BUREAU OF RECLAMATION

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

Last updated: Monday, April 13, 2026 at 3 PM

Executive Summary

ESA and CESA-listed Salmonids

- Entrainment management season is active.
- Annual Loss: 45 (0.43% of annual loss threshold) natural winter-run, 62 (4.78% of annual loss threshold) hatchery winter-run (Sac River), 246 natural steelhead, 1803 (28.46% 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; 62 (4.77% of 1,301 ITL) hatchery winter-run (Sac River); 2 (3.85% of 52 ITL) hatchery winter-run (Battle Creek); 246 (4.65% 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

- Delta smelt were most recently detected at Suisun Marsh.
- No longfin smelt salvage has been observed this water year.
- Turbidity in the central/south Delta is low.

Current Delta Hydrologic Conditions

Operational and Regulatory Conditions

The current controlling factor is OMRI restrictions to no more negative than -5,000 cfs. See most recent weekly outlook for more information.

Current Conditions

Most recent inflow at Freeport in the Sacramento River and Vernalis in the San Joaquin River is 28,591 and 2,727 cfs respectively. Most recent Jersey Point Flow (JPF) is NA cfs. Most recent 1-day, 5-day, and 14-day OMRI measurements were -3,261, -3,281, and -3,403 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.

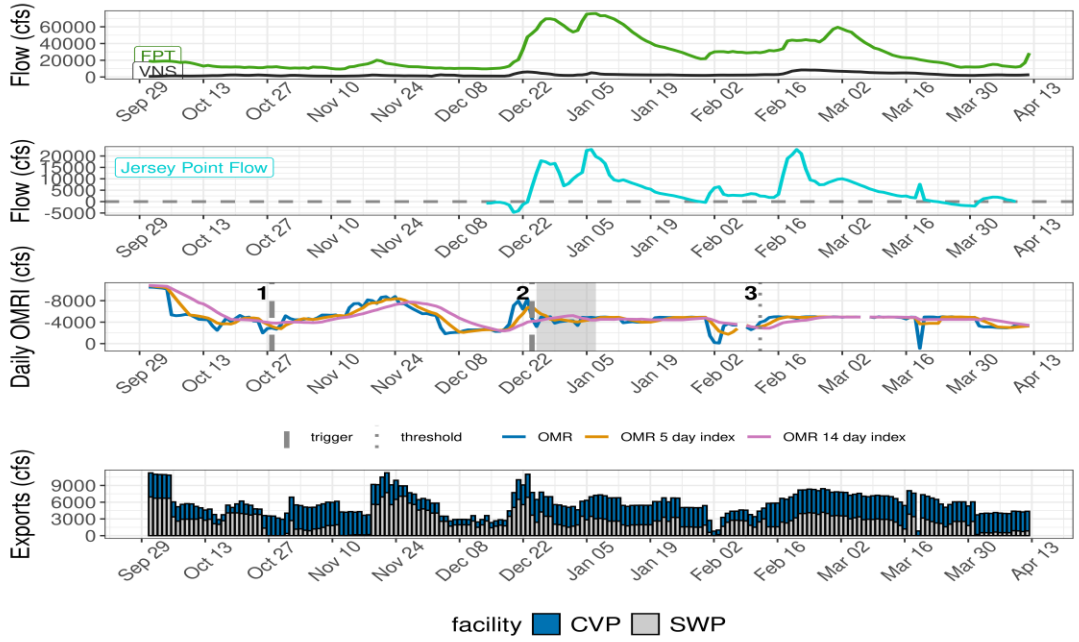

Figure 1: Operations and Action Summary, WY 2026. The numbers and lines in the OMRI plot indicate different triggers and thresholds (see Table 1), with shading representing specific action periods. Dashed and dotted vertical lines represent triggered actions and thresholds, respectively. OMRI data (colored 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. The first graph is a line chart depicting Freeport (FPT) and Vernalis (VNS) flow in cfs. The second graph is a line chart depicting Jersey Point Flow (JPF) in cfs. The third graph is a line chart depicting daily OMRI in cfs for OMR, and OMR 5- and 14-day indexes, with numbered triggers, threshold indicators, and shaded operational periods. The final graph is a bar chart depicting exports in cfs through the Central Valley Project and State Water Project facilities. The x-axis for all four graphs spans late September 2025 through mid-April 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

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 kilometers (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.

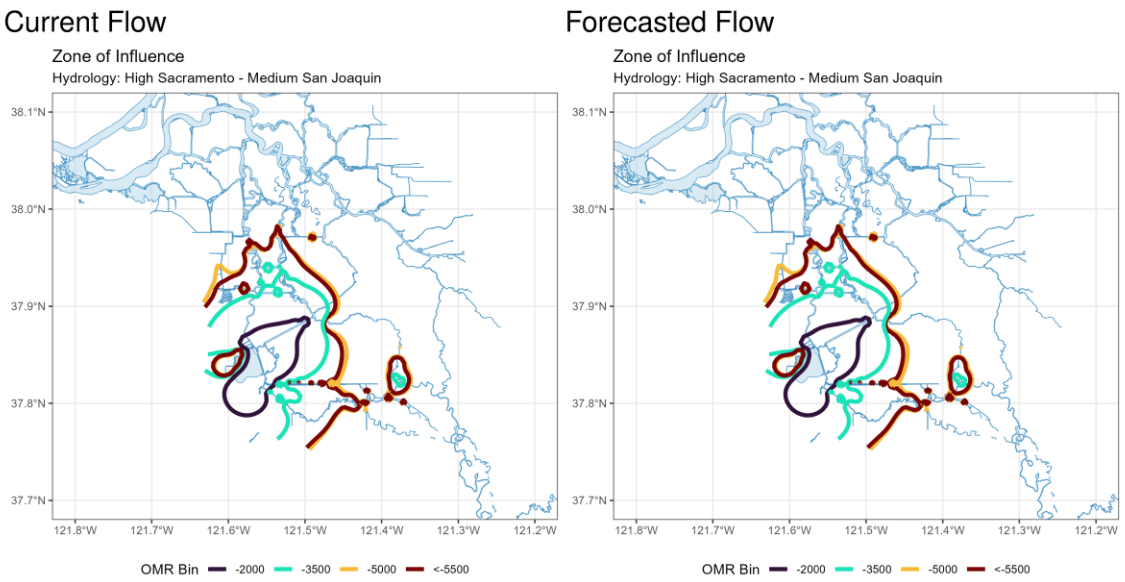

Figure 2: Modeled Zone of Influence at different OMRI scenarios based on current inflow hydrology (left) and forecasted inflow hydrology (right) from the Sacramento River and San Joaquin River

Figure 2 contains two maps depicting the modeled zone of influence under current flow conditions (left) and forecasted flow conditions (right). Each map displays colored contour lines representing OMR Bin scenarios of -2,000, -3,500, -5,000, and less than -5,500 cfs. The maps illustrate how the modeled hydrologic zone of influence expands spatially under increasingly negative OMR flow conditions within the Sacramento-San Joaquin 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 Apr 12, 92% of length-at-date (LAD) winter-run have entered the Delta based on Knights Landing RST catch, 84% have exited the Delta based on Chipps Island Trawl Catch, and 98% 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%	92%	84%	96%
Chinook, DNA Winter-run, Unclipped (Water Year)	NA	NA	NA	NA	NA	98%

Red Bluff Diversion Dam Passage Estimate - As of Apr 08 estimated passage to date of LAD winter-run at Red Bluff Diversion is approximately 4.17 million fish. Note that outmigration timing overlaps with spring-run migrating fish, and true winter-run abundance likely differs from these estimates.

Delta Monitoring - Total catch of LAD winter-run at RSTs at Delta Entry (Tisdale, Knights Landing, Lower Sacramento River) between Mar 30 and Apr 09 is 0 individuals. Total catch at Sacramento Trawl and Beach Seines in the delta between Mar 30 and Apr 10 is 0 individuals. Total catch at Delta Exit at Chipps Island between Mar 30 and Apr 10 is 1 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 April 12, 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.

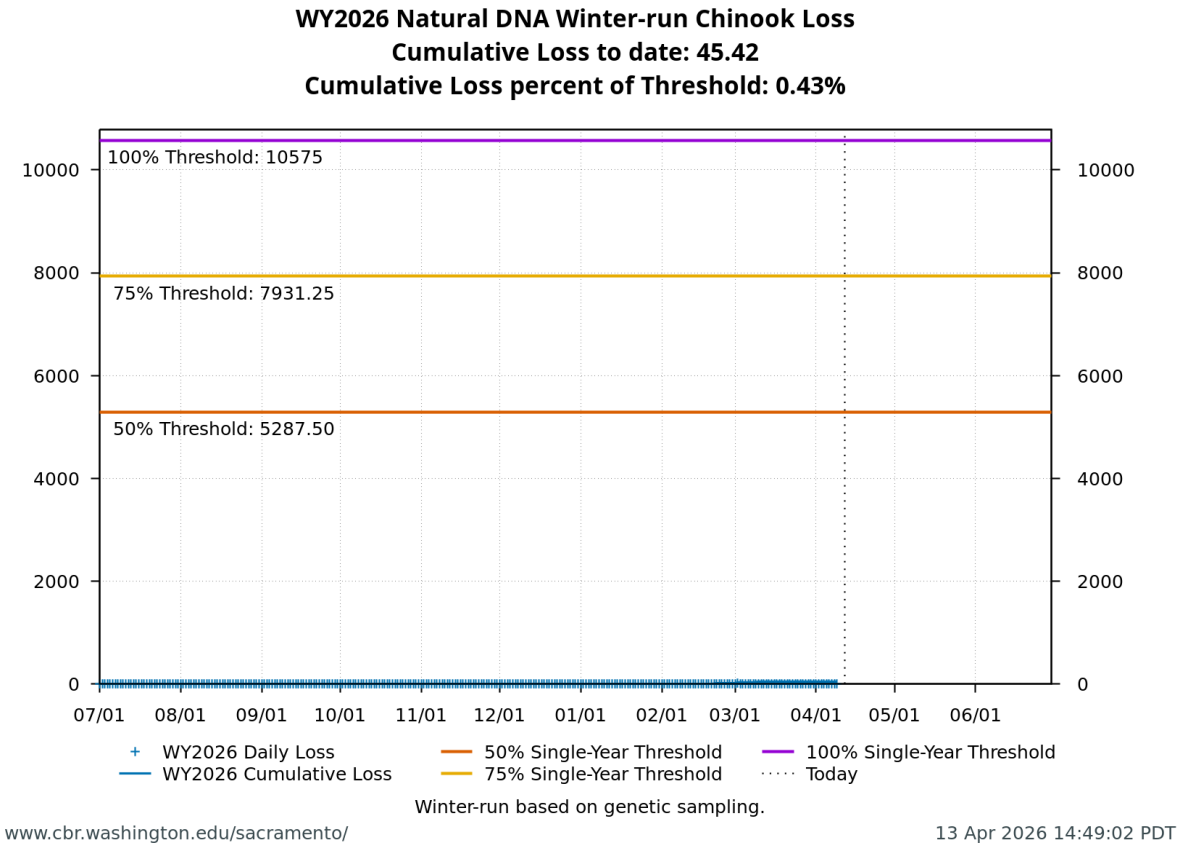

Figure 3: Cumulative loss of natural-origin winter-run for WY 2026. Cumulative loss is based on genetically confirmed winter-run captured in salvage or length-at-date winter-run in which genetic confirmation was unable to be obtained.

Figure 3 is a time series graph depicting cumulative and daily loss of natural-origin winter-run Chinook salmon during Water Year 2026 from July 2025 through April 2026. Blue markers represent daily loss and the blue line represents cumulative loss over time. Horizontal reference lines indicate the 50%, 75%, and 100% single-year loss thresholds, while a vertical dotted line marks the current date. The figure shows cumulative loss remaining well below all threshold levels, with a cumulative loss to date of 45.42 fish, representing 0.43% of the annual threshold.

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 April 12, overall through delta STARS estimated survival probability (with 80% credible intervals) is 0.02 (0-0.06) placing it in the 20th percentile of historical STARS survival estimates for the month of April (WYs 2018-2025). STARS estimated routing and survival probabilities (with 80% credible intervals) into the interior delta are 0.12 (0.1-0.14) and 0.01 (0-0.03), respectively, corresponding to the 41st and 25th percentiles of historical April estimates (WYs 2018-2025).

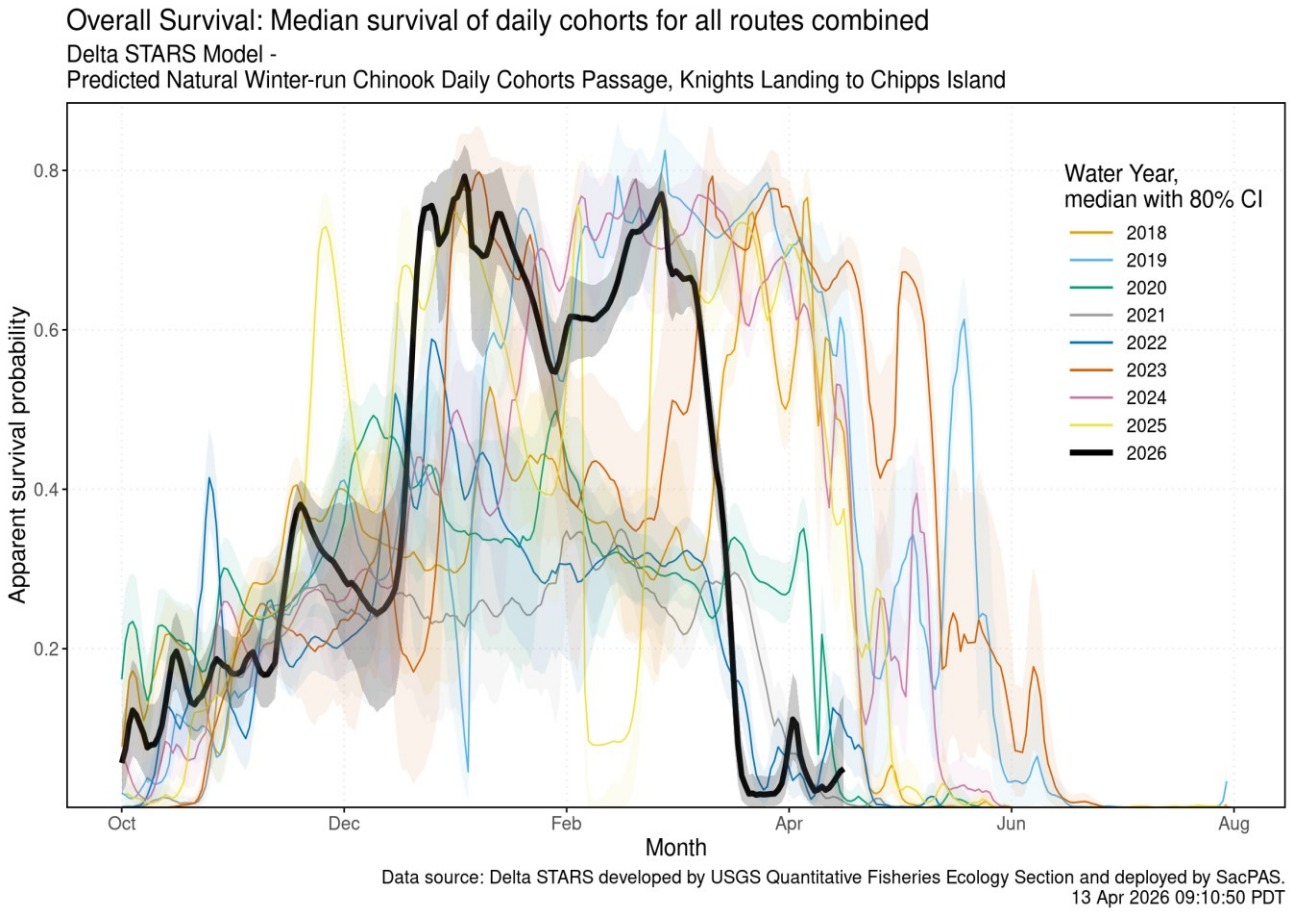

Figure 4: Estimated overall winter-run survival from Knights Landing to Chipps Island. Black line indicates the current water-year, and other colored lines correspond to past water years.

Figure 4 is a line graph depicting median survival of daily cohorts for all routes combined from Knights Landing to Chipps Island. Survival probability is shown by water year for 2018 through 2026, with different-colored lines representing each water year from October through August and shaded bands indicating the 80% confidence interval. The black line represents Water Year 2026, while the remaining colored lines represent previous water years.

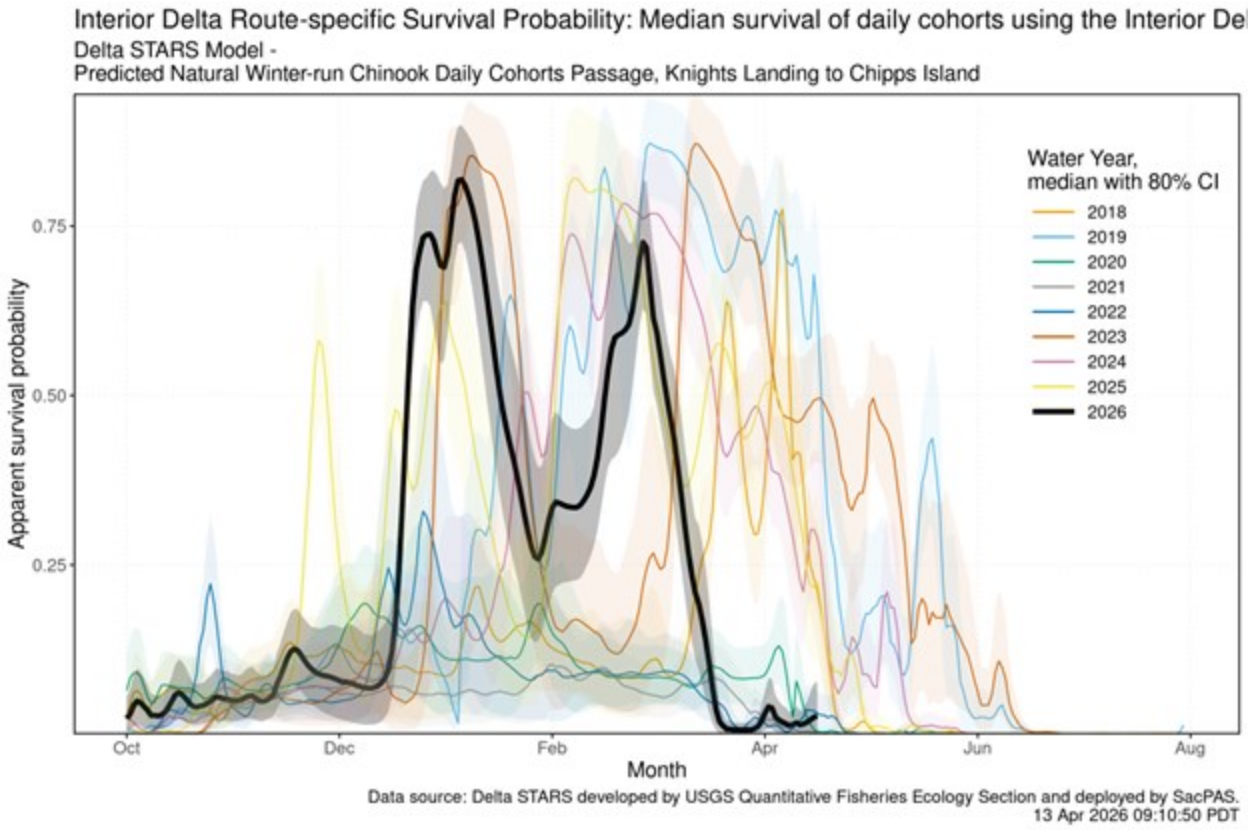

Figure 5: Estimated survival from Knights Landing to Chipps Island of simulated winter-run cohorts that route through the interior Delta. Black line indicates the current water-year, and other colored lines correspond to past water years.

Figure 5 is a line graph depicting median survival of daily cohorts using the Interior Delta routes from Knights Landing to Chipps Island. Survival is shown by water year for 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, and 2026, with different-colored lines from October to August and shaded bands representing the 80% confidence interval.

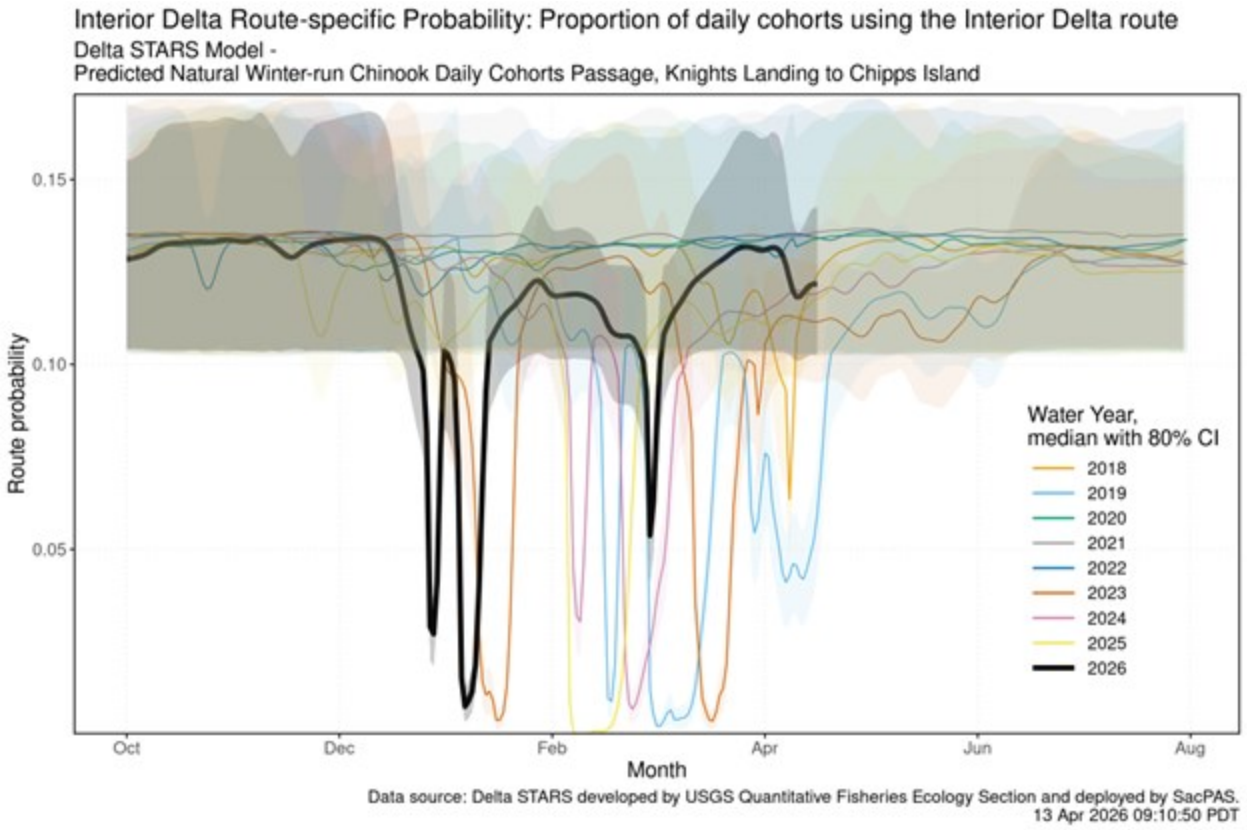

Figure 6: Estimated probability of winter-run routing into the interior Delta. Black line indicates the current water-year, and other colored lines correspond to past water years.

Figure 6 is a line graph depicting the estimated probability of winter-run Chinook daily cohorts routing into the Interior Delta from Knights Landing to Chipps Island. Routing probability is shown by water year for 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, and 2026, with different-colored lines from October to August and shaded bands representing the 80% confidence interval. The black line represents Water Year 2026, while the colored lines represent historical water years.

ECO-PTM (Ecological Particle Tracking Model)

ECO-PTM Results Evaluation Period: 04/07/2026 – 04/27/2026
Particles Injected: 04/07/2026
Injection Location: Sacramento River at Freeport

Table 3. Salmon Particle Route Ratio After 3 Weeks (Ending 04/27/2026)

OMR Flow Bin	Sutter Slough Route	Steamboat Slough Route	Sacramento River (SS) Route	Sacramento River (GEO) Route	Georgiana Slough Route
-6,500	0.10	0.09	0.81	0.73	0.27
-5,000	0.10	0.09	0.80	0.72	0.28
-3,500	0.11	0.09	0.80	0.73	0.27
-2,000	0.10	0.09	0.81	0.71	0.29

Table 4. Salmon Particle Route-Specific Survival After 3 Weeks (Ending 04/27/2026)

OMR Flow Bin	Sutter Slough Route	Steamboat Slough Route	Sacramento River Route	Georgiana Slough Route	All Routes Combined
-6,500	40%	55%	49%	27%	44%
-5,000	43%	53%	50%	27%	45%
-3,500	39%	53%	49%	23%	43%
-2,000	41%	54%	51%	30%	45%

Notes:

- Salmon particle route ratio for the Sacramento River (SS) Route reflects particles inserted at Freeport that are not routed through either Sutter Slough or Steamboat Slough.
- Salmon particle route ratio for the Sacramento River (GEO) Route reflects particles inserted at Freeport that are not routed through either Sutter Slough, Steamboat Slough, Georgiana Slough, or the Delta Cross Channel (when operational).

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 5: 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 April 13, cumulative loss of Livingston Stone hatchery fish (Sacramento River releases) is 62 or 4.78% 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 6: 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 April 13, 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 Apr 12, 66% of CCV steelhead have entered the Delta based on Knights Landing RST catch, 64% have exited the Delta based on Chipps Island Trawl Catch, and 70% have been salvaged.

Table 7: 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	64%	60%	5%	66%	70%	60%

Delta Monitoring - Total catch of unclipped steelhead at RSTs at Delta Entry (Tisdale, Knights Landing, Lower Sacramento River) between Mar 30 and Apr 09 is 2 individuals. Total catch at Sacramento Trawl and Beach Seines in the delta between Mar 30 and Apr 10 is 0 individuals. Total catch at Delta Exit at Chipps Island between Mar 30 and Apr 10 is 0 individuals.

Annual Loss

As of April 12, cumulative loss of unclipped steelhead is 246 or 4.64% 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 33.

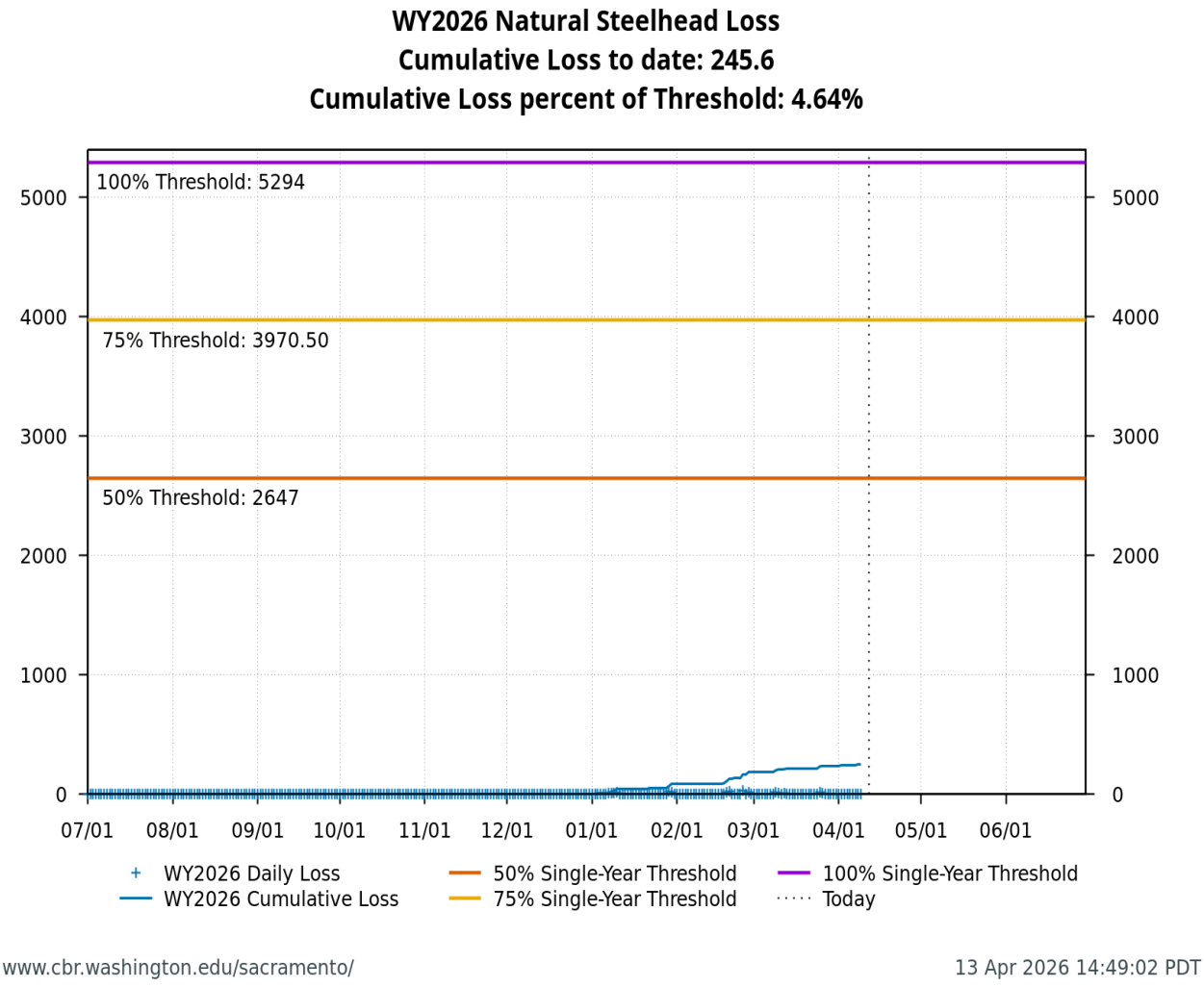

Figure 7: Cumulative loss of natural-origin steelhead for WY 2026. The 5,294 line represents the single-year incidental take limit (ITL), not a loss threshold.

Figure 7 is a time series graph depicting cumulative and daily loss of natural-origin steelhead during Water Year 2026 from July 2025 through April 2026. Blue markers represent daily loss and the blue line represents cumulative loss over time. Horizontal reference lines indicate the 50%, 75%, and 100% levels of the single-year incidental take limit, while a vertical dotted line marks the current date. The figure shows cumulative steelhead loss remaining substantially below the annual ITL, with a cumulative loss to date of 245.6 fish, representing 4.64% of the annual limit.

Hatchery-origin Central Valley Steelhead

Surrogate Releases

There have been a total of 9 releases totaling 1,535,164 steelhead in Water Year 2026. JPE for the hatchery releases as of today is 633,352 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 6,334, but is subject to change with additional steelhead releases.

Table 8: 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

Table 9: 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 1803 or 28.46% 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.

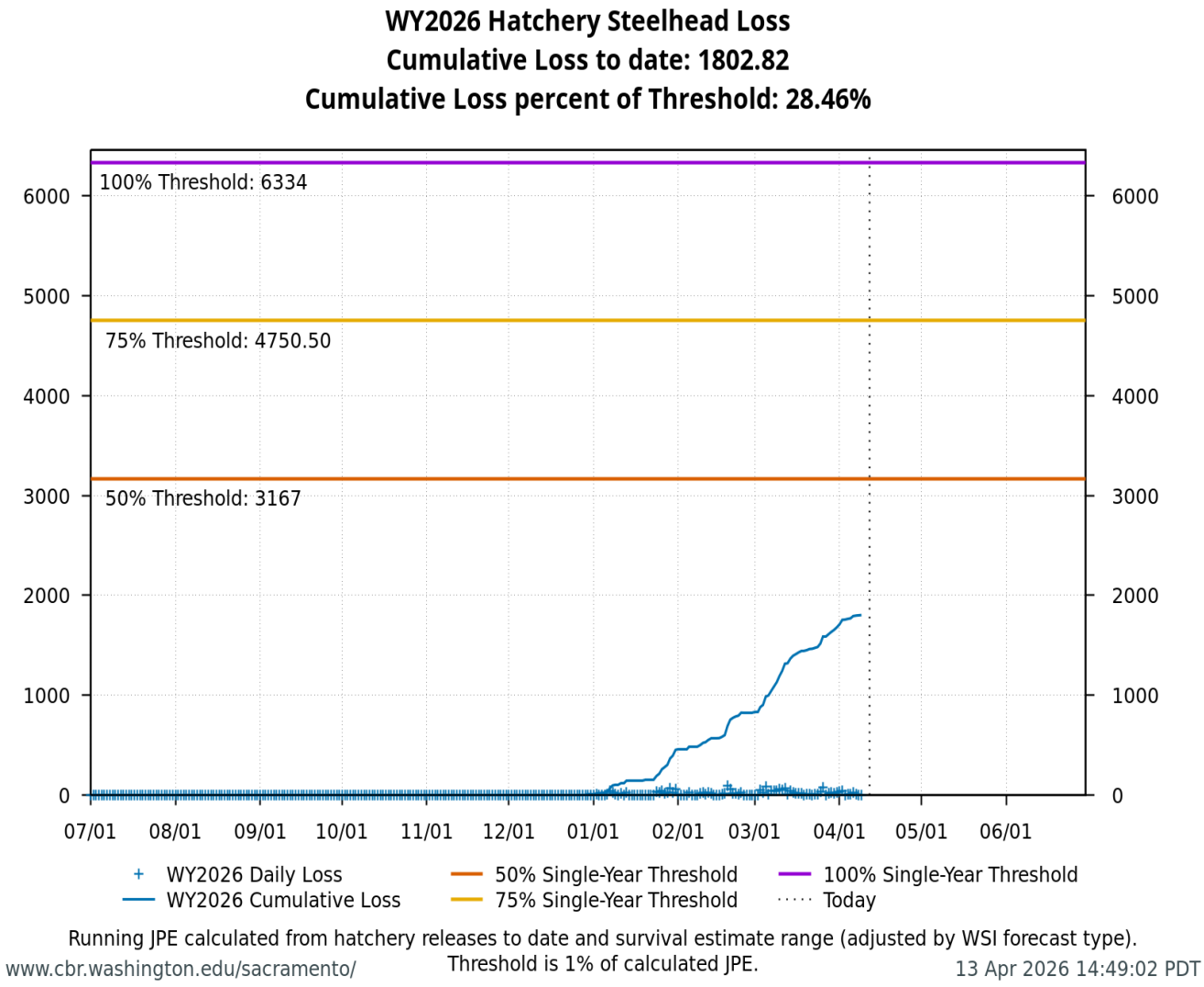

Figure 8: Cumulative loss of hatchery steelhead for WY 2026.

Figure 8 displays daily and cumulative hatchery steelhead loss for Water Year 2026. Points represent daily estimated loss and the line shows cumulative loss over time, with a vertical dashed line indicating the current date. Horizontal lines represent the 100% single-year threshold of 6,334, 75% threshold of 4,750.50, and 50% threshold of 3,167. As of April 13, 2026, cumulative loss to date is 1,802.82 fish, representing 28.46% of the threshold.

