Weekly Assessment for Delta Operations on ESA and CESA-listed Osmerids including Current Delta Hydrologic Conditions

Final: Tuesday, January 13, 2026 at 4 PM

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Executive Summary

- The First flush action implementation period ended on 1/7/26. Entrainment management is currently active.
- Delta smelt are primarily distributed west of the confluence, in Suisun Marsh
- No Delta smelt or longfin smelt salvage has been observed this water year
- Turbidity in the central/south Delta is moderate.

1 Current Delta Hydrologic Conditions

1.1 Operational and Regulatory Conditions

Entrainment management is the current controlling factor. See most recent weekly outlook for more information.

1.2 Current Conditions

Most recent inflow at Freeport in the Sacramento River and Vernalis in the San Joaquin River is 65,994 and 2,951 cfs respectively. Most recent 1-day, 5-day, and 14-day OMRI measurements were -4,900, -4,909, and -5,061 respectively, and most recent export data were 3,551 for Jones Pumping Plant and 1,734 for Henry O. Banks Pumping Plant.

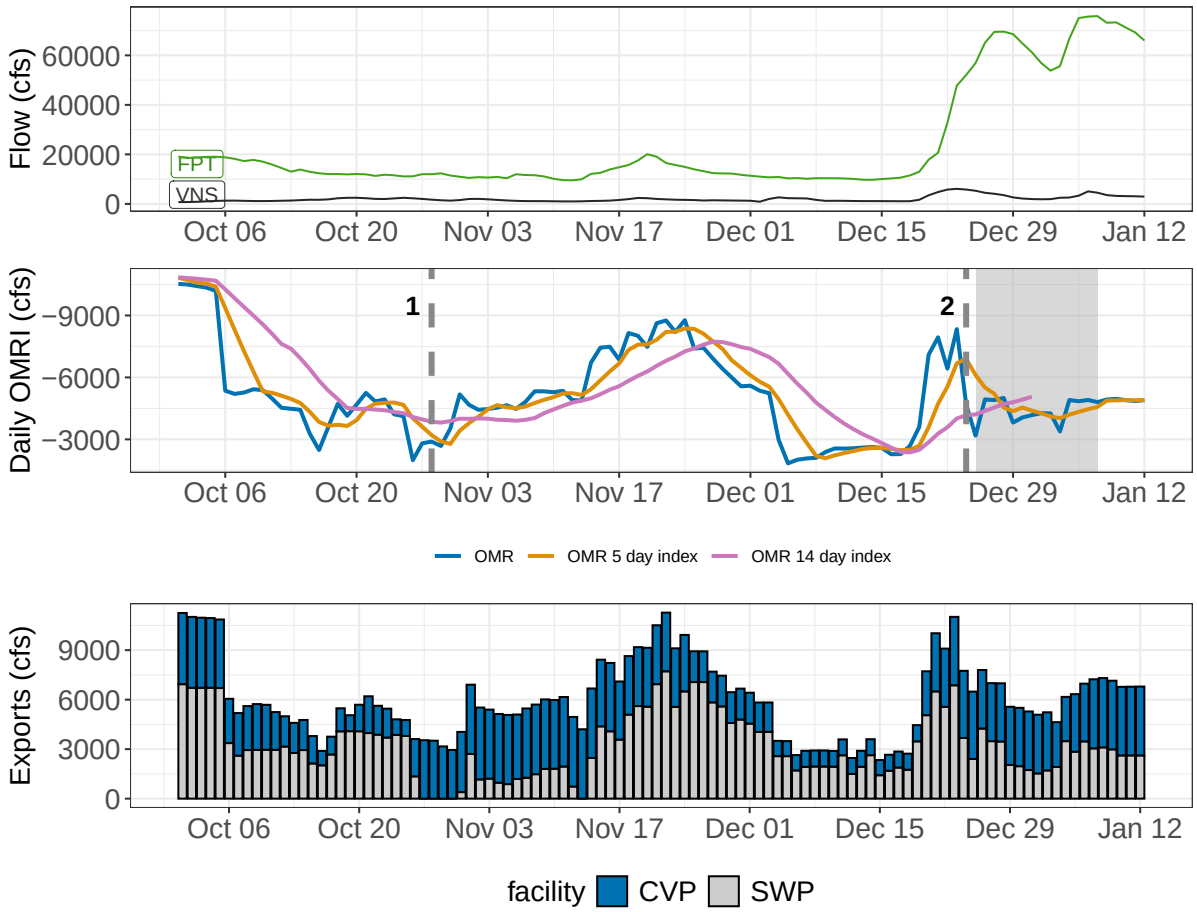


Figure 1: Operations and Action Summary, WY 2026. The numbers and dashed lines in the OMRI plot indicate different triggers (see Table 1), with shading representing specific action periods. OMRI data (colored lines) calculated by SacPAS, Freeport (FPT) and Vernalis (VNS) flow data from CDEC, and CVP (TRP) and SWP (HRO) exports data from CDEC.

