BUREAU OF RECLAMATION

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

Last updated: Monday, June 15, 2026 at 8 AM

Executive Summary

ESA and CESA-listed Salmonids

- Entrainment management season is active.
- Annual Loss: 45 (0.43% of annual loss threshold) natural winter-run, 58 (4.45% of annual loss threshold) hatchery winter-run (Sac River), 265 natural steelhead, 1898 (29.02% of annual loss threshold) hatchery steelhead, 1075 (48.90% of annual loss threshold) spring-run surrogate yearlings (Coleman Late-Fall), and 0 (0.00% of annual loss threshold) spring-run surrogate YOY (Feather River Spring-Run).
- Single-year Incidental Take Limit (ITL) Status: 45 (0.76% of 5,922 ITL) natural winter-run; 58 (4.46% of 1,301 ITL) hatchery winter-run (Sac River); 2 (3.85% of 52 ITL) hatchery winter-run (Battle Creek); 265 (5.01% of 5,294 ITL) natural steelhead.
- Spring-run surrogate ITL status (0.5% per release group, BiOp Table 184): YOY - Feather River Hatchery (2026-03-18): 0 (0% of 4,927 ITL); YOY - Feather River Hatchery (2026-03-19): 0 (0% of 5,245 ITL); YOY - Feather River Hatchery (2026-03-23): 0 (0% of 2,441 ITL); Yearling - Coleman NFH (2025-11-13): 9 (1.21% of 717 ITL); Yearling - Coleman NFH (2025-11-17): 0 (0% of 376 ITL); Yearling - Coleman NFH (2025-12-17): 774 (33.02% of 2,344 ITL); Yearling - Coleman NFH (2025-12-22): 257 (84.64% of 304 ITL); Yearling - Coleman NFH (2026-01-08): 35 (12.26% of 286 ITL).
- LAD winter-run presence in the Delta is decreasing based on historical Chipps Island Trawl monitoring.
- Steelhead presence in the Delta is decreasing based on historical Chipps Island Trawl monitoring.

ESA and CESA-listed Osmerids

- Clifton Court Forebay recorded three consecutive days (June 13–15) with an average daily water temperature above 25°C.

- Entrainment season for smelt ended 6/16/26.

Current Delta Hydrologic Conditions

Operational and Regulatory Conditions

The current controlling factor is Delta water quality.

Current Conditions

Most recent inflow at Freeport in the Sacramento River and Vernalis in the San Joaquin River is 12,513 and 1,420 cfs respectively. Most recent Jersey Point Flow (JPF) is 1,294 cfs. Most recent 1-day, 5-day, and 14-day OMRI measurements were -3,076, -3,130, and -3,236 cfs, respectively, and most recent export data were 3,551 cfs for Jones Pumping Plant and 1,734 cfs for Henry O. Banks Pumping Plant.

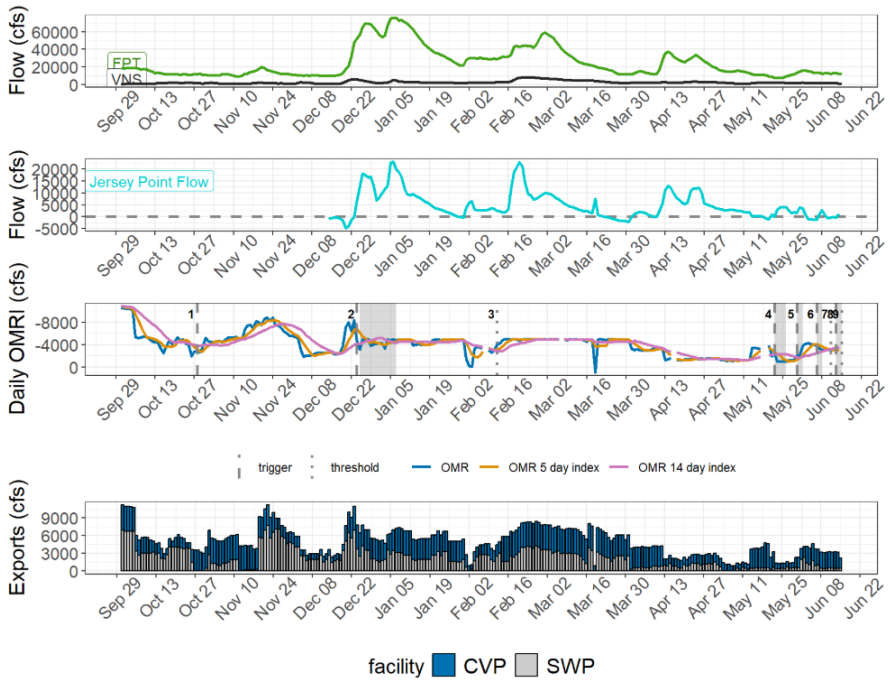

Figure 1: Operations and Action Summary, WY 2026. The numbers and lines in the OMRI plot indicate different triggers and thresholds (see Table 1), with shading representing specific action periods. Dashed and dotted vertical lines represent triggered actions and thresholds, respectively. OMRI data (colored lines) calculated by SacPAS, Freeport (FPT) and Vernalis (VNS) flow data from CDEC, Jersey Point Flow (JPF) from DWR, and CVP (TRP) and SWP (HRO) exports data from CDEC.

Figure 1 depicts four stacked graphs summarizing Water Year 2026 operations from late September through early June. The first three are line graphs depicting Freeport and Vernalis flows, Jersey Point flow, and daily Old and Middle River Index (OMRI) values, including the OMR, 5-day OMR Index, and 14-day OMR Index with action triggers and thresholds. The fourth graph is a bar graph depicting exports in cubic feet per second (cfs) through the Central Valley Project (CVP) and State Water Project (SWP) facilities. The x-axis for all four graphs spans late September 2025 through early June 2026.

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
3	Offramp temperature threshold	2/12/2026	N/A	3 consecutive days	Delta Smelt Adult Entrainment, no action taken WY26
4	DCC Gate Open/Closed	5/22/2026	2026-05-22	4 days	DCC gates
5	DCC Gate Open/Closed	5/30/2026	2026-05-30	2 days	DCC gates
6	DCC Gate Open/Closed	6/6/2026	2026-06-06	2 days	DCC gates
7	Prisoner's Point OMR temperature threshold	6/11/2026	N/A	7 total days	Salmonid temperature threshold- PRI
8	DCC Gate Open/Closed	6/13/2026	2026-06-13	2 days	DCC gates
9	Offramp temperature threshold	6/15/2026	2026-06-16	3 consecutive days	End of Entrainment Management Season for smelts

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 'lolo' category. Forecasted conditions averaged across the next 7 days falls within the 'lolo' category.

The altered channel length for the current "lolo" hydrology is 16, 34, 104 and 163 kilometers (km) across OMR bins of -2000, -3500, -5000 and <-5500 respectively. The altered channel length for forecasted "lolo" hydrology is 16, 34, 104 and 163 kilometers (km) across OMR bins of -2000, -3500, -5000 and <-5500 respectively.

Change in altered channel length between OMR levels is 147 km for current conditions and 147 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 high (>75th percentile) for both current and forecasted hydrology.

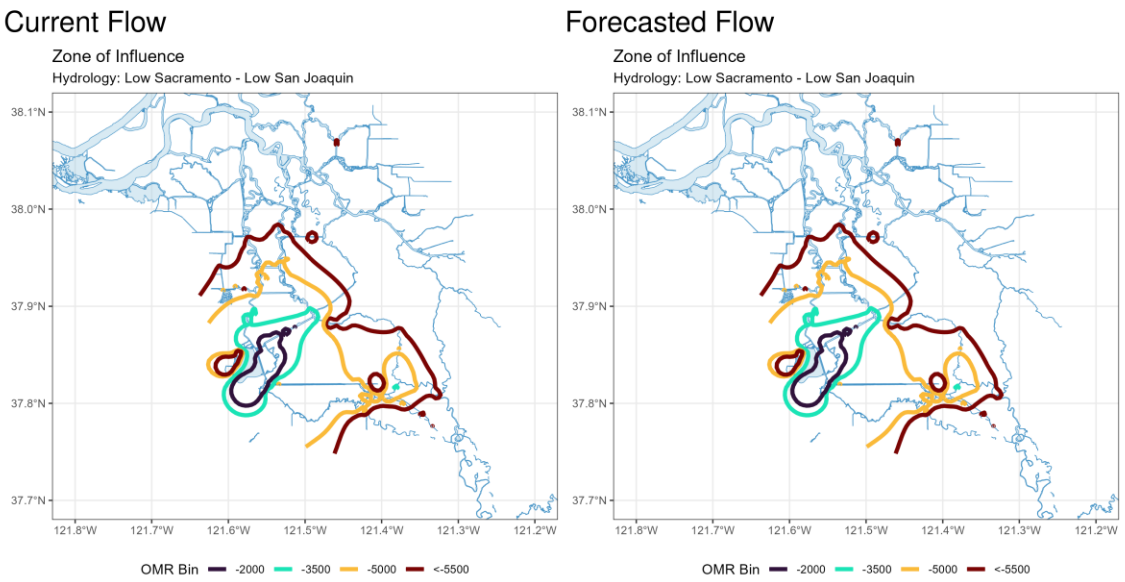

Figure 2: Modeled Zone of Influence at different OMRI scenarios based on current inflow hydrology (left) and forecasted inflow hydrology (right) from the Sacramento River and San Joaquin River

Figure 2 depicts two maps showing the modeled Zone of Influence under four Old and Middle River Index (OMRI) flow scenarios (-2,000, -3,500, -5,000, and less than -5,500 cfs). The left map represents the current inflow hydrology conditions, and the right map represents the forecasted inflow hydrology conditions based on Sacramento River and San Joaquin River flows. The colored contours illustrate the spatial extent of the Zone of Influence for each OMRI scenario within the Delta.

Assessment for Delta Operations on Salmonids

For more detailed data on salmonid conditions in the Delta see corresponding webpage on SacPAS.

Natural Winter-run Chinook

Juvenile Production Estimate

The Juvenile Production Estimate for winter-run is 1,057,452 for the current water year.

Current Status

Delta Entry Timing - Historically, as of Jun 14, 100% of length-at-date (LAD) winter-run have entered the Delta based on Knights Landing RST catch, 100% have exited the Delta based on Chipps Island Trawl Catch, and 100% of DNA confirmed winter-run have been salvaged.

