



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

Last updated: Monday, April 06, 2026 at 8 AM

Executive Summary

ESA and CESA-listed Salmonids

- Entrainment management season is active.
- Annual Loss: 45 (0.43% of annual loss threshold) natural winter-run, 62 (4.78% of annual loss threshold) hatchery winter-run (Sac River), 243 natural steelhead (4.59%), 1770 (27.94% 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); 240 (4.53% 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.
- One Delta smelt was salvaged on 3/6/26, expanded salvage is 4 for this water year.
- 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 14,865 and NA cfs respectively. Most recent Jersey Point Flow (JPF) is NA cfs. Most recent 1-day, 5-day, and 14-day OMRI measurements were -3,075, -3,500, and -4,418 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.

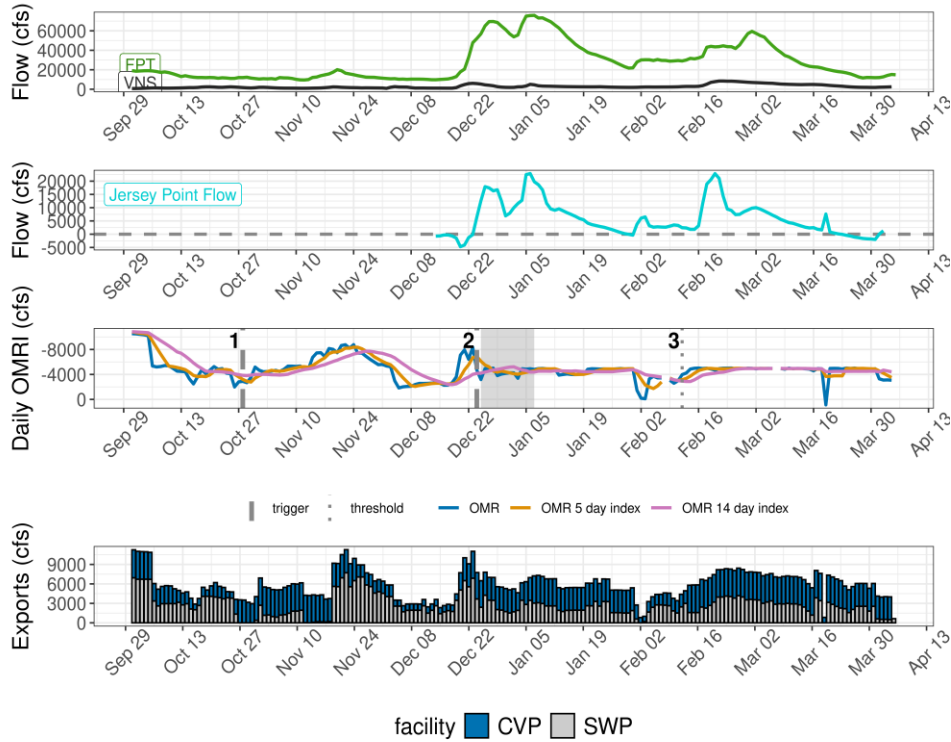


Figure 1: Operations and Action Summary, WY 2026. The numbers and lines in the OMRI plot indicate different triggers and thresholds (see Table 1), with shading representing specific action periods. Dashed and dotted vertical lines represent triggered actions and thresholds, respectively. OMRI data (colored 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 three are line charts depicting flow and daily OMRI in cfs for OMR, and OMR 5- and 14-day indexes. The last chart is a bar graph depicting exports in cfs through the Central Valley Project and State Water Project facilities. The x-axis for all four graphs list September 29 – April 13.

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 ‘medmed’ category. Forecasted conditions averaged across the next 7 days falls within the ‘medmed’ category.

The altered channel length for the current “medmed” hydrology is 26, 49, 101 and 163 kilometers (km) across OMR bins of -2000, -3500, -5000 and <-5500 respectively. The altered channel length for forecasted “medmed” hydrology is 26, 49, 101 and 163 kilometers (km) across OMR bins of -2000, -3500, -5000 and <-5500 respectively.

Change in altered channel length between OMR levels is 137 km for current conditions and 137 km for forecasted conditions indicating that ZOI impacts across OMR scenarios would not change between current and forecasted conditions. Across the nine hydrology bins, changes in altered channel length across OMR scenarios are high (>75th percentile) for both current and forecasted hydrology.