Table 1: Summary of Actions and Triggers, WY 2026

Label	Action	Date Triggered	Date Implemented	Number Days Implemented	Regulation
1	DCC Gate Closure	10/28/2025	2025-10-30	Ongoing	DCC gates
2	First Flush	12/24/2025	2025-12-25	14 days	Entrainment Management

1.3 Zone of Influence

Zone of Influence (ZOI) analysis is discussed in detail in the December 22 assessment. Current conditions were queried from most recent Freeport flow data on the Sacramento River and Vernalis flow data on the San Joaquin river from SacPAS. Forecasted flows were queried from short range deterministic flows provided by the California Nevada River Forecast Center.

Current conditions at Freeport and Vernalis indicate that delta hydrology falls within the 'himed' category. Forecasted conditions averaged across the next 7 days falls within the 'himed' category.

The altered channel length for the current "himed" hydrology is 23, 53, 118 and 111 kilometers (km) across OMR bins of -2000, -3500, -5000 and <-5500 respectively. The altered channel length for forecasted "himed" hydrology is 23, 53, 118 and 111 kilometeres (km) across OMR bins of -2000, -3500, -5000 and <-5500 respectively.

Change in altered channel length between OMR levels is 88 km for current conditions and 88 km for forecasted conditions indicating that ZOI impacts across OMR scenarios would not change between current and forecasted conditions. Across the nine hydrology bins, changes in altered channel length across OMR scenarios are moderate (between 25th and 75th percentiles) for both current and forecasted hydrology.

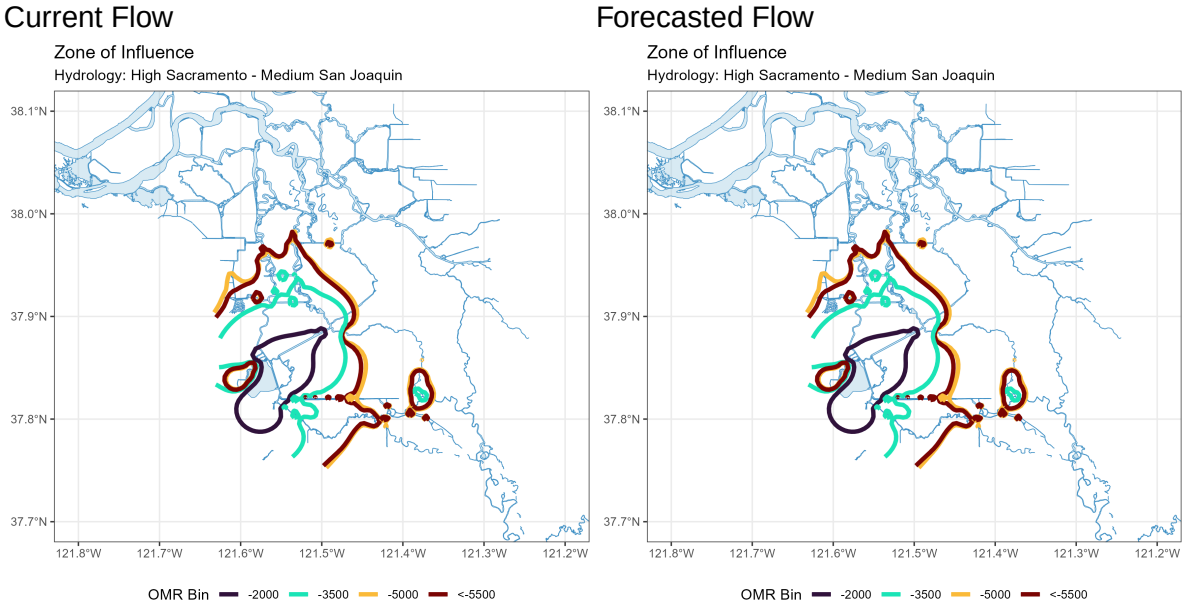


Figure 2: Modeled Zone of Influence at different OMRI scenarios based on current inflow hydrology (left) and forecasted inflow hydrology (right) from the Sacramento River and San Joaquin River

2 Weekly Assessment for Delta Operations on ESA and CESA-listed Osmerids

2.1 Operational and Regulatory Conditions

- See current Weekly Fish and Water Operations Outlook document.
- Additional information also available on the SacPAS SMT page.