Spring-run Chinook

Current Status

Delta Entry Timing - Historically, as of Apr 12, 62% of LAD spring-run have entered the Delta based on Knights Landing RST catch, 22% have exited the Delta based on Chipps Island Trawl Catch, and 22% have been salvaged.

Table 10: 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	70%	85%	76%	62%	22%	22%

Red Bluff Diversion Dam Passage Estimate - As of Apr 08 estimated passage to date of LAD spring-run at Red Bluff Diversion is approximately 0.72 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 - Total catch of LAD spring-run at RSTs at Delta Entry (Tisdale, Knights Landing, Lower Sacramento River) between Mar 30 and Apr 09 is 167 individuals. Total catch at Sacramento Trawl and Beach Seines in the delta between Mar 30 and Apr 10 is 490 individuals. Total catch at Delta Exit at Chipps Island between Mar 30 and Apr 10 is 84 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 11: 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%)	Confirmed 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 April 12, 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 April 12, 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.

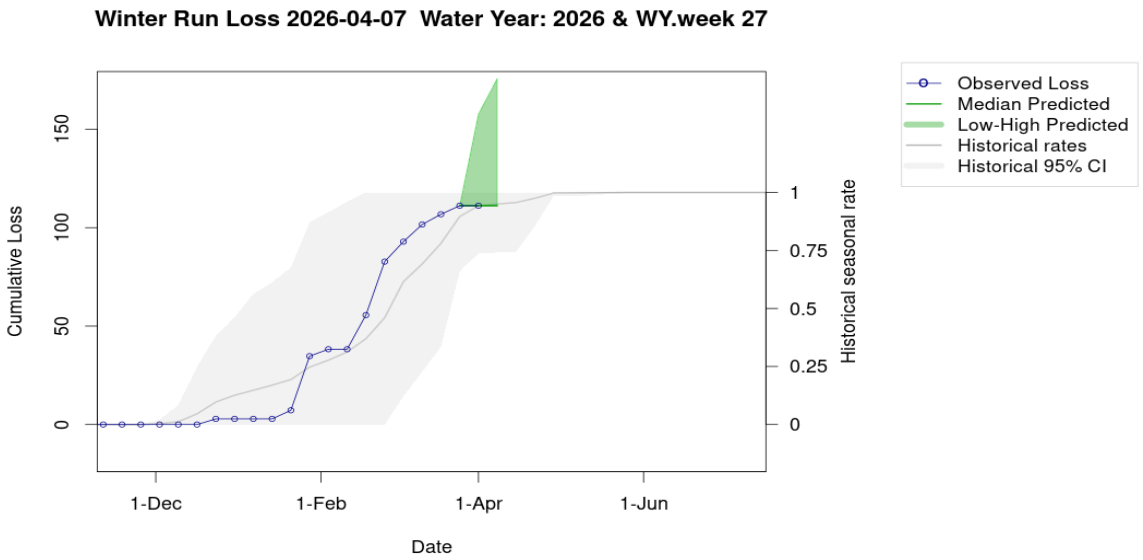

Figure 9: Estimates of winter-run Chinook loss generated by Loss and Salvage Predictor tool.

Figure 9 displays observed cumulative winter-run Chinook loss for Water Year 2026 through April 7, 2026, compared with predicted and historical loss patterns. Points represent observed cumulative loss, while the green line shows the median predicted loss and the shaded green band represents the low–high predicted range. Historical seasonal loss rates and the historical 95% confidence interval are shown in gray for comparison. Observed cumulative loss remains within the predicted and historical ranges during this portion of the water year.

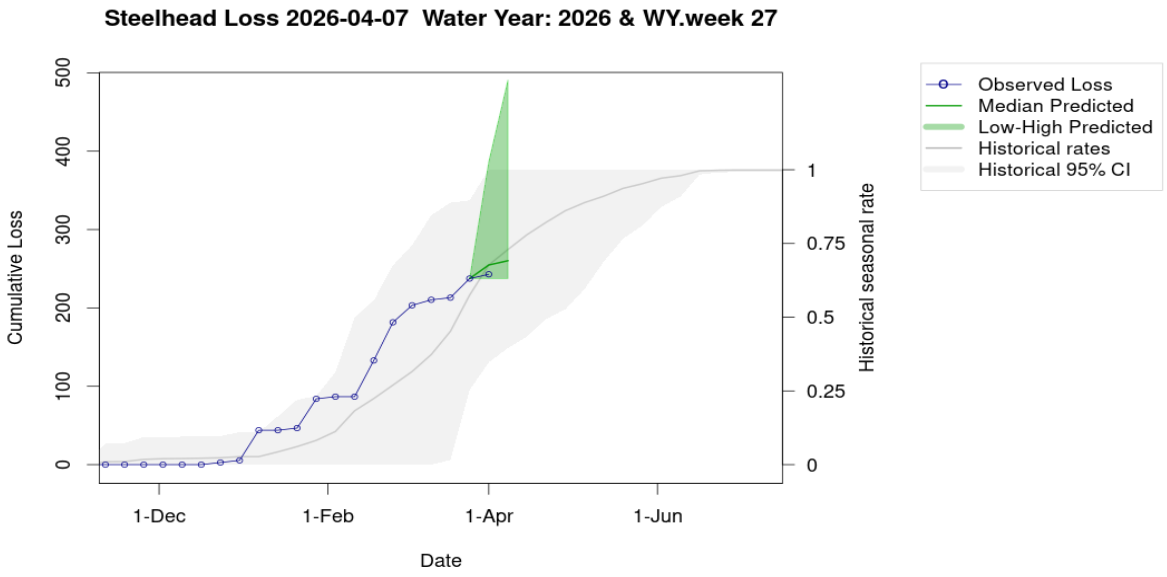

Figure 10: Estimates of steelhead loss generated by Loss and Salvage Predictor tool.

Figure 10 is a line graph showing cumulative steelhead loss estimates for Water Year 2026 through Week 27, generated using the Loss and Salvage Predictor tool. Observed cumulative loss (blue) increases steadily from December through early April, while the median predicted loss and low-high prediction range (green) project additional loss through mid-April. Historical seasonal loss rates and the associated 95% confidence interval are also displayed in gray for comparison.

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 4.78% 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 4.64% of the threshold. **LOW RISK**: Hatchery steelhead cumulative loss is currently 28.46% of the threshold.

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

Operational and Regulatory Conditions

- 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: None in last 2 weeks, previously adults and juveniles
- **Abundance estimate**: 2,034 (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.
- **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 11 for spatial distribution, and Figure 12 for temporal distribution.
- **Delta smelt salvage**: 1 Delta smelt has been salvaged, and the cumulative seasonal salvage is 4.

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 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 12: 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

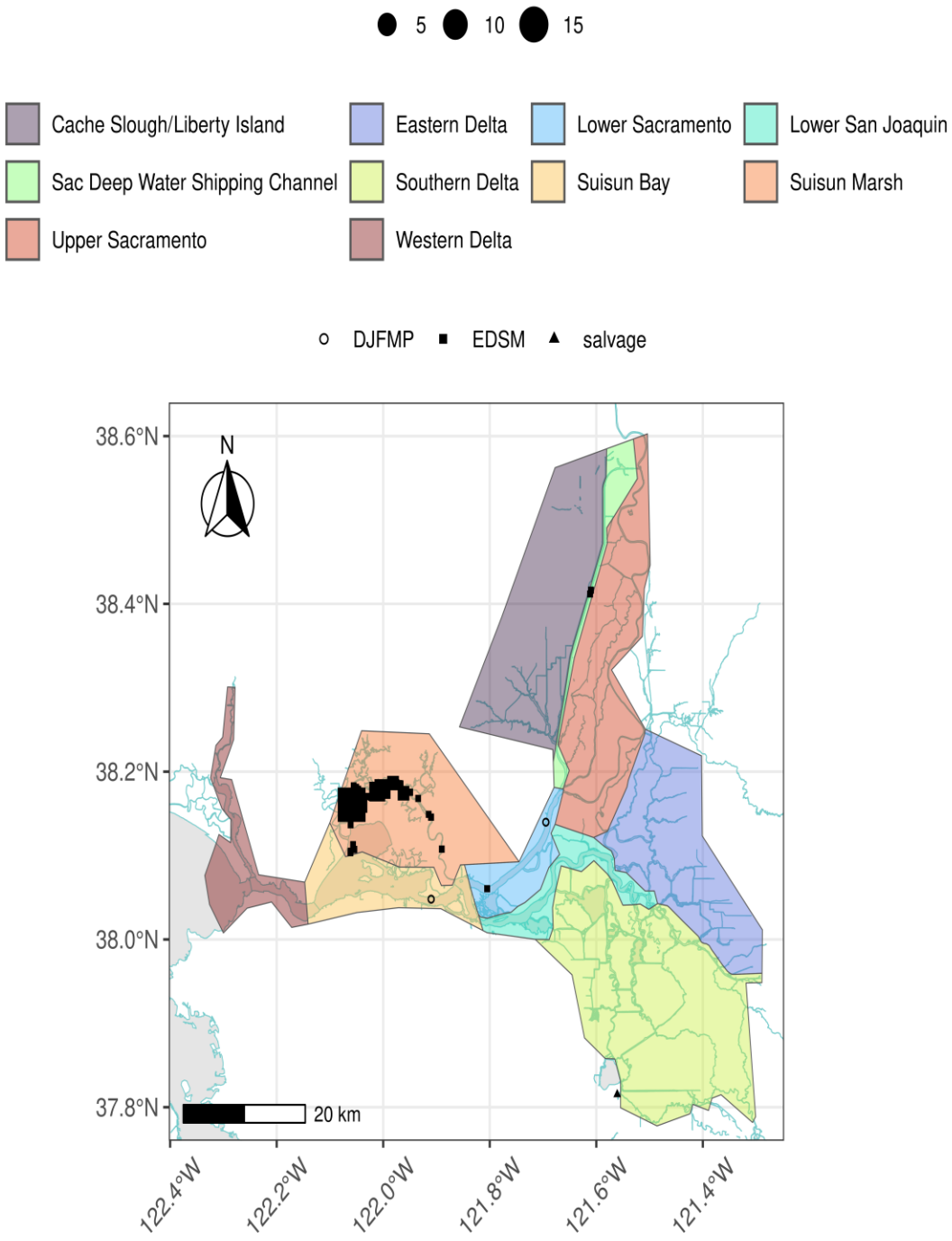

Figure 11: Delta smelt distribution for WY 2026

Figure 11 shows monitoring locations and regional distribution for Delta smelt across the Sacramento–San Joaquin Delta during Water Year 2026. Colored polygons represent Delta regions, including Cache Slough/Liberty Island, Eastern Delta, Lower Sacramento, Lower San Joaquin, Sacramento Deep Water Shipping Channel, Southern Delta, Suisun Bay, Suisun Marsh, Upper Sacramento, and Western Delta. Symbols indicate sampling locations for DJFMP, EDSM, and salvage monitoring programs, with symbol size representing relative sample counts.

Table 13: 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

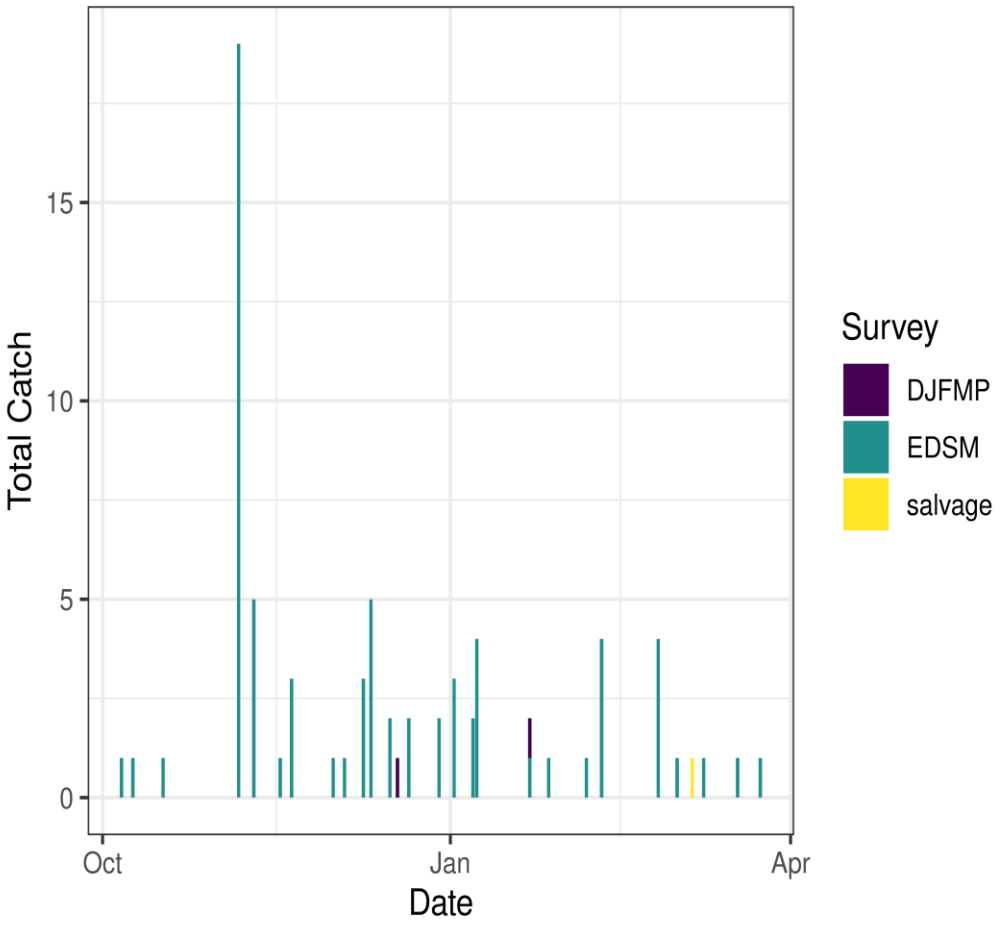

Figure 12: Time series of Delta smelt catch, WY 2026

Figure 12 is a bar chart depicting Delta smelt catch over time during Water Year 2026 from October through April. Bars are colored by survey type, including DJFMP (purple), EDSM (teal), and salvage (yellow). The x-axis displays sampling date and the y-axis shows total catch. Most detections occur within the EDSM survey, with generally low catch counts throughout the water year and a single larger catch event occurring in late fall.

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 4.6 FNU as of Apr 01, 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. Upstream migration for Delta smelt occurs between December and March and in response to "first flush" conditions (Sommer et al., 2011; Grimaldo et al. 2009; 2021). Historically, detections of ripe Delta smelt began in January and peaked in February and March and the majority of Delta Smelt spawning occurs at 11-15˚C (but can occur from 8-18˚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. The large majority of Delta smelt recaptures continue to be from Suisun Marsh, close to where

supplemental fish were released in the fall. Spawning is likely completed due to increased water temperatures.

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. JPF is projected to remain positive for the week and the most recent 11-station average turbidity in the South Delta was 4.6 FNU on April 1, 2026 (station 918 could not be sampled due to bridge clearance issues). Because JPF is positive and turbidity conditions remain below the ≥12 FNU threshold, the conditions required to initiate the larval and juvenile Delta smelt entrainment action are not met.

    Additionally, PTM modeling does not meet the criteria for initiating the action. No Delta smelt larvae have been captured in SLS or 20-mm surveys to date in WY2026. PTM results for this week for neutrally buoyant particles injected at Chipps Island (using the most recent adult detections as a proxy for potential larval locations) showed 0% particle entrainment at both facilities for all OMRI levels (−6,500, −5,000, −3,500, and −2,000 cfs) this week and next week. These results indicate that, if Delta smelt larvae were present, the risk of entrainment would be low.

Longfin smelt

Biological

- **Longfin smelt life stages detected in surveys**: Larva
- **Longfin smelt count**: 475 adult, 1174 juvenile, and 5,623 larval longfin smelt have been detected this water year. See Table 12 for recent detections, Figure 13 for spatial distribution, and Figure 14 for temporal distribution.
- **Longfin smelt salvage**: 0 longfin smelt have been salvaged, and the cumulative seasonal salvage is 0.

Table 14: 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
20mm	2026-04-01	South	NA	Larva	8
20mm	2026-04-01	South	NA	NA	1

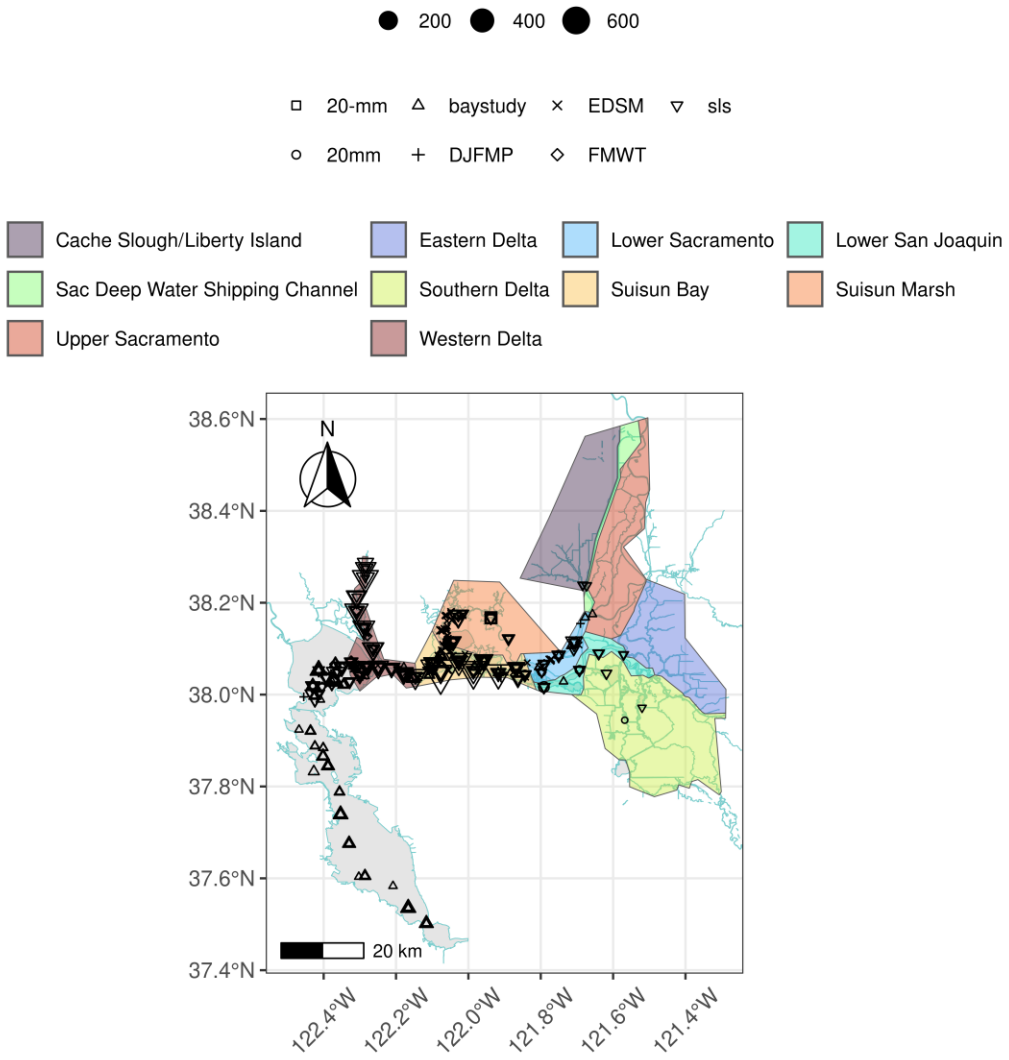

Figure 13: Longfin Smelt Distribution for WY 2026

Figure 13 shows monitoring locations across the Sacramento–San Joaquin Delta and surrounding areas. Colored polygons represent Delta regions, including Cache Slough/Liberty Island, Eastern Delta, Lower Sacramento, Lower San Joaquin, Sacramento Deep Water Shipping Channel, Southern Delta, Suisun Bay, Suisun Marsh, Upper Sacramento, and Western Delta. Symbols indicate sampling locations from multiple monitoring programs (20-mm Survey, Bay Study, DJFMP, EDSM, FMWT, and SLS), with symbol size representing relative sample counts.

Table 15: Longfin smelt water year totals by life stage

Survey	Region	Life Stage	Total
20-mm	West	Larva	63
20mm	North	Larva	12
20mm	South	Larva	10
20mm	West	Larva	13
DJFMP	Bay	Juvenile	1
DJFMP	N/A	Adult	267

Survey	Region	Life Stage	Total
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
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	53
baystudy	Bay	Juvenile	624
baystudy	Far West	Adult	27
baystudy	Far West	Juvenile	111
baystudy	North	Adult	3
baystudy	North	Juvenile	1
baystudy	West	Adult	7
baystudy	West	Juvenile	24
sls	Bay	Larva	300
sls	Far West	Larva	2654
sls	North	Larva	91
sls	South	Larva	52
sls	West	Larva	2253
sls	NA	Juvenile	3
sls	NA	Larva	175

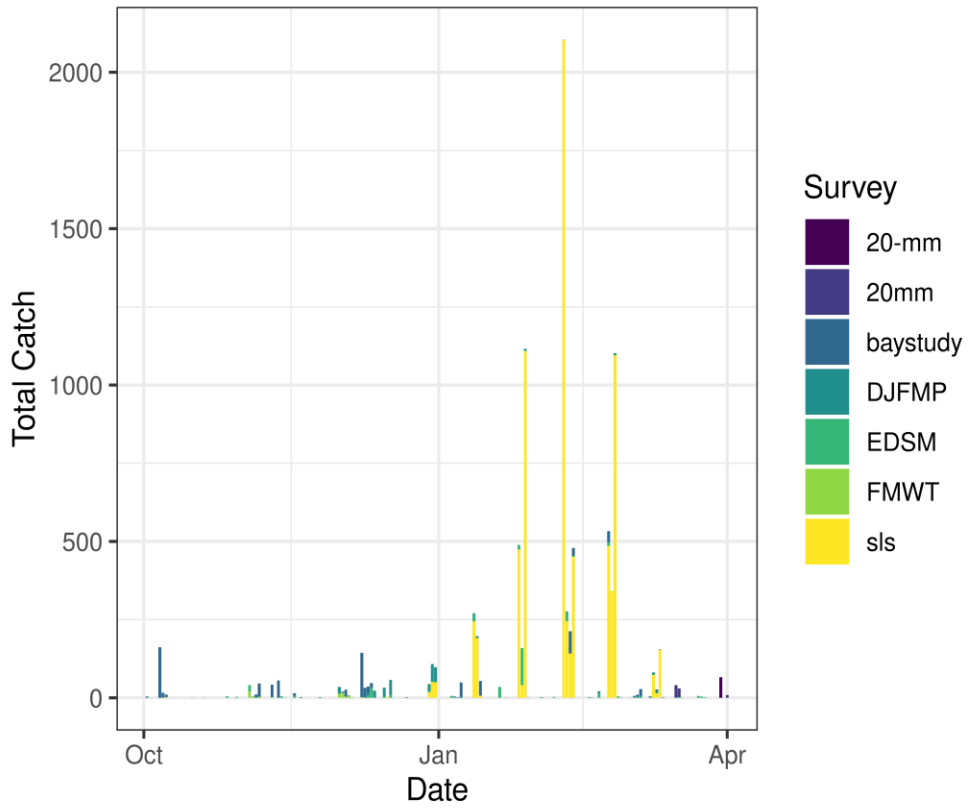

Figure 14: Time series of longfin smelt catch, WY 2026

Figure 14 displays total longfin smelt catch observations over time during Water Year 2026 from October through April for multiple survey programs, including the 20-mm Survey, Bay Study, DJFMP, EDSM, FMWT, and SLS. Bars represent total catch recorded on individual sampling dates, with colors distinguishing survey type. The figure shows relatively low catch totals during fall months, followed by substantially higher catch observations during January through March, particularly associated with SLS surveys.

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: 5,836 cfs as of Apr 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

Larval/juvenile longfin smelt

- **Threshold:** JPF < 0 cfs AND population model demonstrates need to reduce entrainment to avoid population decline
    - Daily average JPF: 5,836 cfs as of Apr 12, 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. JPF is projected to remain positive throughout the week and no adult longfin smelt have been detected in salvage this water year.
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. JPF is projected to remain positive throughout the week, so the condition of JPF < 0 cfs is not met. Additionally, PTM and Zone of Influence modeling indicate a low risk of entrainment for the larval and juvenile Longfin Smelt population. The Longfin smelt larval population and PTM analysis projects low entrainment relative to estimated abundance for this week. The model shows the estimated entrainment for this week is estimated to be <0.1% for -6,500 cfs, and 0% for all other levels of OMRI.

       Zone of Influence modeling indicates moderate differences in the hydrodynamic footprint across OMRI scenarios; however, the Zone of Influence does not extend into the western or far western regions where most Longfin Smelt larvae and juveniles have been detected. Therefore, these effects are not anticipated to result in a population decline, and the criteria for initiating this action are not met.
3. Is there additional information or other analyses that should be considered in this evaluation?
    a. Please see Appendix A for additional information.

End of smelt Entrainment Management

- Not relevant

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Appendix A: Delta Real-Time Forecast Summary

Date: 04/13/2026

Forecast Period: 04/07/2026 – 04/27/2026

Forecast Week 1: 04/07/2026 – 04/13/2026

Forecast Week 2: 04/14/2026 – 04/20/2026

Forecast Week 3: 04/21/2026 – 04/27/2026

Contents

Common Assumptions

The model run results cover the period April 07, 2026 through April 27, 2026 and are based on the following assumptions established by DWR:

1. CCFB Gates are operating to Priority 1.
2. The Delta Cross Channel gates are closed.
3. Suisun Marsh Salinity Control flashboards are in. All three gates are in open position from March 2.
4. San Joaquin River flow at Vernalis is at 2317 cfs at the beginning of the forecast period and is estimated to decrease to 1300 cfs by the end of the forecast period.
5. San Joaquin River EC at Vernalis is at 390 umhos/cm at the beginning of the forecast period and is estimated to increase to 522 umhos/cm at the end of the forecast period.
6. Sacramento River flow at Freeport is at 12702 cfs at the beginning of the forecast period and is expected to increase to 15000 cfs by the end of the forecast period.

7. CCFB inflow is at 600 cfs at the beginning of the forecast period and is expected to increase to 600 cfs by the end of the forecast period.
8. Export at Jones Pumping Plant is at 3455 cfs at the beginning of the forecast period and is expected to decrease to 900 cfs to the end the forecast period.

As shown in the next section, assumptions 4 and 6 are updated based on Reclamation forecast data, and assumption 8 and exports at Banks Pumping Plant have been modified to include four different forecast scenarios at an Old and Middle River (OMR) index of -6,500 cfs, -5,000 cfs, -3,500 cfs, and -2,000 cfs.

Reclamation Forecast Flow and Export Data

Table 1. Weekly Averaged Forecasted Flow Data and Flow Bins:

Forecast Week	Sacramento River at Freeport (cfs)	Sac Flow Bin	San Joaquin River at Vernalis (cfs)	SJR Flow Bin	Delta Inflow Bin
Week 1 04/07/2026 - 04/13/2026	14,425	med	2,530	med	medmed
Week 2 04/14/2026 - 04/20/2026	14,938	med	2,243	med	medmed
Week 3 04/21/2026 - 04/27/2026	13,000	lo	2,200	med	lomed

Table 2. Weekly Averaged CVP and SWP Exports by OMR Bin

Week	OMR Bin (cfs)	CVP Exports (cfs)	SWP Exports (cfs)	Total Exports (cfs)	CVP Exports (% of total)	SWP Exports (% of total)
Week 1: 04/07/2026 - 04/13/2026	-6,500	3,635	601	4,236	86%	14%
Week 1: 04/07/2026 - 04/13/2026	-5,000	3,134	601	3,735	84%	16%
Week 1: 04/07/2026 - 04/13/2026	-3,500	2,561	601	3,162	81%	19%
Week 1: 04/07/2026 - 04/13/2026	-2,000	1,918	601	2,519	76%	24%
Week 2 04/14/2026 - 04/20/2026	-6,500	902	601	1,503	60%	40%

Week	OMR Bin (cfs)	CVP Exports (cfs)	SWP Exports (cfs)	Total Exports (cfs)	CVP Exports (% of total)	SWP Exports (% of total)
Week 2 04/14/2026 - 04/20/2026	-5,000	902	601	1,503	60%	40%
Week 2 04/14/2026 - 04/20/2026	-3,500	902	601	1,503	60%	40%
Week 2 04/14/2026 - 04/20/2026	-2,000	902	601	1,503	60%	40%
Week 3 04/21/2026 - 04/27/2026	-6,500	902	601	1,503	60%	40%
Week 3 04/21/2026 - 04/27/2026	-5,000	902	601	1,503	60%	40%
Week 3 04/21/2026 - 04/27/2026	-3,500	902	601	1,503	60%	40%
Week 3 04/21/2026 - 04/27/2026	-2,000	902	601	1,503	60%	40%

Notes:

- One pumping unit is currently out of service at Jones Pumping Plant until August 2026. The current maximum pumping rate at Jones Pumping Plant (CVP Exports) is 4,200 cfs.
- Per the State Water Project Incidental Take Permit 8.12.1, the State is required to curtail exports April 1 through May 31. This change in exports is expected to persist for the two month period unless Vernalis flows change. This is reflected in the forecast SWP exports starting on April 1.
- From April 11 to mid-May CVP exports will be reduced to roughly 900 cfs due to D-1641.
- The OMR bin for all three weeks reflects the OMR levels at the beginning of Week 1. However, OMR levels during and after Week 1 are reduced due to the various reductions in exports required by regulatory controls. The OMR bin naming convention is maintained for consistency with past reports.

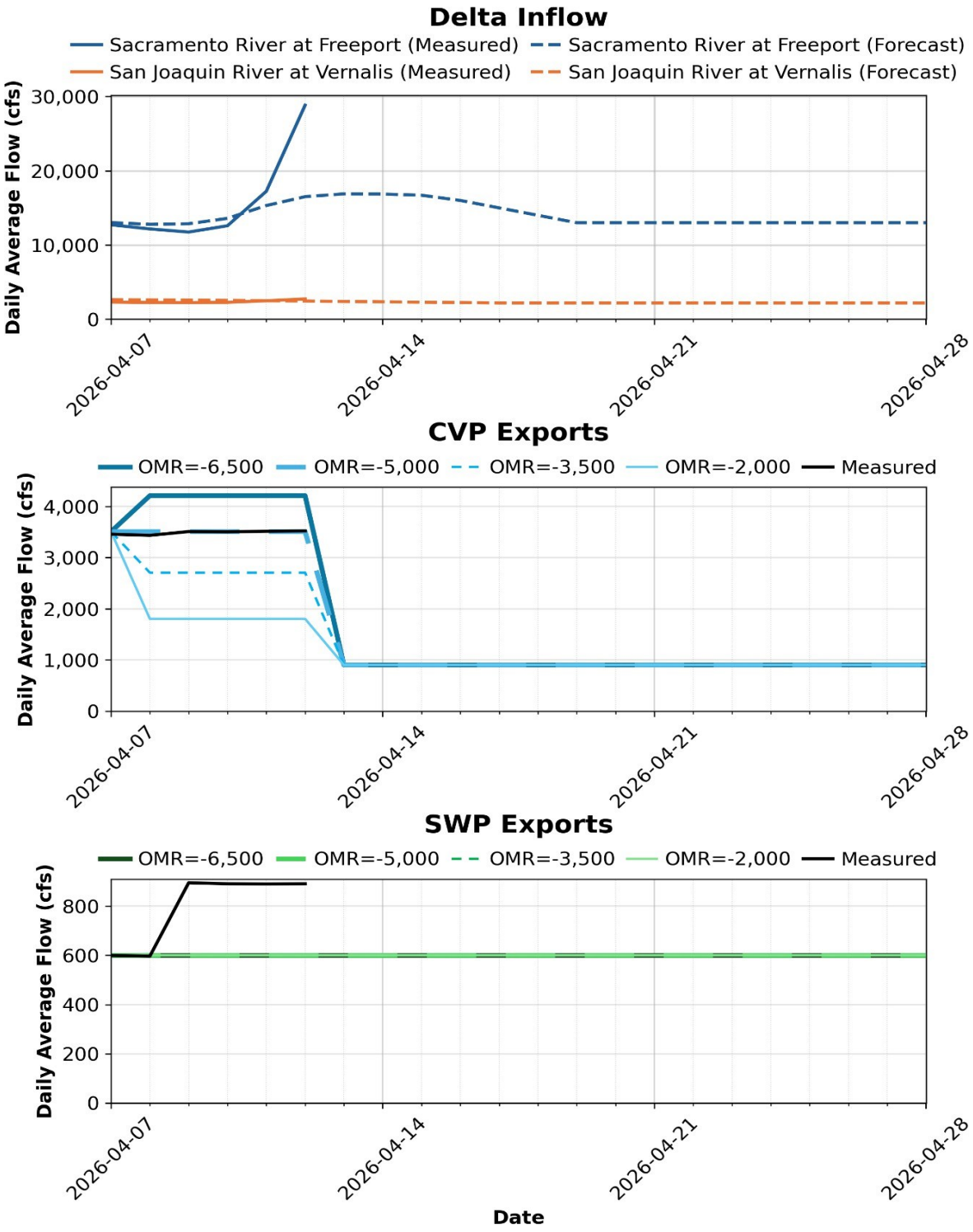

Figure 1: Delta Inflow, CVP Exports, and SWP Exports Summary

Figure 1 is a collection of three line graphs. The top graph shows measured and forecasted Sacramento River flows at Freeport and San Joaquin River flows at Vernalis from April 7, 2026 to April 28, 2026. The bottom two graphs show CVP and SWP exports in daily average flow (cfs) for OMR flow scenarios -6,500, -5,000, -3,500, and -2,000 in different colors and line styles, along with measured export values, from April 7, 2026 to April 28, 2026.