Table 2: Average percent of annual emigrating population for unclipped LAD winter-run captured at monitoring locations and salvaged at Delta facilities for the past 10 years.

Species	Red Bluff Diversion Dam	Tisdale RST	Knights Landing RST	Sac Trawl (Sherwood)	Chipps Island Trawl	Salvage
Chinook, LAD Winter-run, Unclipped	100%	100%	100%	100%	100%	100%
Chinook, DNA Winter-run, Unclipped (Water Year)	N/A	N/A	N/A	N/A	N/A	100%

Red Bluff Diversion Dam Passage Estimate - As of Jun 10 estimated passage to date of LAD winter-run at Red Bluff Diversion is approximately 4.18 million fish. Note that outmigration timing overlaps with spring-run migrating fish, and true winter-run abundance likely differs from these estimates.

Delta Monitoring - No catch has been reported at Delta Entry RSTs (Tisdale, Knights Landing, Lower Sacramento River) in the past two weeks. Total catch at Sacramento Trawl and Beach Seines in the delta between Jun 01 and Jun 12 is 0 individuals. Total catch at Delta Exit at Chipps Island between Jun 01 and Jun 12 is 0 individuals.

Annual Loss

The annual loss threshold for natural winter-run is 1% of the JPE or 10,575 fish. The single-year incidental take limit (ITL) is 0.56% of the JPE (5,922 fish) or 0.36% on a 3-year rolling average (BiOp Table 184). As of June 14, cumulative loss of genetically confirmed winter-run is 45 or 0.43% of the annual loss threshold. Cumulative loss in the past 7 days has been 0.

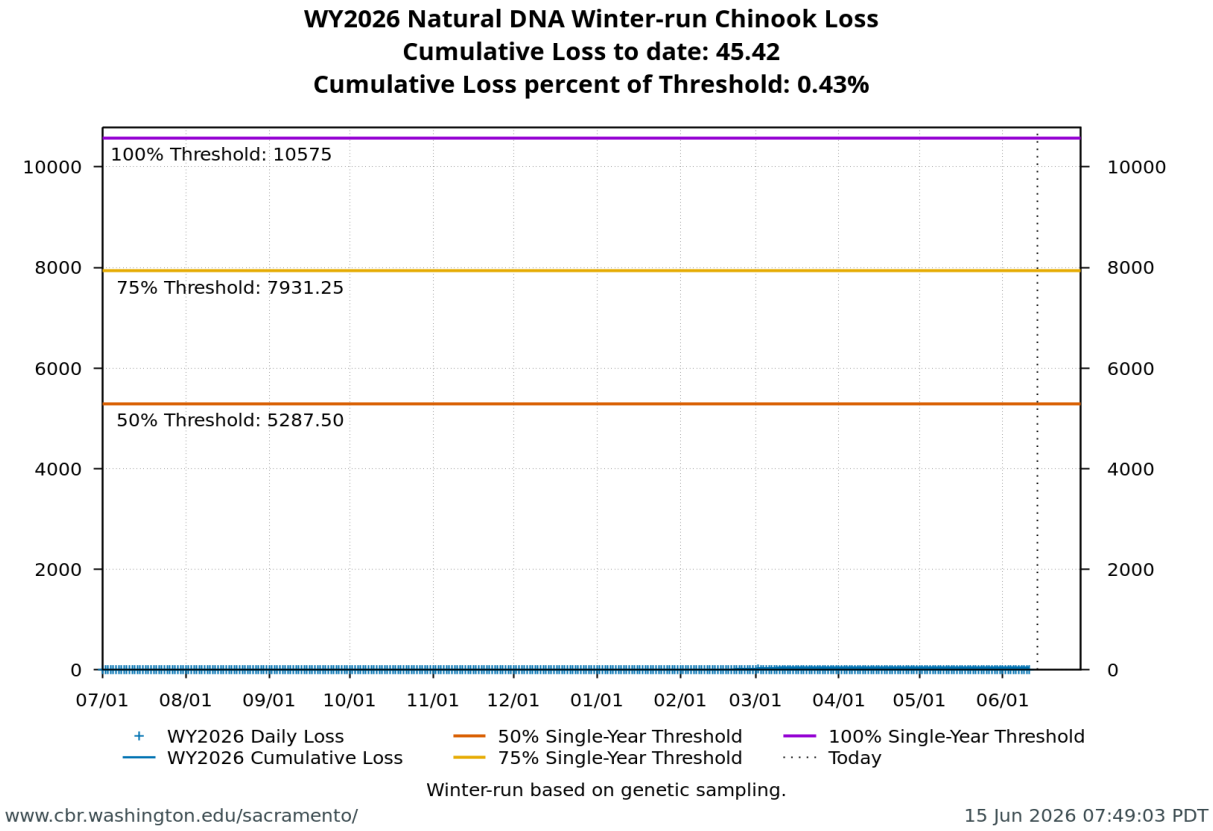

Figure 3: Cumulative loss of natural-origin winter-run for WY 2026. Cumulative loss is based on genetically confirmed winter-run captured in salvage or length-at-date winter-run in which genetic confirmation was unable to be obtained.

Figure 3 depicts a line graph showing cumulative natural-origin winter-run Chinook loss throughout Water Year 2026 from July 2025 through mid-June 2026. The graph includes daily loss observations, cumulative loss, and reference lines indicating the 50%, 75%, and 100% single-year loss thresholds, as well as a vertical line marking the current date. Cumulative loss is based on genetically confirmed winter-run Chinook captured in salvage or fish identified by length-at-date when genetic confirmation could not be obtained.

STARS

The Delta STARS Model is an individual-based simulation model that predicts survival, travel time, and routing of juvenile salmon migrating through the Sacramento–San Joaquin River Delta. This model gives insight into survival and routing patterns of winter-run based on most current conditions.

As of June 13, overall through delta STARS estimated survival probability (with 80% credible intervals) is 0 (0-0) placing it in the 51st percentile of historical STARS survival estimates for the month of June (WYs 2018-2025). STARS estimated routing and survival probabilities (with 80% credible intervals) into the interior delta are 0.13 (0.1-0.16) and 0 (0-0), respectively, corresponding to the 38th and 46th percentiles of historical June estimates (WYs 2018-2025).

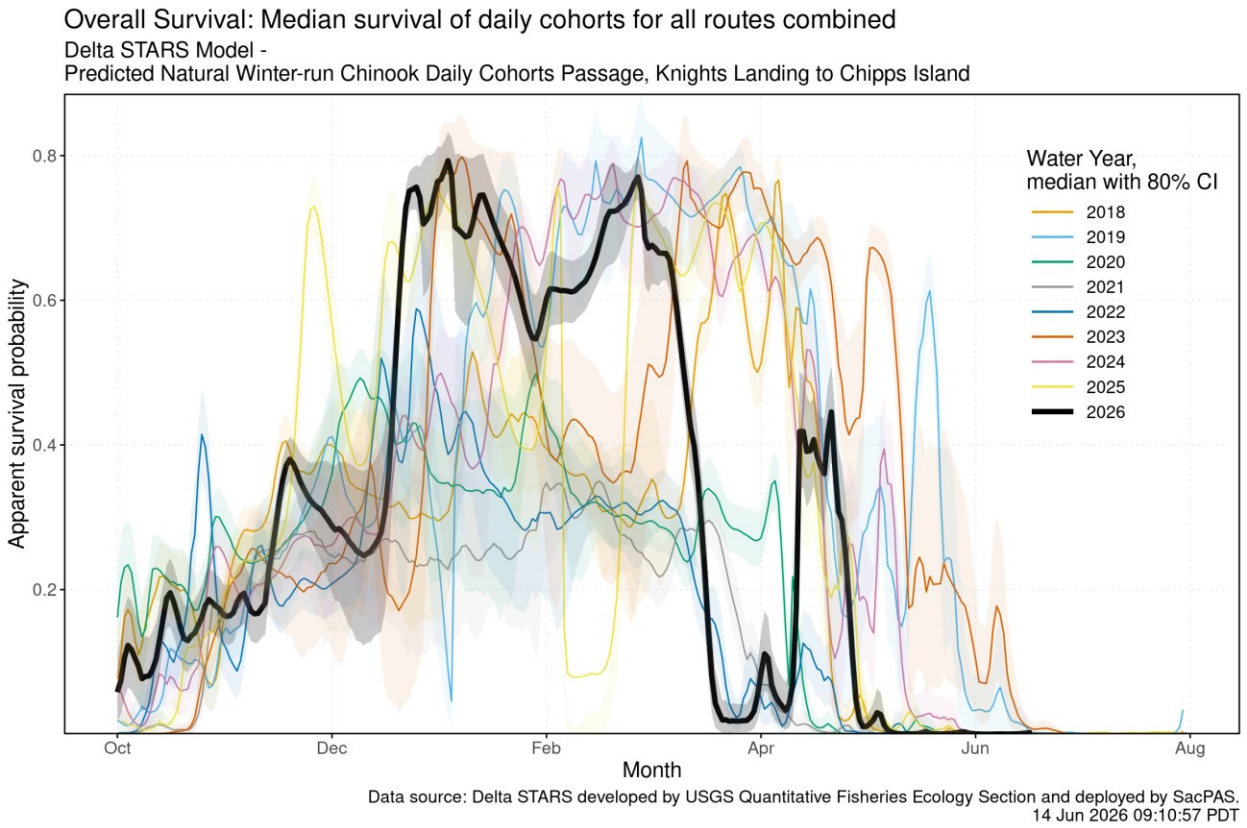

Figure 4: Estimated overall winter-run survival from Knights Landing to Chipps Island. Black line indicates the current water-year, and other colored lines correspond to past water years.

Figure 4 depicts a multi-line graph showing the estimated apparent survival probability of natural-origin winter-run Chinook daily cohorts from Knights Landing to Chipps Island over the course of the water year. Colored lines represent the median survival estimates for water years 2018 through 2026, with shaded bands indicating the 80% confidence intervals. The black line represents the current water year (2026), while the remaining colored lines represent previous water years. The x-axis spans October through August, and the y-axis shows apparent survival probability.