2.2 Delta smelt

2.2.1 Biological

- **Delta smelt life stages:** Adult, Juvenile
- **Abundance estimate:** 8963 (95% CL: 1,984 to 26,236) as of the week of January 5–9, 2026
- **Releases:** A total of 163,349 cultured Delta smelt have been released for WY 2026. The most recent release of 24,606 fish occurred in Sacramento River at Rio Vista on Dec 16, 2025.
- **Delta smelt count:** 33 adult Delta smelt and 24 juvenile Delta smelt have been detected this water year. See Table 2 for recent detections, Figure 3 for spatial distribution, and Figure 4 for temporal distribution.
- **Delta smelt salvage:** 0 Delta smelt have been salvaged, and the cumulative seasonal salvage is 0.

Notes

- Since there are few recent detections of Delta smelt, estimation of distribution within the Delta is limited.
- As mentioned in EDSM reporting, fork length ranges reported for Delta smelt and longfin smelt life stages are defined by permit reporting purposes and are not intended to delineate cohorts or distinguish from hatchery or wild origin. See Table 2 caption for fork-length ranges for age groups of Delta smelt.
- See SacPAS SMT Page for additional details on releases and detection in surveys and salvage.
- Historical salvage trends can be found at: SacPAS Salvage Timing

Table 2: Delta smelt detections in the last 2 weeks. Fork Length > 58mm = Adult, Fork Length 20-58mm = Juvenile, Fork Length < 20mm = Larva.

Survey	Date	Region	Stratum	Life Stage	Catch
EDSM	2026-01-02	West	Suisun Marsh	Adult	2
EDSM	2026-01-02	West	Suisun Marsh	Juvenile	1
EDSM	2026-01-07	West	Suisun Marsh	Adult	1
EDSM	2026-01-07	West	Suisun Marsh	Juvenile	1
EDSM	2026-01-08	West	Suisun Marsh	Adult	3
EDSM	2026-01-08	West	Suisun Marsh	Juvenile	1

