BUREAU OF RECLAMATION

Weekly Assessment of CVP and SWP Delta Operations on ESA-listed Species

January 7, 2025

Executive Summary

Operational Conditions

See Weekly Fish and Water Operation Outlook document for January 7 - 13

Winter-run Chinook Salmon

Loss of natural winter-run Chinook Salmon by length at date (LAD) has occurred in the past week at Federal and State fish salvage facilities. However, this fish was genetically confirmed as not winter-run. Loss of natural winter-run Chinook Salmon at the Central Valley Project (CVP) and State Water Project (SWP) fish collection facilities is possible to occur over the next week. 50-55% of juvenile natural winter-run Chinook Salmon from brood year (BY) 2024 are estimated to be present in the Delta.

Spring-run Chinook salmon

No loss of natural spring-run Chinook Salmon (LAD) has occurred in the past week at the State or Federal fish salvage facilities. 10-20% of juvenile natural spring-run Chinook Salmon was estimated in the Delta. It is likely that juvenile natural yearling spring-run Chinook Salmon are present near the Central Valley Project and State Water Project collection facilities due to loss of hatchery spring-run surrogates; CV spring-run Chinook Salmon adults have completed spawning, eggs are in gravel. Juveniles are emerging and downstream migration is occurring.

Central Valley Steelhead

Loss of natural California CV (CCV) steelhead has occurred on 12/18/24 at the Statel fish salvage facility. Loss of Central Valley steelhead at the Central Valley Project (CVP) and State Water Project (SWP) fish collection facilities is possible over the next week. 1-2% of CCV steelhead were estimated in the Delta.

Green Sturgeon

Loss of green sturgeon has not occurred in the past week at the State and Federal fish salvage facilities. Loss of green sturgeon is unlikely to occur over the next week due to their rare presence in the South Delta.

Delta Cross Channel Gates

The DCC gates were closed on for the season 11/18/2024 consistent with D-1641.

Delta Smelt

Since 12/9, 21 marked Delta smelt have been detected in Suisun Marsh, Suisun Bay, the Sacramento Deepwater Ship Channel, Cache Slough/Liberty Island, the Lower Sacramento River, the Lower San Joaquin River, Suisun Marsh, and Suisun Bay. The last Delta smelt observations were of two marked adults detected in the Lower Sacramento and Suisun Marsh on 1/6/25. One adult was salvaged on 12/17/2024 by the CVP. A total of 48,672 cultured Delta Smelt have been released and 10,000 cultured Delta smelt will be released on 1/8/2025 at Lookout Slough. The Integrated Early Winter Pulse Protection (IEWPP; First Flush) ended on 01/01/25 and OMRI will range. Spawning migration has ended and fish movements are limited. Turbidity is high in the Lower Sacramento, Suisun Marsh and Bay, the Lower San Joaquin River, and some stations near Franks Tract but low in most of the OMR corridor. More negative OMRI this week (-4,900 to -5,000 cfs) may draw some turbidity into the OMR corridor, but no actions are currently triggered.

Monitoring Teams summary

There were no non-consensus issues to report from the Salmon Monitoring Team.

There were no non-consensus issues to report from the Smelt Monitoring Team.

Operational and Regulatory Conditions

See current Weekly Fish and Water Operation Outlook document.

Biology, Distribution, and Evaluation Winter-run Chinook salmon, Spring-run Chinook salmon, Central Valley Steelhead

Population Status

Winter-run Chinook Salmon

- Delta Life Stages:
    - Juveniles, Adults
- Brood Year 2024 Productivity:
    - Catch of juvenile winter-run Chinook Salmon at Red Bluff Diversion Dam continues and juveniles are migrating towards the Delta. Lower Sacramento and Knights Landing rotary screw traps as well as the, EDSM Trawls, Sacramento Trawls, and Sacramento Seines have observed winter-run Chinook Salmon which further confirms that winter-run Chinook salmon are migrating into the Delta.

