks for Assessments or meetings for 12/24/24 and 12/31/24.
    - Given that during Holiday Season the Adult Delta Smelt Protection Action is the mostly likely management condition to be triggered by environmental

conditions, CDFW asked whether SMT could expect emails from WOMT/or Operators if those triggers are met.

- DWR noted that they would send email communications to the SMT when there are changes to pumping operations, when a trigger is met and when the associated operational change is planned to occur.

Action Items

- K&W to share schedule of experimental releases of Delta Smelt with SMT (complete).

Advice to WOMT

- No advice to WOMT.

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 table below has been updated with the 2024 SWP ITP Conditions of Approval.

OMR Management Season for smelts has not begun for the 2024-25 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

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 (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.	Active, Not Triggered
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

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

Measures	Requirement	Time Frame	Trigger	Action Status
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
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
8.3.1 (First Flush Action)	Adjust south Delta exports for 14 consecutive days to maintain a 14-day average OMR index no more negative than -2,000 cfs within three days of when the criteria are met.	Dec 1 through Feb 28	3-day running average daily flows at Freeport greater than, or equal to, 25,000 cfs, AND 3-day running average of daily turbidity at Freeport is greater than, or equal to, 50 FNU.	Active, Not Triggered

Approval	Requirement	Time Frame	Trigger	Action Status
8.3.2 (Adult Delta Smelt Entrainment Protection)	Adjust south Delta exports to achieve a 5-day average OMR index no more negative than -3,500 cfs until the daily average turbidity in at least one of the three turbidity sensors is less than 12 FNU for two consecutive days.	After First Flush Action (8.3.1) or Dec 20 until the three-day average Jersey Point or Rio Vista water temperature reach 53.6°F	Daily average turbidity at or greater than 12 FNU at each of three turbidity sensors in the OMR corridor; Old River at Franks Tract near Terminous (OSJ), Holland Cut (HOL), and Old River at Bacon Island (OBI). Temporarily offramps when daily average flows at Vernalis are great than 10,000 cfs immediately reinstated when the daily average flows at Vernalis drop below 8,000 cfs.	Not Active
8.3.3 (Adult Longfin Smelt Entrainment Protection)	Adjust south Delta exports to achieve one of the following depending on when the salvage threshold was exceeded: From December 1 to the start of the OMR Management season, Permittee, in coordination with Reclamation, shall adjust south Delta exports to achieve an OMR index no more negative than -5,000 cfs on a 7-day average for seven consecutive days and then, initiate OMR Management season; OR from the start of the OMR Management season to the end of February, if OMR Management was initiated by a different Condition of Approval, Permittee shall, in coordination with Reclamation, adjust south Delta exports to achieve an OMR index no more negative than -3,500 cfs on a 7-day average for seven consecutive days.	Dec 1 through Feb 28	Final salvage threshold for water year (WY) 2025 is TBD. Current threshold per Aug-Oct Bay Study Index is 42.	Active, Not Triggered

Approval	Requirement	Time Frame	Trigger	Action Status
8.4.1 (Larval and Juvenile Delta Smelt Protection)	Adjust south Delta exports to achieve a 7-day average OMR index no more negative than -3,500 cfs until the average Secchi disk depth is greater than 1 meter. Adjust south Delta exports to achieve a 7-day average of the OMR index no more negative than -5,000 cfs when the average Secchi disk depth in the most recent survey is great than 1m.	After the end of Adult Delta Smelt Entrainment Protection (8.3.2) until the end of OMR management	Average Secchi disk depth from all stations on the San Joaquin River upstream of Jersey Point and stations south of the lower San Joaquin River in the most recent survey is less than 1 meter. Temporarily offramps when daily average flows at Rio Vista are greater than 55,000 cfs OR daily average flows at Vernalis are greater than 8,000 cfs, immediately reinstate when either daily average flows at Rio Vista are below 40,000 cfs or daily average flows at Vernalis are less than 5,000 cfs.	Not Active

Approval	Requirement	Time Frame	Trigger	Action Status
8.4.2 (Larval and Juvenile Longfin Smelt Entrainment Protection)	Adjust south Delta exports to achieve a 7-day average of the OMR index no more negative than -3,500 cfs for seven days. If the WY cumulative juvenile LFS salvage at the SWP and CVP salvage facilities exceeds 50% of the average annual salvage observed from 2009 through the preceding WY, then adjust south Delta exports to achieve a 7-day average OMRI of -3,500 cfs for 14-days. If the WY cumulative juvenile LFS salvage at the SWP and CVP salvage facilities exceeds 75% of the average annual salvage observed from 2009 through the preceding WY, then adjust south Delta exports to achieve a 7-day average OMRI of -2,500 cfs for 14-days. If salvage of juvenile LFS continues after the 14-day action, then SMT shall advise WOMT on an appropriate measure.	Jan 1 through the end of OMR management	The seven-day average QWEST is less than 1,500 cfs AND larval and juvenile Longfin Smelt (LFS) catch in the most recent Smelt Larval Survey (SLS) or 20-mm Survey at stations 809 and 812 exceeds the catch threshold set by the age 1+ LFS Index. Temporarily offramps when daily average flows at Rio Vista are greater than 55,000 cfs OR daily average flows at Vernalis are greater than 8,000 cfs, immediately reinstate when either daily average flows at Rio Vista are below 40,000 cfs or daily average flows at Vernalis are less than 5,000 cfs.	Not Active
8.6 (End of OMR Management)	If triggered, OMR Management would be off-ramped for LFS and DS.	Onset of OMR management through June 30	Daily mean water temperature at CCF is greater than or equal to 25° C for three consecutive days.	Not Active