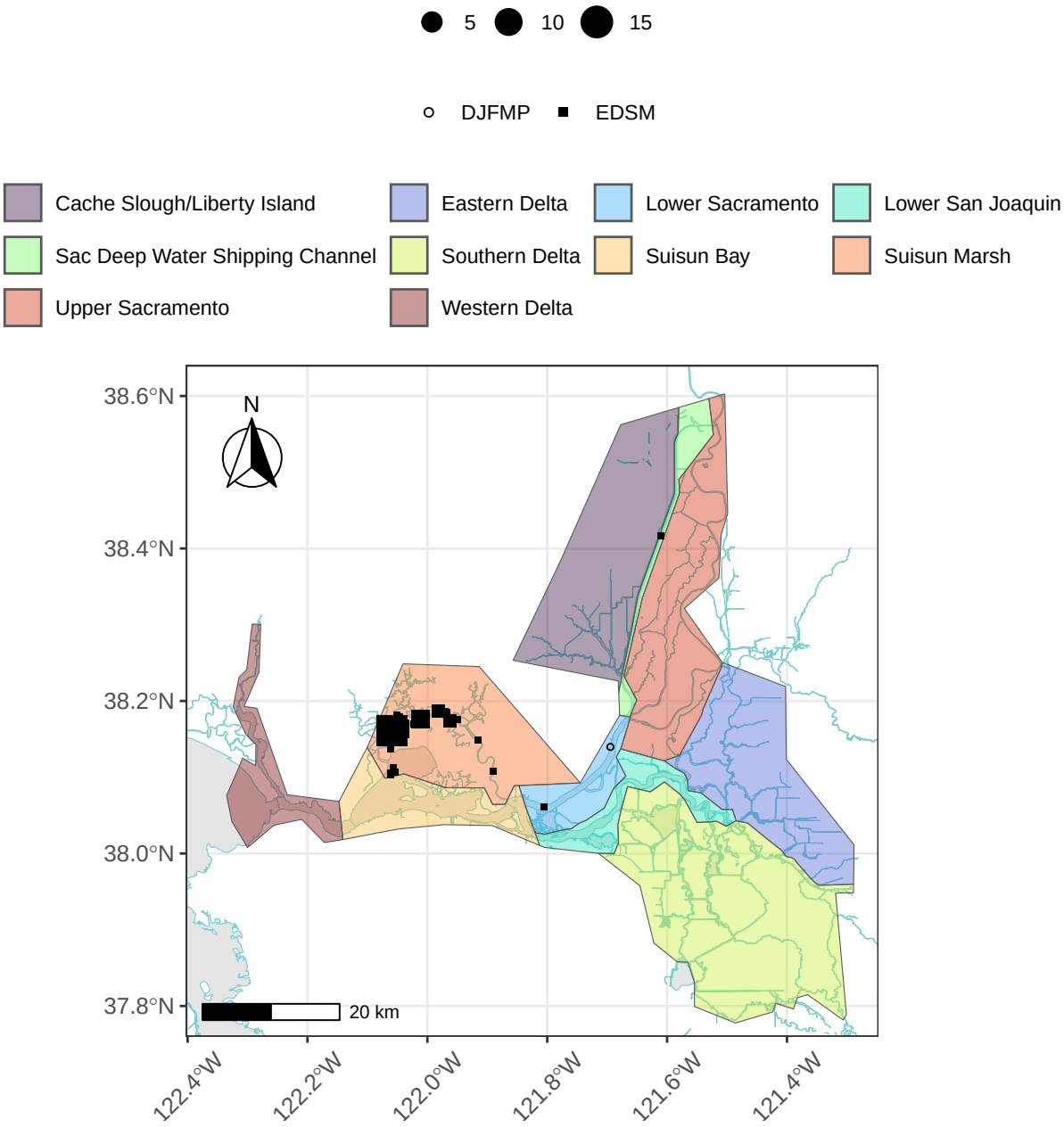


Figure 3: Delta smelt distribution for WY 2026

Table 3: Delta smelt water year totals by life stage

Survey	Region	Life Stage	Total
DJFMP	North	Juvenile	1

Table 3: Delta smelt water year totals by life stage

Survey	Region	Life Stage	Total
EDSM	North	Adult	1
EDSM	West	Adult	32
EDSM	West	Juvenile	23