Delta Export Zone of Influence

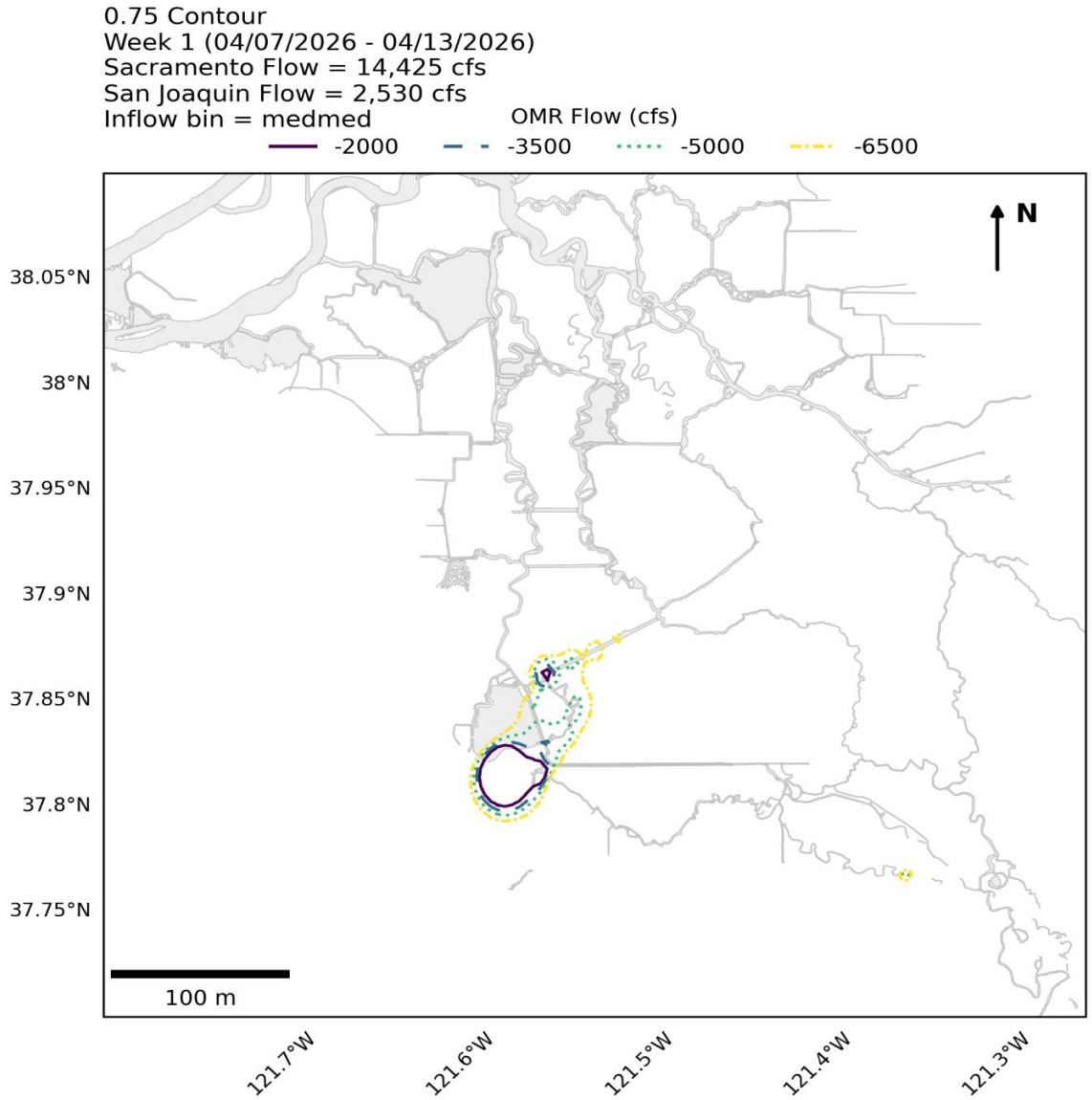

Figure 2: Delta Export Zone of Influence Week 1

Figure 2 is a map of the Delta showing different zones of influence at OMR flow rates of -2,000, -3,500, -5,000, and -6,500 in different colors and line styles. The map was developed using a 0.75 contour during Week 1 (April 7–13, 2026) with Sacramento River flow at 14,425 cfs, San Joaquin River flow at 2,530 cfs, and a medmed inflow bin.

Notes:

- Contours indicate the proportional overlap of hourly average velocity Gaussian KDEs for a 1-week period from DSM2 hydro simulations with and without Delta exports active
- DSM2 nodes that were sufficiently different from neighboring nodes to create isolated contours at several OMR flows were removed (nodes 146, 147, 148, 206, 242, 246, 432, 433, 434)

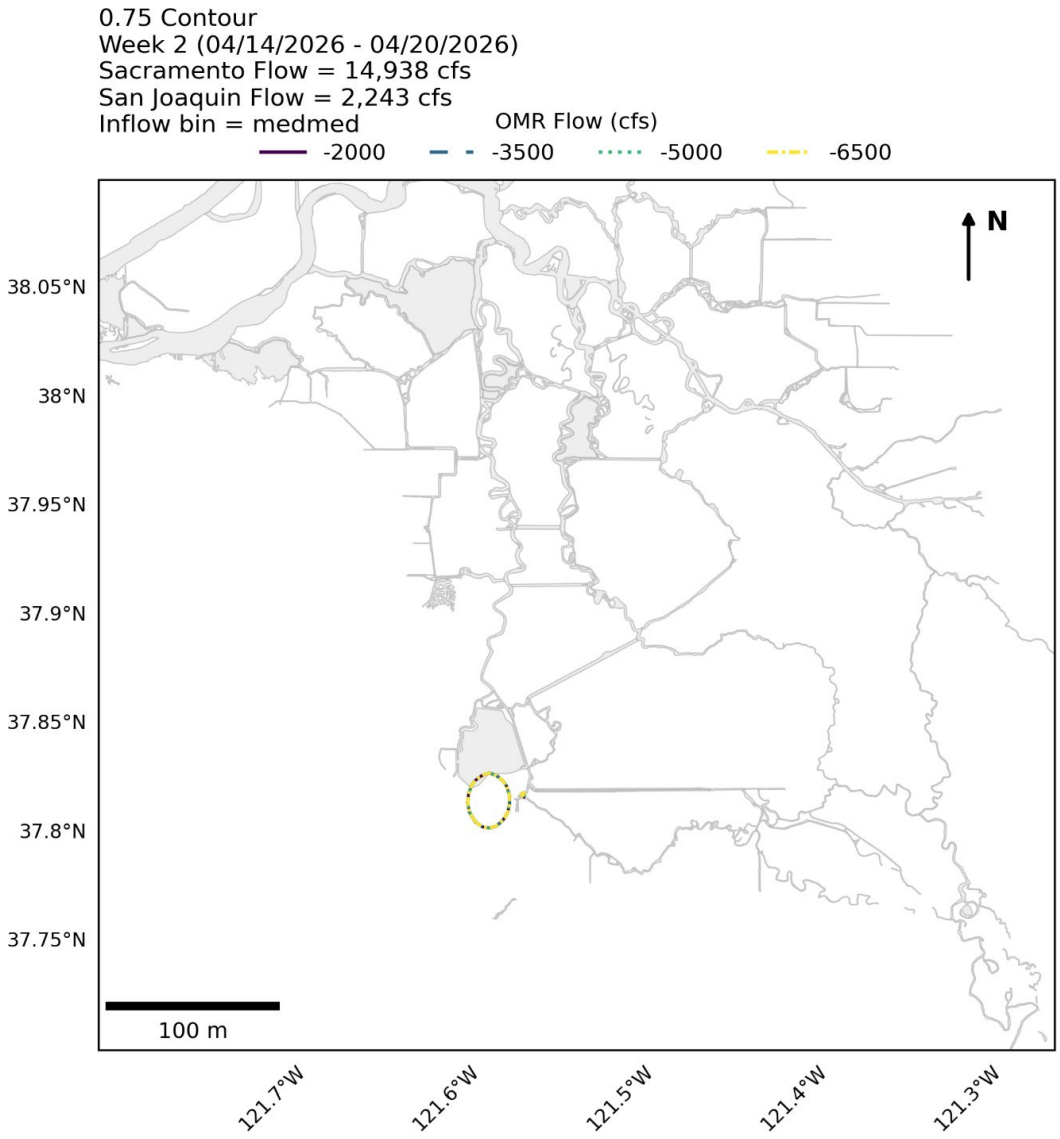

Figure 3: Delta Export Zone of Influence Week 2

Figure 3 is a map of the Delta showing different zones of influence at OMR flow rates of -2,000, -3,500, -5,000, and -6,500 cfs, represented by different colors and line styles. The map was developed using a 0.75 contour during Week 2 (April 14–20, 2026) with Sacramento River flow at 14,938 cfs, San Joaquin River flow at 2,243 cfs, and a medmed inflow bin.

Notes:

- Contours indicate the proportional overlap of hourly average velocity Gaussian KDEs for a 1-week period from DSM2 hydro simulations with and without Delta exports active
- DSM2 nodes that were sufficiently different from neighboring nodes to create isolated contours at several OMR flows were removed (nodes 146, 147, 148, 206, 242, 246, 432, 433, 434)

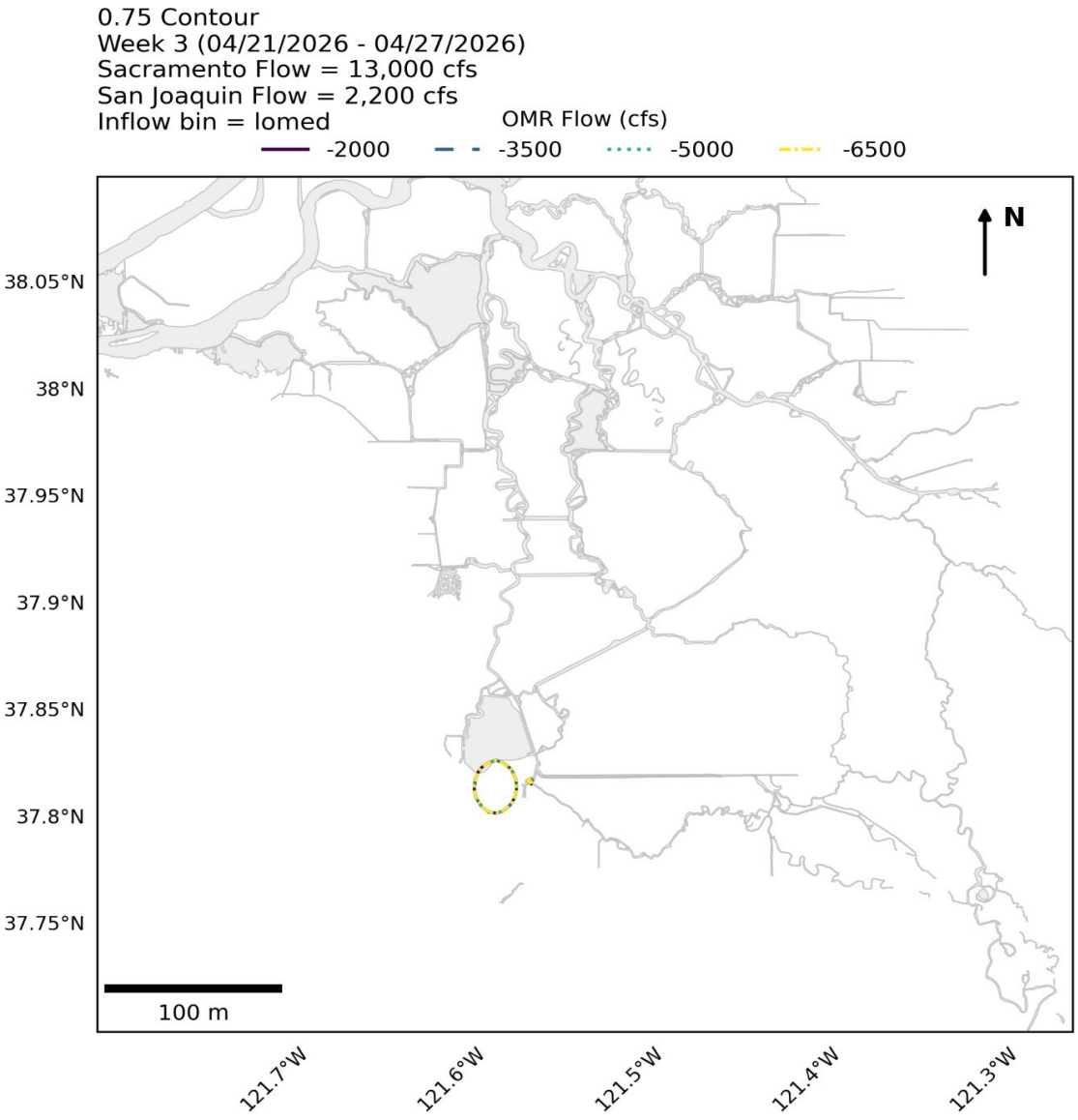

Figure 4: Delta Export Zone of Influence Week 3

Figure 4 is a map of the Delta showing different zones of influence at OMR flow rates of -2,000, -3,500, -5,000, and -6,500 in different colors and line styles. The map was developed using a 0.75 contour during Week 3 (April 21–27, 2026) with Sacramento River flow at 13,000 cfs, San Joaquin River flow at 2,200 cfs, and a lomed inflow bin.

Notes:

- Contours indicate the proportional overlap of hourly average velocity Gaussian KDEs for a 1-week period from DSM2 hydro simulations with and without Delta exports active
- DSM2 nodes that were sufficiently different from neighboring nodes to create isolated contours at several OMR flows were removed (nodes 146, 147, 148, 206, 242, 246, 432, 433, 434)

Table 3. Proportion of DSM2 Channel Length Altered from Pumping

Weekly Model Run	OMR Bin (cfs)	Sum Channel Length (miles) Low	Channel Length (%) Low	Sum Channel Length (miles) Medium	Channel Length (%) Medium	Sum Channel Length (miles) High	Channel Length (%) High
Week 1: 04/07/2026 - 04/13/2026	-6,500	659.84	98.0%	12.96	1.9%	0.85	0.1%
Week 1: 04/07/2026 - 04/13/2026	-5,000	662.80	98.4%	10.00	1.5%	0.85	0.1%
Week 1: 04/07/2026 - 04/13/2026	-3,500	669.63	99.4%	3.16	0.5%	0.85	0.1%
Week 1: 04/07/2026 - 04/13/2026	-2,000	671.25	99.6%	1.55	0.2%	0.85	0.1%
Week 2 04/14/2026 - 04/20/2026	-6,500	672.07	99.8%	0.73	0.1%	0.85	0.1%
Week 2 04/14/2026 - 04/20/2026	-5,000	672.07	99.8%	0.73	0.1%	0.85	0.1%
Week 2 04/14/2026 - 04/20/2026	-3,500	672.07	99.8%	0.73	0.1%	0.85	0.1%
Week 2 04/14/2026 - 04/20/2026	-2,000	672.07	99.8%	0.73	0.1%	0.85	0.1%
Week 3 04/21/2026 - 04/27/2026	-6,500	672.07	99.8%	0.73	0.1%	0.85	0.1%
Week 3 04/21/2026 - 04/27/2026	-5,000	672.07	99.8%	0.73	0.1%	0.85	0.1%
Week 3 04/21/2026 - 04/27/2026	-3,500	672.07	99.8%	0.73	0.1%	0.85	0.1%
Week 3 04/21/2026 - 04/27/2026	-2,000	672.07	99.8%	0.73	0.1%	0.85	0.1%

Notes:

- Sum channel length includes the length of channels within the Delta that have a calculated hydrologic alteration level falling within each category

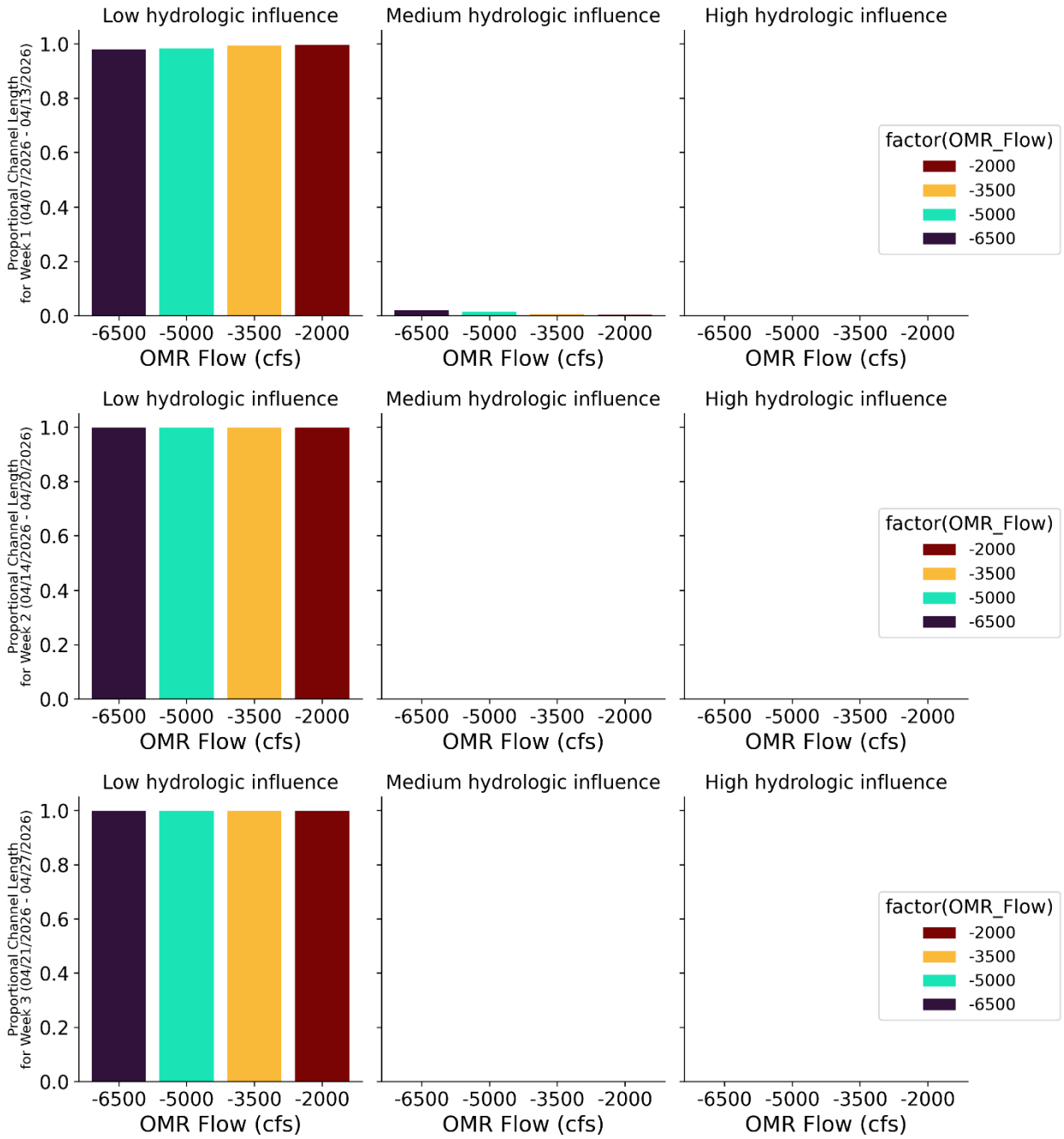

Figure 5: Proportional DSM2 Channel Length Altered from Pumping by Hydrologic Influence Category, Weeks 1–3

Figure 5 is a collection of grouped bar charts for three weekly model runs from April 7 to April 27, 2026. Each row represents a weekly model run and is divided into three panels by hydrologic influence category (Low, Medium, and High). The charts show the proportional DSM2 channel length altered from pumping for OMR flow scenarios -6,500, -5,000, -3,500, and -2,000 cfs. Across all three weeks, nearly all channel length falls within the Low hydrologic influence category, with only minimal proportional alteration shown in the Medium influence category and negligible alteration in the High influence category.

PTM (Particle Tracking Model) Results

PTM Flux Evaluation Period: 04/07/2026 – 04/27/2026

Particles Injected: 04/07/2026

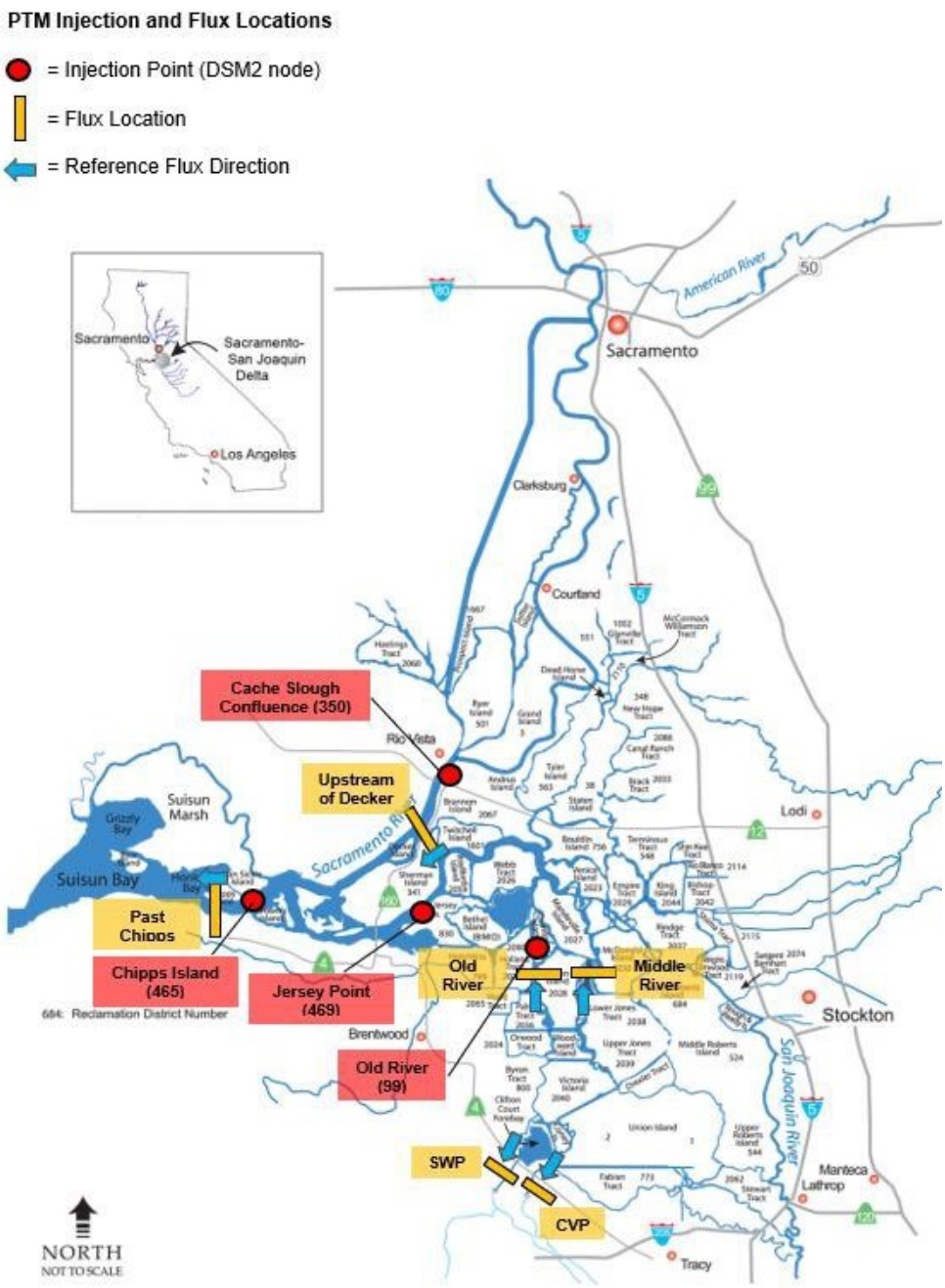

Figure 6: PTM Injection and Flux Locations in the Sacramento–San Joaquin Delta

Figure 6 is a map of the Sacramento–San Joaquin Delta showing PTM injection points (DSM2 nodes) and flux locations used for the April 7–27, 2026 evaluation period, with particles injected on March 24, 2026. Injection points are marked with red circles and labeled by DSM2 node number, while flux locations are shown with yellow bars. Blue arrows indicate the reference flux direction. An inset map shows the Delta's location within California.

Neutrally Buoyant Particles (NP)

Table 4. Neutral Particle Fate (percent flux across boundary) for Particles Injected at Chipps (DSM2 Node 465)

Week	OMR Flow Bin	Past Chipps	Upstream of Decker	Unresolved in Central Delta	Unresolved in OMR corridor	CVP Entrainment	SWP Entrainment
Week 1 End: 04/13/2026	-6,500	82.1	0.0	17.9	0.0	0.0	0.0
Week 1 End: 04/13/2026	-5,000	81.7	0.0	18.3	0.0	0.0	0.0
Week 1 End: 04/13/2026	-3,500	84.3	0.0	15.7	0.0	0.0	0.0
Week 1 End: 04/13/2026	-2,000	86.9	0.0	13.1	0.0	0.0	0.0
Week 2 End: 04/20/2026	-6,500	95.8	0.0	4.3	0.0	0.0	0.0
Week 2 End: 04/20/2026	-5,000	94.6	0.0	5.4	0.0	0.0	0.0
Week 2 End: 04/20/2026	-3,500	95.0	0.0	5.0	0.0	0.0	0.0
Week 2 End: 04/20/2026	-2,000	95.0	0.0	5.0	0.0	0.0	0.0
Week 3 End: 04/27/2026	-6,500	96.0	0.1	4.0	0.0	0.0	0.0
Week 3 End: 04/27/2026	-5,000	96.0	0.0	4.0	0.0	0.0	0.0
Week 3 End: 04/27/2026	-3,500	96.1	0.0	3.9	0.0	0.0	0.0
Week 3 End: 04/27/2026	-2,000	95.1	0.0	4.9	0.0	0.0	0.0

Note: values between 0.0 and 0.1 are indicated with <0.1

Table 5. Neutral Particle Fate (percent flux across boundary) for Particles Injected at Cache Slough (DSM2 Node 350)

Week	OMR Flow Bin	Past Chipps	Upstream of Decker	Unresolved in Central Delta	Unresolved in OMR corridor	CVP Entrainment	SWP Entrainment
Week 1 End: 04/13/2026	-6,500	2.1	77.2	97.9	0.0	0.0	0.0
Week 1 End: 04/13/2026	-5,000	2.9	76.5	97.1	0.0	0.0	0.0
Week 1 End: 04/13/2026	-3,500	3.8	77.3	96.3	0.0	0.0	0.0
Week 1 End: 04/13/2026	-2,000	4.5	77.3	95.5	0.0	0.0	0.0
Week 2 End: 04/20/2026	-6,500	66.8	82.7	33.4	0.2	0.0	0.0
Week 2 End: 04/20/2026	-5,000	65.8	81.7	34.4	0.1	0.0	0.0
Week 2 End: 04/20/2026	-3,500	66.8	82.1	33.3	0.1	0.0	0.0
Week 2 End: 04/20/2026	-2,000	66.8	82.1	33.3	0.1	0.0	0.0
Week 3 End: 04/27/2026	-6,500	74.4	84.5	25.9	0.3	0.0	0.0
Week 3 End: 04/27/2026	-5,000	74.2	83.8	25.9	0.1	0.0	0.0
Week 3 End: 04/27/2026	-3,500	73.5	84.2	26.5	0.0	0.0	0.0
Week 3 End: 04/27/2026	-2,000	75.2	83.8	25.0	0.2	0.0	0.0

Note: values between 0.0 and 0.1 are indicated with <0.1

Table 6. Neutral Particle Fate (percent flux across boundary) for Particles Injected at Jersey Point (DSM2 Node 469)

Week	OMR Flow Bin	Past Chipps	Upstream of Decker	Unresolved in Central Delta	Unresolved in OMR corridor	CVP Entrainment	SWP Entrainment
Week 1 End: 04/13/2026	-6,500	2.3	15.3	98.1	0.4	0.0	0.0
Week 1 End: 04/13/2026	-5,000	3.3	12.9	96.9	0.1	0.0	0.0
Week 1 End: 04/13/2026	-3,500	3.2	12.6	96.8	0.0	0.0	0.0
Week 1 End: 04/13/2026	-2,000	3.2	12.5	96.8	0.0	0.0	0.0
Week 2 End: 04/20/2026	-6,500	41.9	24.1	59.0	0.9	0.0	0.0
Week 2 End: 04/20/2026	-5,000	41.9	22.0	58.3	0.2	0.0	0.0
Week 2 End: 04/20/2026	-3,500	47.8	21.5	52.4	0.2	0.0	0.0
Week 2 End: 04/20/2026	-2,000	48.7	20.8	51.6	0.3	0.0	0.0
Week 3 End: 04/27/2026	-6,500	60.2	26.3	41.0	1.2	0.0	0.0
Week 3 End: 04/27/2026	-5,000	58.8	25.6	41.6	0.3	0.0	0.0
Week 3 End: 04/27/2026	-3,500	63.5	24.4	37.0	0.5	0.0	0.0
Week 3 End: 04/27/2026	-2,000	68.3	22.7	32.3	0.6	0.0	0.0

Note: values between 0.0 and 0.1 are indicated with <0.1

Table 7. Neutral Particle Fate (percent flux across boundary) for Particles Injected at Old River (DSM2 Node 99)

Week	OMR Flow Bin	Past Chipps	Upstream of Decker	Unresolved in Central Delta	Unresolved in OMR corridor	CVP Entrainment	SWP Entrainment
Week 1 End: 04/13/2026	-6,500	0.0	0.4	26.6	45.4	27.8	0.2
Week 1 End: 04/13/2026	-5,000	0.0	0.3	31.4	57.0	11.5	0.1
Week 1 End: 04/13/2026	-3,500	0.0	0.6	40.5	58.1	1.4	0.0
Week 1 End: 04/13/2026	-2,000	0.0	0.6	57.3	42.7	0.0	0.0
Week 2 End: 04/20/2026	-6,500	1.8	2.7	23.5	37.9	33.8	3.0
Week 2 End: 04/20/2026	-5,000	1.5	3.9	28.5	49.5	18.2	2.3
Week 2 End: 04/20/2026	-3,500	2.7	4.0	36.1	55.5	4.7	1.0
Week 2 End: 04/20/2026	-2,000	2.5	4.7	54.1	42.8	0.5	0.1
Week 3 End: 04/27/2026	-6,500	4.7	4.0	20.8	32.5	35.3	6.8
Week 3 End: 04/27/2026	-5,000	5.2	6.0	26.2	41.0	21.3	6.3
Week 3 End: 04/27/2026	-3,500	7.5	5.8	31.5	48.0	9.7	3.3
Week 3 End: 04/27/2026	-2,000	7.9	7.9	47.7	40.2	3.6	0.6

Note: values between 0.0 and 0.1 are indicated with <0.1

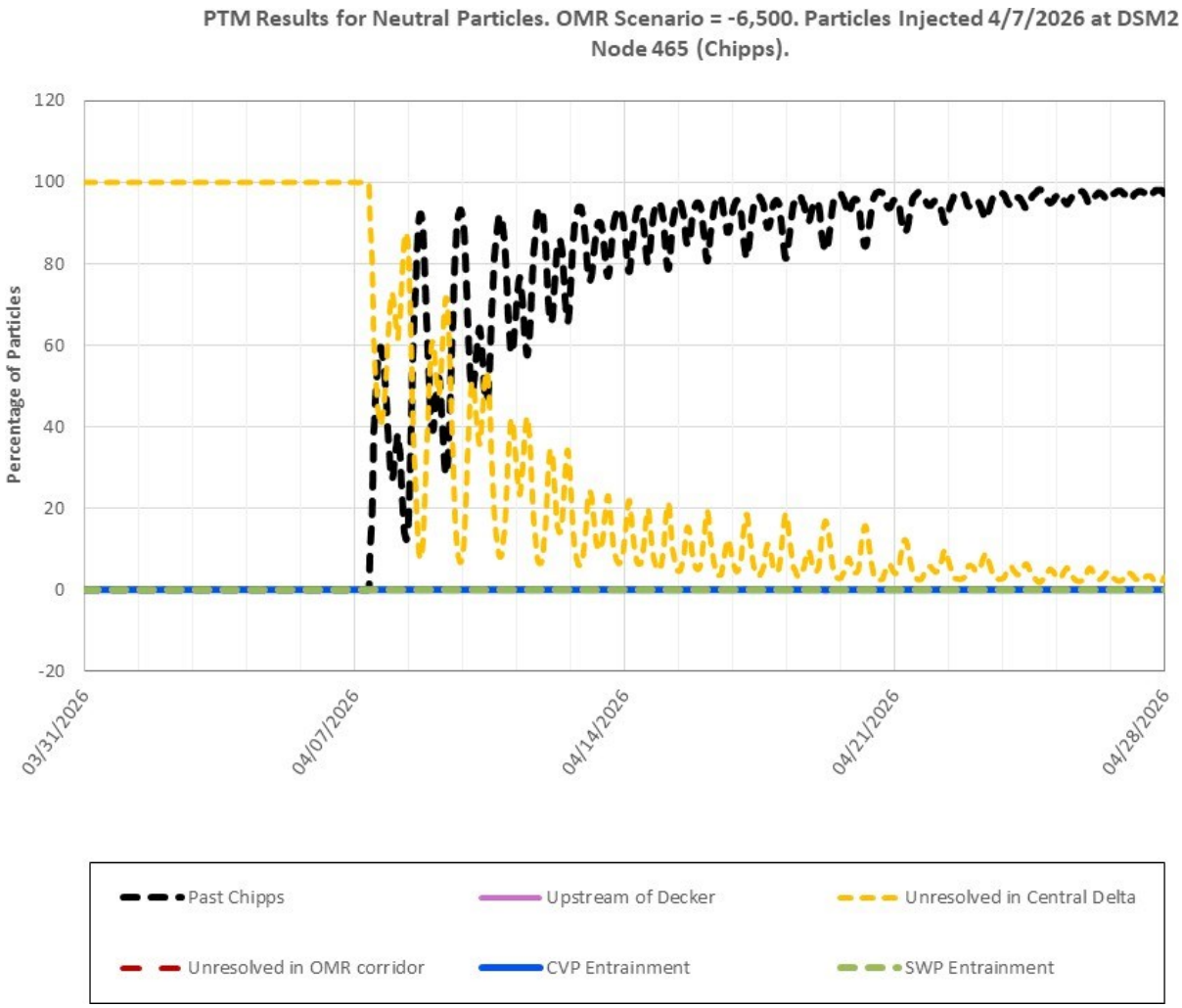

Figure 7: PTM Results for Neutral Particles at Chipps Island under OMR Scenario -6,500

Figure 7 is a line graph showing the percentage of neutral particles over time from April 7 to April 28, 2026, injected on April 7, 2026 at DSM2 Node 465 (Chipps) under the OMR -6,500 scenario. Six flux locations are represented by different colored dashed lines, with Past Chipps (black) and Unresolved in Central Delta (yellow) showing the most notable particle percentages across the evaluation period.

