

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

- SMT to contact KW if interested in participation in the December 7th Delta Smelt (DS) experimental release stakeholder meeting.
- SMT to share updates on post-season action items.
- KW to send post-season meeting summaries to CDFW.
- KW to invite USFWS to the November 23rd SMT meeting to provide an update on the DS experimental release program.
- USFWS to update Longfin Smelt (LFS) catch numbers to reflect recent detections of adult LFS.
- USFWS to share draft analyses of X2 and LFS detections in the Fall Midwater Trawl (FMWT) survey.

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. 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 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 threshold for this year is one.	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 that this week will start with a small precipitation event which will give way to drier weather in the next few days.

- Releases from Whiskeytown Dam on Clear Creek are currently 200 cfs. No modifications expected.
- Releases on the Sacramento River from Keswick Dam are currently 3,600 cfs and will gradually ramp down to baseflow of 3,250 cfs on November 13th.
- American River releases from Nimbus Dam are holding at 550 cfs. No modifications expected.
- Baseflow releases from Goodwin Dam on the Stanislaus River are currently 200 cfs. The fall pulse was completed on November 4th.
- In the Delta, the CVP has maximized export at 4,200 cfs. Inflows are expected to decline as precipitation inflows wane in coming days.
- Delta Cross-channel (DCC) gates were opened on November 5th in response to Delta salinity levels. DCC operations are currently free from fishery constraints. Sacramento and Knights Landing catch indices are being monitored on a daily frequency for any changes that would require a change in DCC operations.
- DWR reported that Feather River releases are currently at 950 cfs and expected to hold for the near future.
- Freeport flows were 8,500 cfs yesterday (November 8th). Recent storm events could increase discharge up to 20,000 cfs and then will decline again.
- San Joaquin River flows at Vernalis were 700 cfs on November 8th and releases are anticipated to decrease over the next week as the Stanislaus River pulse reaches its end.
- Clifton Court Forebay inflows were 0 cfs from November 3rd to 5th due to herbicide treatment and maintenance, but have been ramping back up in the 2,000 to 3,000 cfs range the last few days. Inflows will likely increase to over 4,000 cfs on November 10th, then remain in the 4,000 to 5,000 cfs range in subsequent days.
- Delta outflows are targeting the 2,500 cfs seven-day average. Precipitation will help boost outflows in the coming days and may reach 12,000 cfs around November 11th.
- X2 is currently upstream of the confluence.
- QWEST is currently near -1,500 cfs and may incrementally become more positive with the peak inflow in the next few days. QWEST will then likely trend negative again to the -1,000 to -2,000 cfs range shortly thereafter. DWR noted that QWEST is exhibiting abnormal behavior due to the emergency drought barrier. QWEST calculation doesn't take the emergency drought barrier into account, so QWEST will not be a good indicator of what organisms in the San Joaquin River are experiencing hydrologically.
- Yesterday, the OMR Index was -6,100 cfs. It will trend negative in next few days, reaching around -8,000 cfs, before becoming more positive again as exports decrease into next week.
- DWR requested clarification on whether QWEST's calculation considers the drought barrier.
 - DWR confirmed that QWEST is not an effective indicator while the drought barrier is in place and QWEST values are likely not close to the actual data.
 - DWR also noted that the OMR Index calculation does take the emergency drought barrier into account.
- There were no updates to the survey status table.

Review of Environmental Conditions and Survey Updates

- CDFW noted that this early in the season, smelt-centric sampling has not started yet and there is no update from FMWT.
- CDFW confirmed sampling frequencies for surveys are as follows:
 - Spring Kodiak Trawl (SKT): Monthly
 - Smelt Larva Survey (SLS): Bi-Weekly (every other week)
 - 20-mm: Bi-weekly (every other week)

- Summer Tow Net: Bi-weekly (every other week)
- Bay Study: Monthly
- FMWT: Monthly
- Larval Entrainment Pilot Study (LEPS): Daily (weekdays)

USFWS reported on the Enhanced Delta Smelt Monitoring (EDSM) Program.

- USFWS circulated EDSM catch data for November 1st to 5th to the SMT via email. Six LFS were caught on November 8th in Suisun Bay.
- No updates from the Chipps Island trawl.

CDFW provided a salvage update (November 2nd to 8th).