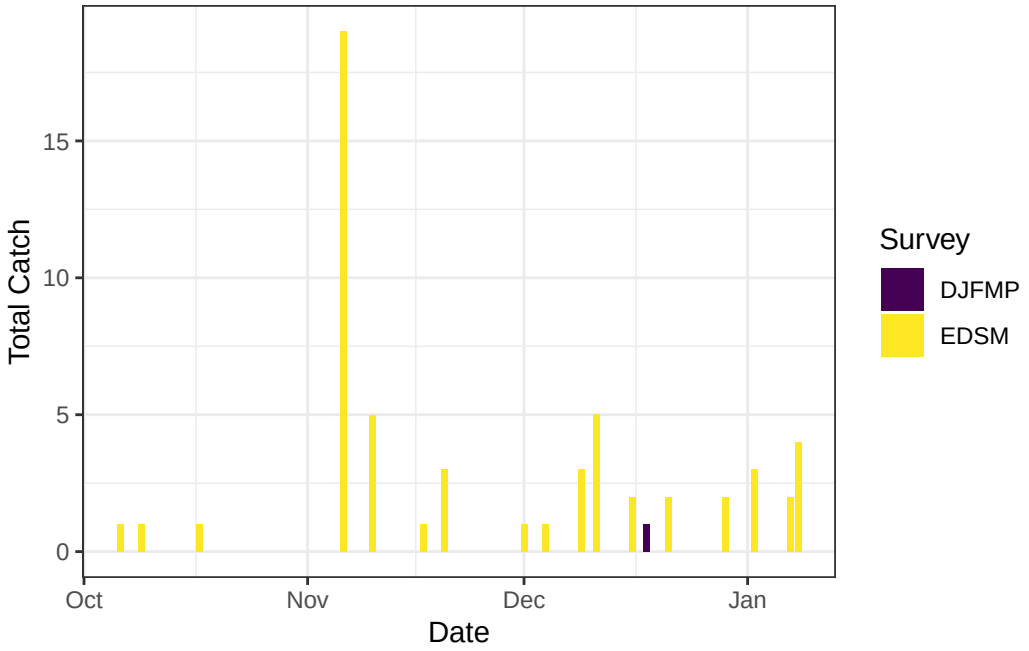


Figure 4: Time series of Delta smelt catch, WY 2026

2.2.2 Environmental

2.2.2.1 First Flush

- Not relevant

2.2.3 Real-time Assessment Thresholds

2.2.3.1 Adult Delta smelt

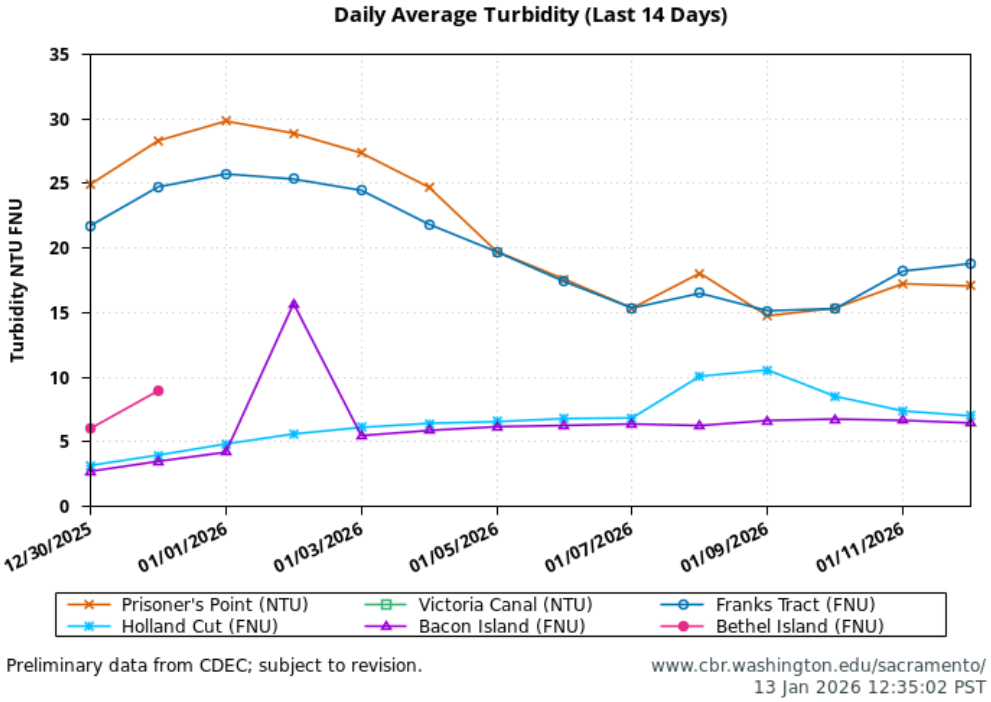
Threshold: If daily average JPF < 0 AND turbidity ≥ 12 FNU at OBI, HOL and OSJ

- **JPF**: 9,041 cfs as of Jan 12, 2026

- **OBI Turbidity**: 6.76, 6.66, 6.46 FNU as of Jan 12, 2026
- **HOL Turbidity**: 8.52, 7.39, 7.01 FNU as of Jan 12, 2026
- **OSJ Turbidity**: 15.31, 18.22, 18.8 FNU as of Jan 12, 2026

Offramp Adult Protections when RVB or SJJ $>$ 12°C

- **RVB temperature (3-day average)**: 9.98°C as of Jan 12, 2026



- See Bay-Delta Live for recent Delta-wide turbidity conditions.

2.2.3.2 Larval/juvenile Delta smelt

Threshold: After the onset of spawning, if JPF $<$ 0 cfs AND turbidity is $\geq$ 12 FNU in the south Delta AND PTM modeling indicates the action would avoid $\geq$ 5% entrainment of Delta smelt population after 30 days

- **12-station South Delta Turbidity**: The most recent average turbidity was 19.1 FNU as of Dec 30, 2025

2.2.4 Evaluation

Delta smelt:

1. After the start of entrainment management, is JPF < 0 and is daily average turbidity $\geq$ 12 FNU in the OMR corridor (stations OBI, HOL, and OSJ)?