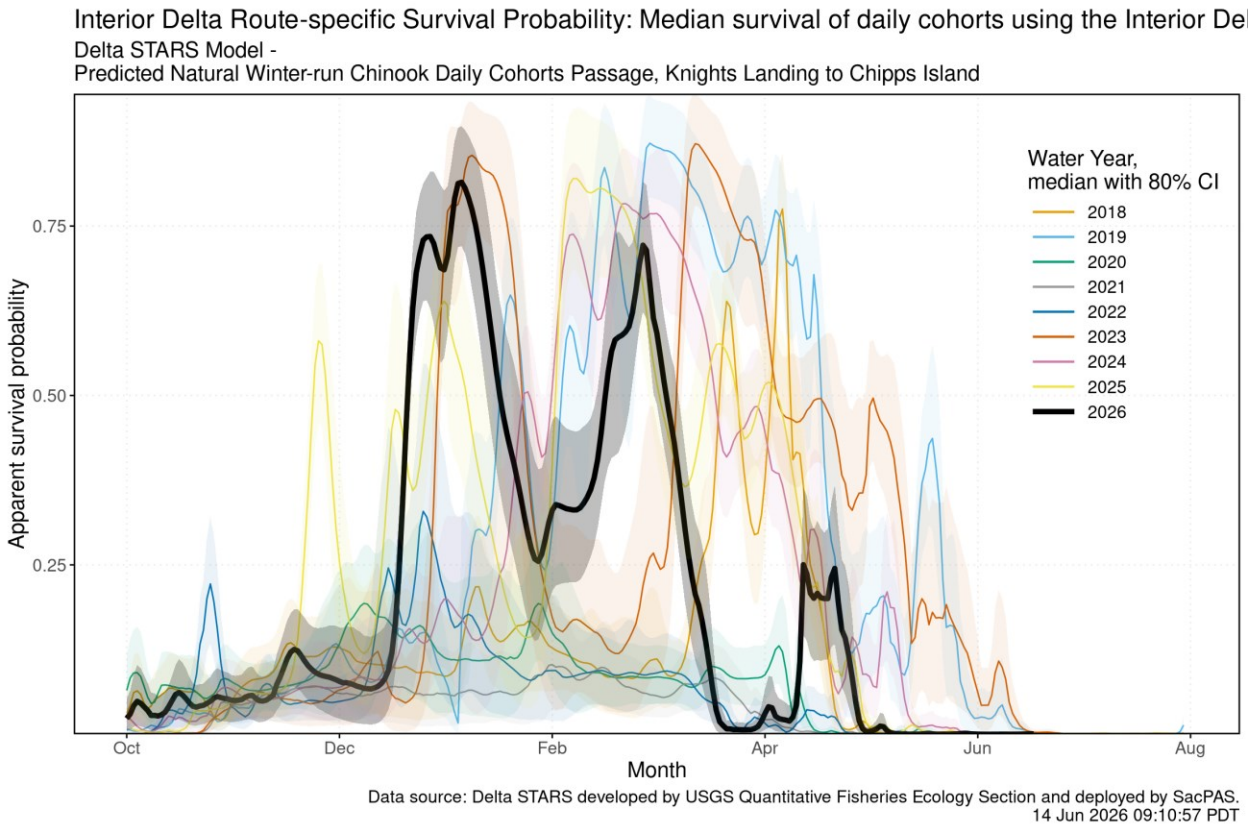

Figure 5: Estimated survival from Knights Landing to Chipps Island of simulated winter-run cohorts that route through the interior Delta. Black line indicates the current water-year, and other colored lines correspond to past water years.

Figure 5 depicts a multi-line graph showing the estimated apparent survival probability of simulated natural-origin winter-run Chinook daily cohorts that route through the Interior Delta from Knights Landing to Chipps Island. Colored lines represent the median survival estimates for water years 2018 through 2026, with shaded bands indicating the 80% confidence intervals. The black line represents the current water year (2026), while the remaining colored lines represent previous water years. The x-axis spans October through August, and the y-axis shows apparent survival probability.

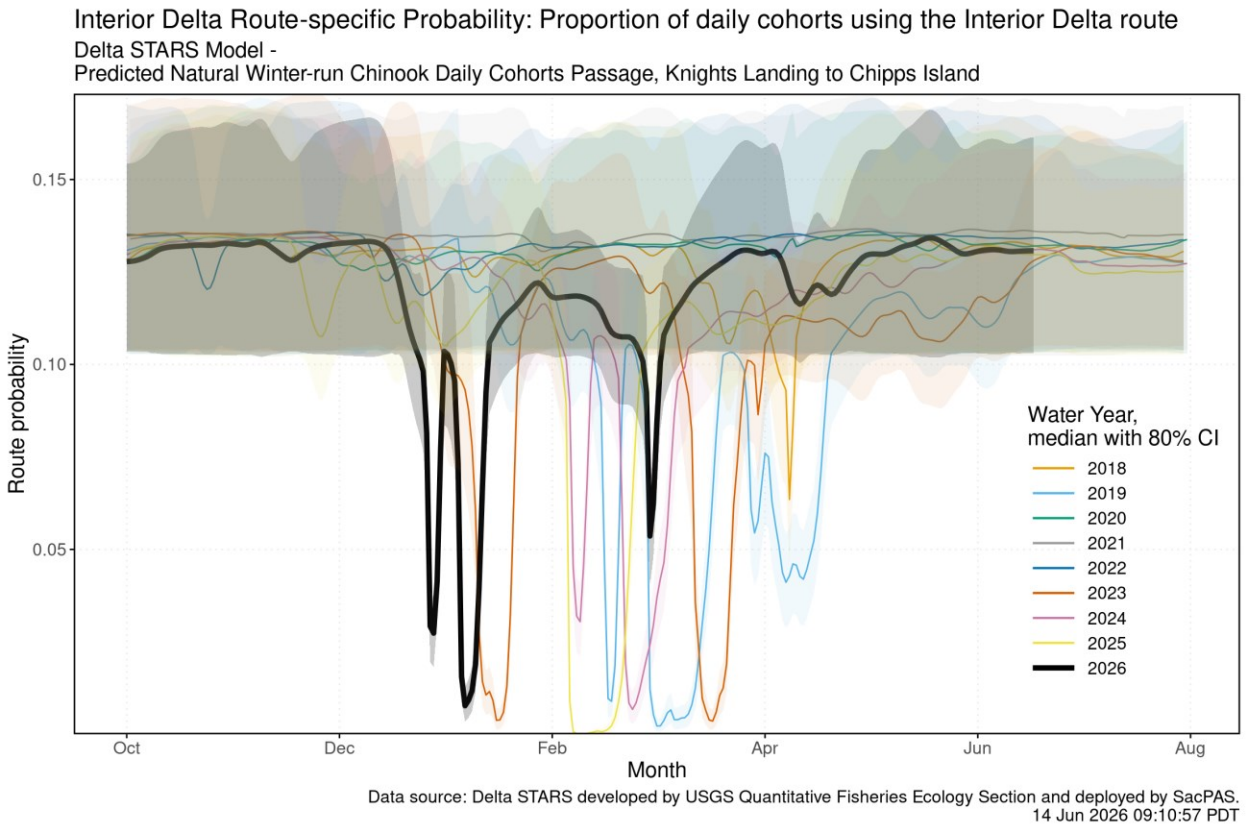

Figure 6: Estimated probability of winter-run routing into the interior Delta. Black line indicates the current water-year, and other colored lines correspond to past water years.

Figure 6 depicts a multi-line graph showing the estimated probability of natural-origin winter-run Chinook daily cohorts routing into the Interior Delta from Knights Landing to Chipps Island. Colored lines represent the median route probability estimates for water years 2018 through 2026, with shaded bands indicating the 80% confidence intervals. The black line represents the current water year (2026), while the remaining colored lines represent previous water years. The x-axis spans October through August, and the y-axis shows route probability.

Hatchery Winter-run Chinook – Sacramento River

Hatchery Releases

Livingston Stone National Fish Hatchery released a total of 466,344 winter-run Chinook salmon (February 18). All fish were 100% CWT-marked production fish released at the Sacramento River at John F. Reginato River Access. Release details are shown in the table below and available on SacPAS.

Table 3: Livingston Stone NFH winter-run Chinook salmon releases into the Sacramento River in Water Year 2026. Data sourced from SacPAS.

Release Date	Hatchery	Release Site	Release Type	Fish Released	% CWT Marked	CWT Tagcodes
February 18, 2026	Livingston Stone NFH	Sacramento River at John F. Reginato River Access	Production	466,344	100%	053800 056770 056788 056789

Juvenile Production Estimate

The Juvenile Production Estimate for hatchery winter-run (Sacramento River releases) is 130,096 for Livingston Stone releases. The annual loss threshold is 1% of the JPE (1,301 fish), which is the same as the single-year ITL (BiOp Table 184).

Annual Loss

As of June 15, cumulative loss of Livingston Stone hatchery fish (Sacramento River releases) is 58 or 4.45% of the annual loss threshold (which equals the single-year ITL). Cumulative loss in the past 7 days has been 0.

Hatchery Winter-run Chinook – Battle Creek

Hatchery Releases

Livingston Stone National Fish Hatchery released a total of 207,067 winter-run Chinook salmon into Battle Creek (February 19). Release details are available on SacPAS.

Table 4: Livingston Stone NFH winter-run Chinook salmon releases into Battle Creek in Water Year 2026. Data sourced from SacPAS.

Release Date	Hatchery	Release Site	Release Type	Fish Released	% CWT Marked	CWT Tagcodes
February 19, 2026	Coleman NFH	North Fork Battle Creek Manton CA	Jumpstart	207,067	100%	056769

Juvenile Production Estimate

The Juvenile Production Estimate for hatchery winter-run released into Battle Creek is 5,186 based on 207,067 fish released. The single-year incidental take limit (ITL) is 1.0% of the JPE (52 fish) or 0.8% on a 3-year rolling average (BiOp Table 184).

Incidental Take

As of June 15, cumulative loss of Livingston Stone hatchery fish (Battle Creek releases) is 2 or 4.47% of the single-year ITL (52 fish). Cumulative loss in the past 7 days has been 0.

Natural-origin Central Valley Steelhead

Current Status

Delta Entry Timing - Historically, as of Jun 14, 98% of CCV steelhead have entered the Delta based on Knights Landing RST catch, 94% have exited the Delta based on Chipps Island Trawl Catch, and 99% have been salvaged.

Table 5: Average percent of annual emigrating population for unclipped CCV steelhead captured at monitoring locations and salvaged at Delta facilities for the past 10 years.