        - Mean cumulative weekly passage of winter-run Chinook Salmon through December 09 at Red Bluff Diversion Dam (RBDD) for the last 20 years of passage data is 93.9% (one SD of 6.4%). The biweekly estimate (90% CI) as of December 01, 2024, was 408,412 (305,359-511,464) compared to an estimate of 769,439 on a comparable date in BY 2023.
        - Hatchery winter-run Chinook salmon: No hatchery winter-run Chinook salmon have been released in WY 2025.
- Supporting Information regarding DCC Management Effects

Spring-run Chinook Salmon

- Delta Life Stages:
    - Young-of-year (YOY) and Yearlings
- Brood Year 2024 Productivity:
    - Hatchery spring-run Chinook Salmon: 698,892 general production late-fall yearling sized fish from Coleman Fish Hatchery were released on November 20-21,67,422 were released on November 25, and 77,355 were released on December 13. The first and third releases that occurred on 11/20/24 and 12/13/24 respectively will count towards COA 8.4.5 for yearling SR surrogate releases and tracking of these fish in the SWP and CVP facilities is being closely monitored. Fish from the first spring-run surrogate release have been observed in salvage over the past week.
    - See additional supporting information in Winter-run Chinook Salmon section.
- Supporting Information regarding DCC Management Effects

Central Valley Steelhead

- Delta Life Stages:
    - Spawning Adults, Kelts, Juveniles
- Brood Year 2024 Productivity:
    - See additional supporting information in winter-run Chinook Salmon section.
- Supporting Information regarding DCC Management Effects

Table 1. Summary of capture data of rotary screw traps and delta monitoring sites. WR, SR, FR, LF, and UK refer to winter-, spring-, fall-, late-fall-, and unknown Chinook Salmon runs respectively. SH and GS refer to Central Valley steelhead and Green Sturgeon respectively.

Clipped	Sample	Dates	WR	SR	FR	LF	UK	SH	GS
N	Butte	12/13 - 01/06	0	185	0	0	0	2	0
N	Tisdale RST	12/16 - 01/06	50	66	733	0	0	2	0
N	Knights Landing RST	12/25 - 01/09	0	0	0	0	0	0	0

Clipped	Sample	Dates	WR	SR	FR	LF	UK	SH	GS
N	Lower Sacramento RST	12/13 - 01/05	7	50	115	0	0	2	0
N	Feather River (Herringer)	12/03 - 12/16	0	1	20	0	72	0	0
N	Feather River (Eye Side)	12/02 - 12/16	0	0	106	0	717	0	0
N	Yuba	12/02 - 12/16	0	0	192	0	871	0	0
N	Lower Feather RST	12/03 - 01/07	2	21	283	0	0	2	0
N	Beach Seines	12/30 - 01/03	2	3	17	1	0	0	0
N	Sacramento Trawls	12/30 - 01/03	2	0	31	0	0	0	0
N	Chipps Island Trawls	12/30 - 01/03	0	0	0	0	0	1	0
Y	Tisdale RST	12/16 - 01/06	1	0	0	2	0	1	0
Y	Knights Landing RST	12/25 - 01/09	0	0	0	0	0	0	0
Y	Lower Sacramento RST	12/13 - 01/05	3	0	0	4	0	0	0
Y	Feather River (Herringer)	12/03 - 12/16	0	0	0	0	0	0	0
Y	Feather River (Eye Side)	12/02 - 12/16	0	0	0	0	0	0	0
Y	Yuba	12/02 - 12/16	0	0	0	0	0	0	0
Y	Lower Feather RST	12/03 - 01/07	0	0	0	0	0	0	0
Y	Beach Seines	12/30 - 01/03	0	0	3	0	2	0	0
Y	Chipps Island Trawls	12/30 - 01/03	0	0	0	0	2	0	0

Table 2. Salmonid distribution estimates

Location	Yet to Enter Delta (%)	In the Delta (%)	Exited Delta past Chipps Island (%)
Young-of-year (YOY) winter-run Chinook salmon	Current: 45-50 % *Last Week: 65-70%	Current: 50-55% Last Week: 30-35%	Current: 0% Last Week: 0%
YOY spring-run Chinook salmon	Current: 80-90 % Last Week: 95-99%	Current: 10-20% Last Week: 1-5%	Current: 0% Last Week: 0%
YOY hatchery winter-run Chinook salmon	Current: NA Last Week: NA	Current: NA Last Week: NA	Current: NA Last Week: NA
Natural origin steelhead	Current: 97-98 % Last Week: 100%	Current: 1-2 % Last Week: 0%	Current: 1 % Last Week: 0%