   No, these conditions will not be met this week.

2. Has the average water temperature at Jersey Point or Rio Vista not exceeded 53.6°F (12°C) for 3 consecutive days and/or has this action already been taken during WY 2026?

   Temperature at Rio Vista or Jersey Point has not exceeded the threshold. The Delta smelt adult entrainment management action has not yet been taken in WY 2026.

3. What is the evidence for the onset of Delta smelt spawning?

   Upstream migration for Delta smelt occurs between September and December and in response to "first flush" conditions (Sommer et al. 2011, Grimaldo et al. 2009). Migration typically ranges one to four weeks after flow and turbidity increases, based on salvage data (Sommer et al. 2011). Historically, detections of ripe Delta smelt began in January and peaked in February and March and the majority of Delta Smelt spawning occurs within a temperature range of 9-18 ˚ C (Damon et al. 2016). Based on historical monitoring data from the past few years, first detection of larvae in the Central and South Delta has typically occurred by mid to late March. Because first flush conditions were met on December 23, spawning-related behaviors may begin occurring during the current assessment week, consistent with the typical one- to four-week response window following increased flow and turbidity.

4. After the onset of spawning, have the following conditions occurred: $\geq$ 5% entrainment of the Delta smelt population at facilities after 30 days?

   Although spawning may begin during the current assessment period, JPF is above 0 cfs; therefore, the conditions required to evaluate larval and juvenile Delta smelt entrainment management are not met.

2.3 Longfin smelt

2.3.1 Biological

- **Longfin smelt life stages:** Juvenile, Adult
- **Longfin smelt count:** 296 adult, 446 juvenile, and 10 larval longfin smelt have been detected this water year. See Table 4 for recent detections, Figure 5 for spatial distribution, and Figure 6 for temporal distribution.

- **Longfin smelt salvage:** 0 longfin smelt have been salvaged, and the cumulative seasonal salvage is 0.

Table 4: Longfin smelt detections in the last 2 weeks. Fork Length > 84mm = Adult, Fork Length 20-84mm = Juvenile, Fork Length < 20mm = Larva.

Survey	Date	Region	Stratum	Life Stage	Catch
DJFMP	2025-12-31	N/A	Chipps Island	Adult	44
DJFMP	2025-12-31	N/A	Chipps Island	Juvenile	2
DJFMP	2026-01-05	Bay	Bay	Juvenile	1
DJFMP	2026-01-05	N/A	Chipps Island	Adult	1
DJFMP	2026-01-06	N/A	Chipps Island	Adult	1
DJFMP	2026-01-08	N/A	Chipps Island	Adult	3
EDSM	2025-12-31	Far West	Suisun Bay	Adult	2
EDSM	2025-12-31	Far West	Suisun Bay	Juvenile	1
EDSM	2026-01-05	Far West	Suisun Bay	Adult	2
EDSM	2026-01-05	Far West	Suisun Bay	Juvenile	2
EDSM	2026-01-06	West	Suisun Bay	Juvenile	1
EDSM	2026-01-07	West	Suisun Marsh	Juvenile	1
EDSM	2026-01-12	North	Lower Sacramento	Juvenile	1
EDSM	2026-01-12	West	Lower Sacramento	Adult	19
EDSM	2026-01-12	West	Lower Sacramento	Juvenile	5