Species	Chipps Island Trawl	Knights Landing RST	Red Bluff Diversion Dam	Sac Trawl (Sherwood)	Salvage	Tisdale RST
Steelhead, Unclipped	94%	83%	38%	98%	99%	88%

Delta Monitoring - No catch has been reported at Delta Entry RSTs (Tisdale, Knights Landing, Lower Sacramento River) in the past two weeks. Total catch at Sacramento Trawl and Beach Seines in the delta between Jun 01 and Jun 12 is 0 individuals. Total catch at Delta Exit at Chipps Island between Jun 01 and Jun 12 is 0 individuals.

Annual Loss

As of June 14, cumulative loss of unclipped steelhead is 265 or 5.00% of the single-year incidental take limit (ITL). There is no annual loss threshold for natural steelhead. The single-year ITL is 5,294 juveniles or 2,319 juveniles as a 3-year rolling average (BiOp Table 184). Cumulative loss in the past 7 days has been 0.

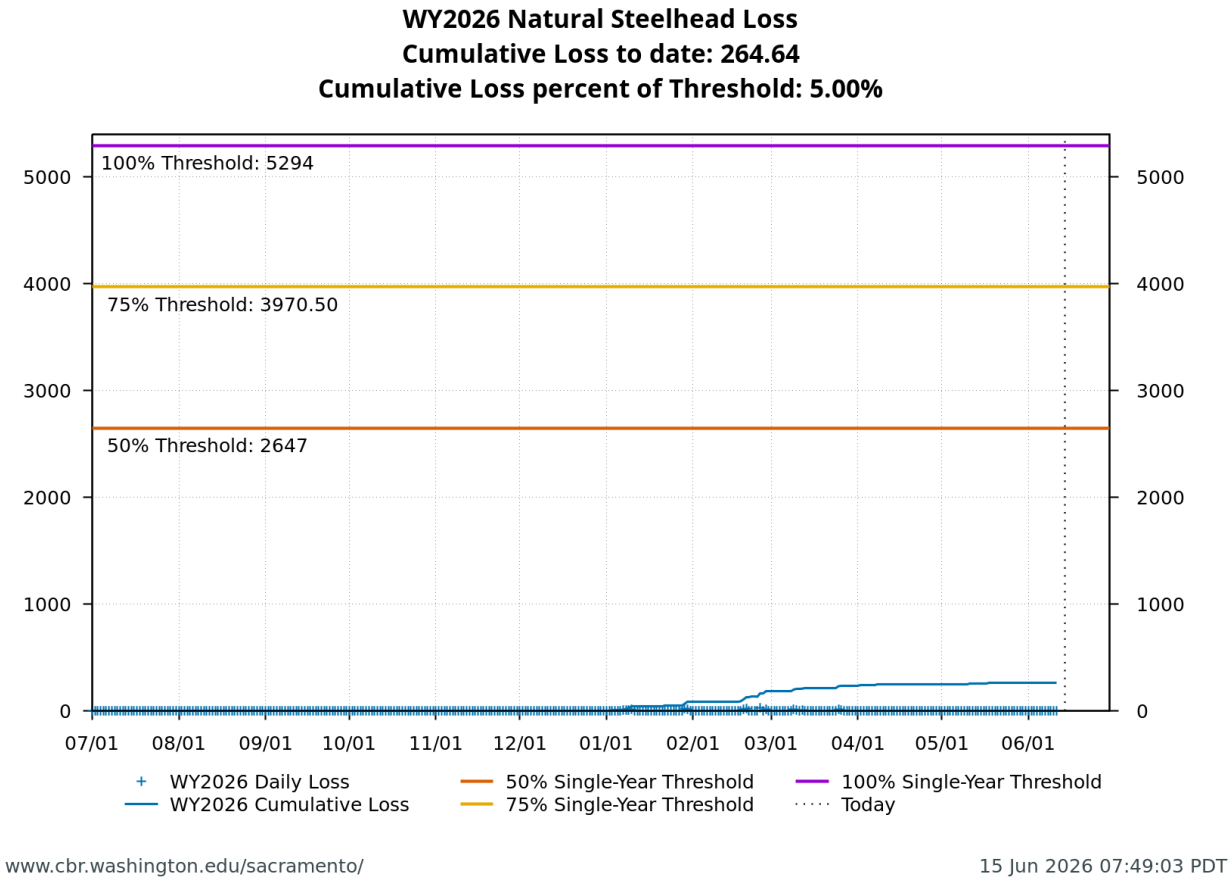

Figure 7: Cumulative loss of natural-origin steelhead for WY 2026. The 5,294 line represents the single-year incidental take limit (ITL), not a loss threshold.

Figure 7 depicts a line graph showing cumulative natural-origin steelhead loss throughout Water Year 2026 from July 2025 through mid-June 2026. The graph includes daily loss observations, cumulative loss, and reference lines indicating 50%, 75%, and 100% of the single-year incidental take limit (ITL), as well as a vertical line marking the current date. The x-axis spans July 2025 through June 2026, and the y-axis shows cumulative steelhead loss.

Hatchery-origin Central Valley Steelhead

Surrogate Releases

There have been a total of 10 releases totaling 1,618,274 steelhead in Water Year 2026. JPE for the hatchery releases as of today is 654,130 based on estimated survivals using forecasted water year types (see details in table below). The annual loss threshold, equal to 1% of the JPE, is currently 6,541, but is subject to change with additional steelhead releases.

Table 6: Summary of steelhead hatchery releases in Water Year 2026. JPE calculated using hatchery-specific survival estimates to Delta entry from release location.

Hatchery	Date of Release	Number Released	Estimated Survival	Juvenile Production Estimate
NIM	2025-11-10	233,109	72%	167,838
Coleman	2025-12-15	555,720	38%	211,174
Coleman	2025-12-17	90,019	38%	34,207
FRH	2026-01-06	376,640	36%	135,590
FRH	2026-01-09	117,715	36%	42,377
MOK	2026-02-17	39,130	25%	9,783
MOK	2026-02-18	39,131	25%	9,783
MOK	2026-03-18	41,550	27%	11,219
MOK	2026-03-19	42,150	27%	11,381
MOK	2026-04-16	83,110	25%	20,778

Table 7: Hatchery-specific survival estimates used for JPE calculations.

Hatchery	Survival Estimate	Source
Coleman NFH	0.205 – 0.433	Sandstrom et al. 2020
Feather River Hatchery	0.09 – 0.45	Kurth 2013
Nimbus Hatchery	0.62 – 0.83	Brodsky et al. 2020
Mokelumne River Hatchery	0.25 – 0.33	Del Real et al. 2012

Total loss of hatchery-origin steelhead is 1898 or 29.02% of the annual loss threshold. Note that hatchery origin of salvaged fish cannot be determined at this time and salvage is based on the assumption of similar routing and survival probabilities of individual hatchery releases.

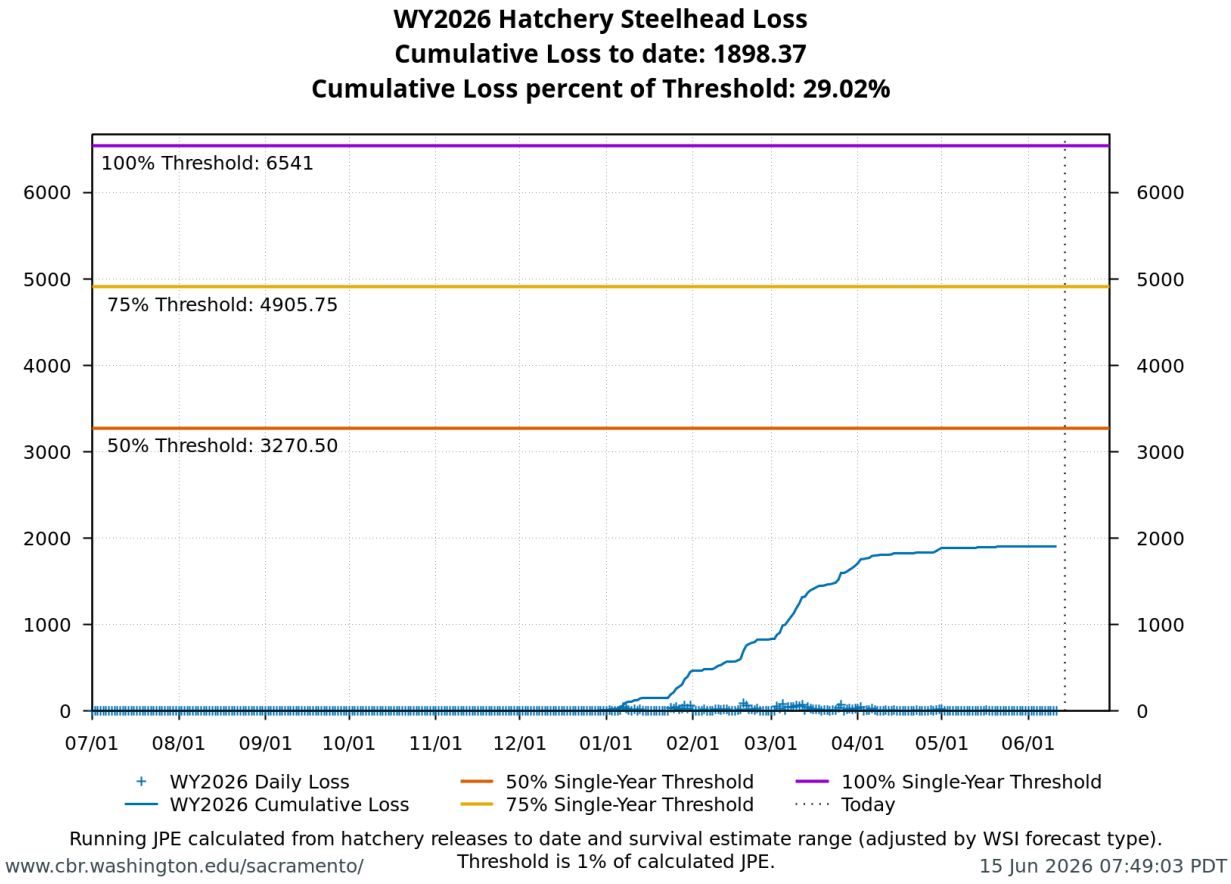

Figure 8: Cumulative loss of hatchery steelhead for WY 2026.

Figure 8 depicts a line graph showing cumulative hatchery steelhead loss throughout Water Year 2026 from July 2025 through mid-June 2026. The graph includes daily loss observations, cumulative loss, and reference lines indicating 50%, 75%, and 100% of the single-year hatchery steelhead threshold, as well as a vertical line marking the current date. The x-axis spans July 2025 through June 2026, and the y-axis shows cumulative hatchery steelhead loss.