*"Last week" indicates week of 12/17/24

Table 3. Historic migration and salvage patterns. Last updated 1/06/2024

Species	Red Bluff Diversion Dam	Tisdale Rst	Knights Landing Rst	SacTrawl Sherwood Catch Index	Chipps Island Trawl Catch Index	Salvage
Chinook, Winter-run, Unclipped	97.1%(95.4%,98.8%) BY: 2015 - 2023	71.9%(55.4%,88.4%) BY: 2015 - 2023	68.7%(47.0%,90.4%) BY: 2015 - 2023	32.1%(6.3%, 57.9%) BY: 2015 - 2023	2.4%(-2.7%,7.4%) BY: 2015 - 2023	13.6%(3.4%, 23.8%) WY: 2015 - 2024
Chinook, Spring-run, Unclipped	13.0%(3.1%, 23.0%) BY: 2015 - 2023	11.6%(5.2%, 18.1%) BY: 2015 - 2023	22.8%(3.0%, 42.6%) BY: 2015 - 2023	1.7%(-1.3%,4.7%) BY: 2015 - 2023	0.0%(0.0%,0.0%) BY: 2015 - 2023	0.0%(0.0%,0.0%) WY: 2015 - 2024
Steelhead, Unclipped (January-December)	0.1%(-0.0%,0.2%) BY: 2015 - 2024	2.0%(-2.5%,6.5%) BY: 2015 - 2024	3.3%(-4.2%,10.9%) BY: 2015 - 2024	0.0%(0.0%,0.0%) BY: 2015 - 2024	1.1%(-1.4%,3.6%) BY: 2015 - 2024	N/A
Steelhead, Unclipped (December-March)	N/A	N/A	N/A	N/A	N/A	6.5%(-2.4%,15.4%) WY: 2015 - 2024
Steelhead, Unclipped (April-June)	N/A	N/A	N/A	N/A	N/A	N/A

Table 4. Mean daily flow and percent change (Wilkins Slough, Deer Creek, Mill Creek; cfs from CDEC) and temperature and percent change (Knights Landing; °F from RST).

Date %	Mill Creek (MLM): mean daily flow (cfs)	Mill Creek (MLM): flow percent change	Mill Creek (MLM): Alert	Deer Creek (DCV): mean daily flow (cfs)	Deer Creek (DCV): flow percent change	Deer Creek (DCV): Alert	Wilkins Slough (WLK): mean daily flow (cfs)	Knights Landing RST: water temp. (f)	Alert Trig-gered
1/5/25	737.1	-23.3%	Flow>95 cfs	706.9	-24.6%	Flow>95cfs	24,973.8	N/A	N/A
1/4/25	961.4	-22.2%	Flow>95 cfs	937.3	-11.7%	Flow>95cfs	24,113.2	N/A	N/A

Date %	Mill Creek (MLM): mean daily flow (cfs)	Mill Creek (MLM): flow percent change	Mill Creek (MLM): Alert	Deer Creek (DCV): mean daily flow (cfs)	Deer Creek (DCV): flow percent change	Deer Creek (DCV): Alert	Wilkins Slough (WLK): mean daily flow (cfs)	Knights Landing RST: water temp. (f)	Alert Trig-gered
1/3/25	1,236.0	67.2%	Flow>95 cfs Change >50%	1,062.0	52.3%	Flow>95cfs Change>50%	23,775.6	N/A	N/A
1/2/25	739.1	-10.1%	Flow>95 cfs	697.3	-19.0%	Flow>95cfs	24,119.0	N/A	N/A
1/1/25	822.0	-24.6%	Flow>95 cfs	860.6	-25.4%	Flow>95cfs	25,027.5	N/A	N/A
12/31/24	1,090.9	-40.6%	Flow>95 cfs	1,153.9	-39.9%	Flow>95cfs	25,731.8	N/A	N/A
12/30/24	1,836.8	-37.2%	Flow>95 cfs	1,920.0	-18.2%	Flow>95cfs	25,273.9	43.3	WLK>7500 cfs and KNL<56.3F