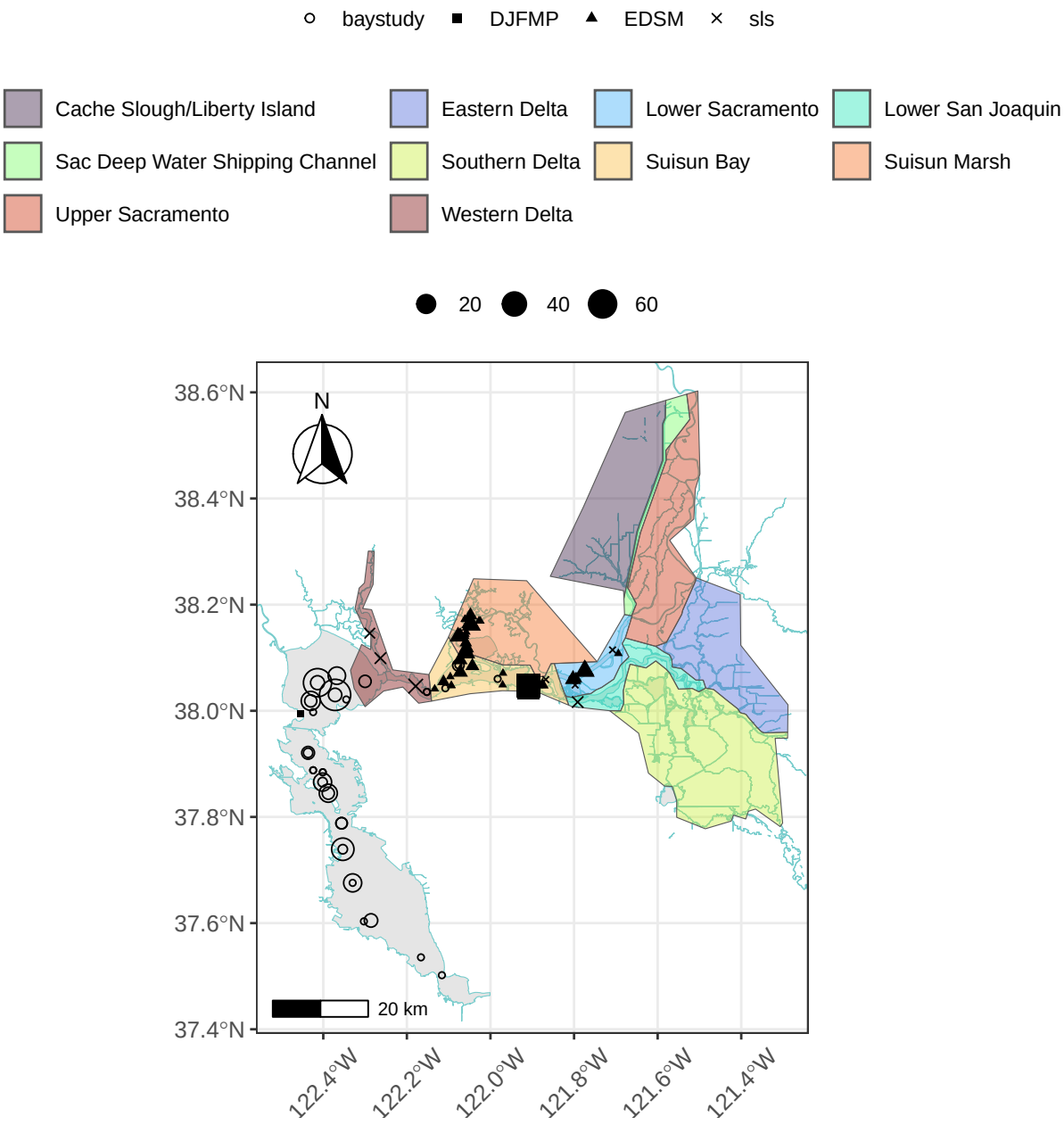


Figure 5: Longfin Smelt Distribution for WY 2026

Table 5: Longfin smelt water year totals by life stage

Survey	Region	Life Stage	Total
DJFMP	Bay	Juvenile	1

Table 5: Longfin smelt water year totals by life stage

Survey	Region	Life Stage	Total
DJFMP	N/A	Adult	240
DJFMP	N/A	Juvenile	14
EDSM	Far West	Adult	7
EDSM	Far West	Juvenile	13
EDSM	North	Juvenile	1
EDSM	West	Adult	41
EDSM	West	Juvenile	80
baystudy	Bay	Adult	6
baystudy	Bay	Juvenile	320
baystudy	Far West	Adult	2
baystudy	Far West	Juvenile	11
baystudy	West	Juvenile	6
sls	Far West	Larva	3
sls	North	Larva	1
sls	West	Larva	6