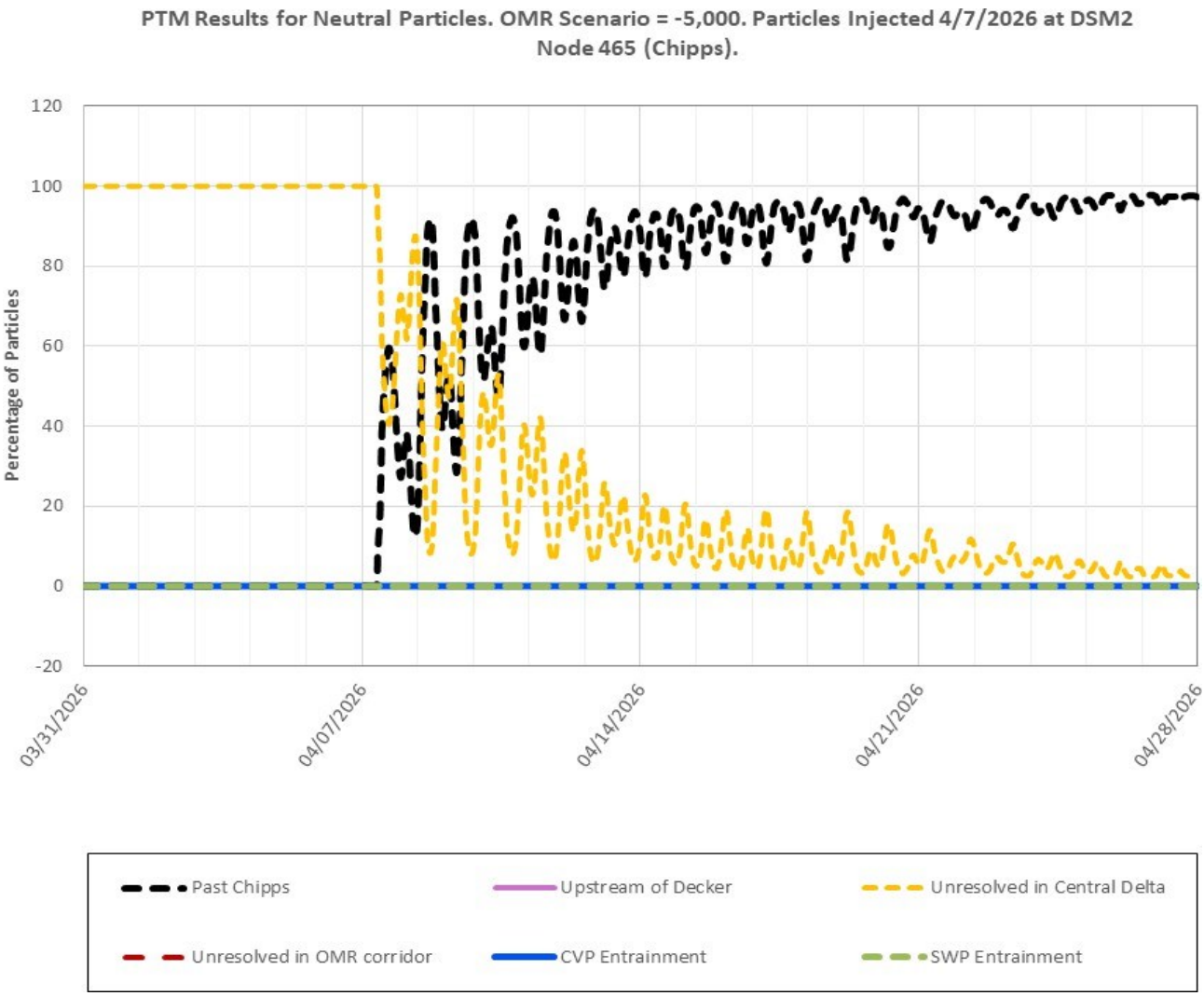

Figure 8: PTM Results for Neutral Particles at Chipps Island under OMR Scenario -5,000

Figure 8 is a line graph showing the percentage of neutral particles over time from April 7 to April 28, 2026, injected on April 7, 2026 at DSM2 Node 465 (Chipps) under the OMR -5,000 scenario. Six flux locations are represented by different colored dashed lines, with Past Chipps (black) and Unresolved in Central Delta (yellow) showing the most notable particle percentages across the evaluation period.

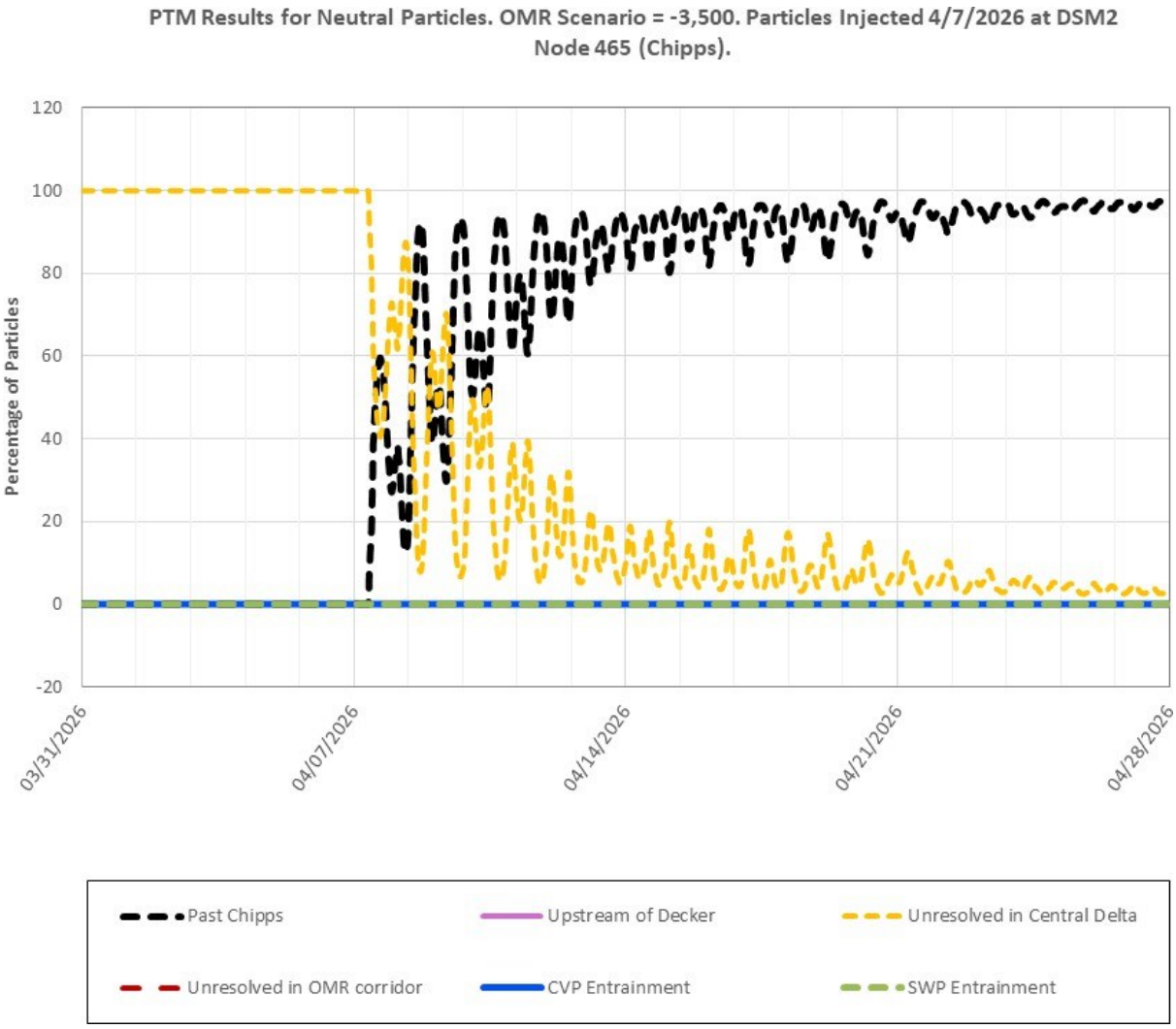

Figure 9: PTM Results for Neutral Particles at Chipps Island under OMR Scenario -3,500

Figure 9 is a line graph showing the percentage of neutral particles over time from April 7 to April 28, 2026, injected on April 7, 2026 at DSM2 Node 465 (Chipps) under the OMR -3,500 scenario. Six flux locations are represented by different colored dashed lines, with Past Chipps (black) and Unresolved in Central Delta (yellow) showing the most notable particle percentages across the evaluation period.

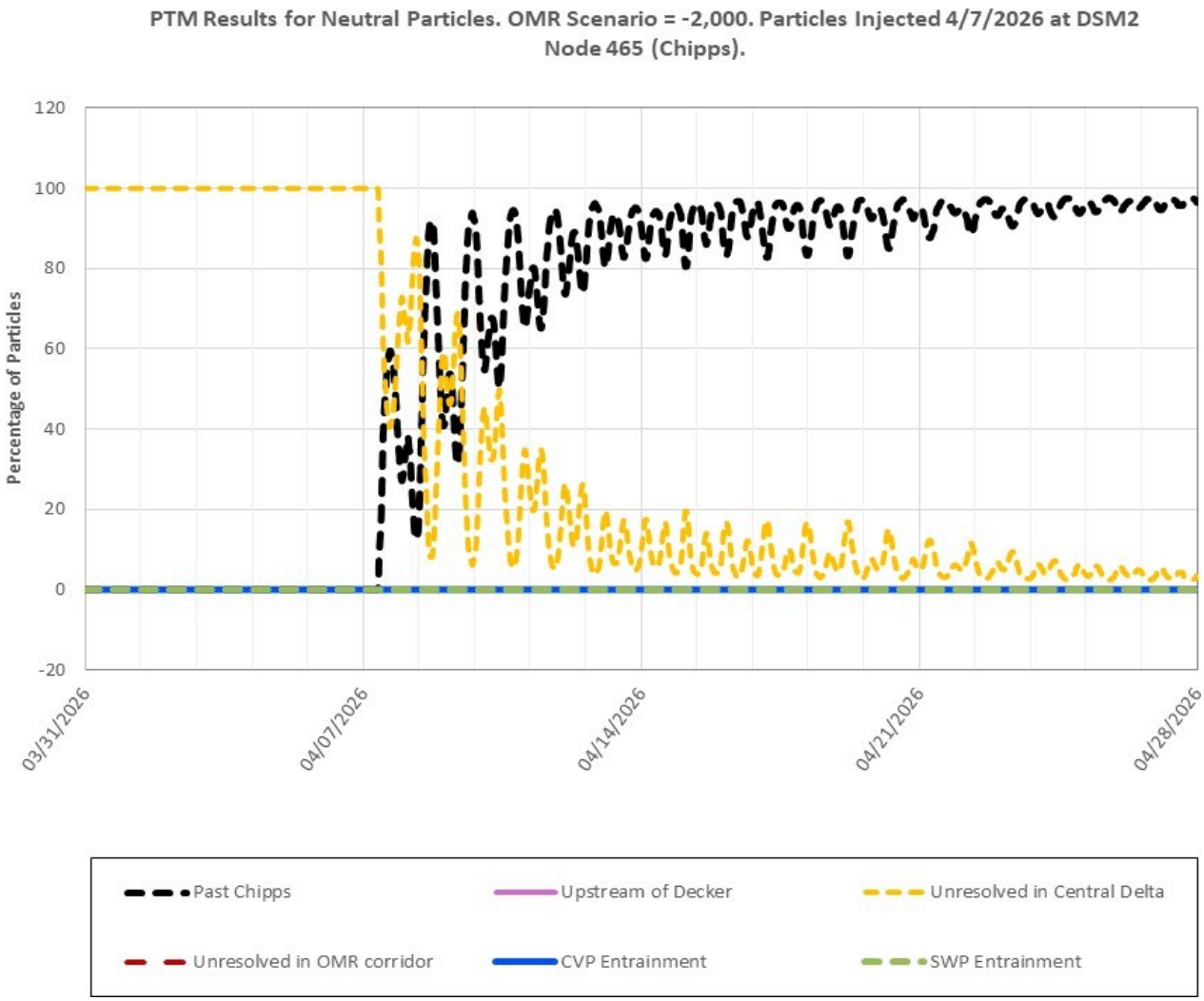

Figure 10: PTM Results for Neutral Particles at Chipps Island under OMR Scenario -2,000

Figure 10 is a line graph showing the percentage of neutral particles over time from April 7 to April 28, 2026, injected on April 7, 2026 at DSM2 Node 465 (Chipps) under the OMR -2,000 scenario. Six flux locations are represented by different colored dashed lines, with Past Chipps (black) and Unresolved in Central Delta (yellow) showing the most notable particle percentages across the evaluation period.

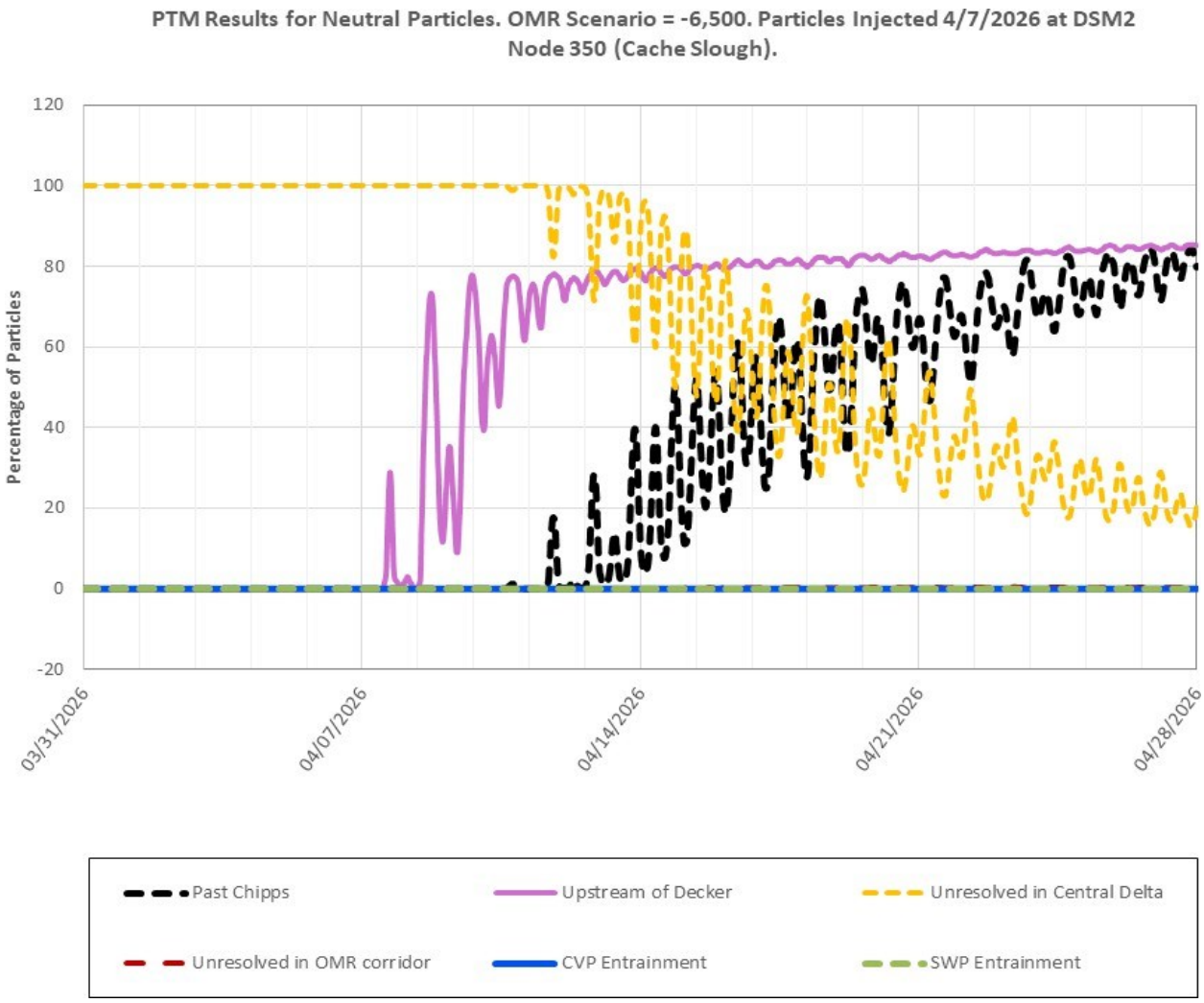

Figure 11: PTM Results for Neutral Particles at Cache Slough under OMR Scenario -6,500 cfs

Figure 11 is a line graph showing the percentage of neutral particles over time from April 7 to April 28, 2026, injected on April 7, 2026 at DSM2 Node 350 (Cache Slough) under the OMR scenario of -6,500 cfs. Upstream of Decker (pink) rises rapidly to approximately 80% by mid-April and remains relatively stable through the end of the period, while Past Chipps (black) increases steadily to around 85% by late April. Unresolved in Central Delta (yellow) initially remains near 100% before declining to approximately 20% by the end of the evaluation period.

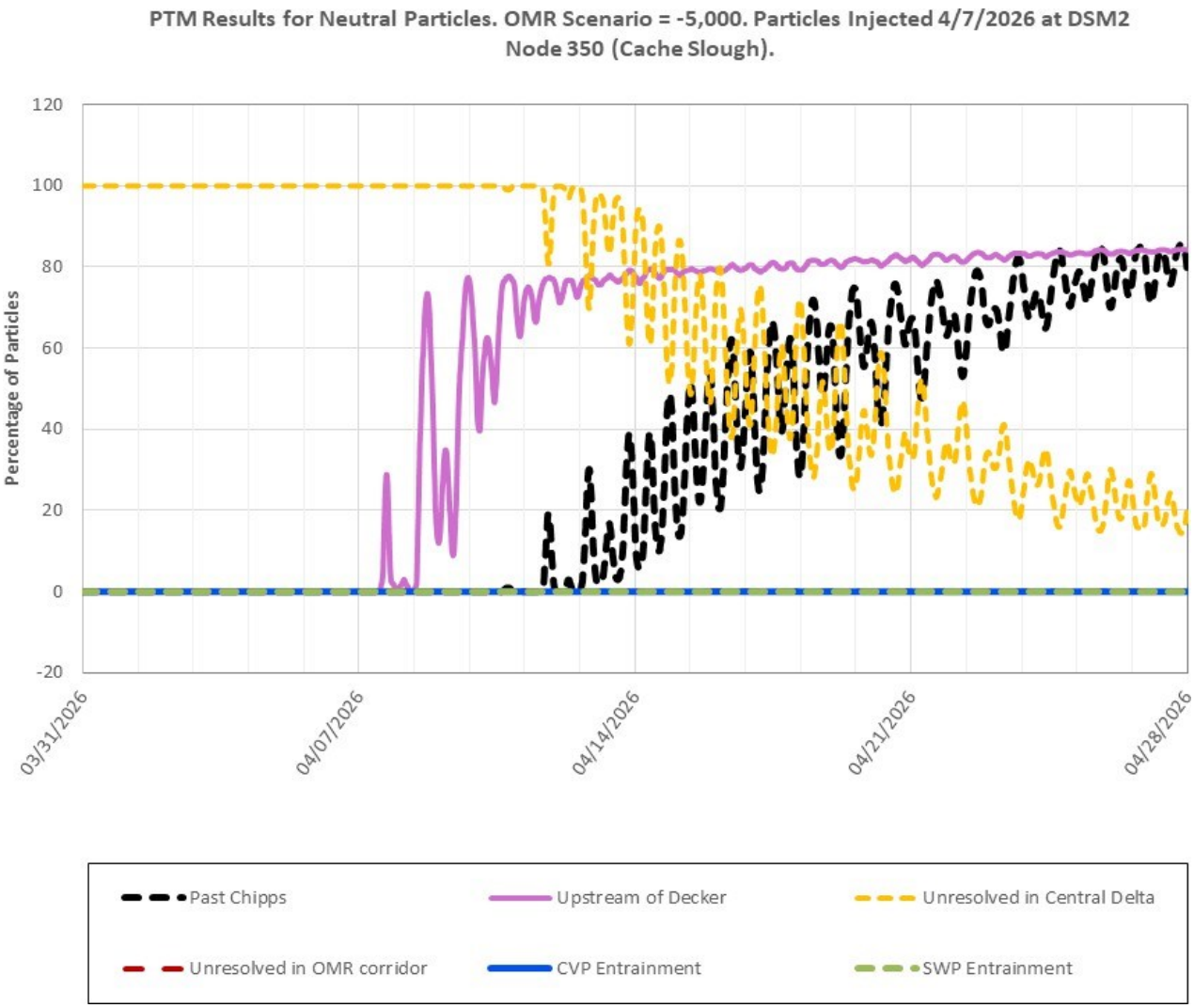

Figure 12: PTM Results for Neutral Particles at Cache Slough under OMR Scenario -5,000 cfs

Figure 12 is a line graph showing the percentage of neutral particles over time from April 7 to April 28, 2026, injected on April 7, 2026 at DSM2 Node 350 (Cache Slough) under the OMR scenario of -5,000 cfs. Upstream of Decker (pink) rises rapidly to approximately 80% by mid-April and remains relatively stable through the end of the evaluation period, while Past Chipps (black) gradually increases to roughly 85% by late April. Unresolved in Central Delta (yellow) initially remains near 100% before declining to approximately 20% by the end of the period.

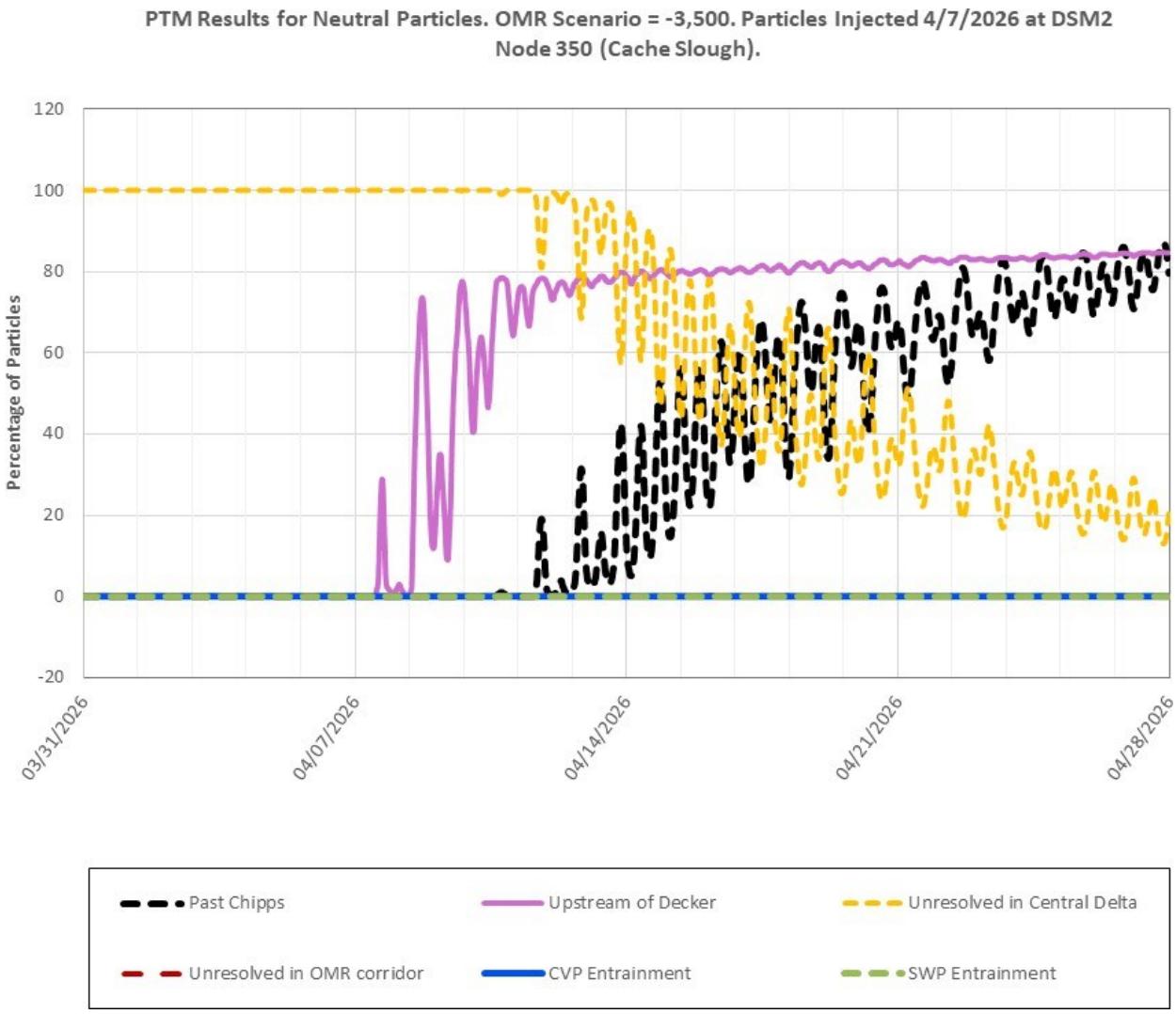

Figure 13: PTM Results for Neutral Particles at Cache Slough under OMR Scenario -3,500 cfs

Figure 13 is a line graph showing the percentage of neutral particles over time from April 7 to April 28, 2026, injected on April 7, 2026 at DSM2 Node 350 (Cache Slough) under the OMR scenario of -3,500 cfs. Upstream of Decker (pink) rises rapidly to approximately 80% by mid-April and remains relatively stable through the end of the evaluation period, while Past Chipps (black) gradually increases to roughly 85% by late April. Unresolved in Central Delta (yellow) initially remains near 100% before declining to approximately 20% by the end of the period.

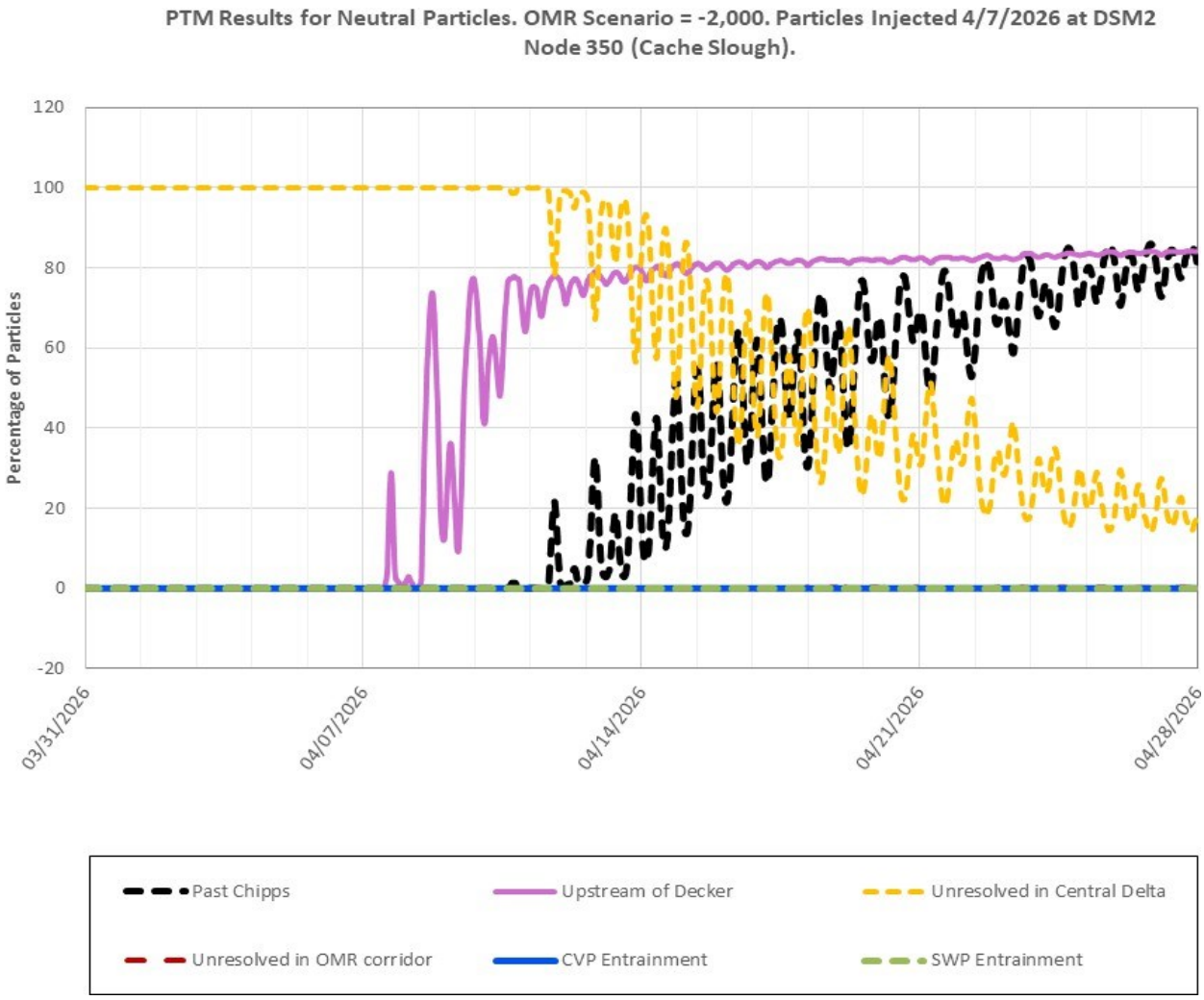

Figure 14: PTM Results for Neutral Particles at Cache Slough under OMR Scenario -2,000 cfs

Figure 14 is a line graph showing the percentage of neutral particles over time from April 7 to April 28, 2026, injected on April 7, 2026 at DSM2 Node 350 (Cache Slough) under the OMR scenario of -2,000 cfs. Upstream of Decker (pink) rises rapidly to approximately 80% by mid-April and remains relatively stable through the end of the evaluation period, while Past Chipps (black) gradually increases to roughly 85% by late April. Unresolved in Central Delta (yellow) initially remains near 100% before declining to approximately 15–20% by the end of the period.

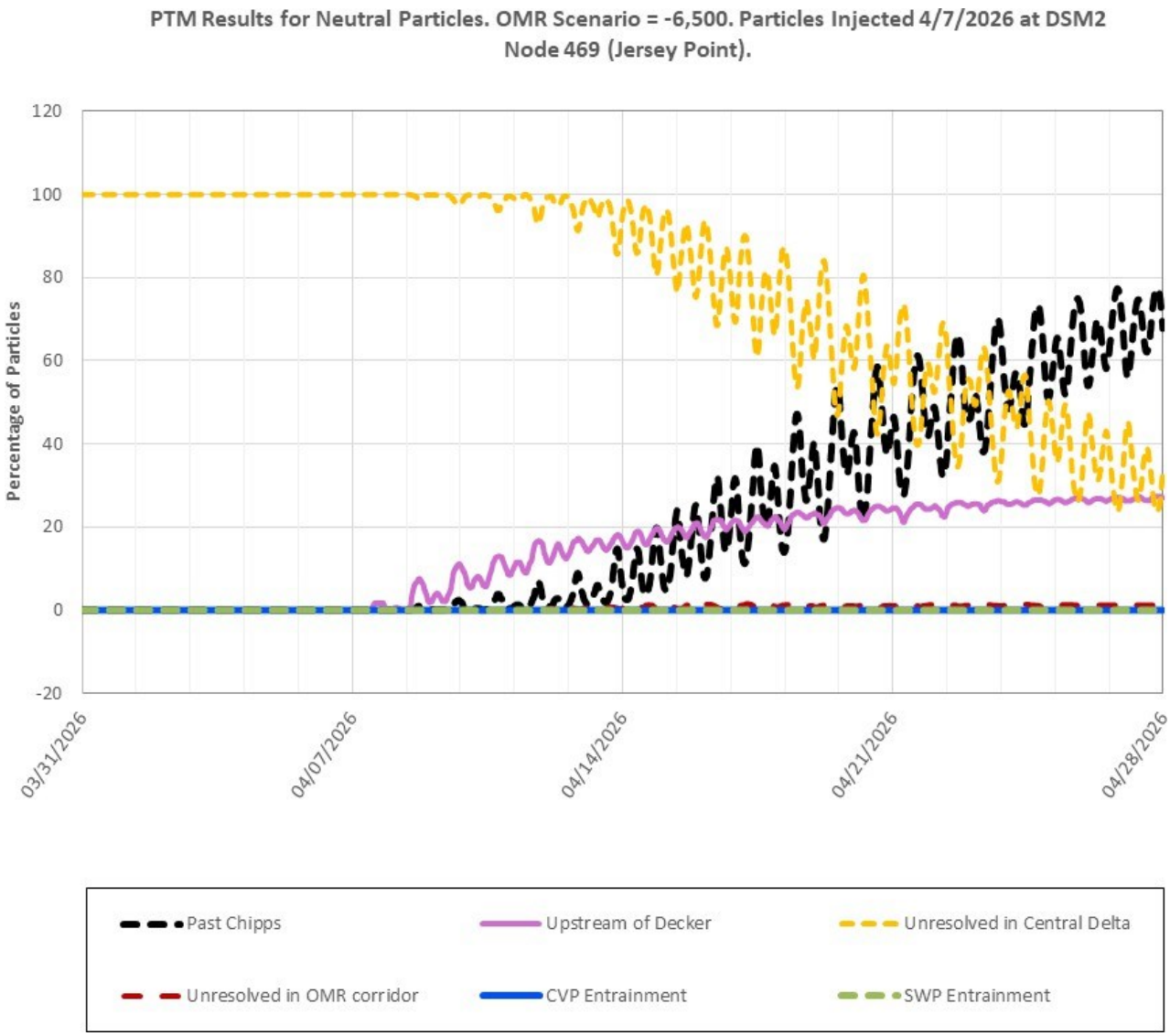

Figure 15: PTM Results for Neutral Particles at Jersey Point under OMR Scenario -6,500 cfs

Figure 15 is a line graph showing the percentage of neutral particles over time from April 7 to April 28, 2026, injected on April 7, 2026 at DSM2 Node 469 (Jersey Point) under the OMR scenario of -6,500 cfs. Past Chipps (black) gradually increases throughout the evaluation period to approximately 75% by late April, while Upstream of Decker (pink) rises more slowly to around 25%. Unresolved in Central Delta (yellow) remains near 100% early in the period before declining steadily to approximately 25–30% by the end of the evaluation period.