Spring-run Chinook

Current Status

Delta Entry Timing - Historically, as of Jun 14, 100% of LAD spring-run have entered the Delta based on Knights Landing RST catch, 100% have exited the Delta based on Chipps Island Trawl Catch, and 100% have been salvaged.

Table 8: Average percent of annual emigrating population for LAD spring-run Chinook salmon captured at monitoring locations and salvaged at Delta facilities for the past 10 years.

Species	Red Bluff Diversion Dam	Tisdale RST	Knights Landing RST	Sac Trawl (Sherwood)	Chipps Island Trawl	Salvage
Chinook, LAD Spring-run, Unclipped	100%	100%	100%	100%	100%	100%

Red Bluff Diversion Dam Passage Estimate - As of Jun 10 estimated passage to date of LAD spring-run at Red Bluff Diversion is approximately 0.96 million fish. Note that outmigration timing overlaps with winter-run and fall-run outmigration, and true spring-run abundance likely differs from these estimates.

Delta Monitoring - No catch has been reported at Delta Entry RSTs (Tisdale, Knights Landing, Lower Sacramento River) in the past two weeks. Total catch at Sacramento Trawl and Beach Seines in the delta between Jun 01 and Jun 12 is 0 individuals. Total catch at Delta Exit at Chipps Island between Jun 01 and Jun 12 is 0 individuals.

Spring-run Surrogate Releases

A total of 3,327,812 spring-run surrogate fish have been released in Water Year 2026, with an estimated Juvenile Production Estimate (JPE) of 1,130,892 fish entering the Delta. This includes 805,323 Coleman Late-Fall Run Chinook yearlings (JPE: 219,852) released from Coleman National Fish Hatchery across 12 coded-wire tag groups, and 2,522,489 Feather River Hatchery Spring-Run young-of-year (JPE: 911,040) across 7 coded-wire tag groups. See details in table below.

Table 9: Spring-run Chinook salmon surrogate releases: Coleman Late-Fall yearlings and Feather River Spring-Run young-of-year (production and experimental). ITL is 0.5% of each release group (BiOp Table 184).

Hatchery	Release Date	Stock	Life Stage	Type	CWT Released	JPE	ITL (0.5%)	Loss	CWT Codes
Feather River Hatchery	2026-03-18	Spring-Run	YOY	Production	985,324	355,866	4,927	0	063227, 063229
Feather River Hatchery	2026-03-19	Spring-Run	YOY	Production	1,048,948	378,846	5,245	0	063036, 063236, 063239
Feather River Hatchery	2026-03-23	Spring-Run	YOY	Production	488,217	176,328	2,441	0	062858, 063234
Coleman NFH	2025-11-13	Late-Fall	Yearling	Production	143,346	39,134	717	9	056808, 056809
Coleman NFH	2025-11-17	Late-Fall	Yearling	Experimental	75,119	20,507	376	0	056810
Coleman NFH	2025-12-17	Late-Fall	Yearling	Production	468,876	128,002	2,344	774	053700, 056806, 056811, 056812, 056814, 056815, 056817
Coleman NFH	2025-12-22	Late-Fall	Yearling	Experimental	60,873	16,618	304	257	056813
Coleman NFH	2026-01-08	Late-Fall	Yearling	Experimental	57,109	15,591	286	35	056816

Annual Loss

The annual loss threshold (Action 5) is 1% of the JPE entering the Delta, tracked cumulatively but separately for yearlings and young-of-year. Yearling surrogates (Coleman Late-Fall): the threshold is 2,199 fish; as of June 14, cumulative loss is 1,075 fish or 48.90% of the threshold. YOY surrogates (Feather River Spring-Run): the threshold is 9,110 fish; as of June 14, cumulative loss is 0 fish or 0.00% of the threshold. The single-year incidental take limit (ITL) is 0.5% of the estimated number of each surrogate release group (BiOp Table 184). ITL status by release group: YOY - Feather River Hatchery (2026-03-18, Production): 0 loss of 4,927 ITL (0%); YOY - Feather River Hatchery (2026-03-19, Production): 0 loss of 5,245 ITL (0%); YOY - Feather River Hatchery (2026-03-23, Production): 0 loss of 2,441 ITL (0%); Yearling - Coleman NFH (2025-11-13, Production): 9 loss of 717 ITL (1.21%); Yearling - Coleman NFH (2025-11-17, Experimental): 0 loss of 376 ITL (0%); Yearling - Coleman NFH (2025-12-17, Production): 774 loss of 2,344 ITL (33.02%); Yearling - Coleman NFH (2025-12-22, Experimental): 257 loss of 304 ITL (84.64%); Yearling - Coleman NFH (2026-01-08, Experimental): 35 loss of 286 ITL (12.26%)

Loss Prediction and Trajectories

The following figures display the current loss predictor model outputs for winter-run Chinook salmon and steelhead.

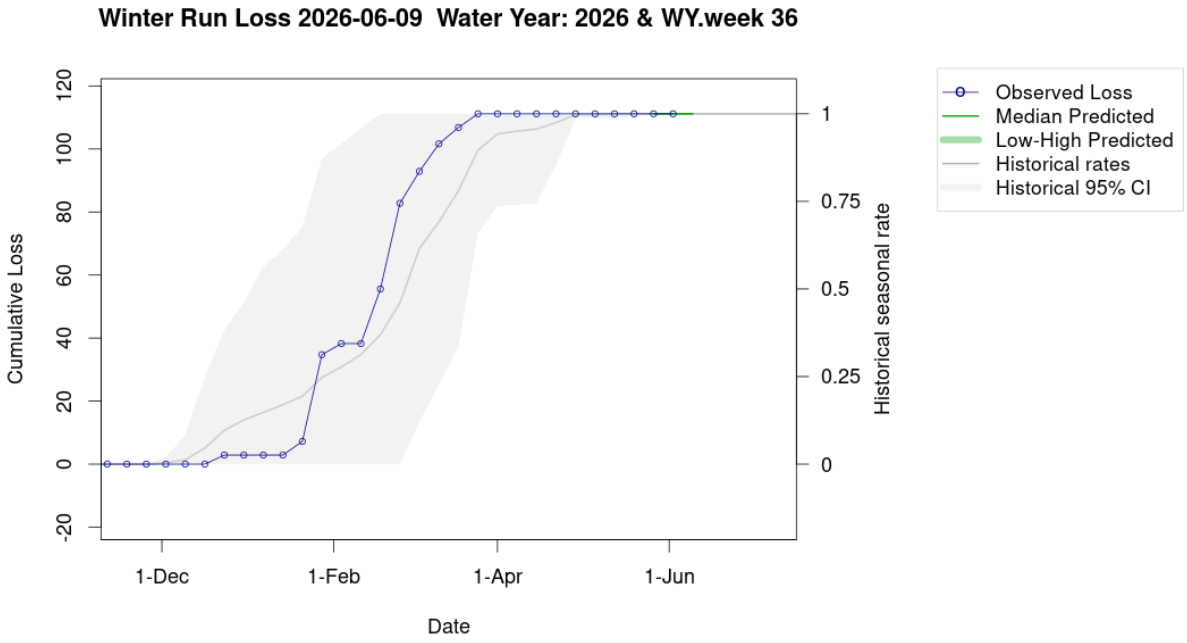

Figure 9: Estimates of winter-run Chinook loss generated by Loss and Salvage Predictor tool.

Figure 9 depicts a line graph showing observed and predicted cumulative winter-run Chinook loss over the course of the water year from late November through early June. The graph includes observed loss, median predicted loss, low-to-high predicted loss, historical seasonal loss rates, and the historical 95% confidence interval. The x-axis spans late November through early June, the left y-axis shows cumulative loss, and the right y-axis shows the historical seasonal rate.

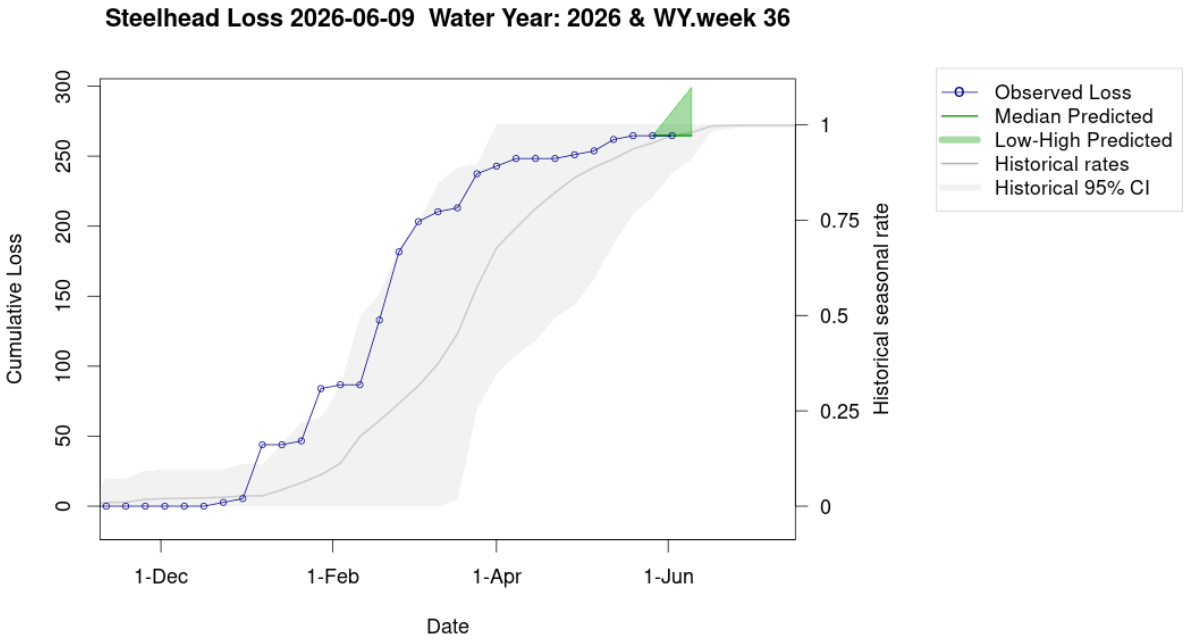

Figure 10: Estimates of steelhead loss generated by Loss and Salvage Predictor tool.

Figure 10 depicts a line graph showing observed and predicted cumulative steelhead loss over the course of the water year from late November through early June. The graph includes observed loss, median predicted loss, low-to-high predicted loss, historical seasonal loss rates, and the historical 95% confidence interval. The x-axis spans late November through early June, the left y-axis shows cumulative loss, and the right y-axis shows the historical seasonal rate.