Table 5. STARS model simulations for route-specific entrainment, travel times, and survival. Travel time is calculated in days

Stock	Date	Route	Median Travel Time	Survival	Routing Probability
Winter Chinook	2025-01-05	Overall	4.56	0.70	N/A
Winter Chinook	2025-01-05	Sacramento River	4.10	0.75	0.65
Winter Chinook	2025-01-05	Yolo Bypass	9.66	0.64	0.00
Winter Chinook	2025-01-05	Sutter Slough	4.84	0.62	0.13
Winter Chinook	2025-01-05	Steamboat Slough	4.09	0.75	0.11
Winter Chinook	2025-01-05	Interior Delta	7.33	0.48	0.11
Late-fall Chinook	2025-01-05	Overall	10.45	0.30	N/A
Late-fall Chinook	2025-01-05	Delta Cross Channel	18.12	0.12	0.19
Late-fall Chinook	2025-01-05	Georgiana Slough	16.45	0.17	0.19
Late-fall Chinook	2025-01-05	Sacramento River	7.35	0.40	0.36
Late-fall Chinook	2025-01-05	Sutter and Steamboat Slough	7.56	0.37	0.26

Table 6a. WY 2025 loss and salvage predictor data: Predicted weekly loss of winter-run Chinook salmon and steelhead at CVP and SWP facilities.

Parameter	Modeled Current Week	Modeled Next Week
Predicted Steelhead, Median %	3	2
Predicted Steelhead, High %	43	43
Predicted Chinook Winter Run, Median %	4	3
Predicted Chinook Winter Run, High %	104	107

Table 6b. Environmental details, current and forecast.

Parameter	Data	Forecast
Temperature (Mallard Island, C)	10.6	10.6
Precipitation (5-d running sum, inches)	0.77	0.77
Old and Middle River Flows (cfs)	-2878	-2878
Sacramento River Flow (Freeport, cfs)	41793	41793
DCC Gates	closed	closed
San Joaquin River Flow (Vernalis, cfs)	1339	1339
Export	2360	2360