- No DS or LFS were salvaged at either facility.

USBR shared environmental data updates as of November 8th.

- Three-station daily average water temperature: 15.5° C.
- Three-day running average discharge at Freeport: 8,892 cfs.
- Three-day running average turbidity at Freeport: 5.96 FNU.
- X2 is >82 km.
 - Estimated Sacramento River X2 is 87.4 km.
 - Estimated San Joaquin River X2 is 87.3 km.
- Weather forecast out of Antioch is precipitation less than 0.1-inch, and then partly cloudy to sunny rest of the week with winds from the west to northwest between three and seven mph.
- Weather forecast out of Stockton is precipitation less than 0.1-inch, and then partly cloudy to sunny rest of the week with patchy fog and winds from the south/southeast to northwest between three and seven mph.

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

- USBR noted that there were no significant changes since last week. However, two topics were brought to the group regarding language in the assessment:
 - The descriptive term, “juvenile”, used for the current life stage of DS may not be appropriate. At this point “subadult” could be a more fitting term.
 - The SMT agreed that “subadult” is a preferable term as compared to “juvenile” given the time of the year.
 - USFWS and CDFW noted that adult DS are not expected to appear until January.
 - Is there a need to directly address how the pulse from recent precipitation could potentially increase the likelihood of entrainment of DS even though it will not likely be a meaningful increase? USBR noted that suggesting a greater likelihood of entrainment is especially difficult because it is hard to demonstrate that DS currently have a presence in the south Delta.
 - CDFW recommended including language explaining that the SMT does not expect a turbidity pulse to affect DS distribution due to seasonal timing.
- USFWS requested clarification for why meetings were being conducted in November given that regulatory action does not start until December.
 - CDFW explained that the ITP calls for November meetings to allow the group to ramp up before participating in the December meetings where conditions of approval are discussed, and the team could be issuing advice. The only condition in effect today is 8.1.5.2 which outlines contents for weekly risk assessments of DS and LFS.

- CDFW commented that not much has changed since last week with regard to LFS.
 - There are adults and juveniles downstream from the confluence.
 - Adults may be starting to stage, but the SMT does not expect to see any movement into the Delta until December.
 - EDSM captured two adults last week (one 98 mm adult in Suisun Bay on November 5th and another 91 mm adult in Suisun Marsh on November 2nd). This may indicate that LFS are starting to stage downstream. EDSM also caught six more LFS in Suisun Bay on November 8th and at least one of those fish was adult sized.

PART 3: Live-edit Assessments

ITP Longfin Smelt Risk Assessment

- CDFW reported that the only edits are to update the EDSM catch data for LFS adults and note that there have been no recent EDSM detections in the Delta.
- All categories of risk for entrainment are low this week.

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

USBR reviewed changes to the Outlook.

- SMT members discussed amendments to the language describing the areas where DS are currently located. The proposed change recommended that the Outlook suggest that while DS have only been detected in the Sacramento Deep-Water Ship Channel, it is likely that DS are present below the confluence.
- CDFW supported the existing language in the document regarding LFS and proposed additional text indicating the recent detections of adults in Suisun Bay and Suisun Marsh and that LFS presence downstream is likely.
- USFWS also pointed out that the proportion of November to December LFS catches in the FWMT has increased over time.

USBR reviewed updates to the assessment.

- The current life stage for DS was swapped to subadult from juvenile throughout.
- Additional text was added to clarify biological conditions and match the edits made to the Outlook.
- Question 5 was updated to reflect the latest turbidity values.

USBR reviewed the Executive Summary.

- No substantial edits since last week.
- CDFW proposed updating the language on the presence of DS in the Sacramento Deep-Water Ship Channel to also reflect life history information indicating presence below confluence.
- DWR and USBR suggested “Integrated Early Winter Pulse Protection” be used instead of “First Flush” in this section.

Part 4: Additional Considerations/Discussion

USFWS requested that SMT members share updates on the status of their agencies post-season action items.

- USFWS has done some preliminary analyses related to some of the topics discussed by the SMT last season (e.g., using particle tracking for Barker Slough, the effects of reduced tow times, X2).
- CDFW requested that USFWS circulate their findings with the SMT.

Agencies reported no items for elevation to WOMT.