Approval	Requirement	Time Frame	Trigger	Action Status
8.10.1 (Barker Slough Pumping Plant Larval Delta Smelt Protection)	Barker Slough Pumping Plant will operate to a maximum 7-day average diversion rate less than 60 cfs (March 1 to April 30) or 100 cfs (May 1 to June 30).	March 1 through June 30 of dry and critical water years	Catch of larval DS (<25 mm fork length) in the 20-mm Survey at station 718 exceeds 14% (March 1 to April 30) or 5% (May 1 to June 30) of the total catch of larval DS across the Cache Slough area of the north Delta (20-mm Survey stations 716, 718, 719, 720, 723, 724, and 726).	Not Active
8.10.2 (Barker Slough Pumping Plant Larval Longfin Smelt Protection)	Barker Slough Pumping Plant will operate to a maximum 7-day average diversion rate less than 100 cfs.	Jan 1 through March 31 of dry and critical water years	Water year type changes to dry or critical after Jan 1	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

Operational Questions

The SMT did not discuss operational questions.

Agency Survey Updates

CDFW delivered catch updates on relevant surveys to the SMT.

- SFBS was on the water and sampling for their December survey from 12/2/2024-12/11/2024 and FMWT is on the water sampling for their December survey from 12/2/20240-12/20/2024. Both surveys are currently performing data verification on their indices and will release data when available.
- SLS 12 was on the water from 12/2/2024-12/5/2024 and sampled all stations. There are 13 LFS detections and processing is complete.
    - SLS 13 will be on the water and sampling 12/16/2024-12/19/2024.

USFWS provided catch updates for EDSM and Chipps Island Trawl

- EDSM was on the water from 12/2/2024-12/6/2024, sampled 33 sites, and detected 1 VIE tagged DS from the 11/18/2024 Experimental Release event. The DS was transferred to UC Davis for the Directed Outflow Project (DOP).

    - EDSM detected 15 LFS with 11 LFS transferred to the DOP and 1 LFS transferred to the FCCL for broodstock. FCCL has met their broodstock goal and USFWS will not transfer any additional LFS, from EDSM or Chipps Island Trawl, to the facility for the Water Year 2025 season.
    - The DS abundance estimate for the week of 12/2/2024 is 1,084 with 95% CI (109; 4,420).
    - EDSM is on the water this week from 12/9/2024-12/14/2024.
- Chipps Island Trawl did not sample the week of 12/2/2024 due to mechanical difficulties with the sampling vessel. Chipps Island Trawl is on the water this week sampling from 12/9/2024-12/14/2024.

CDFW shared the following salvage update.

- No osmerids were detected in salvage and no operational variances were reported.

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

DS

- Reclamation suggested that based on decreased turbidity, DS risk outside OMR corridor is Low but DS risk should be Moderate in the OMR corridor based on highly negative OMR values and turbidity.
    - CDFW agreed with Moderate risk in the OMR corridor but noted that because of how recent the high flow and turbidity event was, DS may still be moving around in the system, and thus feels that risk is more on the Moderate side outside of the OMR corridor as well.
    - USFWS agreed with the proposed Moderate risk for the OMR corridor but suggested higher risk outside of the OMR corridor would be contingent on the amount of precipitation and changes to environmental conditions.
    - The SMT discussed risk outside of the OMR corridor, considering between Low and Moderate risk. Based on current conditions, risk could be seen as somewhere between Low and Moderate. However, upon further discussion, the SMT agreed to Moderate risk to DS both inside and outside the OMR corridor based on an OMRI of -10,000 cfs, a possible rainstorm hitting the Sacramento Valley and Delta region and associated turbidity plumes, population scale migration, and the possibility of associated entrainment.

LFS

- CDFW suggested keeping risk High for larval LFS in the central and south Delta largely due to environmental conditions. QWEST has been more negative than -6,000 cfs and is expected to become more negative and OMR remains very negative at around -10,000 cfs. SLS catch data indicates that the larval count is low but enough seems to be present in the zone of influence to warrant High risk. Sub-adults and adults are still at Low risk based on distribution and what we expect at this time of the year.

- DWR, Reclamation, and USFWS agreed with CDFW's recommended risk.

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 change.

LFS

- No change.

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.

- Delta Smelt
    - This section was edited during the SMT meeting to reflect the conversation about risk to Delta Smelt.

ITP Longfin Smelt and Delta Smelt Risk Assessment

There is no weekly ITP risk assessment required under the 2024 ITP.

Part 4: Additional Considerations/Discussion

DSM2 Runs

- Reclamation noted that their modelers have asked if there was a need for DSM2 runs this season.
    - DWR added that this might be a good topic to revisit once ROD is signed because the SMT role will be reduced for LFS and DS risk assessments. DWR noted the amount of effort required for running DSM2 runs and the usefulness of it for this group.
    - CDFW noted that it was unlikely that the SMT would request these DSM2 runs, but may occur if there was historically high juvenile LFS salvage.

Presentations

- K&W asked the SMT if they would like to have a presentation on the USFWS BiOp that will be reflected in regulatory documents (ITP and ROD).
    - Reclamation asked CDFW if there had been forward progress on a possible presentation on the ITP.
        - CDFW noted that they had been directed to hold off for now.

- Reclamation noted the benefit of a presentation and conversation about the PA and the BiOps.
- K&W asked whether it could be useful to have presentations on the new BiOps even if the role of the SMT is likely to change once the ROD is signed.
- USFWS added that there are a lot of groups that will need to figure out what happens with the new documents.
- SMT expressed interest in learning more about science in the PA and BiOPS but, given numerous related activities underway, no decision was made about a presentation to SMT.

Agencies reported no items for elevation to WOMT.

Next SMT Meeting

The next SMT meeting will be held on Tuesday 12/17/2024 on Microsoft Teams.