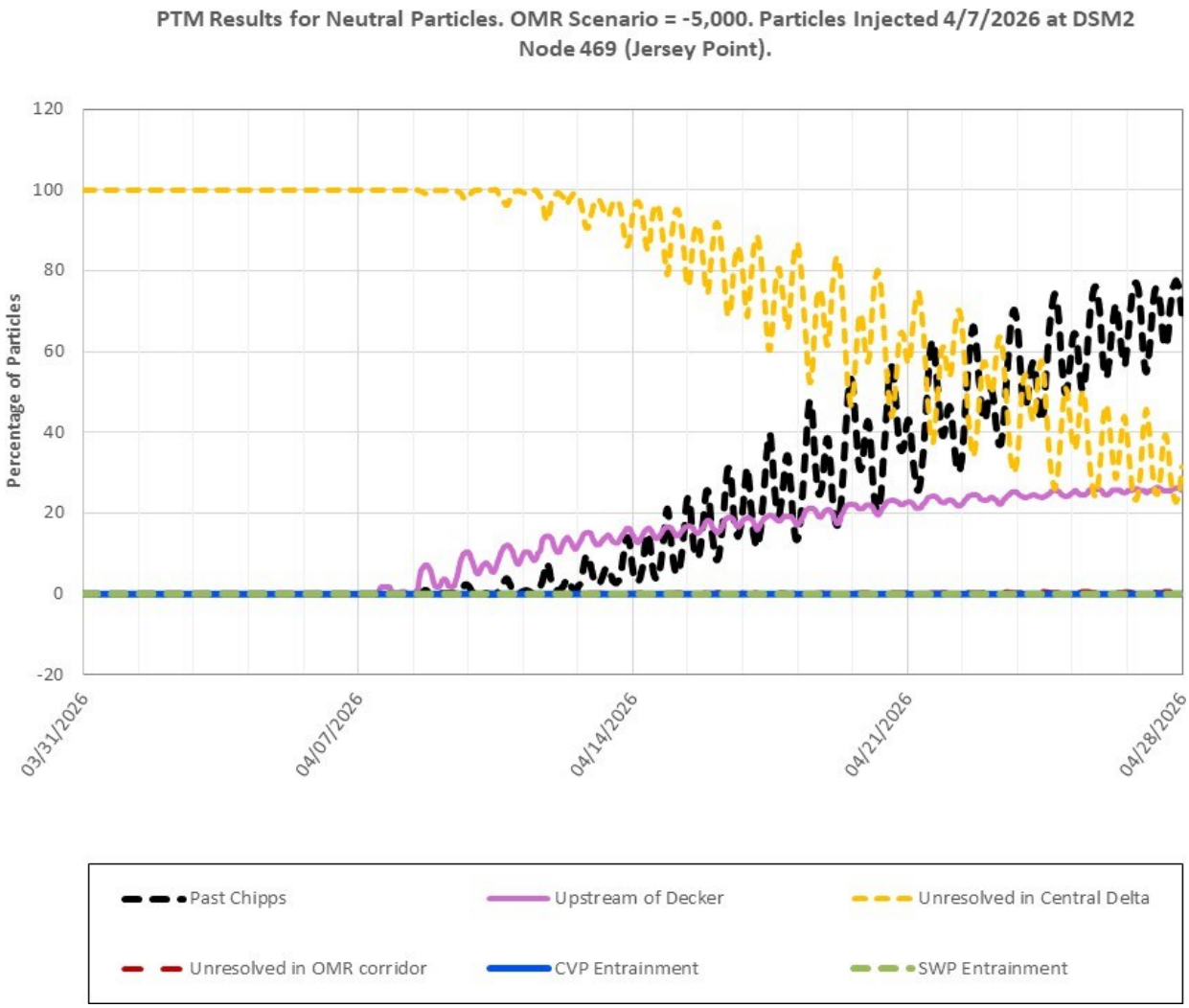

Figure 16: PTM Results for Neutral Particles at Jersey Point under OMR Scenario -5,000 cfs

Figure 16 is a line graph showing the percentage of neutral particles over time from April 7 to April 28, 2026, injected on April 7, 2026 at DSM2 Node 469 (Jersey Point) under the OMR scenario of -5,000 cfs. Past Chipps (black) gradually increases throughout the evaluation period to approximately 75% by late April, while Upstream of Decker (pink) rises more slowly to around 25%. Unresolved in Central Delta (yellow) remains near 100% early in the period before declining steadily to approximately 25–30% by the end of the evaluation period.

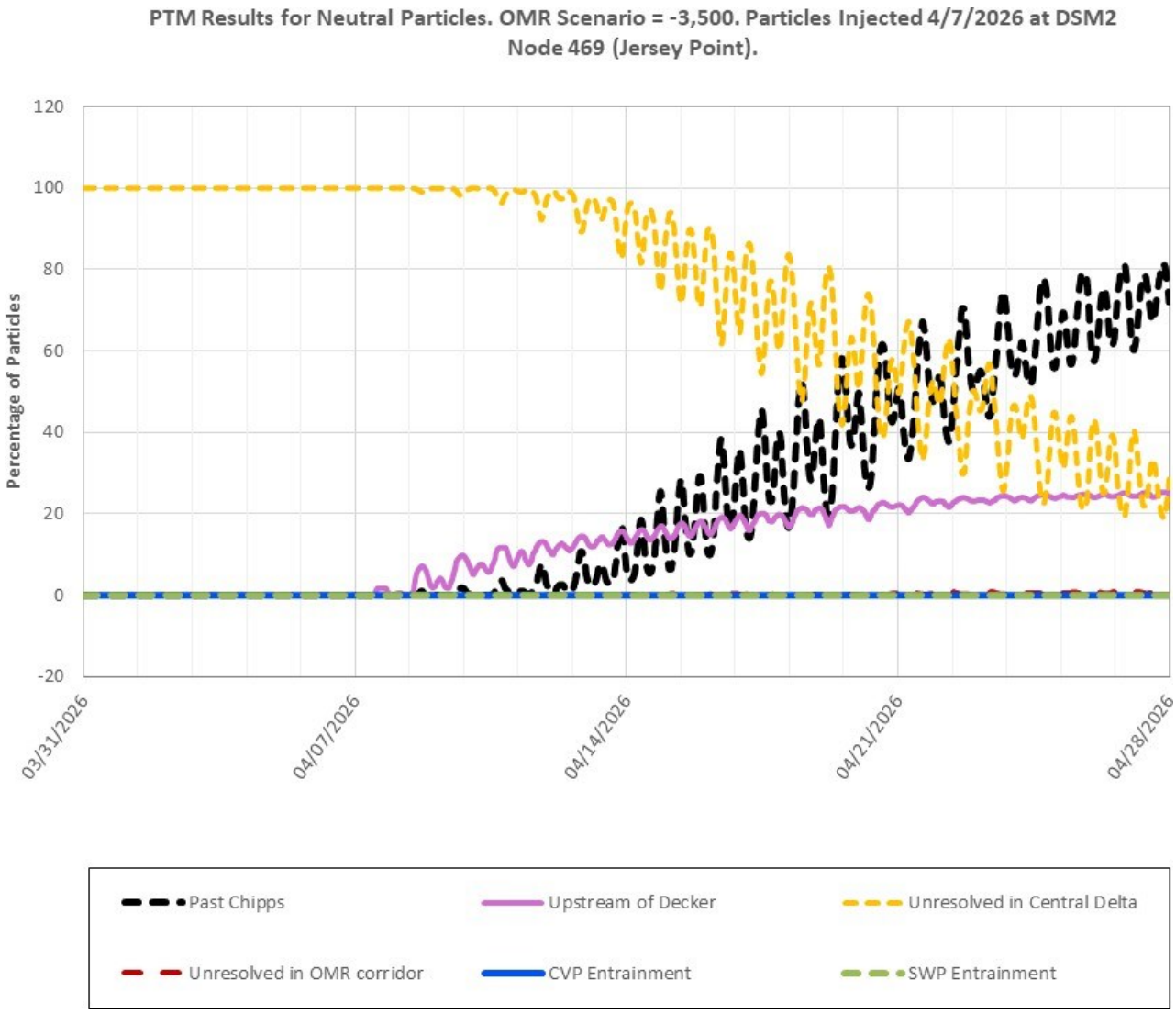

Figure 17: PTM Results for Neutral Particles at Jersey Point under OMR Scenario -3,500 cfs

Figure 17 is a line graph showing the percentage of neutral particles over time from April 7 to April 28, 2026, injected on April 7, 2026 at DSM2 Node 469 (Jersey Point) under the OMR scenario of -3,500 cfs. Past Chipps (black) gradually increases throughout the evaluation period to approximately 80% by late April, while Upstream of Decker (pink) rises more slowly to around 25%. Unresolved in Central Delta (yellow) remains near 100% early in the period before declining steadily to approximately 20–25% by the end of the evaluation period.

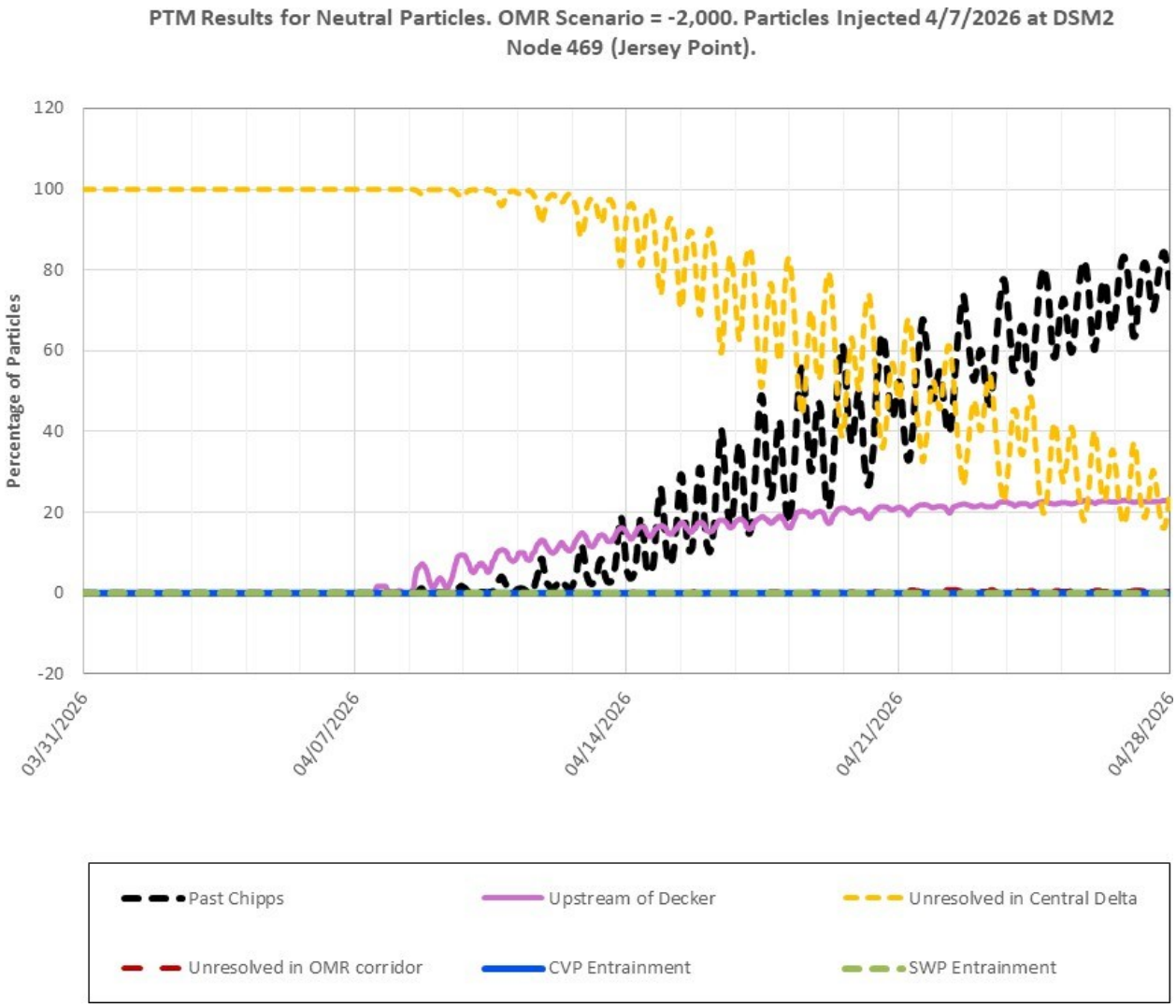

Figure 18: PTM Results for Neutral Particles at Jersey Point under OMR Scenario -2,000 cfs

Figure 18 is a line graph showing the percentage of neutral particles over time from April 7 to April 28, 2026, injected on April 7, 2026 at DSM2 Node 469 (Jersey Point) under the OMR scenario of -2,000 cfs. Past Chipps (black) gradually increases throughout the evaluation period to approximately 80% by late April, while Upstream of Decker (pink) rises more slowly to around 20–25%. Unresolved in Central Delta (yellow) remains near 100% early in the period before declining steadily to approximately 20% by the end of the evaluation period.

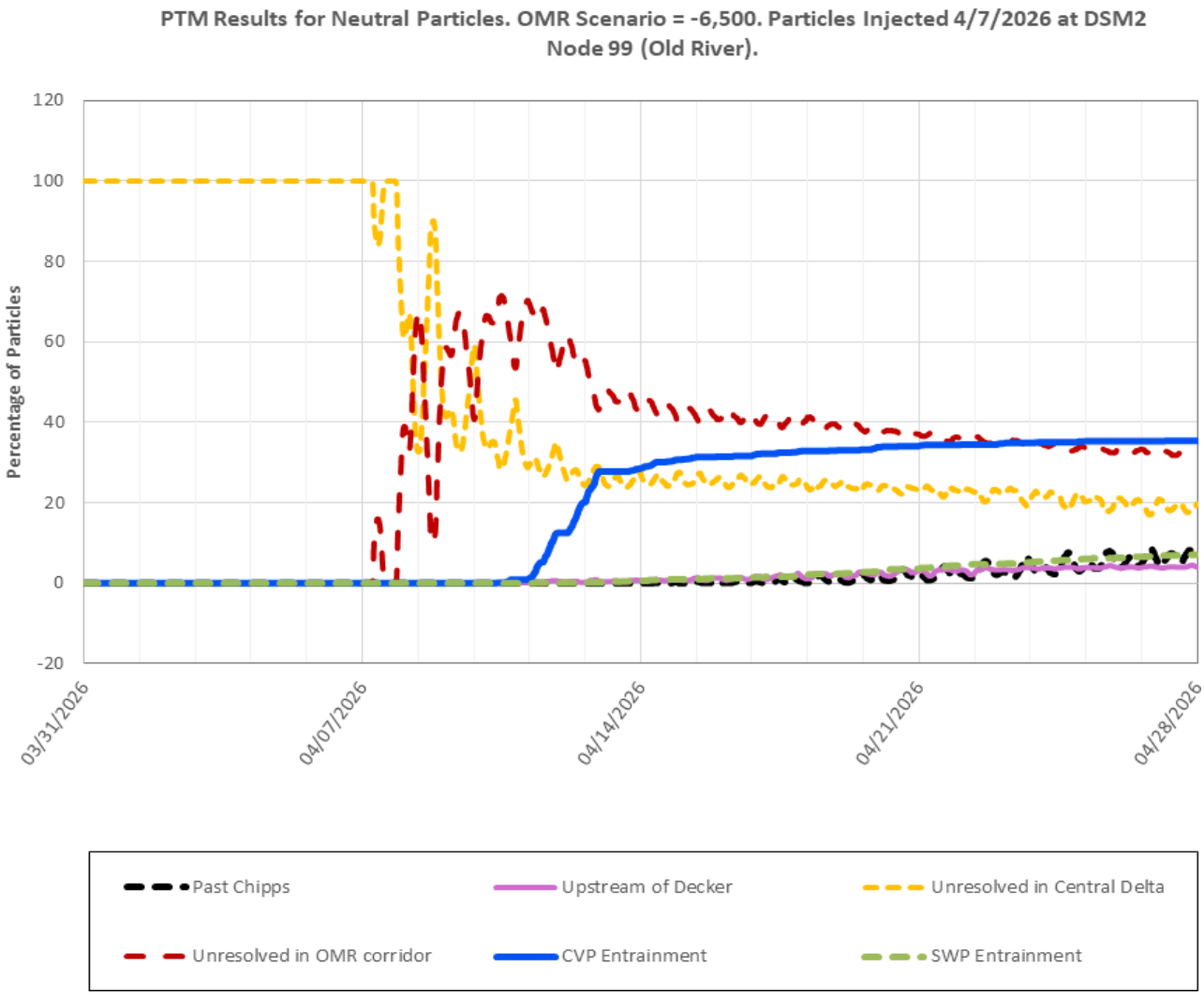

Figure 19: PTM Results for Neutral Particles at Old River under OMR Scenario -6,500 cfs

Figure 19 is a line graph showing the percentage of neutral particles over time from April 7 to April 28, 2026, injected on April 7, 2026 at DSM2 Node 99 (Old River) under the OMR scenario of -6,500 cfs. CVP Entrapment (blue) rises rapidly to approximately 30–35% by mid-April and remains relatively stable through the remainder of the evaluation period, while Unresolved in OMR corridor (red) peaks near 70% before gradually declining to around 30–35% by late April. Unresolved in Central Delta (yellow) declines from near 100% early in the period to approximately 20% by the end of the evaluation period.

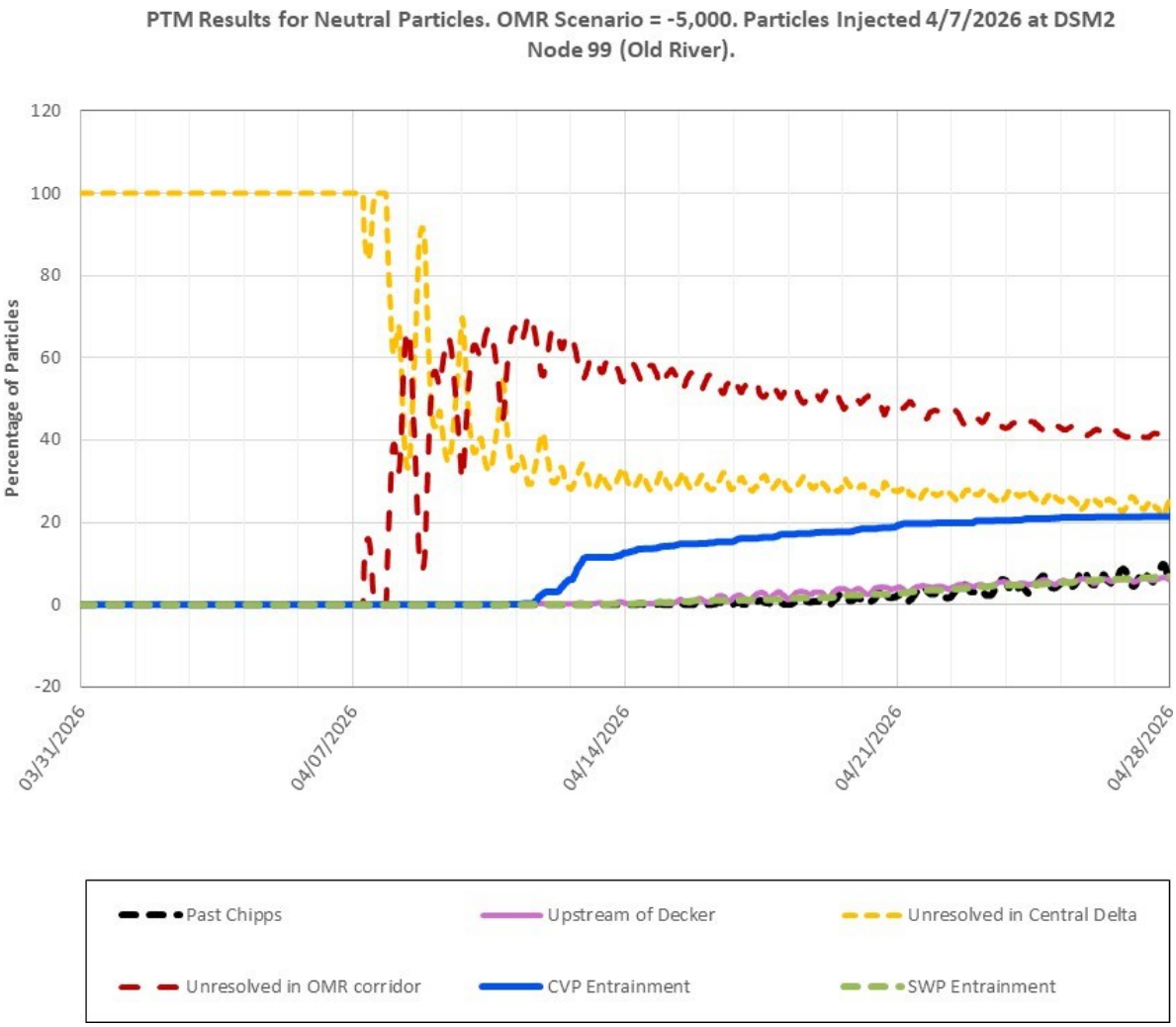

Figure 20: PTM Results for Neutral Particles at Old River under OMR Scenario -5,000 cfs

Figure 20 is a line graph showing the percentage of neutral particles over time from April 7 to April 28, 2026, injected on April 7, 2026 at DSM2 Node 99 (Old River) under the OMR scenario of -5,000 cfs. Unresolved in OMR corridor (red) rises rapidly and remains the dominant pathway through much of the evaluation period, gradually declining from approximately 65% to around 40% by late April. CVP Entrapment (blue) increases steadily to approximately 20–25% by the end of the period, while Unresolved in Central Delta (yellow) declines from near 100% early in the period to approximately 20–25% by late April.

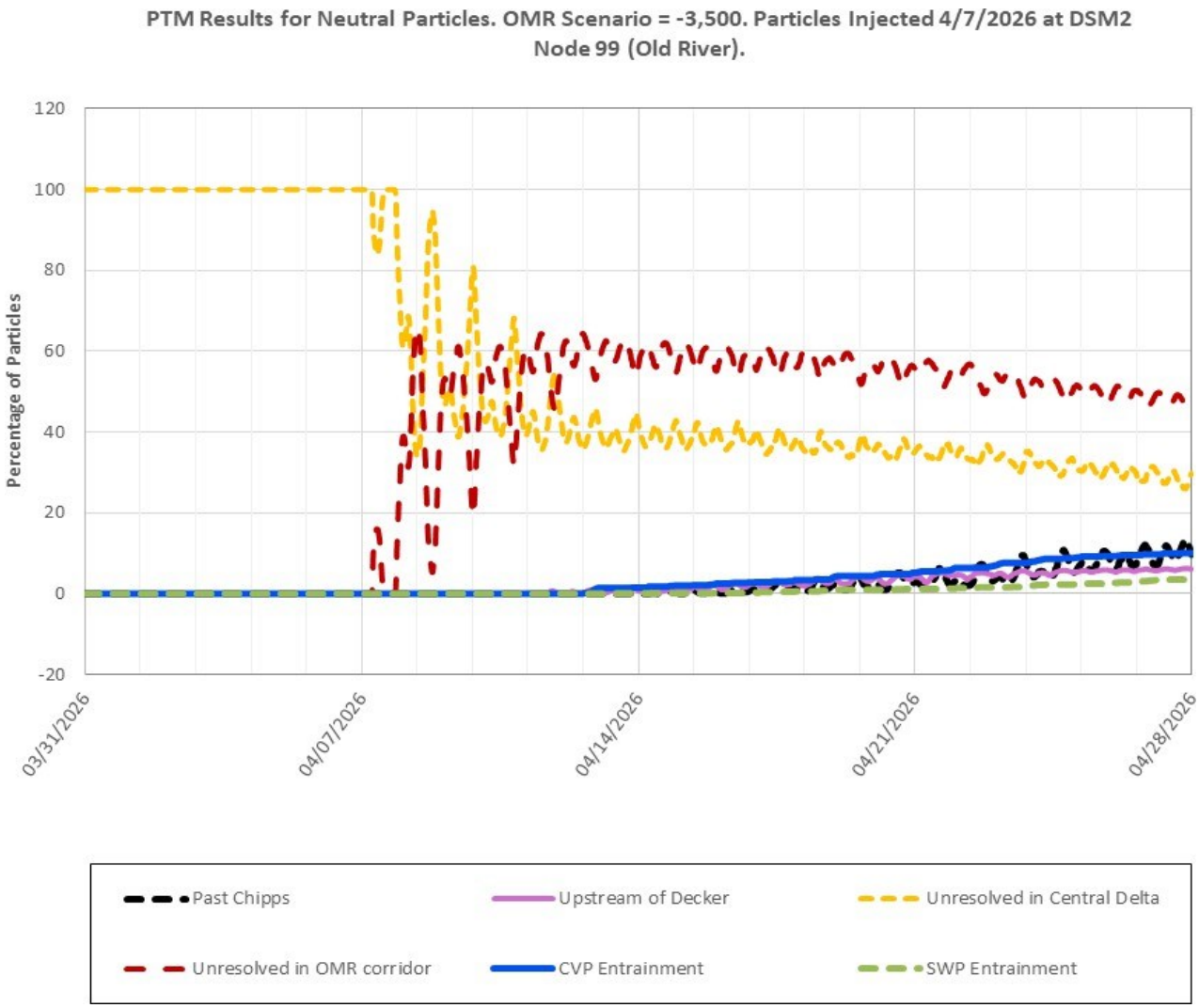

Figure 21: PTM Results for Neutral Particles at Old River under OMR Scenario -3,500 cfs

Figure 21 is a line graph showing the percentage of neutral particles over time from April 7 to April 28, 2026, injected on April 7, 2026 at DSM2 Node 99 (Old River) under the OMR scenario of -3,500 cfs. Unresolved in OMR corridor (red) remains the dominant pathway throughout the evaluation period, stabilizing near 50–60% through mid- to late April. Unresolved in Central Delta (yellow) declines from near 100% early in the period to approximately 30% by the end of the evaluation period, while CVP Entrapment (blue), Past Chipps (black), and Upstream of Decker (pink) remain comparatively low, each generally below 10% through late April.

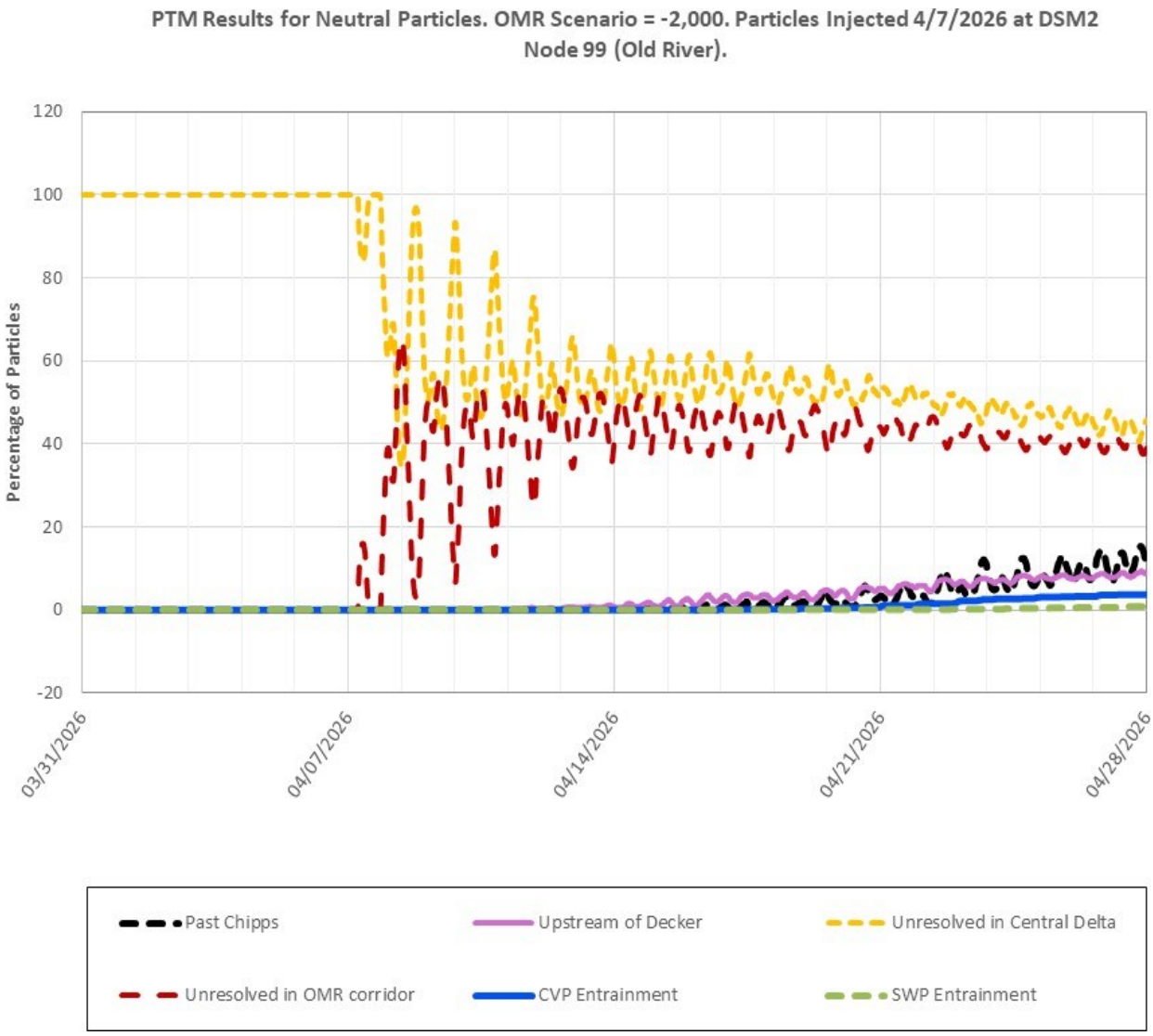

Figure 22: PTM Results for Neutral Particles at Old River under OMR Scenario -2,000 cfs

Figure 22 is a line graph showing the percentage of neutral particles over time from April 7 to April 28, 2026, injected on April 7, 2026 at DSM2 Node 99 (Old River) under the OMR scenario of -2,000 cfs. Unresolved in Central Delta (yellow) and Unresolved in OMR corridor (red) remain the dominant pathways throughout the evaluation period, with both stabilizing near 40–50% through late April. Past Chipps (black) and Upstream of Decker (pink) increase gradually over time but remain comparatively low, reaching approximately 10–15% by the end of the evaluation period, while CVP Entrapment (blue) and SWP Entrapment (green) remain minimal throughout the period.

Surface Oriented Particles (PP)

Table 8. Surface Oriented Particle Fate (percent flux across boundary) for Particles Injected at Chipps (DSM2 Node 465)

Week	OMR Flow Bin	Past Chipps	Upstream of Decker	Unresolved in Central Delta	Unresolved in OMR corridor	CVP Entrainment	SWP Entrainment
Week 1 End: 04/13/2026	-6,500	90.8	0.0	9.2	0.0	0.0	0.0
Week 1 End: 04/13/2026	-5,000	91.5	0.0	8.5	0.0	0.0	0.0
Week 1 End: 04/13/2026	-3,500	93.1	0.0	6.9	0.0	0.0	0.0
Week 1 End: 04/13/2026	-2,000	93.2	0.0	6.8	0.0	0.0	0.0
Week 2 End: 04/20/2026	-6,500	97.8	0.0	2.3	0.0	0.0	0.0
Week 2 End: 04/20/2026	-5,000	97.7	0.0	2.3	0.0	0.0	0.0
Week 2 End: 04/20/2026	-3,500	98.2	0.1	1.8	0.0	0.0	0.0
Week 2 End: 04/20/2026	-2,000	98.4	0.0	1.6	0.0	0.0	0.0
Week 3 End: 04/27/2026	-6,500	98.1	0.1	1.9	0.0	0.0	0.0
Week 3 End: 04/27/2026	-5,000	97.9	0.0	2.1	0.0	0.0	0.0
Week 3 End: 04/27/2026	-3,500	98.6	0.1	1.4	0.0	0.0	0.0
Week 3 End: 04/27/2026	-2,000	98.3	0.0	1.8	0.0	0.0	0.0

Note: values between 0.0 and 0.1 are indicated with <0.1

Table 9. Surface Oriented Particle Fate (percent flux across boundary) for Particles Injected at Cache Slough (DSM2 Node 350)

Week	OMR Flow Bin	Past Chipps	Upstream of Decker	Unresolved in Central Delta	Unresolved in OMR corridor	CVP Entrainment	SWP Entrainment
Week 1 End: 04/13/2026	-6,500	15.4	72.4	84.6	0.0	0.0	0.0
Week 1 End: 04/13/2026	-5,000	14.0	71.4	86.0	0.0	0.0	0.0
Week 1 End: 04/13/2026	-3,500	16.4	71.4	83.6	0.0	0.0	0.0
Week 1 End: 04/13/2026	-2,000	17.1	71.9	82.9	0.0	0.0	0.0
Week 2 End: 04/20/2026	-6,500	72.1	80.3	28.2	0.3	0.0	0.0
Week 2 End: 04/20/2026	-5,000	71.7	79.2	28.4	0.1	0.0	0.0
Week 2 End: 04/20/2026	-3,500	73.8	78.6	26.3	0.1	0.0	0.0
Week 2 End: 04/20/2026	-2,000	75.5	80.3	24.7	0.2	0.0	0.0
Week 3 End: 04/27/2026	-6,500	79.9	83.0	20.5	0.4	0.0	0.0
Week 3 End: 04/27/2026	-5,000	82.7	81.9	17.5	0.2	0.0	0.0
Week 3 End: 04/27/2026	-3,500	82.8	80.9	17.4	0.1	0.0	0.0
Week 3 End: 04/27/2026	-2,000	83.9	82.1	16.3	0.2	0.0	0.0

Note: values between 0.0 and 0.1 are indicated with <0.1

Table 10. Surface Oriented Particle Fate (percent flux across boundary) for Particles Injected at Jersey Point (DSM2 Node 469)

Week	OMR Flow Bin	Past Chipps	Upstream of Decker	Unresolved in Central Delta	Unresolved in OMR corridor	CVP Entrainment	SWP Entrainment
Week 1 End: 04/13/2026	-6,500	11.3	12.9	89.2	0.4	0.0	0.0
Week 1 End: 04/13/2026	-5,000	10.5	11.9	89.9	0.4	0.0	0.0
Week 1 End: 04/13/2026	-3,500	13.4	12.3	86.8	0.2	0.0	0.0
Week 1 End: 04/13/2026	-2,000	15.3	12.7	84.9	0.2	0.0	0.0
Week 2 End: 04/20/2026	-6,500	65.8	19.3	34.7	0.5	0.0	0.0
Week 2 End: 04/20/2026	-5,000	70.3	19.3	30.0	0.3	0.0	0.0
Week 2 End: 04/20/2026	-3,500	71.0	18.3	29.5	0.4	0.1	0.0
Week 2 End: 04/20/2026	-2,000	73.5	17.8	26.9	0.4	0.0	0.0
Week 3 End: 04/27/2026	-6,500	79.7	19.9	20.9	0.5	0.1	0.0
Week 3 End: 04/27/2026	-5,000	81.7	20.4	18.7	0.4	0.0	0.0
Week 3 End: 04/27/2026	-3,500	82.4	19.2	18.4	0.7	0.1	0.0
Week 3 End: 04/27/2026	-2,000	83.3	18.9	17.6	0.8	0.0	0.0

Note: values between 0.0 and 0.1 are indicated with <0.1

Table 11. Surface Oriented Particle Fate (percent flux across boundary) for Particles Injected at Old River (DSM2 Node 99)

Week	OMR Flow Bin	Past Chipps	Upstream of Decker	Unresolved in Central Delta	Unresolved in OMR corridor	CVP Entrainment	SWP Entrainment
Week 1 End: 04/13/2026	-6,500	0.2	1.0	29.3	36.0	34.1	0.4
Week 1 End: 04/13/2026	-5,000	0.1	0.9	36.3	45.8	17.8	0.1
Week 1 End: 04/13/2026	-3,500	0.1	0.8	44.6	51.3	3.9	0.1
Week 1 End: 04/13/2026	-2,000	0.1	1.0	58.9	41.0	0.0	0.0
Week 2 End: 04/20/2026	-6,500	5.5	4.0	22.4	30.4	38.8	2.9
Week 2 End: 04/20/2026	-5,000	4.7	4.4	29.7	38.1	25.2	2.3
Week 2 End: 04/20/2026	-3,500	6.3	5.9	36.8	45.7	10.2	1.0
Week 2 End: 04/20/2026	-2,000	7.4	5.4	50.5	40.1	1.8	0.1
Week 3 End: 04/27/2026	-6,500	10.1	6.2	17.5	25.3	41.0	6.2
Week 3 End: 04/27/2026	-5,000	10.8	5.9	22.7	32.1	28.3	6.0
Week 3 End: 04/27/2026	-3,500	13.4	9.0	28.7	41.0	13.4	3.5
Week 3 End: 04/27/2026	-2,000	16.0	8.8	40.6	36.7	5.5	1.2

Note: values between 0.0 and 0.1 are indicated with <0.