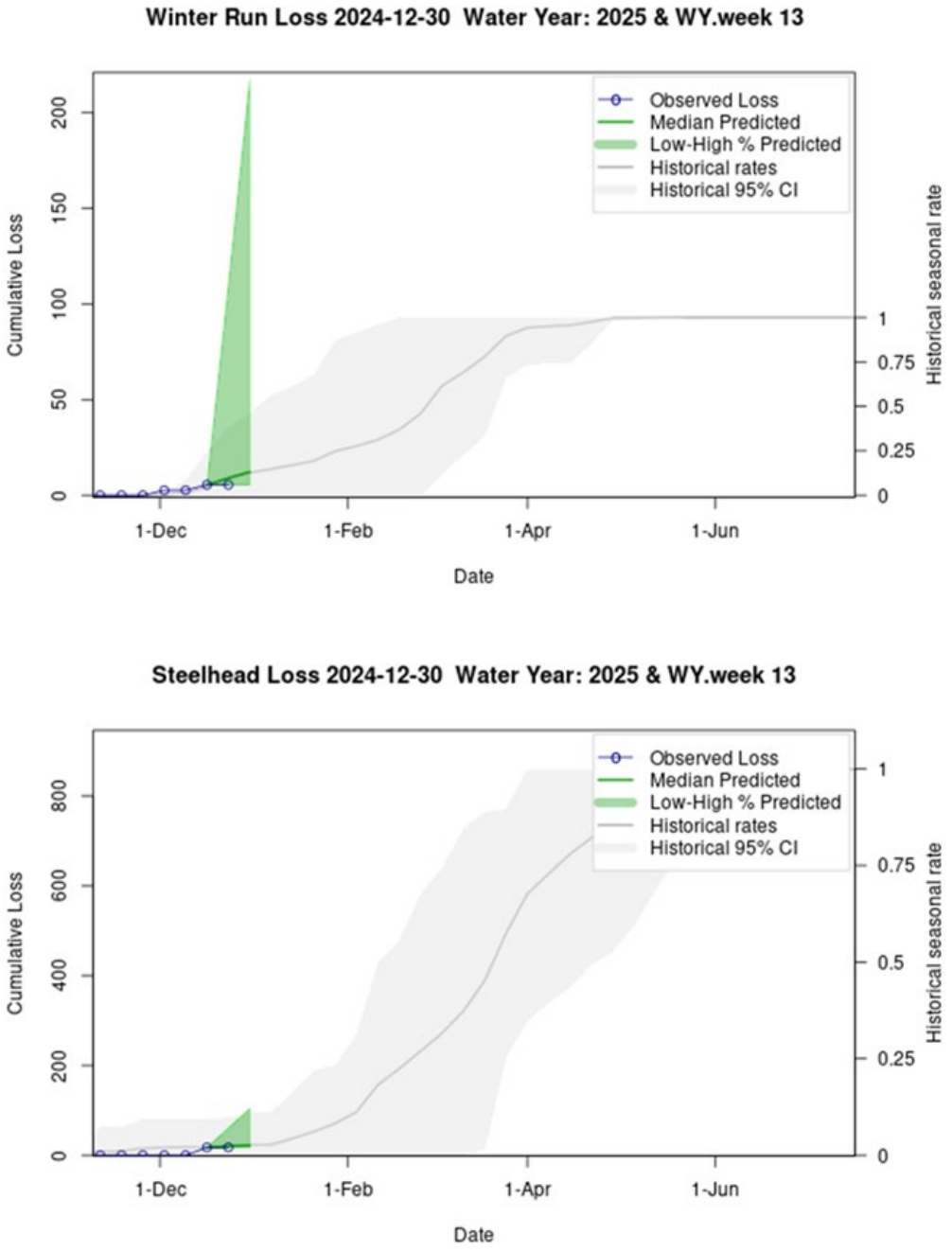

Figure 1: Predicted weekly loss of steelhead and winter-run Chinook salmon at the CVP and SWP facilities.

Figure 1 is two-line graphs of the predicted weekly loss of steelhead and winter-run Chinook salmon for water year 2025 beginning on December 1, 2024. The first line graph shows a higher predicted than observed loss. The second line graph shows a closer to predicted observed loss.

Evaluation

1. After January 1, are more than 5% of juveniles from one or more salmonid species present in the Delta?

    a. Greater than 5% of juvenile winter-run Chinook Salmon are present in the Delta.

2. Does the operational outlook's ranges impact fish movement and change the potential distribution of fish?

    a. Greater than 5% of juvenile winter-run are present in the Delta. OMR flow is expected to remain at or more positive than -5,000 cfs this upcoming week. OMR flows more positive than -5,000 cfs are hypothesized to have minimal impact on movement and distribution of salmonids in the South Delta.

3. What is the likelihood of increased loss exceeding the next annual loss threshold (50%, 75% or 90% of threshold) resulting in OMR management actions based on population distribution, abundance, and behavior of fish in the Delta?

    a. Winter-run Chinook salmon – Low likelihood. Total juvenile natural winter-run Chinook salmon (genetic) is 0 (as of 1/06/2025)

    b. Central Valley Steelhead – Low likelihood. Total natural juvenile steelhead loss is 17.32 fish (as of 01/06/2025).

4. If an annual loss threshold has been exceeded, do continued OMR restrictions benefit fish movement and survival based on real-time information?

    a. NA

5. If OMR is more negative than -5,000 cfs, are there changes in spawning, rearing, foraging, sheltering, or migration behavior beyond those anticipated to occur under OMR management at -5,000 cfs?

    a. NA

Biology Distribution and Evaluation of Green Sturgeon

Population Status

- Delta Life Stages:
    - Adults and Juveniles

Distribution

Current Distribution

- Adults: Most abundant during spring spawning migration period of March through May, and post spawning out-migration periods May through June; October through January

depending on first winter storm event resulting in significant Sacramento River flow increases. Adult presence year-round to a lesser extent mainly in San Pablo Bay.