End of Entrainment Management for Salmonids

The end of entrainment management for salmonids occurs on June 30, or after 7 days of daily mean water temperature in June ≥ 72° F (22° C) at Mossdale and at Prisoner's Point (does not have to be consecutive), whichever occurs first.

Location	Threshold (°F/°C)	Days Exceeding (n)	Dates Exceeding	Status
Mossdale	72°F / 22°C	2	Jun 15, Jun 16	Threshold Exceeded
Prisoners Point	72°F / 22°C	12	Jun 05, Jun 06, Jun 07, Jun 08 Jun 09, Jun 10, Jun 11, +5 more	Threshold Exceeded

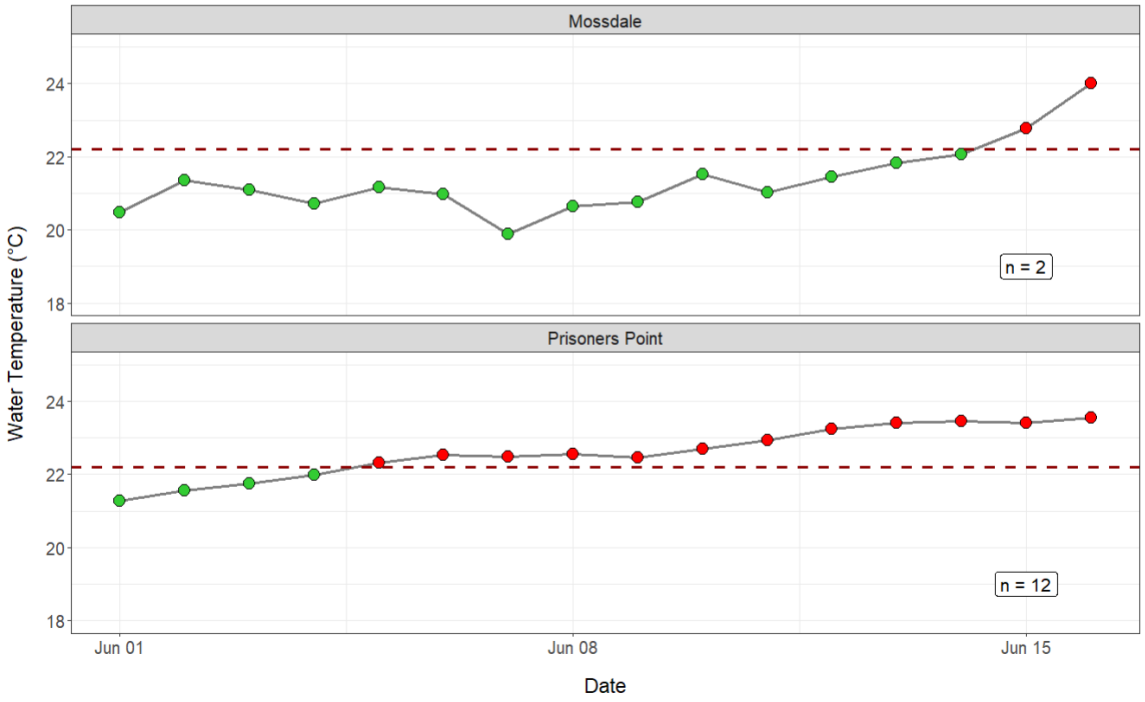

Figure 11: Dates of temperature threshold exceedance and daily average temperature at Mossdale and Prisoner's Point. Table indicates the number of days and dates exceeding temperature threshold at each location. In the figures, horizontal dashed line indicates temperature threshold for entrainment management for salmonids. Number of days exceeding the threshold at each location are shown (n=).

Figure 11 depicts a summary table and two line graphs showing daily average water temperature at Mossdale and Prisoners Point during June 2026. The table summarizes the temperature threshold, number of days exceeding the threshold, dates of exceedance, and exceedance status for each location. The line graphs display daily average water temperature over time, with a horizontal dashed line indicating the salmonid entrainment management temperature threshold of 22°C (72°F). Data points exceeding the threshold are highlighted, and the total number of exceedance days (n) is shown for each location.

Evaluation

1. What is the probability of exceeding natural or hatchery winter-run Chinook salmon loss thresholds in the upcoming week?
    a. LOW RISK: Natural winter-run cumulative loss is currently 0.43% of the threshold. LOW RISK: Hatchery winter-run (Sac River) cumulative loss is currently 4.45% of the threshold. LOW RISK: Hatchery winter-run (Battle Creek) cumulative loss is currently 4.47% of the threshold.
2. What is the probability of exceeding spring-run Chinook salmon surrogate loss thresholds (yearling and YOY) in the upcoming week?
    a. LOW RISK: Spring-run surrogate yearlings (Coleman Late-Fall) cumulative loss is currently 48.90% of the threshold. LOW RISK: Spring-run surrogate YOY (Feather River Spring-Run) cumulative loss is currently 0.00% of the threshold.
3. What is the probability of exceeding natural or hatchery steelhead loss thresholds in the upcoming week?
    a. LOW RISK: Natural steelhead cumulative loss is currently 5.00% of the threshold. LOW RISK: Hatchery steelhead cumulative loss is currently 29.02% of the threshold.

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

Operational and Regulatory Conditions

- Entrainment season for smelt ended 6/16/26.
- See current Weekly Fish and Water Operations Outlook document.
- Additional information also available on the SacPAS SMT page.

Delta smelt

Biological

- Delta smelt life stages detected in surveys:
- **Abundance estimate:** 2034 (95% CL: 162 to 8,959) as of the week of March 23–27, 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.
    - Non-production release: On June 2, USFWS released ~4,000 juvenile Delta smelt (120 dph; average fork length of 31 mm) at Sherman Island.

- **Delta smelt count:** 44 adult Delta smelt and 30 juvenile Delta smelt have been detected this water year. See Table 10 for recent detections, Figure 12 for spatial distribution, and Figure 13 for temporal distribution.
- **Delta smelt salvage:** 1 Delta smelt has been salvaged, and the cumulative seasonal salvage is 4.

Notes

- EDSM is currently in phase 2 (20-mm); detections are marked as *Hypomesus sp.* until genetic verification is returned, which may be 4-6 weeks delay. As a result, 'recent catch' in this assessment may be low until genetic verification has occurred.

- 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 10 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 10: 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
NA	NA	NA	NA	NA	NA

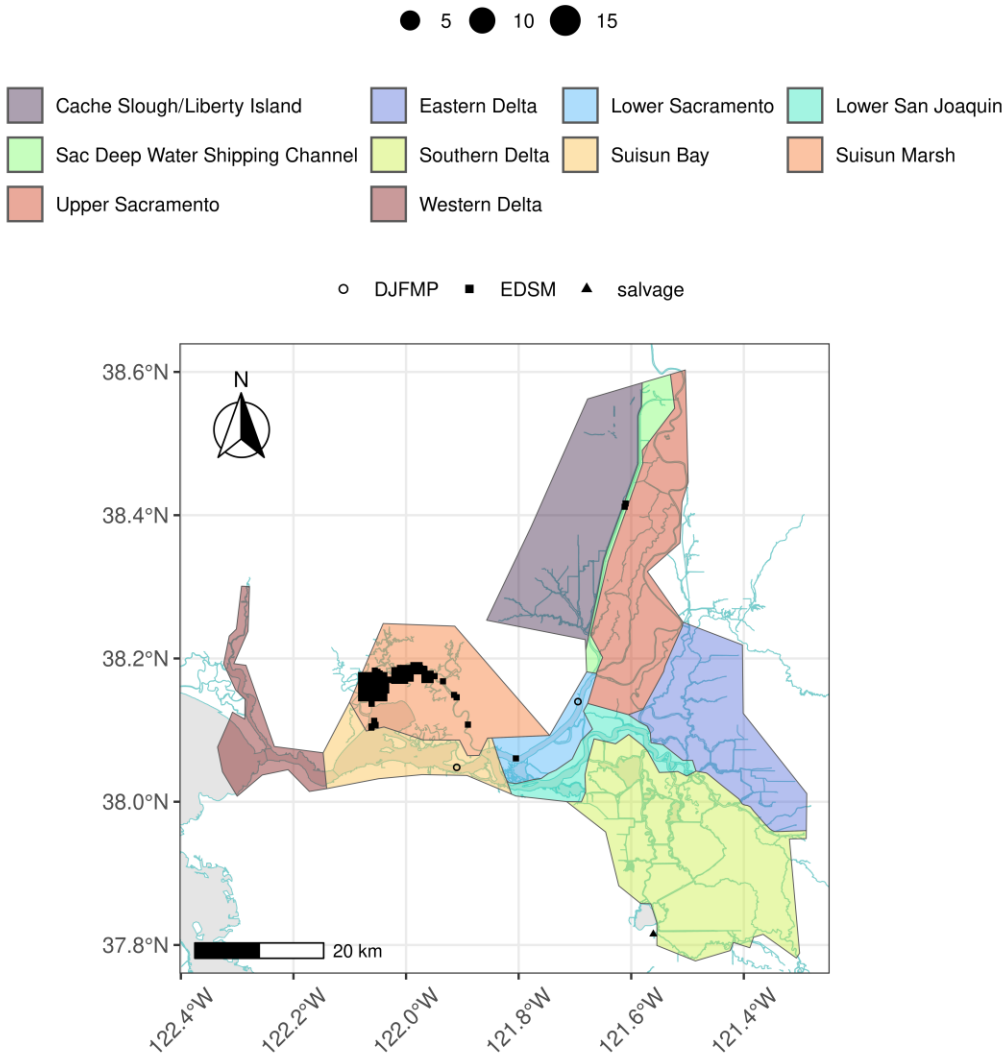

Figure 12: Delta smelt distribution for WY 2026

Figure 12 depicts a map of the Sacramento–San Joaquin Delta showing the distribution of delta smelt during Water Year 2026. Colored polygons delineate the long-term monitoring subregions, while symbols indicate delta smelt observations from the DJFMP, EDSM, and salvage monitoring programs. Symbol size represents the number of delta smelt observed at each location, with larger symbols indicating higher catches.