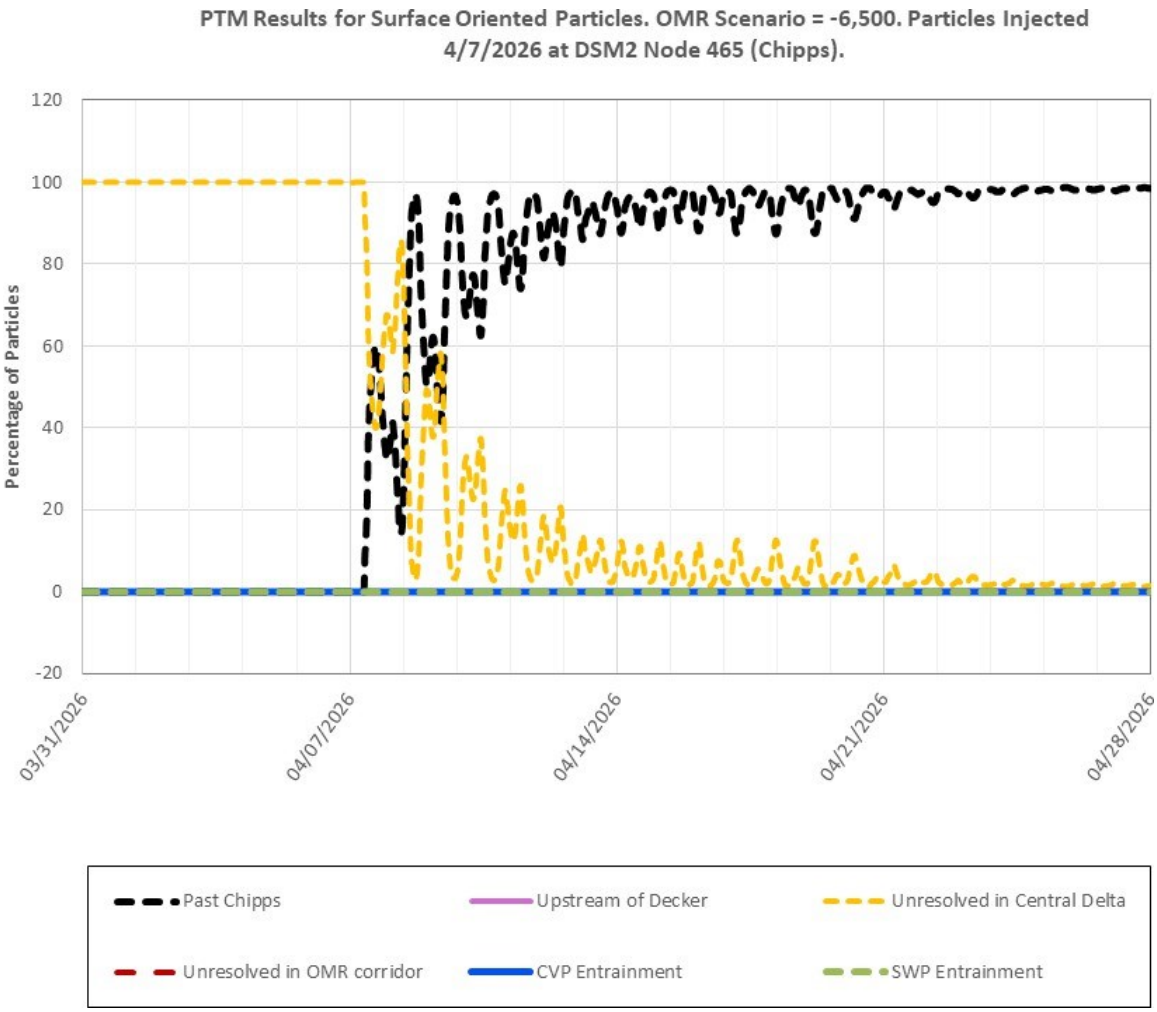

Figure 23: PTM Results for Surface Oriented Particles at Chipps under OMR Scenario -6,500 cfs

Figure 23 is a line graph showing the percentage of surface oriented particles over time from April 7 to April 28, 2026, injected on April 7, 2026 at DSM2 Node 465 (Chipps) under the OMR scenario of -6,500 cfs. Past Chipps (black) increases rapidly after particle injection and reaches nearly 100% by mid-April, remaining dominant through the evaluation period. Unresolved in Central Delta (yellow) declines sharply from 100% immediately after injection to near zero by late April. Upstream of Decker (pink), Unresolved in OMR corridor (red), CVP Entrapment (blue), and SWP Entrapment (green) remain negligible throughout the evaluation period.

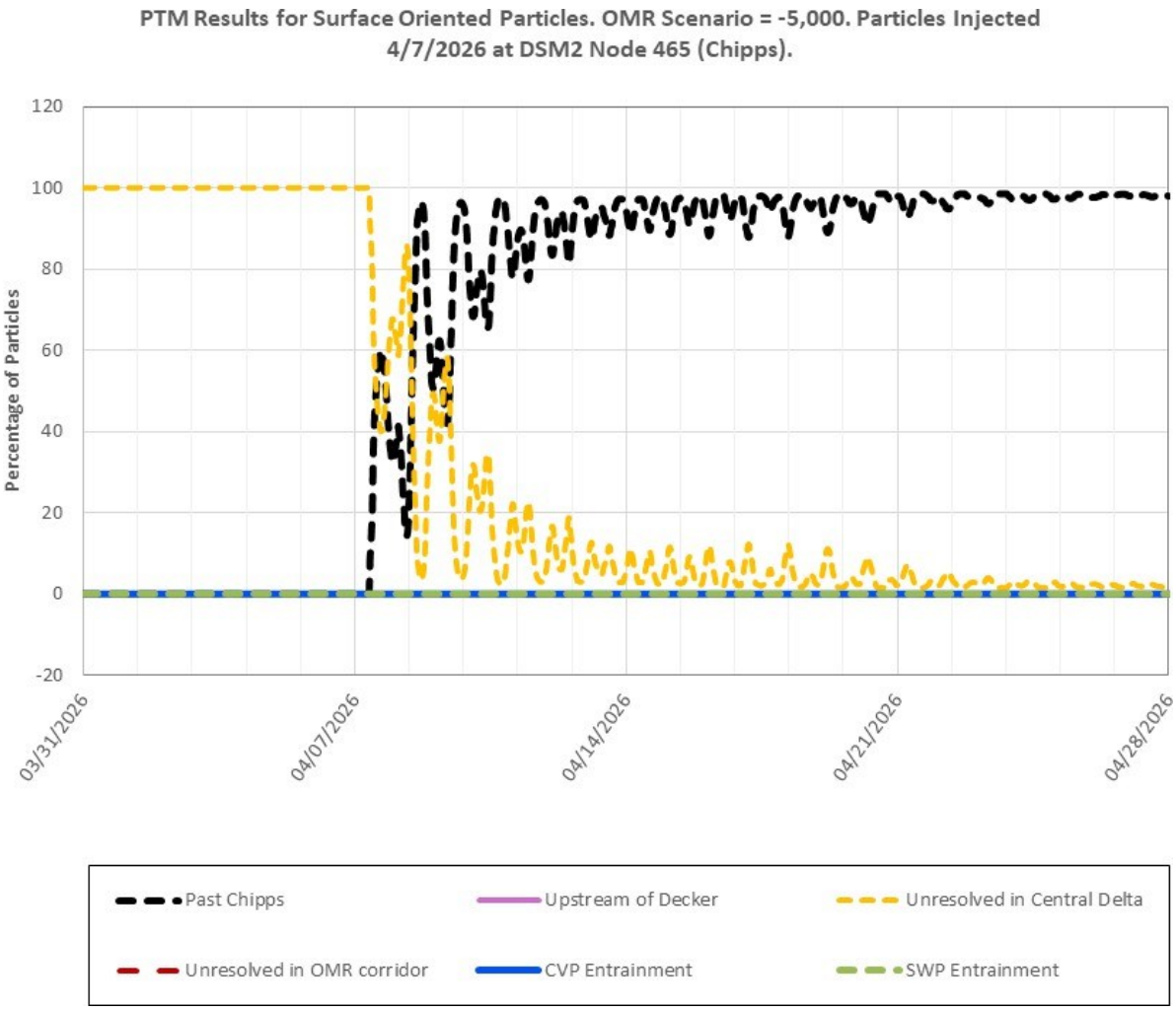

Figure 24: PTM Results for Surface Oriented Particles at Chipps under OMR Scenario -5,000 cfs

Figure 24 is a line graph showing the percentage of surface oriented particles over time from April 7 to April 28, 2026, injected on April 7, 2026 at DSM2 Node 465 (Chipps) under the OMR scenario of -5,000 cfs. Past Chipps (black) rises sharply to near 100% shortly after injection and remains there throughout the evaluation period, while Unresolved in Central Delta (yellow) declines rapidly from 100% after injection to near zero by late April. Upstream of Decker (pink), Unresolved in OMR corridor (red), CVP Entrainment (blue), and SWP Entrainment (green) remain near zero throughout the period.

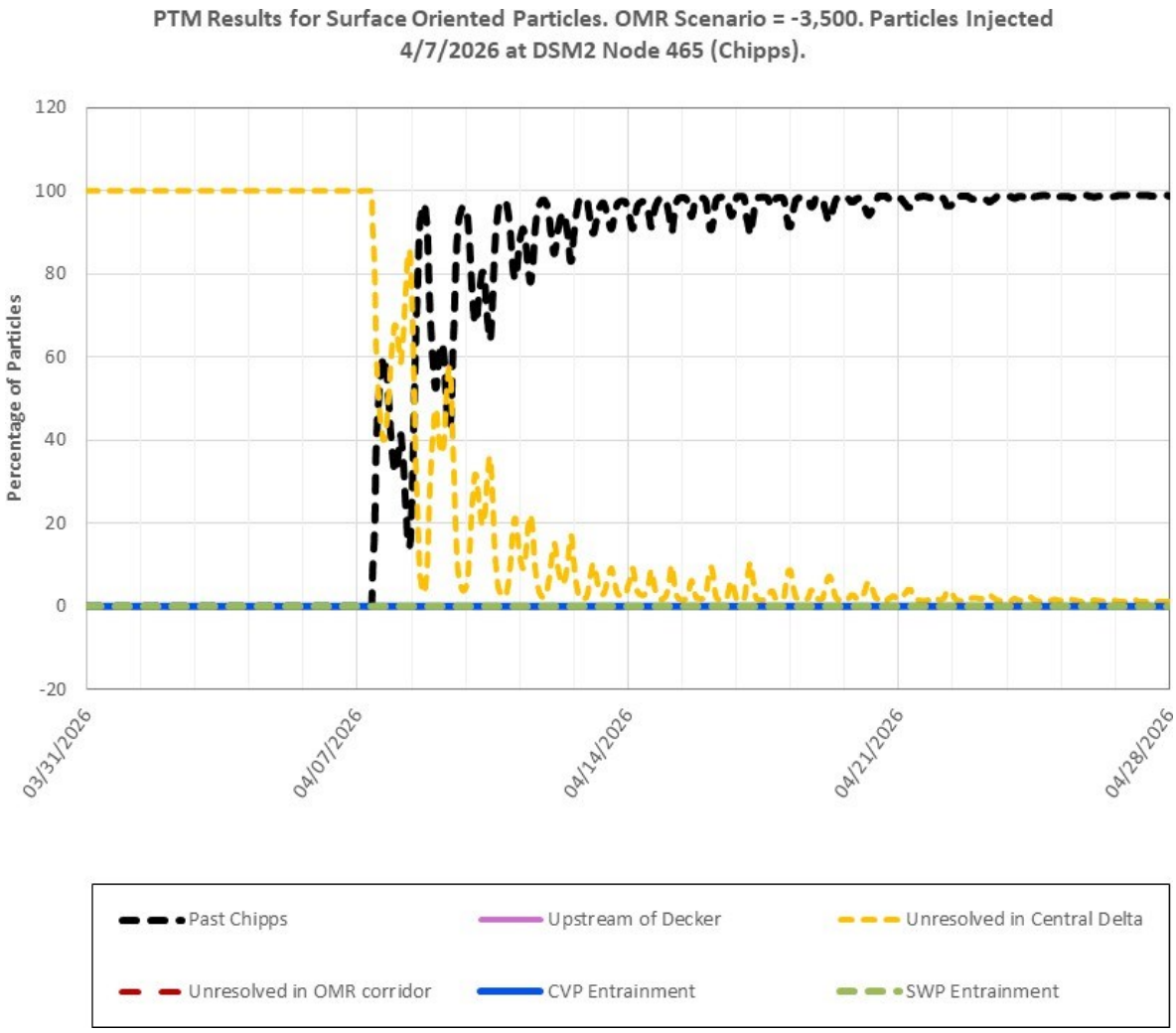

Figure 25: PTM Results for Surface Oriented Particles at Chipps under OMR Scenario -3,500 cfs

Figure 25 is a line graph showing the percentage of surface oriented particles over time from April 7 to April 28, 2026, injected on April 7, 2026 at DSM2 Node 465 (Chipps) under the OMR scenario of -3,500 cfs. Past Chipps (black) rises sharply to near 100% shortly after injection and remains dominant throughout the evaluation period, while Unresolved in Central Delta (yellow) declines rapidly from 100% after injection to near zero by late April. Upstream of Decker (pink), Unresolved in OMR corridor (red), CVP Entrainment (blue), and SWP Entrainment (green) remain near zero throughout the period.

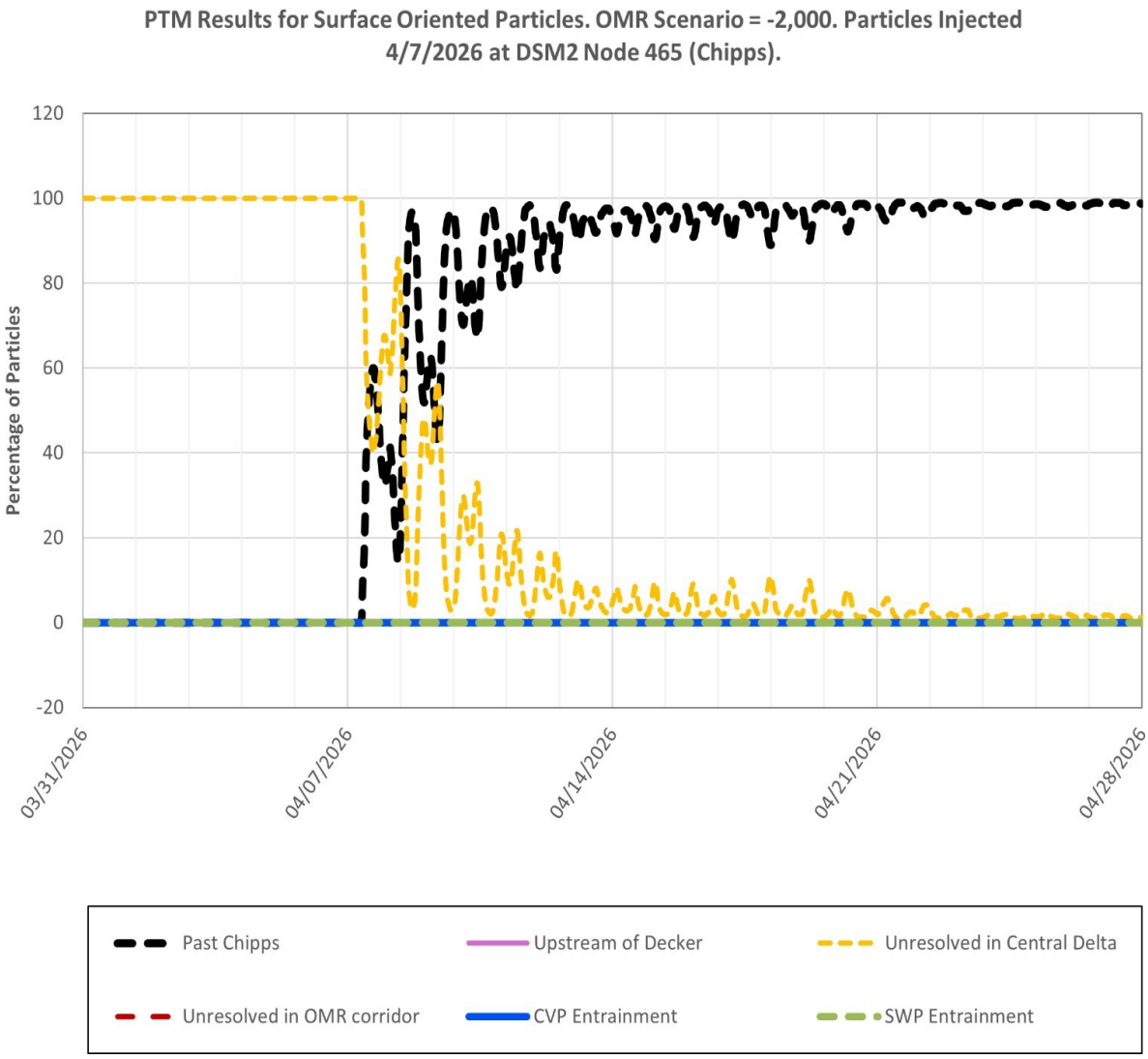

Figure 26: PTM Results for Surface Oriented Particles at Chipps under OMR Scenario -2,000 cfs

Figure 26 is a line graph showing the percentage of surface oriented particles over time from April 7 to April 28, 2026, injected on April 7, 2026 at DSM2 Node 465 (Chipps) under the OMR scenario of -2,000 cfs. Past Chipps (black) rises sharply to near 100% shortly after injection and remains dominant throughout the evaluation period, while Unresolved in Central Delta (yellow) declines rapidly from 100% after injection to near zero by late April. Upstream of Decker (pink), Unresolved in OMR corridor (red), CVP Entrainment (blue), and SWP Entrainment (green) remain near zero throughout the period.

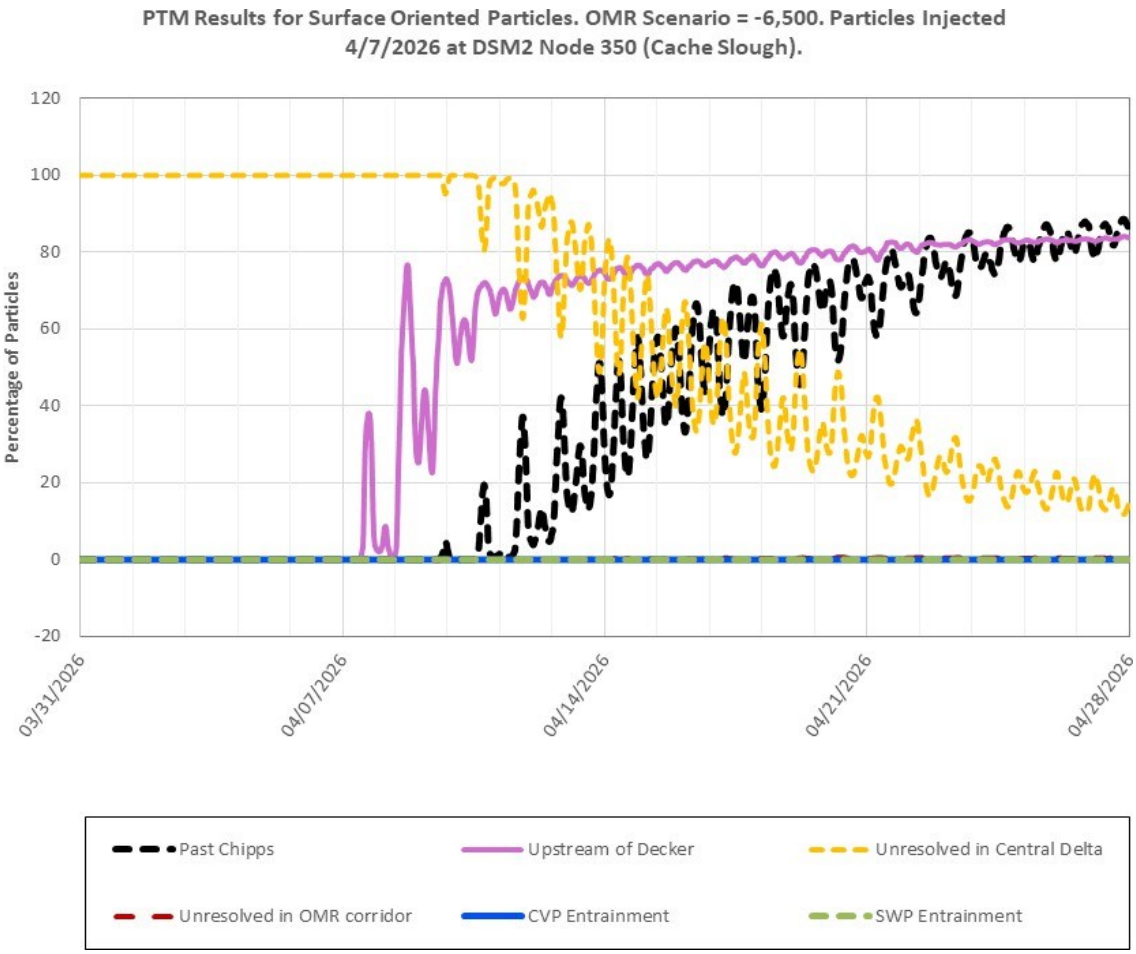

Figure 27: PTM Results for Surface Oriented Particles at Cache Slough under OMR Scenario -6,500 cfs

Figure 27 is a line graph showing the percentage of surface oriented particles over time from April 7 to April 28, 2026, injected on April 7, 2026 at DSM2 Node 350 (Cache Slough) under the OMR scenario of -6,500 cfs. Upstream of Decker (pink) rises rapidly to approximately 80% by mid-April and remains relatively stable through the evaluation period. Past Chipps (black) gradually increases throughout the period and approaches approximately 90% by late April, while Unresolved in Central Delta (yellow) declines from near 100% shortly after injection to around 15–20% by the end of the period. Unresolved in OMR corridor (red), CVP Entrainment (blue), and SWP Entrainment (green) remain near zero throughout the period.

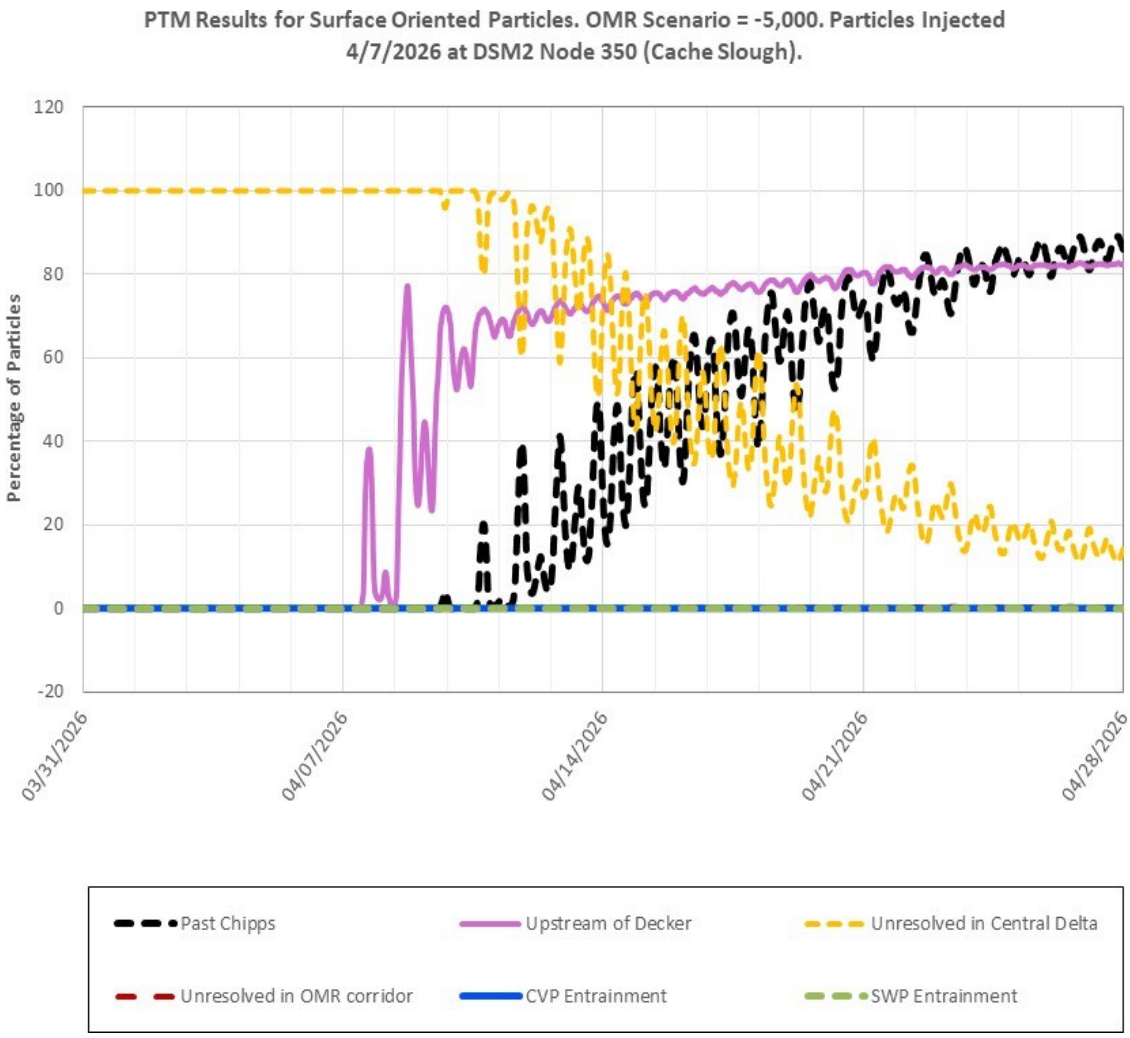

Figure 28: PTM Results for Surface Oriented Particles at Cache Slough under OMR Scenario -5,000 cfs

Figure 28 is a line graph showing the percentage of surface oriented particles over time from April 7 to April 28, 2026, injected on April 7, 2026 at DSM2 Node 350 (Cache Slough) under the OMR scenario of -5,000 cfs. Upstream of Decker (pink) rises rapidly to approximately 80% by mid-April and remains relatively stable through the evaluation period. Past Chipps (black) gradually increases throughout the period and approaches approximately 90% by late April, while Unresolved in Central Delta (yellow) declines from near 100% shortly after injection to around 10–15% by the end of the period. Unresolved in OMR corridor (red), CVP Entrainment (blue), and SWP Entrainment (green) remain near zero throughout the period.

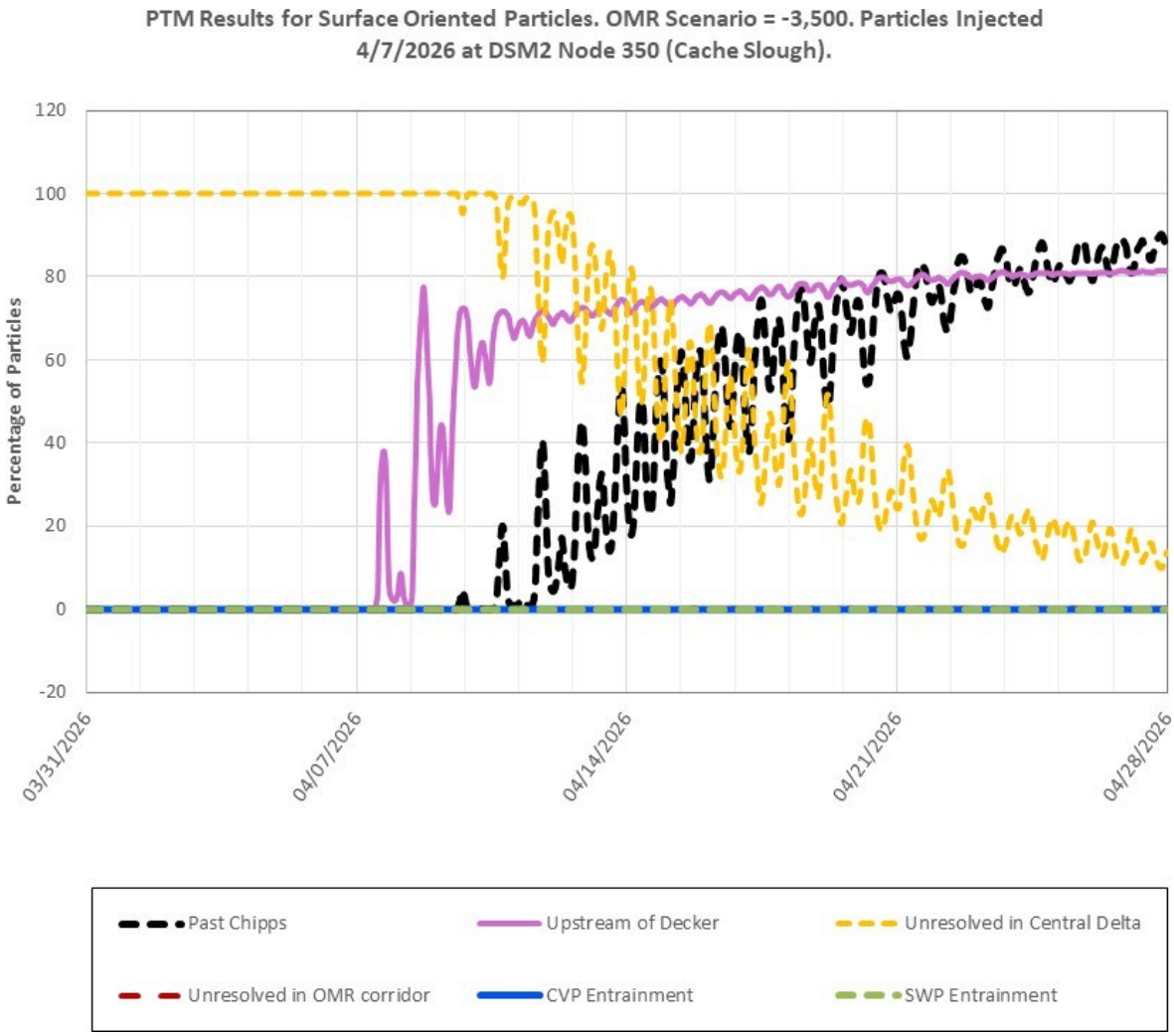

Figure 29: PTM Results for Surface Oriented Particles at Cache Slough under OMR Scenario -3,500 cfs

Figure 29 is a line graph showing the percentage of surface oriented particles over time from April 7 to April 28, 2026, injected on April 7, 2026 at DSM2 Node 350 (Cache Slough) under the OMR scenario of -3,500 cfs. Upstream of Decker (pink) rises rapidly to approximately 75–80% by mid-April and remains relatively stable through the evaluation period. Past Chipps (black) gradually increases throughout the period and approaches approximately 90% by late April, while Unresolved in Central Delta (yellow) declines from near 100% shortly after injection to around 10–15% by the end of the period. Unresolved in OMR corridor (red), CVP Entrainment (blue), and SWP Entrainment (green) remain near zero throughout the period.

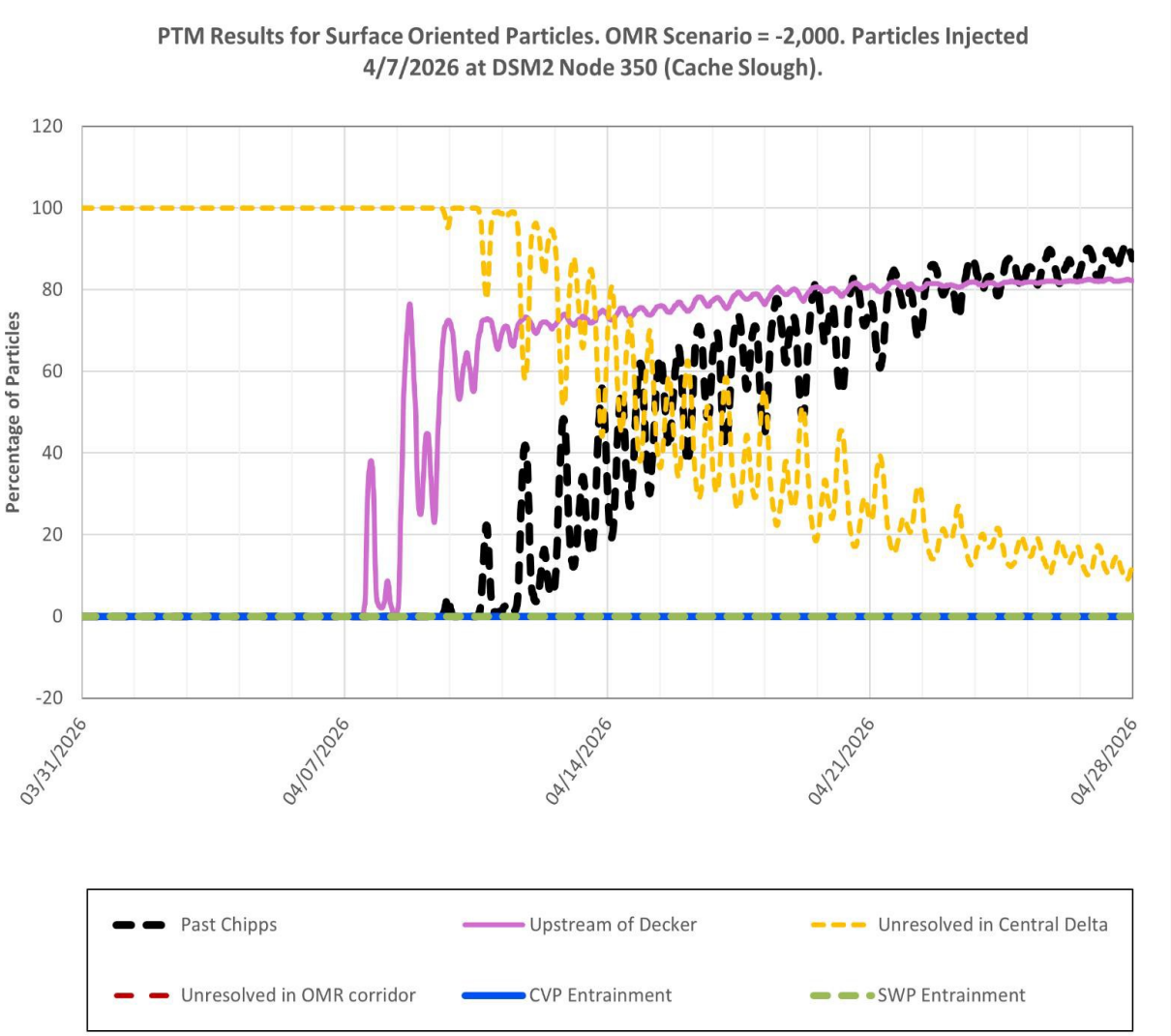

Figure 30: PTM Results for Surface Oriented Particles at Cache Slough under OMR Scenario -2,000 cfs

Figure 30 is a line graph showing the percentage of surface oriented particles over time from April 7 to April 28, 2026, injected on April 7, 2026 at DSM2 Node 350 (Cache Slough) under the OMR scenario of -2,000 cfs. Upstream of Decker (pink) rises rapidly to approximately 75–80% by mid-April and remains relatively stable through the evaluation period. Past Chipps (black) gradually increases throughout the period and approaches approximately 90% by late April, while Unresolved in Central Delta (yellow) declines from near 100% shortly after injection to around 10% by the end of the period. Unresolved in OMR corridor (red), CVP Entrainment (blue), and SWP Entrainment (green) remain near zero throughout the period.