- Juveniles: Age-1 through Age-3 juveniles present year-round and widely distributed. Juveniles tagged with acoustic tags in the main channel Sacramento River near Sherman Island detected in the Sacramento River as far upstream as the Cache Slough complex, in the San Joaquin River at the Antioch Bridge, in Threemile, Horseshoe Bend, and Montezuma Sloughs. Seasonal abundance at the primary sampling site (near Sherman Island) appears to be highest during summer in based on capture and telemetry data. Residence time at the primary sampling site for individual fish ranges from one day to over one year but telemetry data show outmigration from the primary sampling site to the Pacific Ocean ranges from 27 to 552 days. Recent capture data shows diurnal depth preference in the main channel of the Sacramento River. No recent documentation of shallow water habitat presence or foraging.

Historical Trends

- Juvenile and adult green sturgeon are historically present in the San Joaquin and Sacramento rivers and the Delta.

Forecasted Distribution within Central Valley and Delta regions

- Juvenile and adult green sturgeon are present in the San Joaquin and Sacramento rivers and Delta during the next week.

Evaluation

1. Is there likely to be salvage that may exceed the annual loss limit?
    a. Green sturgeon salvage is 0 fish (as of 1/7/2025). The agencies in the SaMT assessed the likelihood of salvage occurring in the next week is unlikely to occur.

Biology, Distribution, and Evaluation of Delta Smelt

Population Status (Brood Year 2024)

- Delta Smelt Life Stages: Juveniles, Subadults, and Adults
- The abundance estimate as of the week of 12/30/24 was 11,313 (95% CI: 3,235 to 28,944).
- Adult, subadult and juvenile Delta Smelt are expected to be present in the Sacramento Deepwater Shipping Channel, Cache Slough/Liberty Island, the Lower Sacramento River, the Lower San Joaquin River, Suisun Bay and Suisun Marsh.

Distribution

Current Distribution

- Real time detection data is currently limited to Enhanced Delta Smelt Monitoring (EDSM), Chipps Island Trawl (Chipps), and Smelt Larval Survey (SLS). Bay Study and Fall Midwater Trawl Survey provide data as available.
- Since there are few recent detections of Delta Smelt, the Smelt Monitoring Team's capacity to estimate where they are within the Delta is limited.
- Since 12/9/2024, 17 adult and 4 juvenile Delta Smelt have been detected in Suisun Marsh, Cache Slough/Liberty Island, the Lower Sacramento, the Lower San Joaquin, Suisun Marsh and Suisun Bay. The most recent Delta Smelt detections were 2 adults on 1/6/2025 in the Lower Sacramento and Suisun Marsh. Twenty-five Delta Smelt (24 marked, 1 unmarked) have been detected this water year.
- One marked (VIE-LOA) adult Delta smelt was detected in Salvage at the TFCF on 12/17/24. Cumulative seasonal salvage is 1.
- Larval sampling at the Skinner Fish Facility (SFF) and the Tracy Fish Collection Facility (TFCF) has not yet been initiated this year.

Table 7. Summary of newly reported detections of Delta Smelt since the last assessment. Identifications are considered tentative and additional genetic testing will confirm the identity of individuals. Individuals with no tags are provided alive to the FCCL as potential additions to the FCCL Broodstock. Delta Smelt >58mm FL are considered adults. Subadult fish are considered by the SMT to be fish from the previous year's cohort based on size and timing of collection. Young of year are considered juveniles and larvae. Regions are those defined by EDSM sampling. Salvage values reflect pre-expansion salvage.