Table 11: Delta smelt water year totals by life stage

Survey	Region	Life Stage	Total
DJFMP	N/A	Adult	1
DJFMP	North	Juvenile	1
EDSM	North	Adult	2
EDSM	West	Adult	40
EDSM	West	Juvenile	29
salvage	South	Adult	1

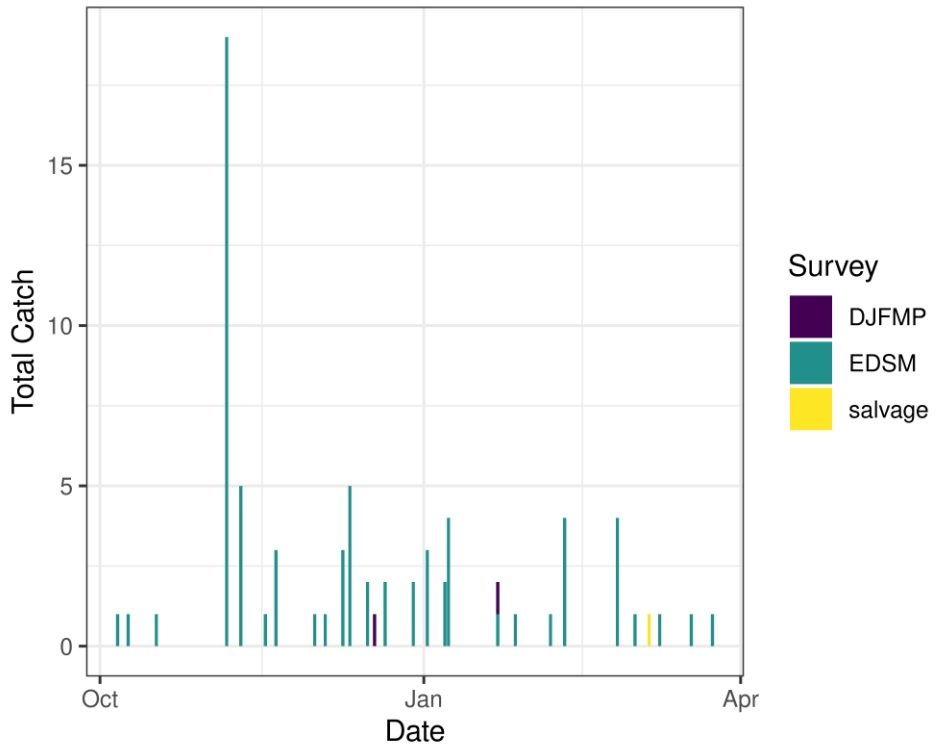

Figure 13: Time series of Delta smelt catch, WY 2026

Figure 13 depicts a time series bar graph showing total delta smelt catch by survey from October 2025 through March 2026. Bar colors distinguish catches from the DJFMP, EDSM, and salvage monitoring programs. The x-axis shows the sampling date, and the y-axis shows the total number of delta smelt captured on each sampling date.

Environmental

First Flush

- Implemented 12/25/25-01/7/26

Real-time Assessment Thresholds

Adult Delta smelt

- Adult Delta smelt action offramped on 02/12/2026
- No adult Delta smelt action was taken in WY26
- See Bay-Delta Live for recent Delta-wide turbidity conditions.

Larval/juvenile Delta smelt

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

- **12-station South Delta Turbidity**: The most recent average turbidity was 2.5 FNU as of Jun 11, 2026

Evaluation

Delta smelt:

1. After the start of entrainment management, is JPF < 0, is daily average turbidity ≥ 12 FNU in the OMR corridor (stations OBI, HOL, and OSJ)? 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?
    a. The adult Delta smelt entrainment action is not active and no action was taken in WY26. Temperature at Jersey Point exceeded the threshold on February 12th, 2025. Jersey Point 3-day average temperature was 12.05°C on February 10th, 12.09°C on February 11th, and 12.13°C on February 12th.
2. What is the evidence for the onset of Delta smelt spawning?
    a. Entrainment season for smelt ended 6/16/26.
3. After the onset of spawning, have the following conditions occurred: JPF < 0 cfs, average turbidity is ≥ 12 FNU in the south Delta, and PTM modeling indicates the action would avoid ≥ 5% entrainment of the Delta smelt population at facilities after 30 days?
    a. Entrainment season for smelt ended 6/16/26.

Longfin smelt

Biological

- Longfin smelt life stages detected in surveys: Juvenile
- **Longfin smelt count:** 490 adult, 1,716 juvenile, and 9,557 larval longfin smelt have been detected this water year. See Table 12 for recent detections, Figure 14 for spatial distribution, and Figure 15 for temporal distribution.
- **Longfin smelt salvage:** 0 longfin smelt have been salvaged, and the cumulative seasonal salvage is 0.

Table 12: 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
EDSM 20-mm	2026-06-04	West	Suisun Marsh	Juvenile	1

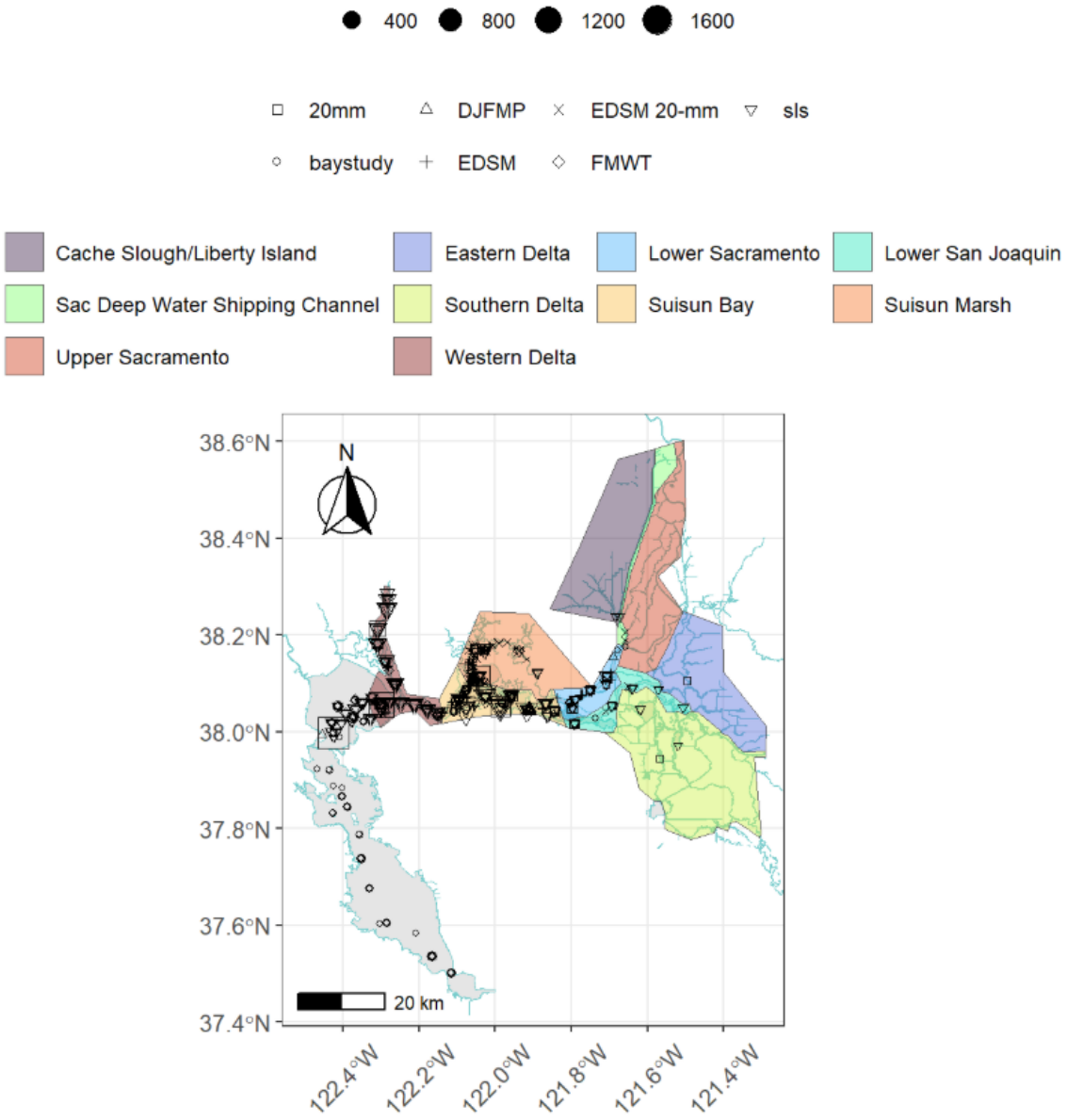

Figure 14: Longfin Smelt Distribution for WY 2026

Figure 14 depicts a map of the Sacramento–San Joaquin Delta showing the distribution of longfin smelt during Water Year 2026. Colored polygons delineate the longfin smelt monitoring subregions, while symbols indicate longfin smelt observations from the 20-mm Survey, Bay Study, DJFMP, EDSM, EDSM 20-mm, FMWT, and Spring Kodiak Trawl (SLS) monitoring programs. Symbol size represents the number of longfin smelt observed at each location, with larger symbols indicating higher catches.

