

# Smelt Monitoring Team – Friday, January 21<sup>st</sup>, 2022

## 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 (KW)

## ACTION ITEMS

- DWR to perform Particle Tracking Model (PTM) run as requested.

## PURPOSE

Convene the Smelt Monitoring Team (SMT) to address the triggering of Incidental Take Permit (ITP) Conditions of Approval (COA) 8.4.2 (Larval and Juvenile Longfin Smelt Entrainment Protection) as of January 20<sup>th</sup>, 2022 and assess the risk of larval and juvenile Longfin Smelt (LFS) entrainment. The SMT shall determine if an OMR flow restriction is warranted and if so provide a recommendation on an appropriate 7-day average OMR (Old and Middle River) flow target to minimize current or future entrainment risk of LFS.

## MEETING SUMMARY

### Relevant Actions & Triggers

CDFW reported that both triggers of COA 8.4.2 were met with make-up sampling conducted by Smelt Larval Survey crews. The conditions are as follows:

*(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.*

### Current Operations

USBR and DWR updated the SMT on water operations and environmental conditions:

- USBR reported that no changes have occurred in any upstream conditions, with the exception of the American River.
  - As of January 20<sup>th</sup>, flows on the American River were reduced to remain below the flood encroachment envelope. Flows on the 21<sup>st</sup> were 3,000 cfs and on Tuesday, January 25<sup>th</sup> another action will set flows into Folsom storage ramping down to 2,500 cfs.
- DWR noted that Clifton Court Forebay exports continue within the 1,500 to 1,700 cfs range.
- On January 20<sup>th</sup> QWEST was -2,100 cfs and is anticipated to become more negative in the coming days.
- X2 is 74 km.
- DWR reminded the SMT that operations are anticipated to change on February 1<sup>st</sup> to meet the Chipps Island X2 requirements. If inflows remain similar, exports will reduce to 2,000 to 3,000

cfs and the OMR Index will be in the -2,000 to -3,000 cfs range, though precipitation would change these anticipated values.

## Survey Updates

CDFW presented recent catch updates.

- SLS conducted make-up surveys on January 18th focusing only on the 12 south and central Delta stations. The make-up surveys will be designated as SLS 1.
  - Longfin Smelt larvae were detected at the following stations with lengths from 4 to 8 mm:

Station Number	# Larvae
809	22
812	24
815	2
901	1
906	2
910	1

USFWS reported no new detections from the Enhanced Delta Smelt Monitoring (EDSM) program since the last SMT meeting. EDSM sampling was suspended January 20<sup>th</sup> and 21<sup>st</sup> due to COVID.

## Discussion

CDFW noted that more LFS larvae are emerging in the lower San Joaquin River just upstream of the confluence.

- Historically, larvae are seen in higher concentrations in the Suisun Marsh and Bay. Thus, it is expected that there is a higher larvae density is present downstream, but data is not currently available to confirm LFS distribution.
- If QWEST continues to become more negative, this could increase the likelihood of entrainment for larval LFS.
  - DWR noted that QWEST was significantly positive (>10,000 cfs) in late December and only became negative on January 4<sup>th</sup>. QWEST has gradually decreased from -200 to -2,000 cfs since then.

CDFW reviewed a presentation prepared by CDFW staff last year (originally presented to the SMT on January 29<sup>th</sup>, 2021) comparing years with low and high juvenile LFS salvage.

- CDFW pointed out that the 2021 Fall Midwater Trawl (FMWT) Index is significantly higher than in recent years, therefore higher densities of larval LFS are anticipated.
- USFWS emphasized the importance of avoiding a situation where it is too late to take action to prevent entrainment.
- DWR commented that a Particle Tracking Model (PTM) run would help the SMT determine if a recommendation would change the risk of entrainment.

Ultimately, the SMT agreed that a PTM run is necessary to make an informed decision for the final OMR flow target recommendation.

- Stations 812, 901, and 902 were selected as injection sites.
  - 901 and 902 were selected at the recommendation of USFWS and CDFW to see if there is a significant difference between the two stations near Franks Tract.
  - CDFW elected 812 due to its correlation with greater larval density and entrainment risk in the past.
  - On January 25<sup>th</sup> the SMT will discuss formalizing which stations to use as more consistent insertion points for future PTM runs given the data produced from this run.
- The SMT selected the following operations scenarios: base case (no recommendation), OMR Index of -4,000 cfs, and OMR Index of -2,500 cfs.
- The SMT will get the results of the PTM run Monday to discuss at Tuesday's meeting, with three days to meet the target the SMT identified January 29<sup>th</sup> as the start date if a recommendation is made. The PTM run will include -5,000 cfs for all scenarios until the 29<sup>th</sup>.

### **LFS Risk Assessment Live Editing**

No advice will be elevated to WOMT at this time, as the SMT agreed they did not have sufficient information to make a recommendation at this time.

The SMT reviewed and discussed the ITP Risk Assessment for LFS.

- The SMT agreed there is no change in overall risk for the week.
- Language was added to the summary noting the following:
  - SLS 1 triggered COA 8.4.2 and detected an increase in larval density in the lower San Joaquin River from SLS 13.
  - There is more widespread distribution in the south and central Delta, which is expected due to increased emergence of larval LFS, however this represents a seasonal norm and is consistent with the drier hydrology observed this season.
  - QWEST gradually trending negative in January and highlighted that the SMT will assess how negative QWEST affects risk based on pending PTM results.
- No changes were made to Section 1-A.
- In Section 1-B, Exposure Risk for LFS was updated to identify that the SMT will look into the change in risk as QWEST becomes more negative using data from pending PTM results. Furthermore, a note was added noting that SLS 1 triggered COA 8.4.2.
- In Section 1-B, Change in Exposure for LFS was revised to indicate that LFS larvae have been confirmed by recent sampling. The SMT will reassess risk for these larvae based on the pending PTM run.