Date	Survey	Life Stage	Catch	Tag Type	Stratum/Station	Region
12/17/2024	EDSM	Adult	1	VIE-LBA	Suisun Marsh	West
12/19/2024	EDSM	Juvenile	1	AdClipped	Lower Sacramento	North
12/19/2024	EDSM	Adult	2	AdClipped	Lower Sacramento	North
12/19/2024	EDSM	Adult	1	AdClipped	Lower Sacramento	West
12/19/2024	DJFMP	Juvenile	2	AdClipped	Lower Sacramento	North
12/19/2024	DJFMP	Adult	4	AdClipped	Lower Sacramento	North
12/30/2024	EDSM	Adult	1	AdClipped	Lower San Joaquin	West
12/30/2024	EDSM	Adult	1	VIE-LOA	Suisun Marsh	West
12/30/2024	EDSM	Adult	1	AdClipped	Lower Sacramento	West
12/30/2024	EDSM	Adult	1	AdClipped	Suisun Marsh	West
12/31/2024	EDSM	Adult	1	AdClipped	Suisun Bay	West
12/31/2024	EDSM	Juvenile	1	AdClipped	Suisun Bay	West
1/6/2025	EDSM	Adult	1	AdClipped	Lower Sacramento	West
1/6/2025	EDSM	Adult	1	AdClipped	Suisun Marsh	West

Table 8. Summary of recent Delta Smelt detections reported since last assessment and the total detections for the current water year. Notes reflect latest information on reported detections or completion of survey for the water year and include both larval and adult detections. Total Fish counts do not distinguish between hatchery origin and wild Delta Smelt. Table indicates detections that have undergone preliminary ID, QA/QC, and genetic confirmation. Numbers are updated as QA/QC and genetic confirmation become available

Sampling Method	Fre-quency	New Detections	Preliminary Detections	QA/QC Detections	Genetically Confirmed Detections	Total WY 2025	Notes
EDSM	Weekly	13	N/A	5	N/A	18	Phase 1 began 12/2/2024
DJFMP Beach Seines	Biweekly	6	N/A	0	N/A	6	Ongoing
SLS	Biweekly	0	N/A	N/A	N/A	0	Began 12/2/24
20-mm	Biweekly	0	N/A	N/A	N/A	0	Begins: 3/10/25
Summer Townet	Biweekly	0	N/A	N/A	N/A	0	Begins: 6/9/25
Bay Study	Monthly	0	N/A	N/A	N/A	0	Ongoing
FMWT	Monthly	0	N/A	N/A	N/A	0	Ongoing
Chipps	Weekly	0	N/A	N/A	N/A	0	Ongoing
FCCL Brood Stock Collections	Weekly	0	N/A	N/A	N/A	0	Began 11/19/2024
LEPS	As available	0	N/A	N/A	N/A	0	Begins: 1/6/25
TFCF	Daily	1	N/A	N/A	N/A	1	Ongoing
Skinner Fish Facility	Daily	0	N/A	N/A	N/A	0	Ongoing
Total	N/A	N/A	N/A	N/A	N/A	25	Sum of all Delta Smelt observed during the OMR Management Season

Cultured Delta Smelt Experimental Releases

- Approximately 100,000 fish are expected to be released for Water Year 2025:
    - 13,573 released on November 18, 2024 at Lookout Slough (truck hard release)
    - 14,880 released on December 9, 2024 at Lookout Slough (truck hard release)
    - 20,219 released on December 18, 2024 at Sandy Beach in Rio Vista (truck hard release)
    - 10,000 planned on January 8, 2025 at Lookout Slough
    - 25,000 planned on January 22, 2025 at Lookout Slough
    - 15,000 planned on January 27, 2025 at Sandy Beach in Rio Vista
- See SacPAS Current Conditions for the Smelt Monitoring Team (SMT) for details about releases.

Historical Trends

- 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 (Delta-Stewardship-Council GitHub), first detection of larvae in the Central and South Delta has typically occurred by mid to late March.
- Salvage data as presented on SacPas indicates that adult Delta Smelt salvage in recent years has reached the 50th percentile between February and the beginning of March (see Delta Smelt Adult query).
- Historically, the highest peak in salvage was in May and the second highest was in June (Grimaldo et al 2009; figure 5).

Forecasted Distribution within Central Valley and Delta regions

- Predicting the distribution of Delta Smelt is currently difficult because detection data is limited to a few wild individuals and historic patterns may not be representative of the low population levels.
- The SMT uses turbidity as a surrogate for Delta Smelt presence and in making assessments of the likelihood of entrainment for larval Delta Smelt after spawning begins.