Table 13: Longfin smelt water year totals by life stage

Survey	Region	Life Stage	Total
20mm	Far West	Larva	272
20mm	North	Larva	13
20mm	South	Larva	17
20mm	West	Larva	710
DJFMP	Bay	Juvenile	1
DJFMP	N/A	Adult	267
DJFMP	N/A	Juvenile	31
DJFMP	NA	Adult	1
EDSM	Far West	Adult	24
EDSM	Far West	Juvenile	100
EDSM	North	Adult	1
EDSM	North	Juvenile	1
EDSM	West	Adult	83
EDSM	West	Juvenile	204
EDSM 20-mm	Far West	Juvenile	5
EDSM 20-mm	Far West	Larva	7
EDSM 20-mm	North	Larva	4
EDSM 20-mm	South	Larva	2
EDSM 20-mm	West	Juvenile	204
EDSM 20-mm	West	Larva	740
FMWT	Bay	Adult	1
FMWT	Bay	Juvenile	14
FMWT	Far West	Adult	2
FMWT	Far West	Juvenile	14
FMWT	West	Adult	4
FMWT	West	Juvenile	18
FMWT	NA	Adult	2
FMWT	NA	Juvenile	28
baystudy	Bay	Adult	54
baystudy	Bay	Juvenile	630
baystudy	Far West	Adult	41
baystudy	Far West	Juvenile	329
baystudy	North	Adult	3
baystudy	North	Juvenile	1
baystudy	West	Adult	7
baystudy	West	Juvenile	131
sls	Bay	Larva	448
sls	Far West	Larva	4274
sls	North	Larva	91
sls	South	Larva	54
sls	West	Larva	2531
sls	NA	Juvenile	3
sls	NA	Larva	391

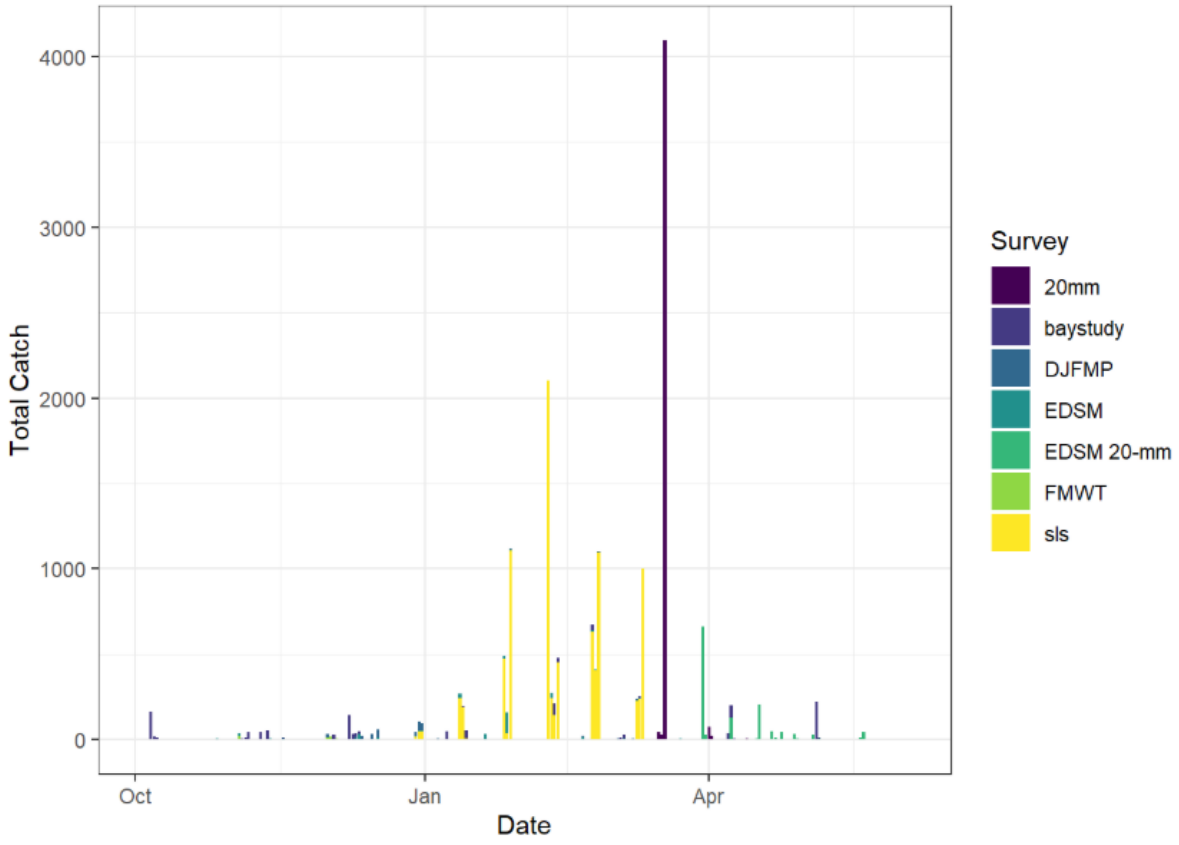

Figure 15: Time series of longfin smelt catch, WY 2026

Figure 15 depicts a time series bar graph showing total longfin smelt catch by survey from October 2025 through May 2026. Bar colors distinguish catches from the 20-mm Survey, Bay Study, DJFMP, EDSM, EDSM 20-mm, FMWT, and Spring Kodiak Trawl (SLS) monitoring programs. The x-axis shows the sampling date, and the y-axis shows the total number of longfin smelt captured on each sampling date.

Real-time Assessment Thresholds

Start of Entrainment Management (Adult Longfin Smelt)

- This action was not taken in WY26

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: -344 cfs as of Jun 11, 2026
    - Adult abundance (Age 1+ LFS index): 2479.2 fish
        - 5% of abundance + 1: 125.0
    - Water year total adult longfin smelt salvage = 0

Larval/juvenile longfin smelt

- **Threshold:** JPF < 0 cfs AND population model demonstrates need to reduce entrainment to avoid population decline
    - Daily average JPF: -344 cfs as of Jun 11, 2026

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?
    a. Entrainment season for smelt ended 6/16/26.
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?
    a. Entrainment season for smelt ended 6/16/26.
3. Is there additional information or other analyses that should be considered in this evaluation?
    a. No

End of smelt Entrainment Management

Threshold: CLC ≥ 25°C (77°F) for 3 consecutive days OR June 30

- Clifton Court Temperature: 25.2, 25.4, 25.5°C as of Jun 15, 2026

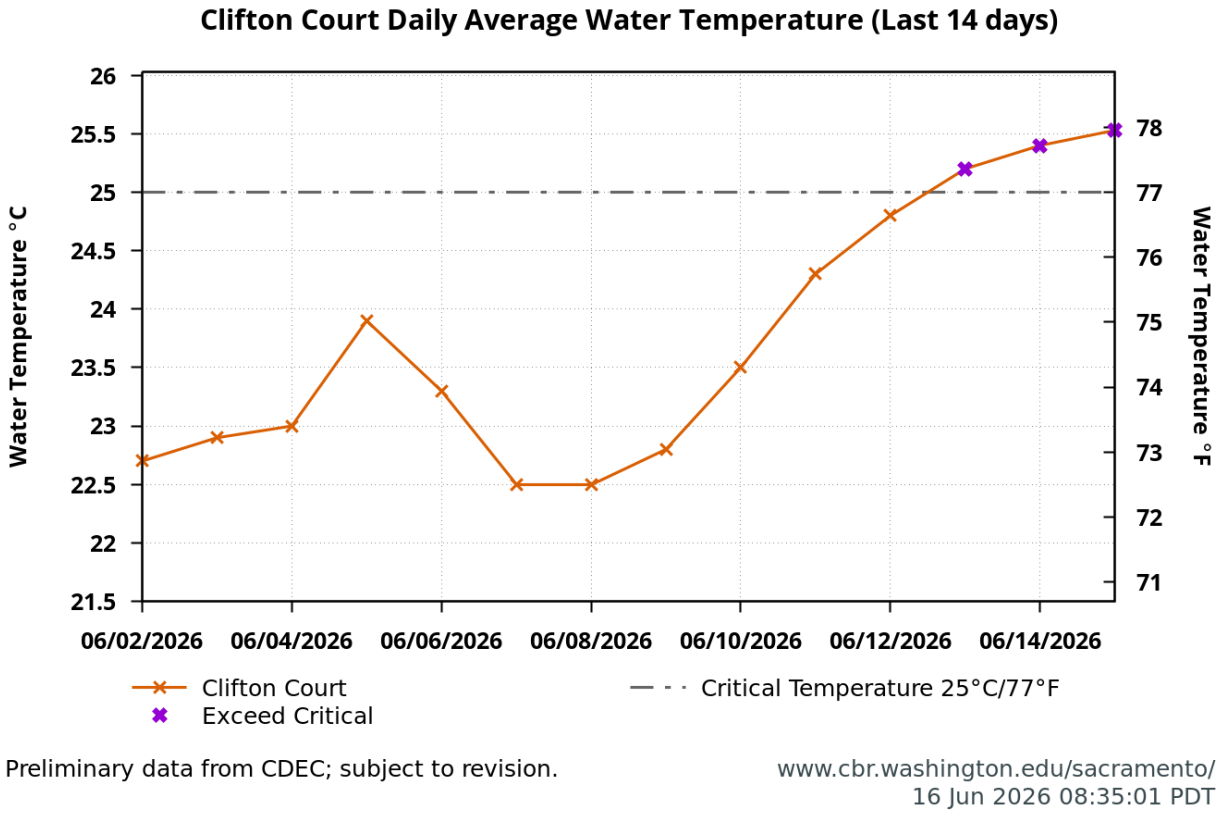

Figure 16. Clifton Court Daily Average Water Temperature for the Last 14 Days

Figure 16 depicts a line graph showing the daily average water temperature at Clifton Court Forebay over the previous 14 days. The x-axis shows the date from June 2 through June 15, 2026. The left y-axis shows water temperature in degrees Celsius (°C), and the right y-axis shows the equivalent temperature in degrees Fahrenheit (°F). The orange line represents the daily average water temperature, purple markers indicate days when the critical temperature threshold was exceeded, and the horizontal dashed line marks the critical temperature threshold of 25°C (77°F).

References

Brodsky, A., Zeug, S. C., Nelson, J., Hannon, J., Anders, P. J., & Cavallo, B. J. (2020). Does broodstock source affect post-release survival of steelhead? Implications of replacing a non-native hatchery stock for recovery. Environmental Biology of Fishes, 103(5), 437–453.

Damon, L. J., Slater, S. B., Baxter, R. D., & Fujimura, R. W. (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.

Del Real, S. C., Workman, M., & Merz, J. (2012). Migration characteristics of hatchery and natural-origin oncorhynchus mykiss from the lower mokelumne river, california. Environmental Biology of Fishes, 94(2), 363–375.

Grimaldo, L. F., Smith, W. E., & Nobriga, M. L. (2021). Re-examining factors that affect delta smelt (hypomesus transpacificus) entrainment at the state water project and central valley project in the sacramento–san joaquin delta. San Francisco Estuary and Watershed Science, 19(1).

Grimaldo, L. F., Sommer, T., Van Ark, N., Jones, G., Holland, E., Moyle, P. B., Herbold, B., & Smith, P. (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.

Kurth, R. (2013). Downstream migration success of feather river fish hatchery steelhead smolts under different release strategies.

Sandstrom, P. T., Ammann, A. J., Michel, C., et al. (2020). Low river survival of juvenile steelhead in the sacramento river watershed. Environmental Biology of Fishes, 103(5), 531–541.

Sommer, T., Mejia, F. H., Nobriga, M. L., Feyrer, F., & Grimaldo, L. (2011). The spawning migration of delta smelt in the upper san francisco estuary. San Francisco Estuary and Watershed Science, 9(2).