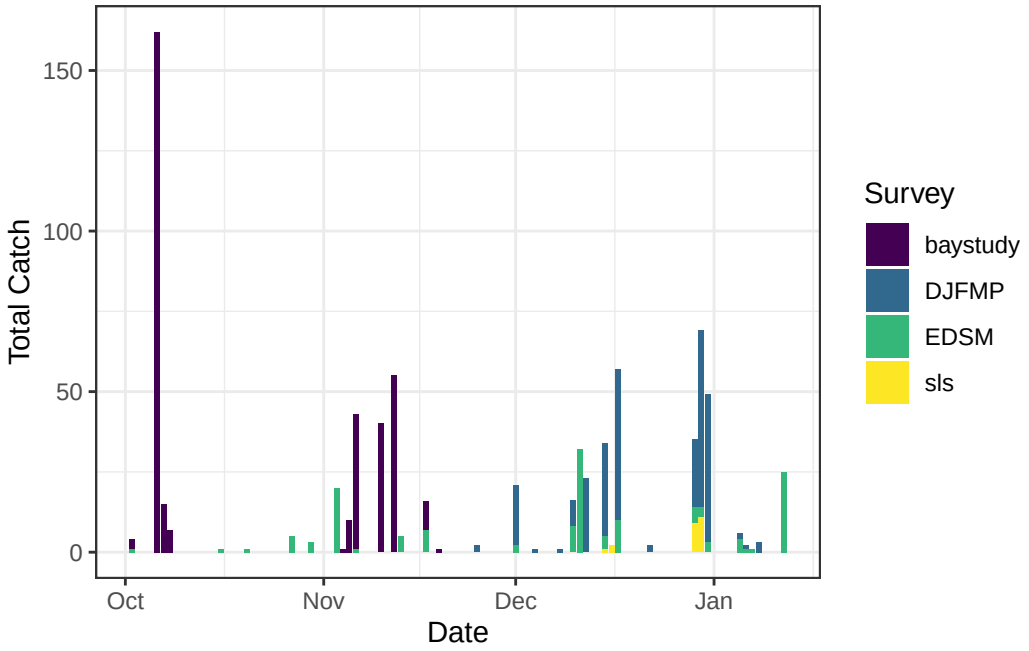


Figure 6: Time series of longfin smelt catch, WY 2026

2.3.2 Real-time Assessment Thresholds

2.3.2.1 Start of Entrainment Management (Adult Longfin Smelt)

- Not relevant

2.3.2.2 Adult longfin smelt

- **Threshold:** JPF < 0 cfs, annual loss is on a trajectory to exceed 5% of the adult population abundance, and reduced exports will reduce entrainment in the south Delta
  - Daily average JPF: 9,041 cfs as of Jan 12, 2026
  - Adult abundance (Age 1+ LFS index): 2479.2 fish
    - 5% of abundance + 1: 125.0
  - Water year total adult longfin smelt salvage = 0

2.3.2.3 Larval/juvenile longfin smelt

- **Threshold:** JPF < 0 cfs AND population model demonstrates need to reduce entrainment to avoid population decline
  - Daily average JPF: 9,041 cfs as of Jan 12, 2026

2.3.3 Evaluation

Longfin smelt:

1. If JPF < 0, what is the trajectory of annual loss of adult longfin smelt and is it likely to exceed 5% of the adult population estimate? Is South Delta entrainment expected to decrease due to a reduction in export pumping?

   JPF is not < 0 cfs and no adult longfin smelt have been detected in salvage.

2. For larval and juvenile longfin smelt, if JPF < 0 cfs, do particle tracking models show a moderate to high difference in particle fates across different OMRI scenarios? Does Zone of Influence modeling show moderate to high changes in hydrodynamic footprint across different OMRI scenarios? Are these effects anticipated to cause a population decline?

   JPF is not less than zero. ZOI modeling shows moderate change in the hydrodynamic footprint between OMRI scenarios.

3. Is there additional information or other analyses that should be considered in this evaluation?

   Additional information may be discussed if needed at the DAT call.

2.4 End of smelt Entrainment Management

- Not relevant

2.5 References

Damon, L. J., S. B. Slater, R. D. Baxter, and R. W. Fujimura. 2016. Fecundity and reproductive potential of wild female Delta smelt in the upper San Francisco Estuary, California. California Fish and Game 102(4):188–210.

Grimaldo, L. F., T. Sommer, N. Van Ark, G. Jones, E. Holland, P. B. Moyle, B. Herbold & P. Smith (2009) Factors Affecting Fish Entrainment into Massive Water Diversions in a Tidal Freshwater Estuary: Can Fish Losses be Managed? North American Journal of Fisheries Management, 29:5, 1253-1270, DOI: 10.1577/M08-062.1

Sommer, T., F. Mejia, M. Nobriga, and L. Grimaldo. 2011. The Spawning Migration of Delta Smelt in the Upper San Francisco Estuary. San Francisco Estuary and Watershed Science 9(2).