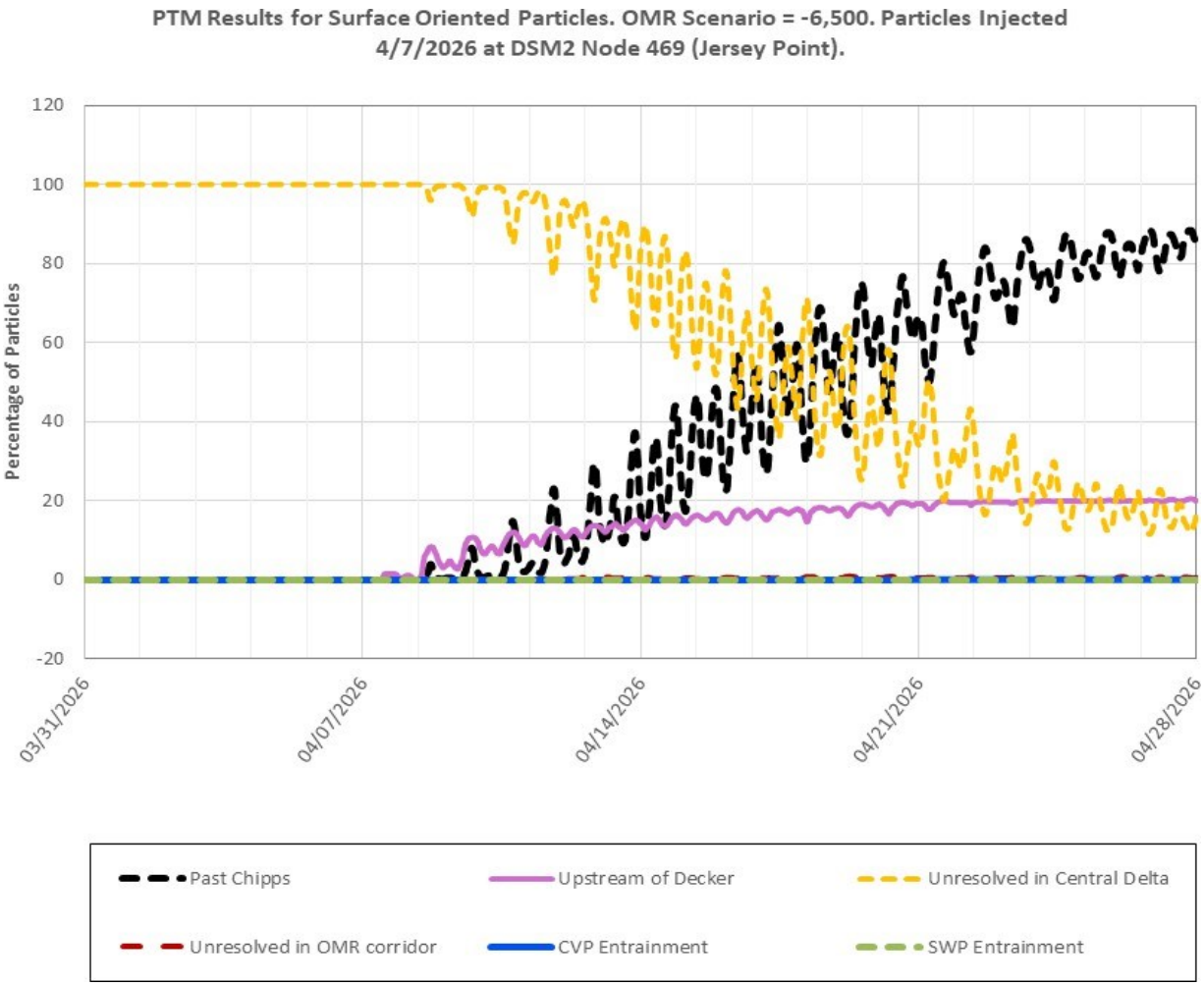

Figure 31: PTM Results for Surface Oriented Particles at Jersey Point under OMR Scenario -6,500 cfs

Figure 31 is a line graph showing the percentage of surface oriented particles over time from April 7 to April 28, 2026, injected on April 7, 2026 at DSM2 Node 469 (Jersey Point) under the OMR scenario of -6,500 cfs. Unresolved in Central Delta (yellow) starts near 100% before declining to approximately 15–20% by late April, Past Chipps (black) rises steadily to roughly 90%, and Upstream of Decker (pink) increases gradually to approximately 20% by the end of the period. Unresolved in OMR corridor (red), CVP Entrainment (blue), and SWP Entrainment (green) remain near zero throughout the evaluation period.

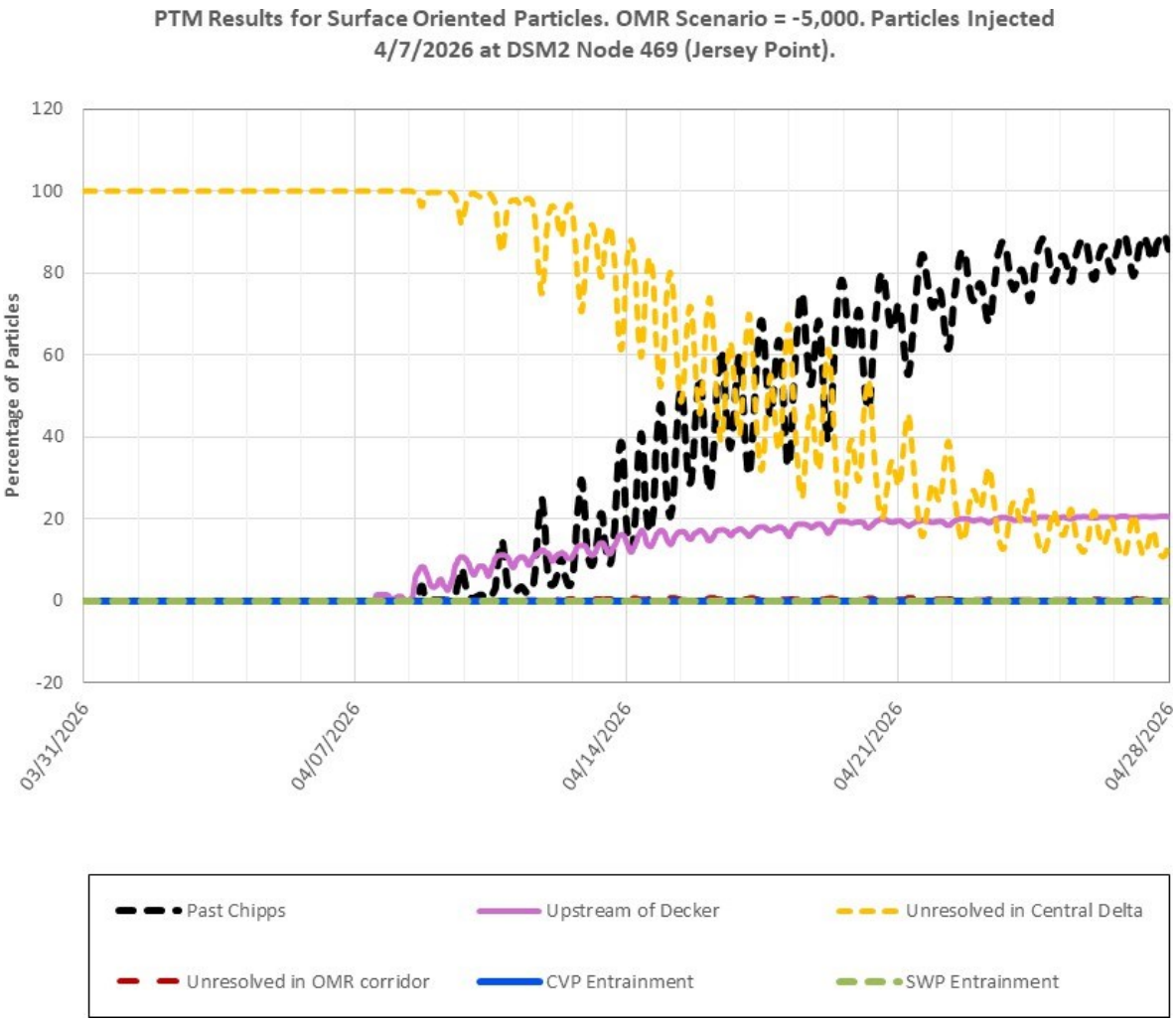

Figure 32: PTM Results for Surface Oriented Particles at Jersey Point under OMR Scenario -5,000 cfs

Figure 32 is a line graph showing the percentage of surface oriented particles over time from April 7 to April 28, 2026, injected on April 7, 2026 at DSM2 Node 469 (Jersey Point) under the OMR scenario of -5,000 cfs. Unresolved in Central Delta (yellow) starts near 100% before declining to approximately 10–15% by late April, Past Chipps (black) rises steadily to roughly 90%, and Upstream of Decker (pink) increases gradually to approximately 20% by the end of the period. Unresolved in OMR corridor (red), CVP Entrainment (blue), and SWP Entrainment (green) remain near zero throughout the evaluation period.

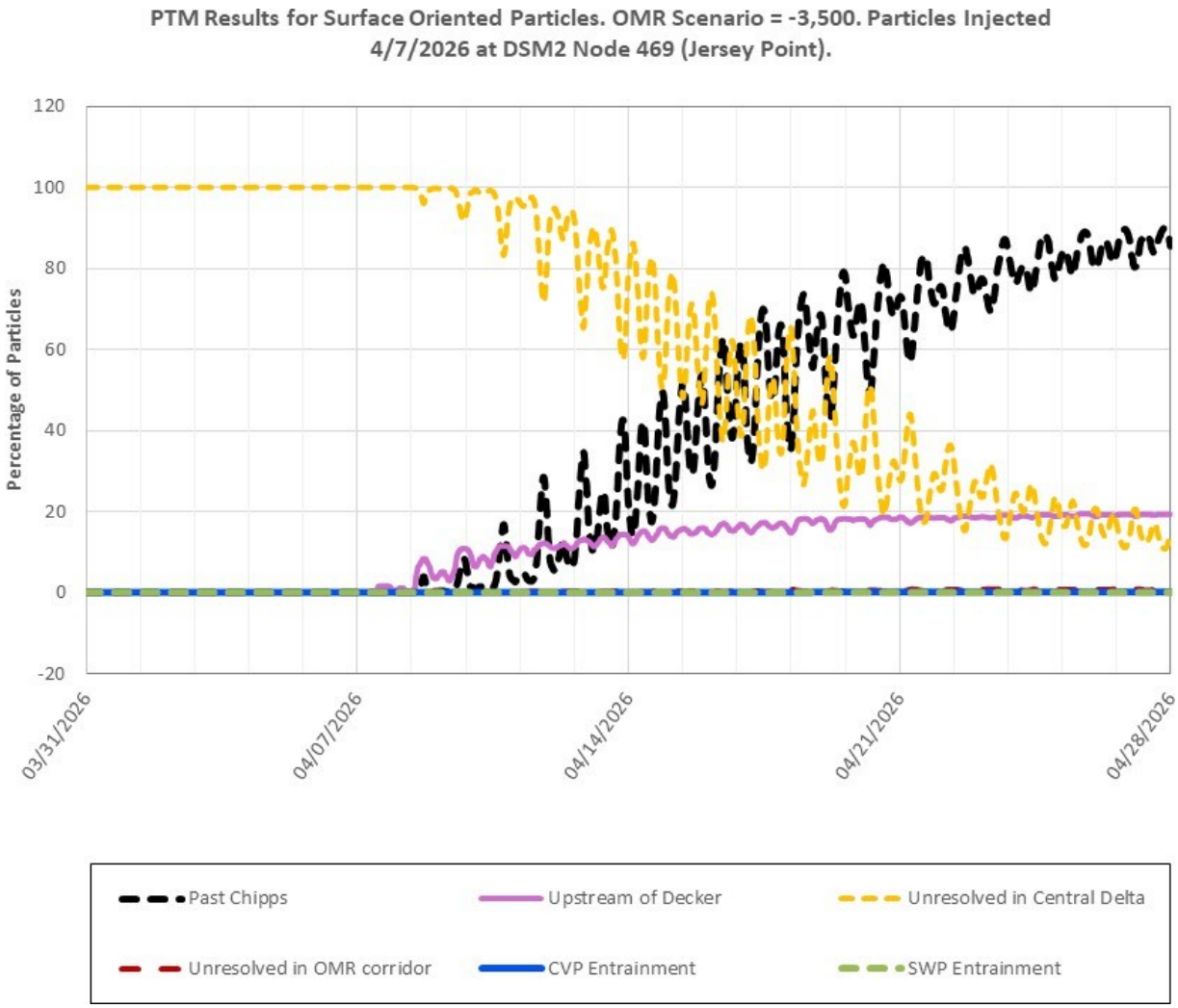

Figure 33: PTM Results for Surface Oriented Particles at Jersey Point under OMR Scenario -3,500 cfs

Figure 33 is a line graph showing the percentage of surface oriented particles over time from April 7 to April 28, 2026, injected on April 7, 2026 at DSM2 Node 469 (Jersey Point) under the OMR scenario of -3,500 cfs. Unresolved in Central Delta (yellow) starts near 100% before declining to approximately 10–15% by late April, Past Chipps (black) rises steadily to roughly 90%, and Upstream of Decker (pink) increases gradually to approximately 20% by the end of the period. Unresolved in OMR corridor (red), CVP Entrainment (blue), and SWP Entrainment (green) remain near zero throughout the evaluation period.

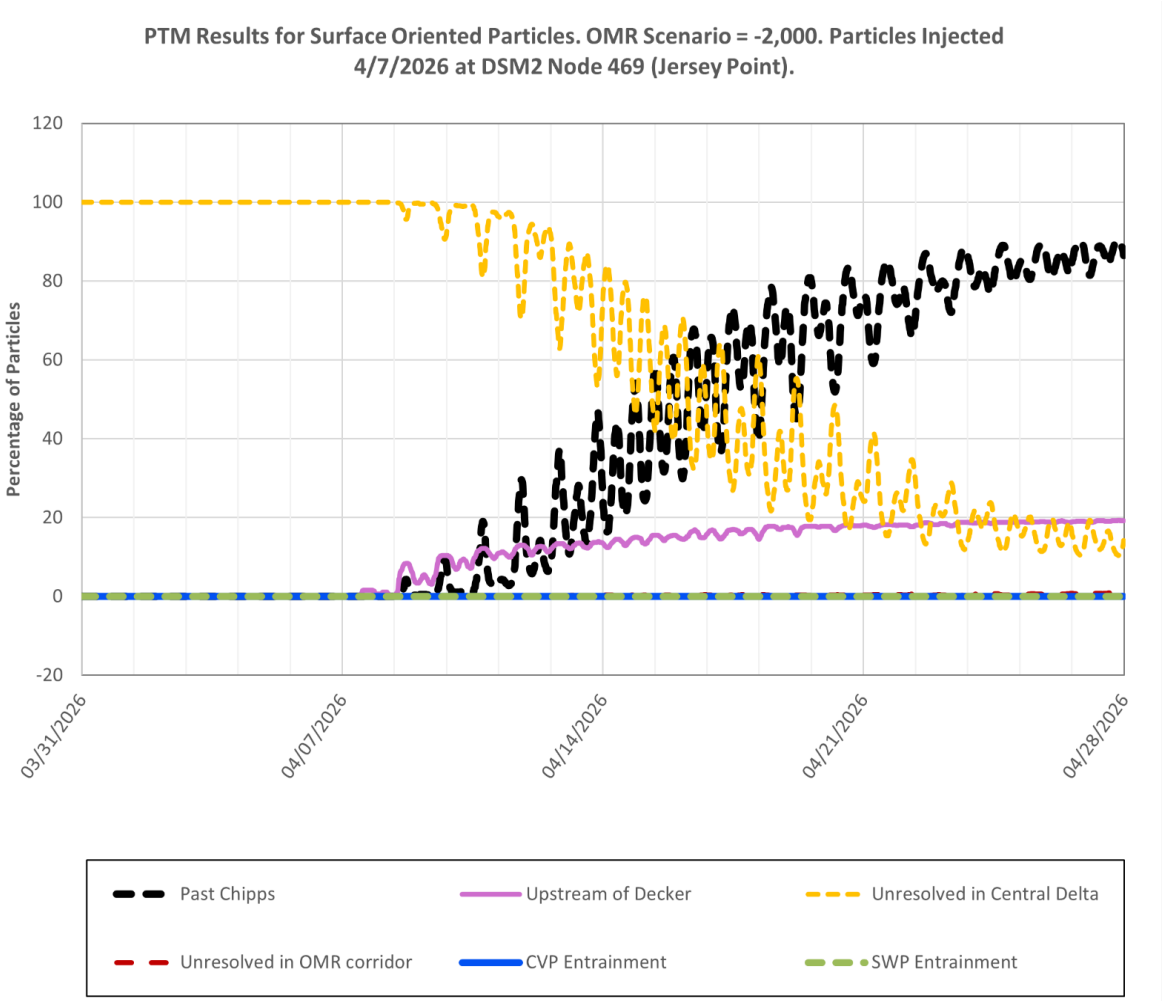

Figure 34: PTM Results for Surface Oriented Particles at Jersey Point under OMR Scenario -2,000 cfs

Figure 34 is a line graph showing the percentage of surface oriented particles over time from April 7 to April 28, 2026, injected on April 7, 2026 at DSM2 Node 469 (Jersey Point) under the OMR scenario of -2,000 cfs. Unresolved in Central Delta (yellow) starts near 100% before declining to approximately 10–15% by late April, Past Chipps (black) rises steadily to roughly 90%, and Upstream of Decker (pink) increases gradually to approximately 20% by the end of the period. Unresolved in OMR corridor (red), CVP Entrainment (blue), and SWP Entrainment (green) remain near zero throughout the evaluation period.

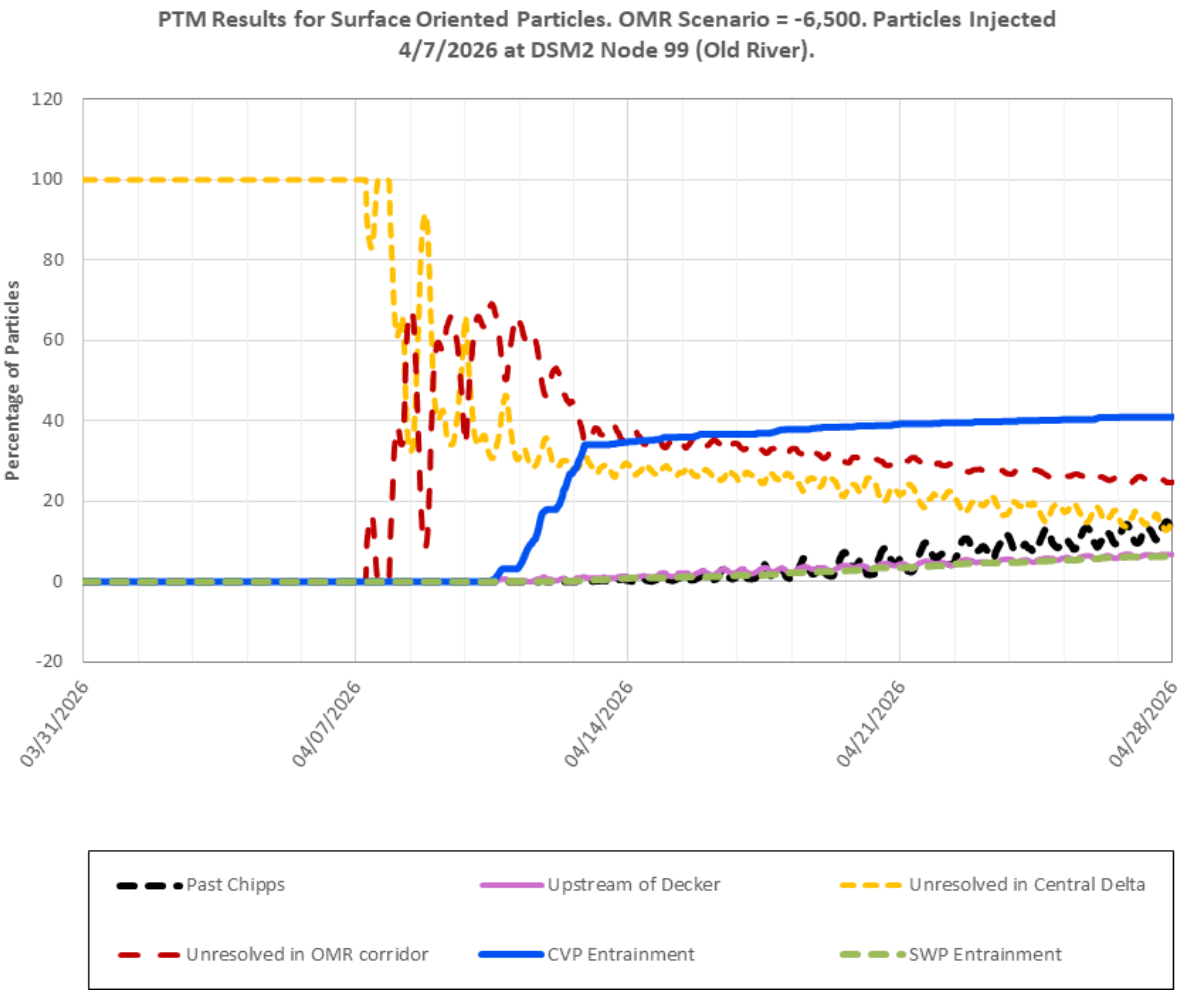

Figure 35: PTM Results for Surface Oriented Particles at Old River under OMR Scenario -6,500 cfs

Figure 35 is a line graph showing the percentage of surface oriented particles over time from April 7 to April 28, 2026, injected on April 7, 2026 at DSM2 Node 99 (Old River) under the OMR scenario of -6,500 cfs. CVP Entrainment (blue) rises rapidly to approximately 35–40% by mid-April and remains relatively stable through the end of the period. Unresolved in OMR corridor (red) peaks near 65–70% shortly after injection before gradually declining to around 25% by late April, while Unresolved in Central Delta (yellow) decreases from near 100% to approximately 15%. Past Chipps (black), Upstream of Decker (pink), and SWP Entrainment (green) increase gradually over time but remain below approximately 15% by the end of the evaluation period.

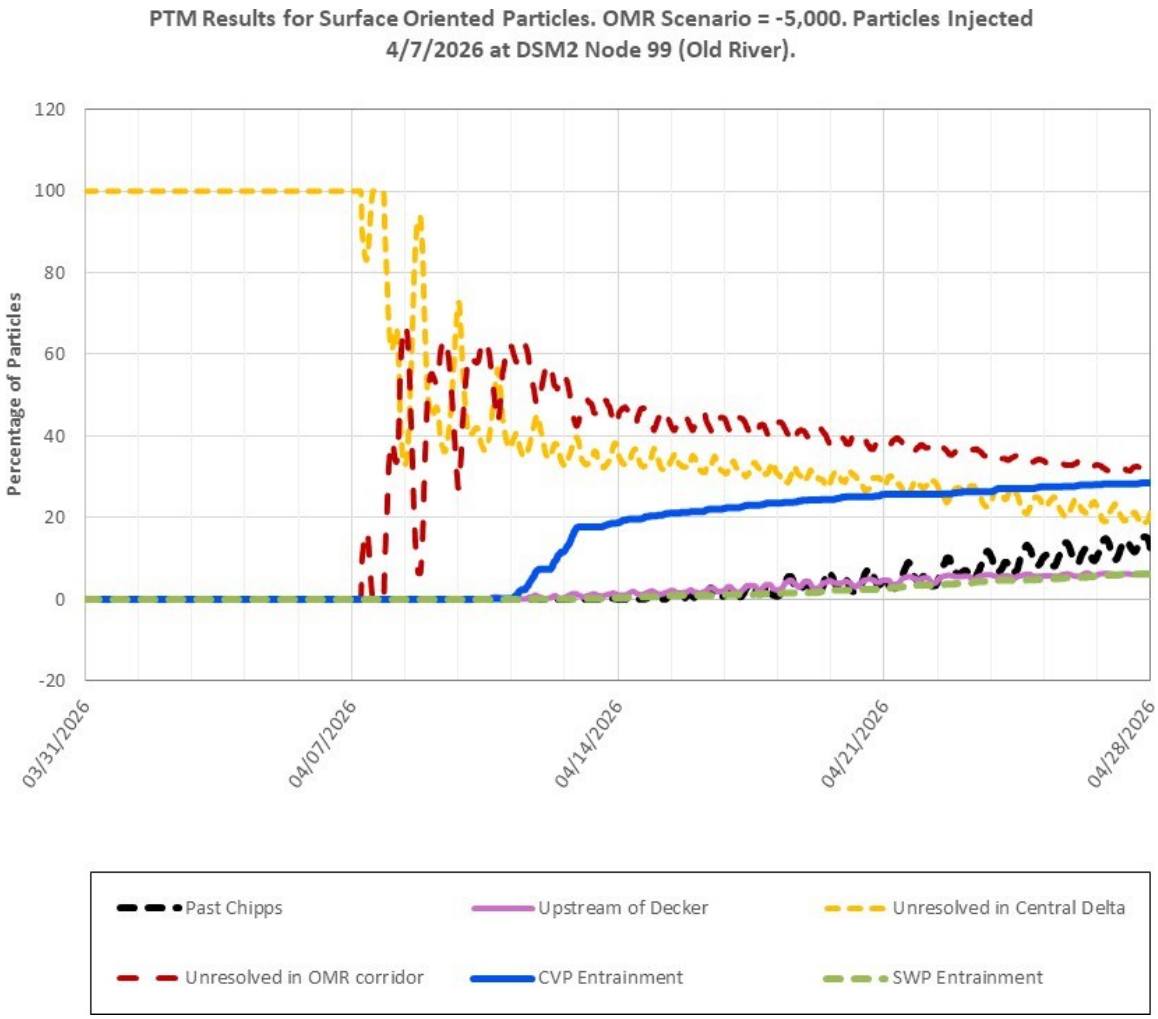

Figure 36: PTM Results for Surface Oriented Particles at Old River under OMR Scenario -5,000 cfs

Figure 36 is a line graph showing the percentage of surface oriented particles over time from April 7 to April 28, 2026, injected on April 7, 2026 at DSM2 Node 99 (Old River) under the OMR scenario of -5,000 cfs. Unresolved in OMR corridor (red) increases rapidly to approximately 60% shortly after injection before gradually declining to around 30% by late April. CVP Entrainment (blue) rises steadily through the evaluation period, reaching approximately 30% by the end of April, while Unresolved in Central Delta (yellow) decreases from near 100% to roughly 20%. Past Chipps (black), Upstream of Decker (pink), and SWP Entrainment (green) increase gradually over time but remain below approximately 15% by the end of the period.

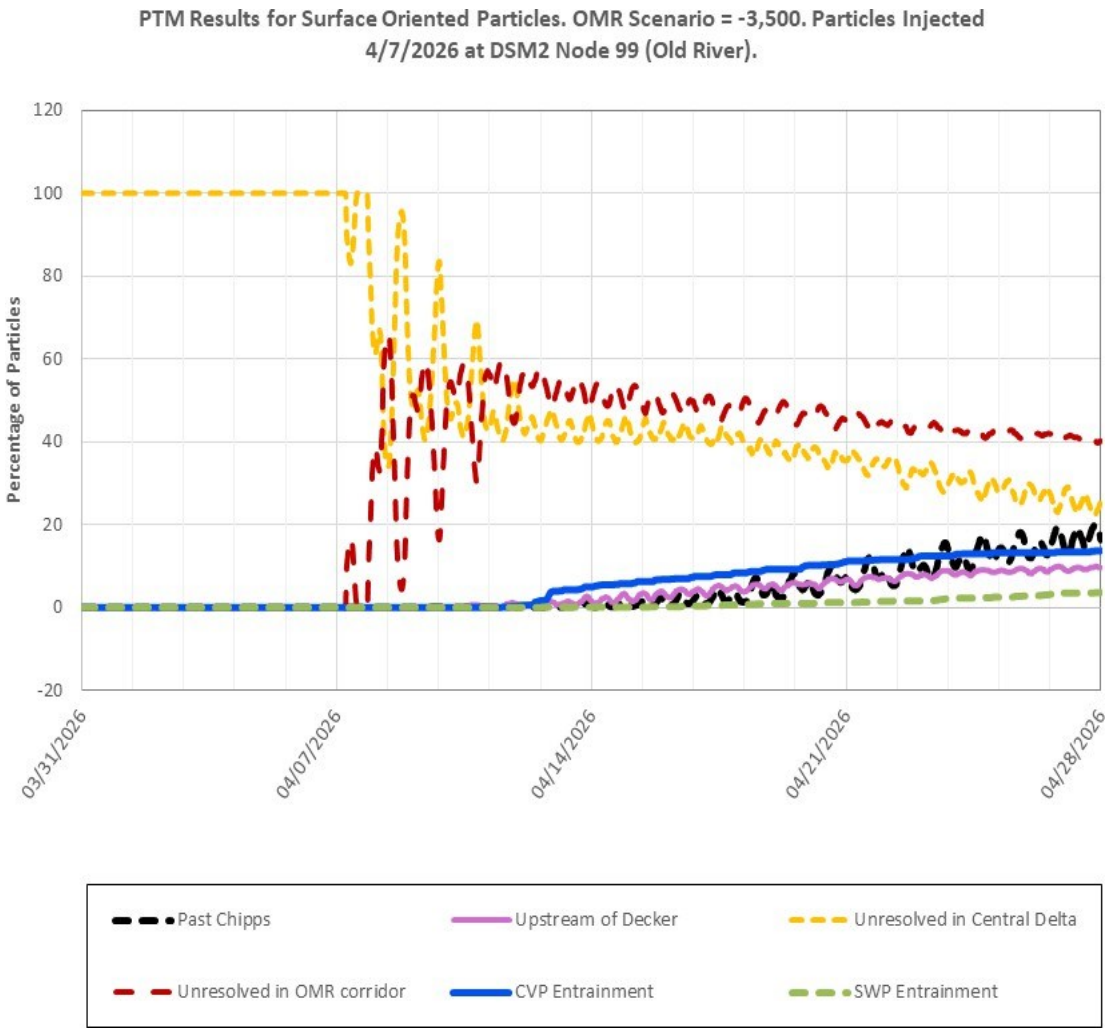

Figure 37: PTM Results for Surface Oriented Particles at Old River under OMR Scenario -3,500 cfs

Figure 37 is a line graph showing the percentage of surface oriented particles over time from April 7 to April 28, 2026, injected on April 7, 2026 at DSM2 Node 99 (Old River) under the OMR scenario of -3,500 cfs. Unresolved in OMR corridor (red) increases rapidly to approximately 55–60% shortly after injection before gradually declining to around 40% by late April. Unresolved in Central Delta (yellow) decreases from near 100% to approximately 25% over the evaluation period, while CVP Entrainment (blue) increases gradually to roughly 15%. Past Chipps (black), Upstream of Decker (pink), and SWP Entrainment (green) also increase steadily through late April, remaining below approximately 20%, 12%, and 5%, respectively, by the end of the period.

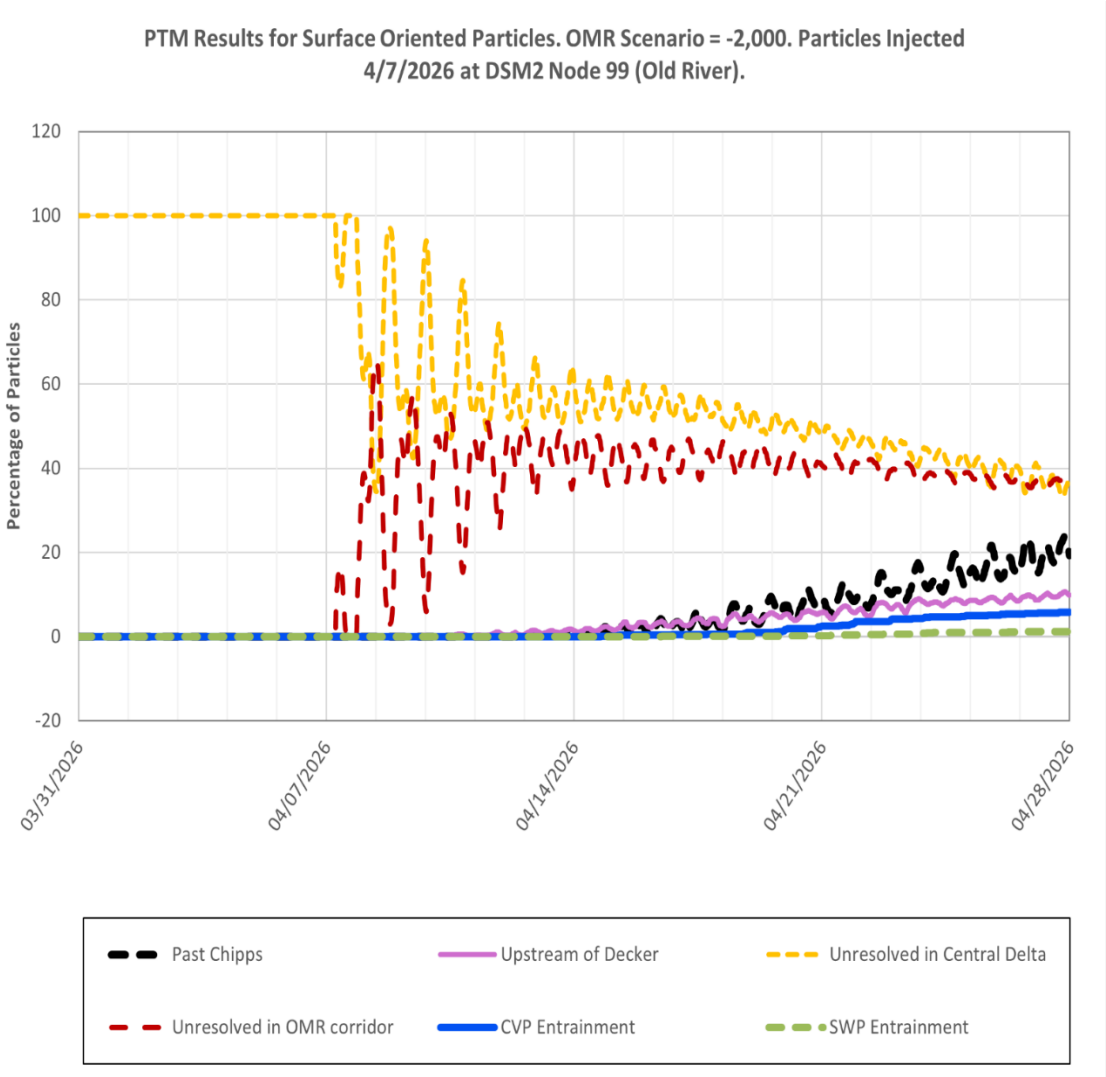

Figure 38: PTM Results for Surface Oriented Particles at Old River under OMR Scenaro -2,000 cfs

Figure 38 is a line graph showing the percentage of surface oriented particles over time from April 7 to April 28, 2026, injected on April 7, 2026 at DSM2 Node 99 (Old River) under the OMR scenario of -2,000 cfs. Unresolved in Central Delta (yellow) decreases from near 100% to approximately 35% by late April, while Unresolved in OMR corridor (red) rises rapidly to around 50% shortly after injection and gradually declines to roughly 35–40% by the end of the period. Past Chipps (black) increases steadily through late April to approximately 20%, while Upstream of Decker (pink), CVP Entrainment (blue), and SWP Entrainment (green) remain comparatively low, each staying below approximately 10% over the evaluation period.