- The potential of experimentally released Delta Smelt to distribute from their release site is unknown at this time and SMT cannot predict their distribution beyond the original release site and subsequent recaptures. There is a high degree of uncertainty regarding the response of cultured fish to environmental cues typically applied to wild Delta Smelt.

Abiotic Conditions

Turbidity

- Partly cloudy to sunny this week. In Stockton, NNW winds 7 to 15 mph today with gusts as high as 28 mph. In Antioch, N winds 24 to 30 mph today with gusts as high as 39 mph. Tomorrow, NE to NW winds 5-13 mph with gusts as high as 22 mph.
- Turbidity is above 12 FNU at Old River at Franks Tract (OSJ) and Prisoners Point (PPT). Turbidity is below 12 FNU at Old River at Bacon Island (OBI), Holland Cut (HOL), and at other stations in the South Delta. Turbidity may increase with windy conditions today, and decrease later this week.

Table 9. Relevant Environmental Factors to the current management actions for Delta Smelt

Date Reported	OBI Turbidity (FNU)	OSJ Turbidity (NTU)	HOL Turbidity (FNU)
1/6/2025	6.24	24.80	5.78

X2 Conditions

- As of 1/7/2025, X2 was estimated at 59 km.

Other Environmental Conditions

- The Fish and Water Operation Outlook OMR Index values are expected to range between -4,900 to -5,000 cfs this week.
- QWEST was +3,260 cfs as of 1/7/2025 and is expected to range between +1,800 and +3,000 cfs this week.
- Real time tracking of environmental conditions, relevant thresholds and Delta Smelt catch data are updated daily at SacPass Current Conditions for the Smelt Monitoring Team (SMT).

Evaluation

USBR and DWR Proposed Operations

- Both (CVP and SWP) water projects are operating to the following D-1641 standards: 1) monthly average Delta Outflow not less than 6,000 cfs for January, 2) E/I ratio no greater than 0.65, and 3) daily Chlorides at Contra Costa Intake (at Rock Slough) no greater than 250 mg/l. In addition, OMR management season has begun, so the 14-day averaged OMR index cannot be more negative than –5,000 cfs according to both the Federal Biological Opinions and State ITP for joint project operations.

Questions and Discussions

1. Between December 1 and January 31, has any first flush condition been exceeded?
    a. First flush conditions were exceeded on December 16. Integrated Early Winter Pulse Protection (IEWPP) began on December 19, 2024 and lasted through January 1, 2025.
2. Do DSM have a high risk of migration and dispersal into areas at high risk of future entrainment? (December 1- January 31)
    a. First flush conditions were exceeded on December 16. Integrated Early Winter Pulse Protection (IEWPP) began on December 19, 2024 and lasted through January 1, 2025, decreasing risk of DSM entrainment.
3. Has a spent female been collected?
    a. The question is not applicable under the 2024 PA.
4. If OMR of -2000 cfs does not reduce OBI turbidity below 12NTU/FNU, what OMR target is deemed protective between -2000 and -5000 cfs?
    a. OBI and HOL turbidity are below 12 NTU/FNU.
5. If OBI is 12 NTU/FNU, what do other station locations show?
    a. OBI and HOL turbidity are below 12 NTU/FNU.
6. If OBI is 12 NTU/FNU, is a turbidity bridge avoidance action not warranted? What is the supporting information?
    a. OBI and HOL turbidity are below 12 NTU/FNU.
7. After March 15 and if QWEST is negative, are larval or juvenile DSM within the entrainment zone of the CVP and SWP pumps based on surveys?
    a. This question is not applicable until March 15th.
8. Based on real-time spatial distribution of Delta Smelt and currently available turbidity information, should OMR be managed to no more negative than -3,500?
    a. This question is not applicable until March 15th.
9. What do hydrodynamic models, informed by EDSM or other relevant data, suggest the estimated percentage of larval and juvenile DSM that could be entrained may be?
    a. This question is not applicable until March 15th.

Delta Smelt References

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