ECO-PTM (Ecological Particle Tracking Model)

ECO-PTM Results Evaluation Period: 04/07/2026 – 04/27/2026
Particles Injected: 04/07/2026
Injection Location: Sacramento River at Freeport

Table 12. Salmon Particle Route Ratio After 3 Weeks (Ending 04/27/2026)

OMR Flow Bin	Sutter Slough Route	Steamboat Slough Route	Sacramento River (SS) Route	Sacramento River (GEO) Route	Georgiana Slough Route
-6,500	0.10	0.09	0.81	0.73	0.27
-5,000	0.10	0.09	0.80	0.72	0.28
-3,500	0.11	0.09	0.80	0.73	0.27
-2,000	0.10	0.09	0.81	0.71	0.29

Table 13. Salmon Particle Route-Specific Survival After 3 Weeks (Ending 04/27/2026)

OMR Flow Bin	Sutter Slough Route	Steamboat Slough Route	Sacramento River Route	Georgiana Slough Route	All Routes Combined
-6,500	40%	55%	49%	27%	44%
-5,000	43%	53%	50%	27%	45%
-3,500	39%	53%	49%	23%	43%
-2,000	41%	54%	51%	30%	45%

Notes:

- Salmon particle route ratio for the Sacramento River (SS) Route reflects particles inserted at Freeport that are not routed through either Sutter Slough or Steamboat Slough.
- Salmon particle route ratio for the Sacramento River (GEO) Route reflects particles inserted at
- Freeport that are not routed through either Sutter Slough, Steamboat Slough, Georgiana Slough, or the Delta Cross Channel (when operational).

Longfin Smelt Larval Population and PTM Analysis

PTM Results Evaluation Period: 04/07/2026 – 04/27/2026
Particles Injected: 04/07/2026
PTM Injection Location: node(s) within each Delta Region identified in map below
PTM Analysis Method: LFS larva abundance is estimated in each Enhanced Delta Smelt Monitoring (EDSM) program subregion. Cumulative particle flux into CVP and SWP facilities is represented in PTM by one injection location per subregion. LFS larva entrainment is estimated by multiplying the LFS subregion abundance by cumulative particle flux into CVP and SWP facilities from the corresponding subregion injection point. LFS entrainment from each subregion is added together and reported at the LFS Region scale identified on the map below.

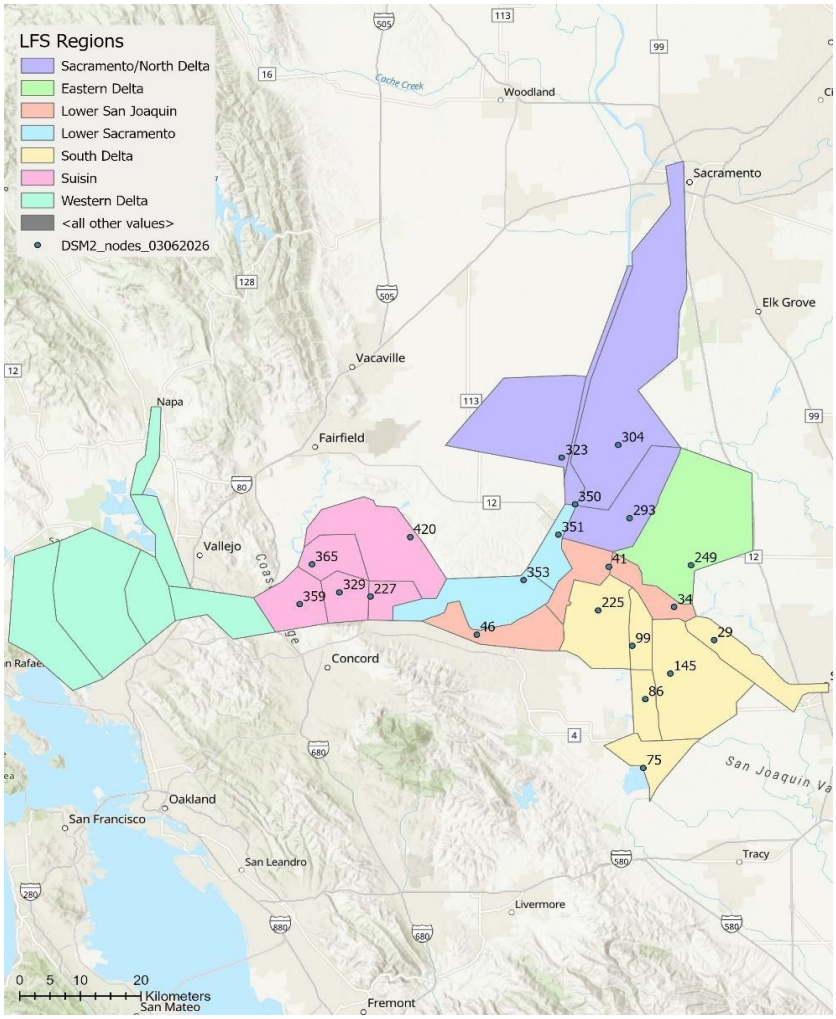

Figure 39: DSM2 PTM Regions in the Sacramento-San Joaquin Delta

Figure 39 is a map of the Sacramento-San Joaquin Delta showing the seven DSM2 PTM regions — Sacramento/North Delta, Eastern Delta, Lower San Joaquin, Lower Sacramento, South Delta, Suisun, and Western Delta — each distinguished by a different color. DSM2 node locations are displayed throughout the map with node numbers labeled, illustrating the regional distribution of model nodes across the Delta and Suisun areas.

Notes:

- EDSM subregions and their corresponding injection node are shown in the figure below.
- No DSM2 nodes are west of the West Suisun Bay subregion, so the furthest west node in the DSM2 domain is used to represent particle entrainment for all subregions west of West Suisun Bay.

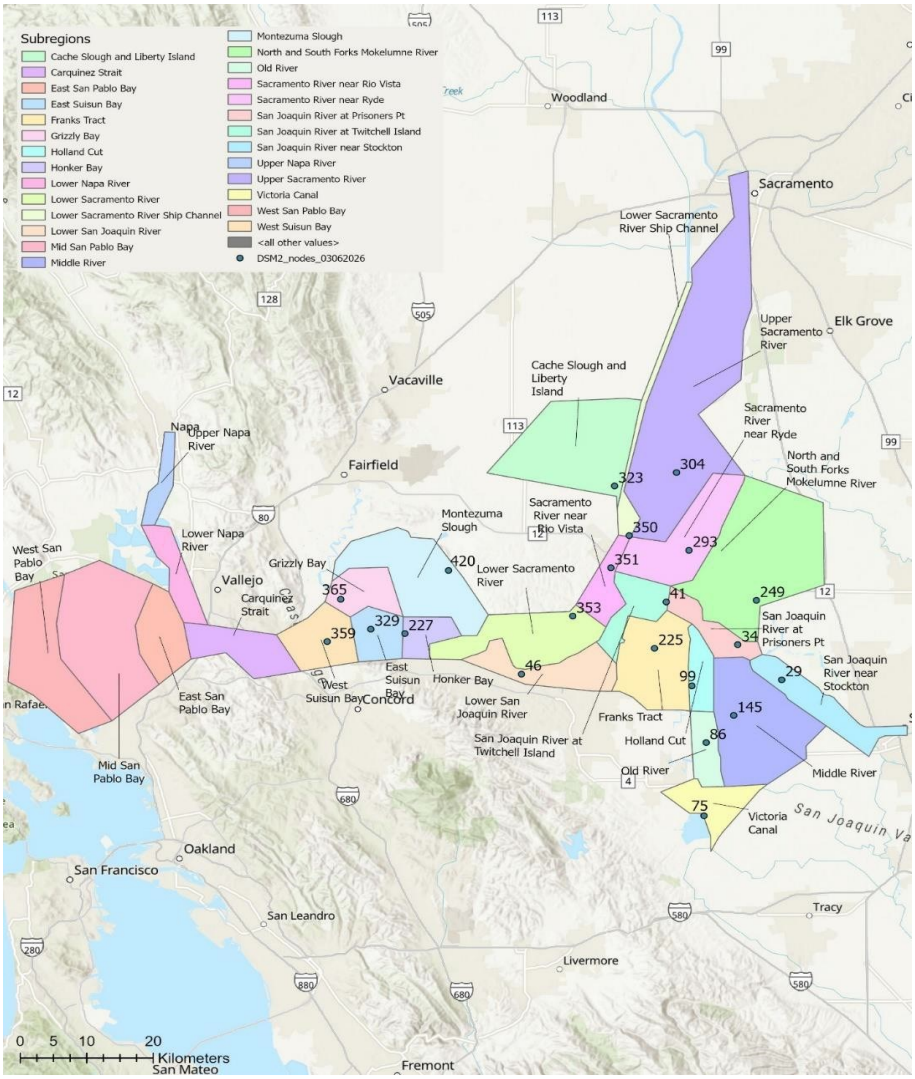

Figure 40: Longfin Smelt Larval Population Estimate Methodology and Survey Status

Figure 40 is a map of the Sacramento–San Joaquin Delta and San Francisco Bay Area showing 25 subregions used in the Longfin Smelt larval population estimate methodology, each distinguished by a different color and labeled with a numeric population estimate (e.g., Cache Slough and Liberty Island, Montezuma Slough, Sacramento River near Rio Vista, San Joaquin River near Stockton, and West Suisun Bay). Survey status points are overlaid across the subregions, illustrating the spatial distribution of sampling locations and estimated larval populations across the Delta and adjacent waterways.

Notes:

- Regional and Delta-wide longfin smelt (LFS) larval population is estimated using SLS survey data from Survey 6 (3/9/2026-3/11/2026) and volumetric expansion methods developed by the Six-Agency Monitoring Survey Design Team. The percent of samples processed as of 04/09/2026 for each survey is shown in the table below. Results from Survey 6 are used because it has been more than one month since Survey 5 and Survey 6 results are partially processed in Suisun and Western Delta. However, since only partial results are available for Suisun and Western Delta and these regions typically contain a high count of LFS larva, the entrainment analysis may overestimate Delta-wide proportional entrainment.

Table 14. SLS Survey Processing Completion by Region and Survey Number, WY 2026

SLS Survey Number	Survey Date	Eastern Delta	Lower Sacramento	Lower San Joaquin	Sacramento/ North Delta	South Delta	Suisun	Western Delta
1	12/29/2025	100%	100%	100%	100%	100%	100%	100%
2	1/12/2026	100%	100%	100%	100%	100%	100%	100%
3	1/26/2026	100%	100%	100%	100%	100%	100%	100%
4	2/9/2026	100%	100%	100%	100%	100%	100%	100%
5	2/23/2026	100%	100%	100%	100%	100%	100%	92%
6	3/9/2026	100%	71%	86%	67%	100%	78%	28%

Notes:

- The DSM2 node used as an injection point, EDSM subregion, and LFS Region for reporting are shown in the table below.

Table 15. DSM2 Injection Node Assignments by EDSM Subregion and LFS Region

DSM2 Injection Node	EDSM Subregion	LFS Region
329	East Suisun Bay	Suisun
365	Grizzly Bay	Suisun
227	Honker Bay	Suisun
420	Montezuma Slough	Suisun
359	West Suisun Bay	Suisun
359	Carquinez Strait	Western Delta
359	Upper Napa River	Western Delta
359	Lower Napa River	Western Delta
359	East San Pablo Bay	Western Delta
359	West San Pablo Bay	Western Delta
359	Mid San Pablo Bay	Western Delta
353	Lower Sacramento River	Lower Sacramento
351	Sacramento River near Rio Vista	Lower Sacramento
350	Lower Sacramento River Ship Channel	Sacramento/ North Delta
293	Sacramento River near Ryde	Sacramento/ North Delta
323	Cache Slough and Liberty Island	Sacramento/ North Delta

DSM2 Injection Node	EDSM Subregion	LFS Region
304	Upper Sacramento River	Sacramento/ North Delta
249	North and South Forks Mokelumne River	East
46	Lower San Joaquin River	Lower San Joaquin
41	San Joaquin River at Twitchell Island	Lower San Joaquin
34	San Joaquin River at Prisoners Point	Lower San Joaquin
225	Franks Tract	South Delta
99	Holland Cut	South Delta
86	Old River	South Delta
29	San Joaquin River near Stockton	South Delta
145	Middle River	South Delta
75	Victoria Canal	South Delta

Table 16. LFS Entrainment Estimate using PTM with Surface Oriented Particles: Week 1 ending 04/13/2026

OMR (cfs)	Combined Exports (cfs)	Region Metric	West	Suisun	Sacra-mento/ North Delta	Lower San Joaquin	Lower Sacra-mento	South Delta	East	Total (#)	Total (%)
N/A	N/A	LFS Larva Abundance (Survey 6: 3/9/2026)	4,086,949	42,108,829	304,865	3,645,226	3,225,406	0	0	53,371,275	0
-6,500	4,236	PTM Entrained (%)	0.0	0.0	0.0	<0.1	0.0	0.0	0.0	N/A	N/A
-5,000	3,735	PTM Entrained (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N/A	N/A
-3,500	3,162	PTM Entrained (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N/A	N/A
-2,000	2,519	PTM Entrained (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N/A	N/A
-6,500	4,236	LFS Larva Entrained (#)	0	0	0	859	0	0	0	859	<0.1%
-5,000	3,735	LFS Larva Entrained (#)	0	0	0	0	0	0	0	0	0.0%
-3,500	3,162	LFS Larva Entrained (#)	0	0	0	0	0	0	0	0	0.0%
-2,000	2,519	LFS Larva Entrained (#)	0	0	0	0	0	0	0	0	0.0%

Notes:

Values between 0.0 and 0.1 are indicated with <0.1

Table 17. LFS Entrainment Estimate using PTM with Surface Oriented Particles: Week 2 ending 04/20/2026

OMR (cfs)	Combined Exports (cfs)	Region Metric	West	Suisun	Sacra-mento/ North Delta	Lower San Joaquin	Lower Sacra-mento	South Delta	East	Total (#)	Total (%)
N/A	N/A	LFS Larva Abundance (Survey 6: 3/9/2026)	4,086,949	42,108,829	304,865	3,645,226	3,225,406	0	0	53,371,275	0
-6,500	1,503	PTM Entrained (%)	0.0	0.0	0.0	<0.1	0.0	0.0	0.0	N/A	N/A
-5,000	1,503	PTM Entrained (%)	0.0	0.0	0.0	<0.1	0.0	0.0	0.0	N/A	N/A
-3,500	1,503	PTM Entrained (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N/A	N/A
-2,000	1,503	PTM Entrained (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	N/A	N/A
-6,500	1,503	LFS Larva Entrained (#)	0	0	0	2,365	0	0	0	2,365	<0.1%
-5,000	1,503	LFS Larva Entrained (#)	0	0	0	1,076	0	0	0	1,076	<0.1%
-3,500	1,503	LFS Larva Entrained (#)	0	0	0	0	0	0	0	0	0.0%
-2,000	1,503	LFS Larva Entrained (#)	0	0	0	0	0	0	0	0	0.0%

Notes:

Values between 0.0 and 0.1 are indicated with <0.1
The PTM entrained (%) value reflects the total entrained particles from all subregions within an LFS Region divided by the estimated LFS Region abundance

Table 18. LFS Entrainment Estimate using PTM with Surface Oriented Particles: Week 3 ending 04/27/2026

OMR (cfs)	Combined Exports (cfs)	Region Metric	West	Suisun	Sacramento/ North Delta	Lower San Joaquin	Lower Sacra-mento	South Delta	East	Total (#)	Total (%)
N/A	N/A	LFS Larva Abundance (Survey 6: 3/9/2026)	4,086,949	42,108,829	304,865	3,645,226	3,225,406	0	0	53,371,275	0
-6,500	1,503	PTM Entrained (%)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	N/A	N/A
-5,000	1,503	PTM Entrained (%)	0.0	0.0	0.0	<0.1	0.0	0.0	0.0	N/A	N/A
-3,500	1,503	PTM Entrained (%)	0.0	0.0	0.0	<0.1	0.0	0.0	0.0	N/A	N/A
-2,000	1,503	PTM Entrained (%)	0.0	0.0	0.0	<0.1	0.0	0.0	0.0	N/A	N/A
-6,500	1,503	LFS Larva Entrained (#)	0	0	0	3,658	0	0	0	3,658	<0.1%
-5,000	1,503	LFS Larva Entrained (#)	0	0	0	2,586	0	0	0	2,586	<0.1%
-3,500	1,503	LFS Larva Entrained (#)	0	0	0	434	0	0	0	434	<0.1%
-2,000	1,503	LFS Larva Entrained (#)	0	0	0	646	0	0	0	646	<0.1%

Notes:

Values between 0.0 and 0.1 are indicated with <0.1
The PTM entrained (%) value reflects the total entrained particles from all subregions within an LFS Region divided by the estimated LFS Region abundance

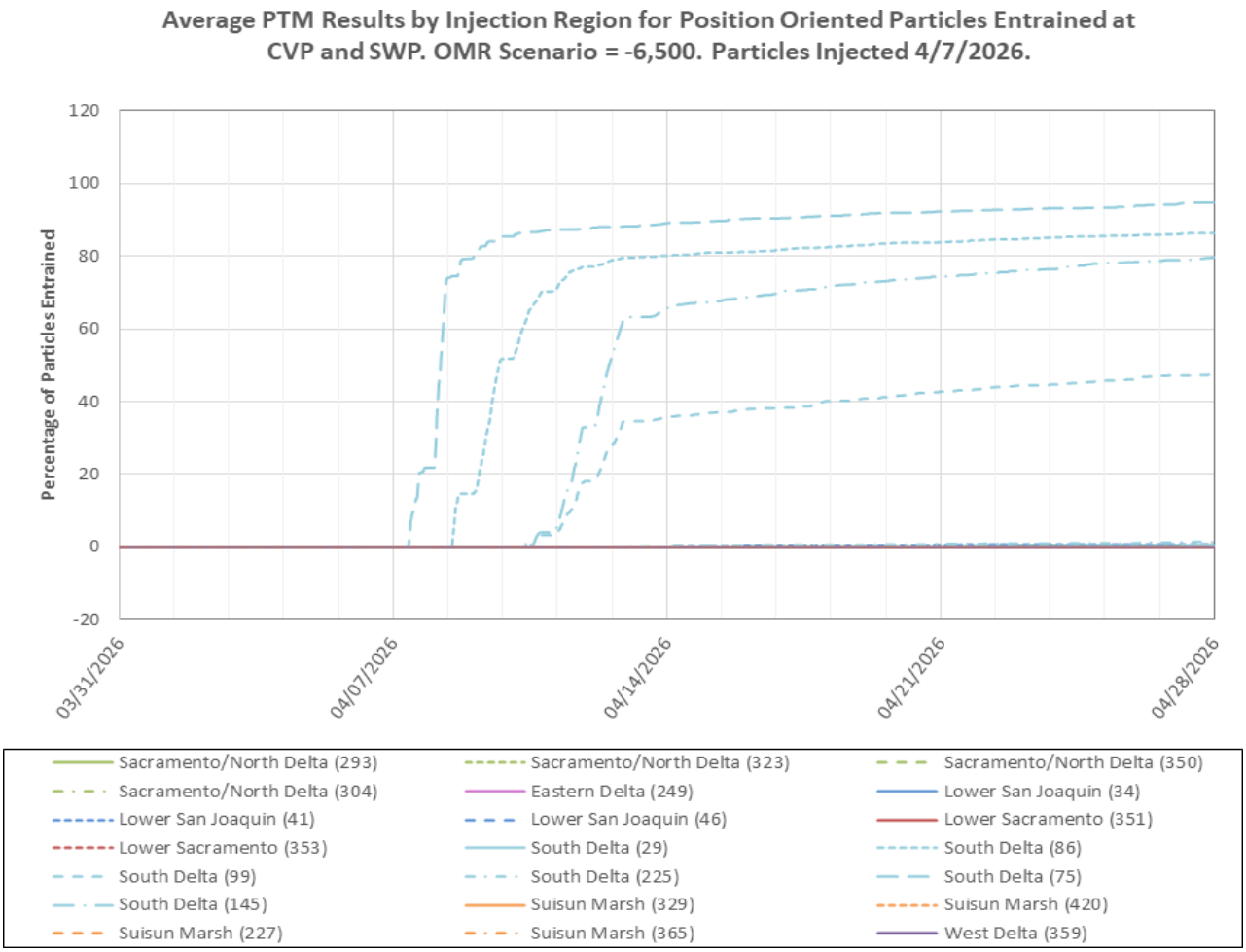

Figure 41: Average PTM Results by Injection Region for Position Oriented Particles Entrained at CVP and SWP, OMR Scenario -6,500

Figure 41 is a line graph showing the average percentage of position oriented particles entrained at CVP and SWP over time from April 7 to April 28, 2026, for particles injected on April 7, 2026, grouped by DSM2 injection regions. South Delta (light blue) exhibits the highest entrainment, increasing rapidly shortly after injection and approaching approximately 90–95% by late April. Lower San Joaquin (blue) and Eastern Delta (pink) show moderate increases, reaching approximately 40–80% over the evaluation period. Sacramento/North Delta, Lower Sacramento, Suisun Marsh, and West Delta remain comparatively low, with minimal entrainment throughout the period.

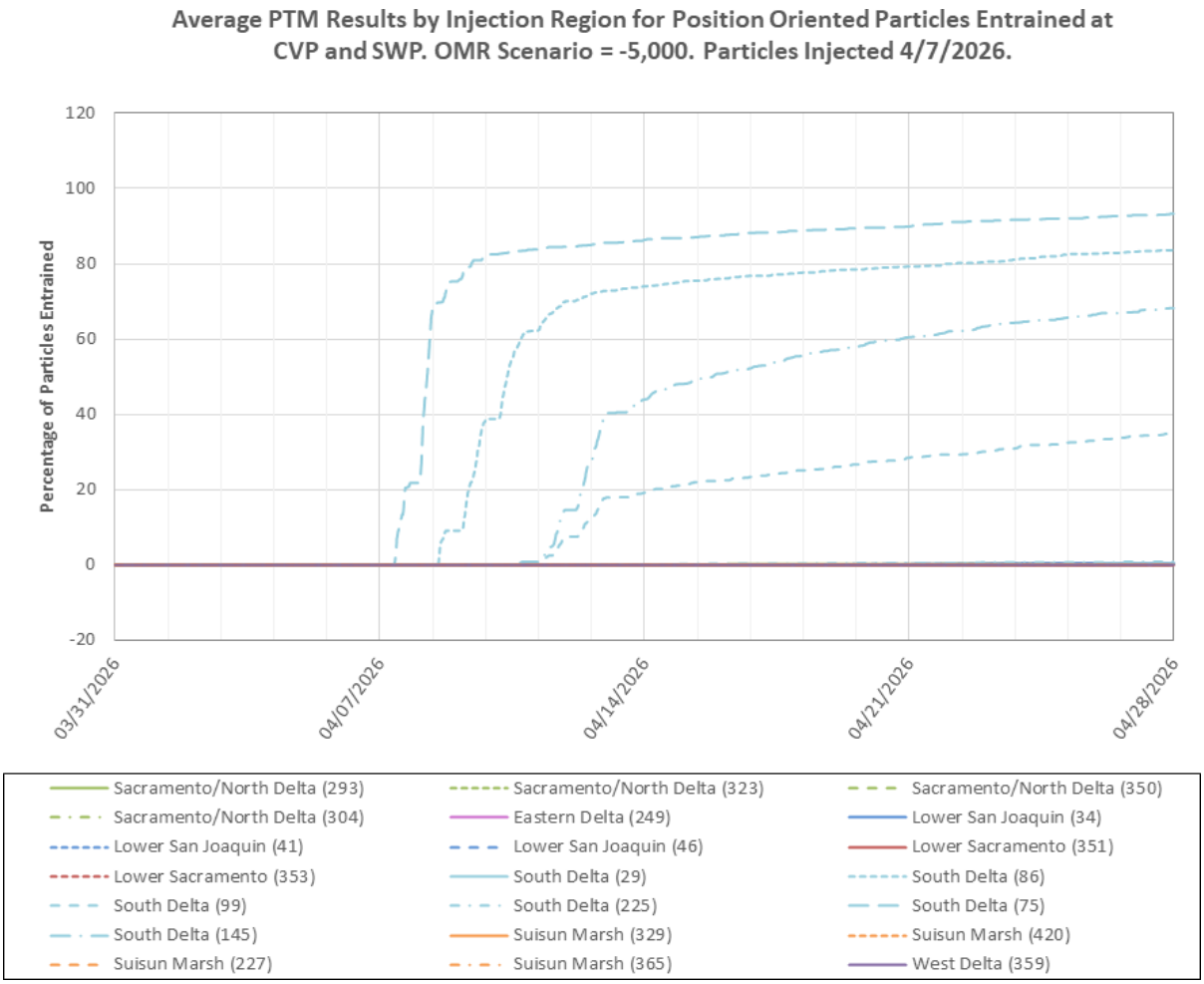

Figure 42: Average PTM Results by Injection Region for Position Oriented Particles Entrained at CVP and SWP, OMR Scenario -5,000

Figure 42 is a line graph showing the average percentage of position oriented particles entrained at CVP and SWP over time from April 7 to April 28, 2026, for particles injected on April 7, 2026, grouped by DSM2 injection regions. South Delta (light blue) exhibits the highest entrainment, increasing rapidly shortly after injection and approaching approximately 90–95% by late April. Lower San Joaquin (blue) and Eastern Delta (pink) show moderate increases, reaching approximately 35–80% over the evaluation period. Sacramento/North Delta, Lower Sacramento, Suisun Marsh, and West Delta remain comparatively low, with minimal entrainment throughout the period.

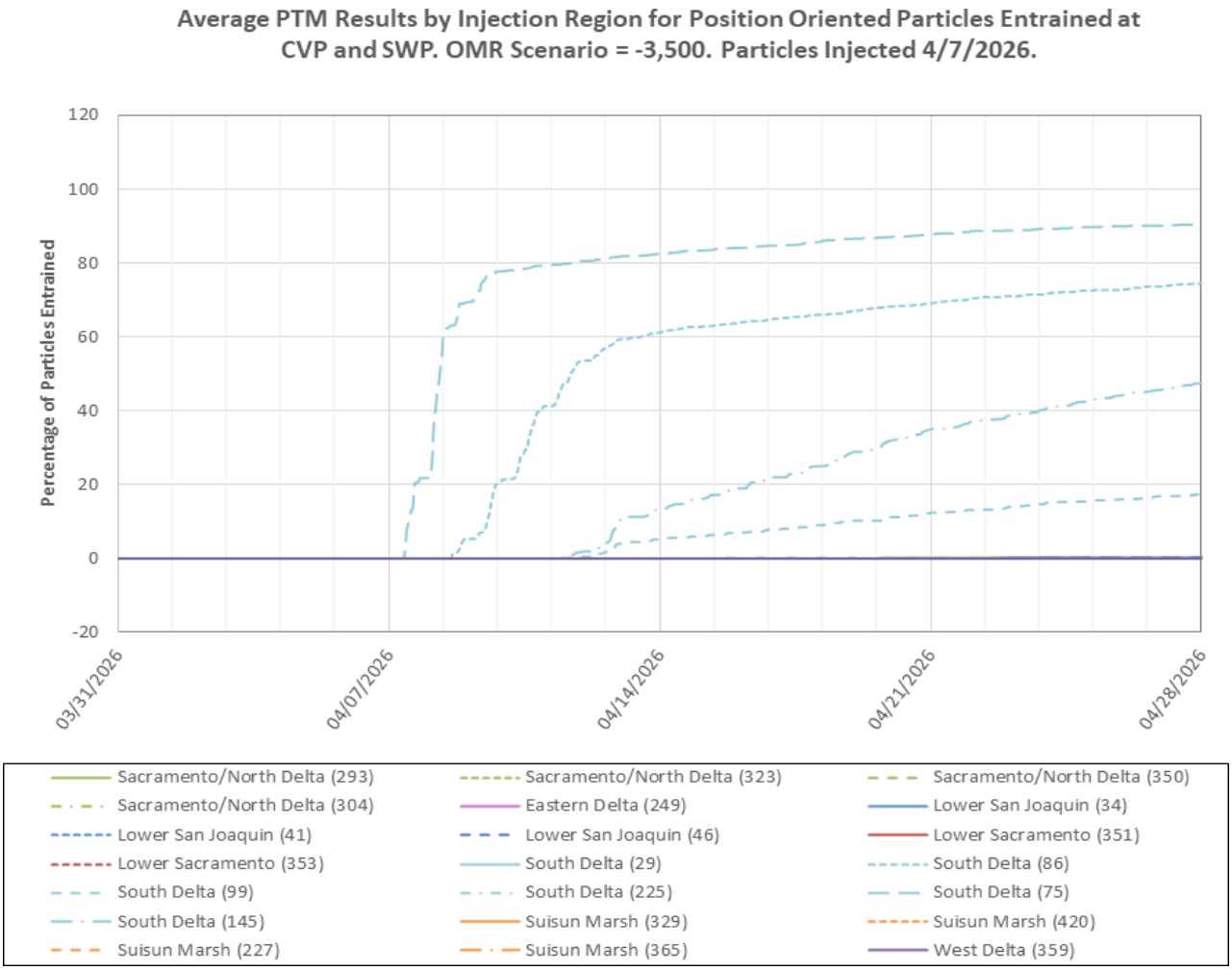

Figure 43: Average PTM Results by Injection Region for Position Oriented Particles Entrained at CVP and SWP, OMR Scenario -3,500

Figure 43 is a line graph showing the average percentage of position oriented particles entrained at CVP and SWP over time from April 7 to April 28, 2026, for particles injected on April 7, 2026, grouped by DSM2 injection regions. South Delta (light blue) exhibits the highest entrainment, increasing rapidly shortly after injection and approaching approximately 90% by late April. Lower San Joaquin (blue) and Eastern Delta (pink) show moderate increases, reaching approximately 15–75% over the evaluation period. Sacramento/North Delta, Lower Sacramento, Suisun Marsh, and West Delta remain comparatively low, with minimal entrainment throughout the period.

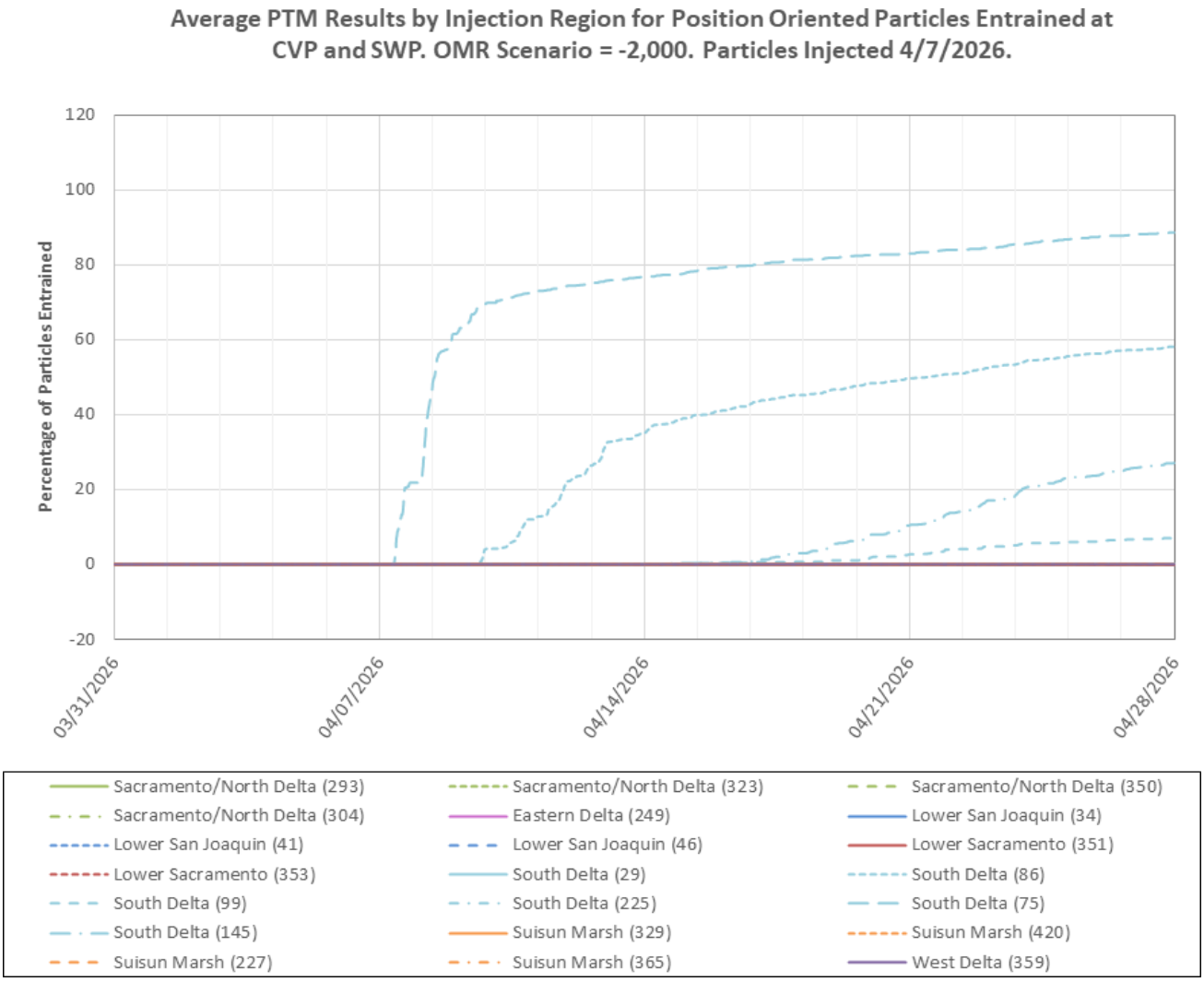

Figure 44: Average PTM Results by Injection Region for Position Oriented Particles Entrained at CVP and SWP, OMR Scenario -2,000

Figure 44 is a line graph showing the average percentage of position oriented particles entrained at CVP and SWP over time from April 7 to April 28, 2026, for particles injected on April 7, 2026, grouped by DSM2 injection regions. South Delta (light blue) exhibits the highest entrainment, increasing rapidly shortly after injection and approaching approximately 85–90% by late April. Lower San Joaquin (blue) and Eastern Delta (pink) show moderate increases, reaching approximately 5–60% over the evaluation period. Sacramento/North Delta, Lower Sacramento, Suisun Marsh, and West Delta remain comparatively low, with minimal entrainment throughout the period.