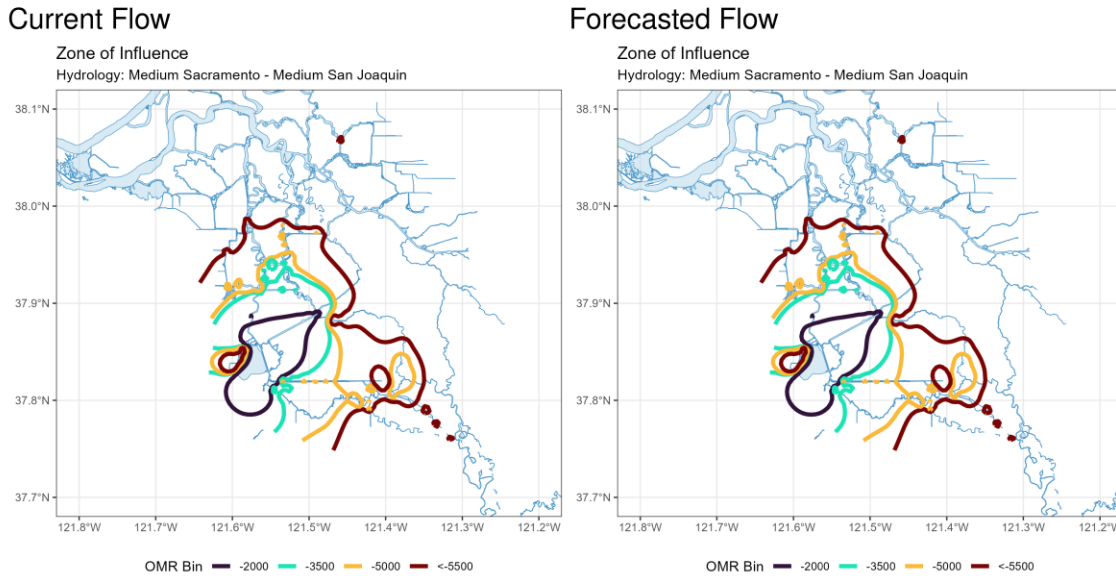


Figure 2: Modeled Zone of Influence at different OMRI scenarios based on current inflow hydrology (left) and forecasted inflow hydrology (right) from the Sacramento River and San Joaquin River

Figure 2 contains two maps of current and forecasted flow for the zone of influence. Each map contains lines of different colors depicting OMRI Bin -2000, -3500, -500, and less than -5500 modeling scenarios.

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 05, 88% of length-at-date (LAD) winter-run have entered the Delta based on Knights Landing RST catch, 71% 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%	88%	71%	93%
Chinook, DNA Winter-run, Unclipped (Water Year)	NA	NA	NA	NA	NA	98%

Red Bluff Diversion Dam Passage Estimate - As of Apr 01 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 22 and Apr 02 is 0 individuals. Total catch at Sacramento Trawl and Beach Seines in the delta between Mar 22 and Apr 02 is 0 individuals. Total catch at Delta Exit at Chipps Island between Mar 22 and Apr 02 is 50 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 05, 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.

WY2026 Natural DNA Winter-run Chinook Loss
Cumulative Loss to date: 45.42
Cumulative Loss percent of Threshold: 0.43%

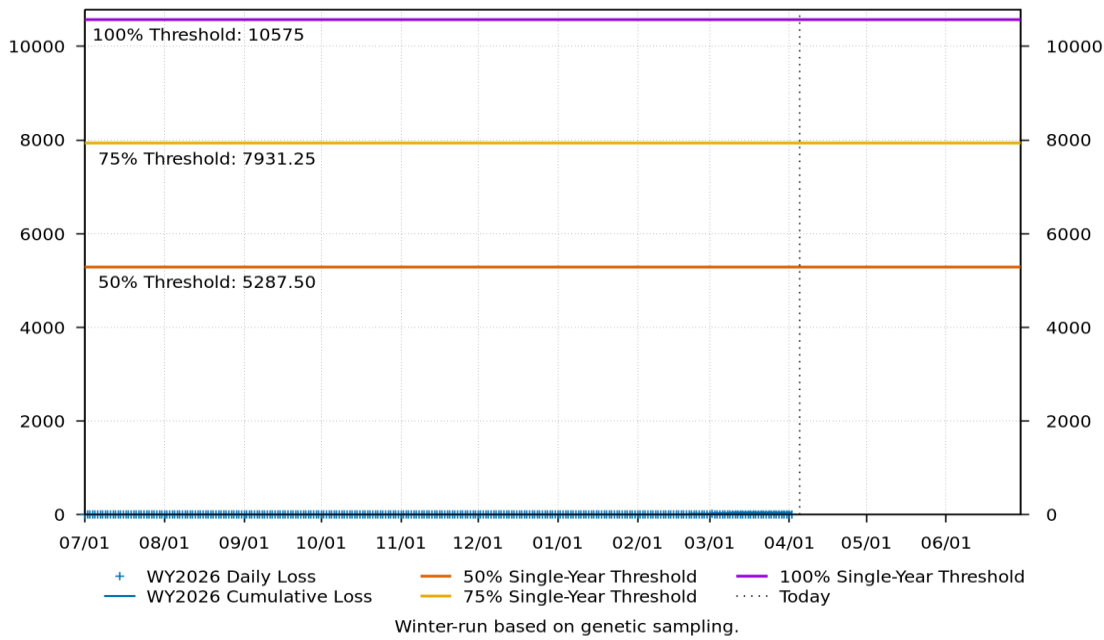


Figure 3: Cumulative loss of natural-origin winter-run for WY 2026. Cumulative loss is based on genetically confirmed winter-run captured in salvage or length-at-date winter-run in which genetic confirmation was unable to be obtained.

Figure 3 displays daily and cumulative winter-run Chinook loss based on genetic sampling 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. The 100% threshold: 10575, 75% threshold: 7931.25, and 50% threshold: 5287.50 are shown as horizontal lines. As of April 06, 2026, the cumulative loss to date is 45.42, and the cumulative loss percent of the threshold is 0.43%.

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 04, overall through delta STARS estimated survival probability (with 80% credible intervals) is 0.15 (0.08-0.22) placing it in the 40th 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 0.13 (0.1-0.16) and 0.05 (0.01-0.1), respectively, corresponding to the 64th and 38th percentiles of historical April estimates (WYs 2018-2025).

Overall Survival: Median survival of daily cohorts for all routes combined
Delta STARS Model -
Predicted Natural Winter-run Chinook Daily Cohorts Passage, Knights Landing to Chipps Island

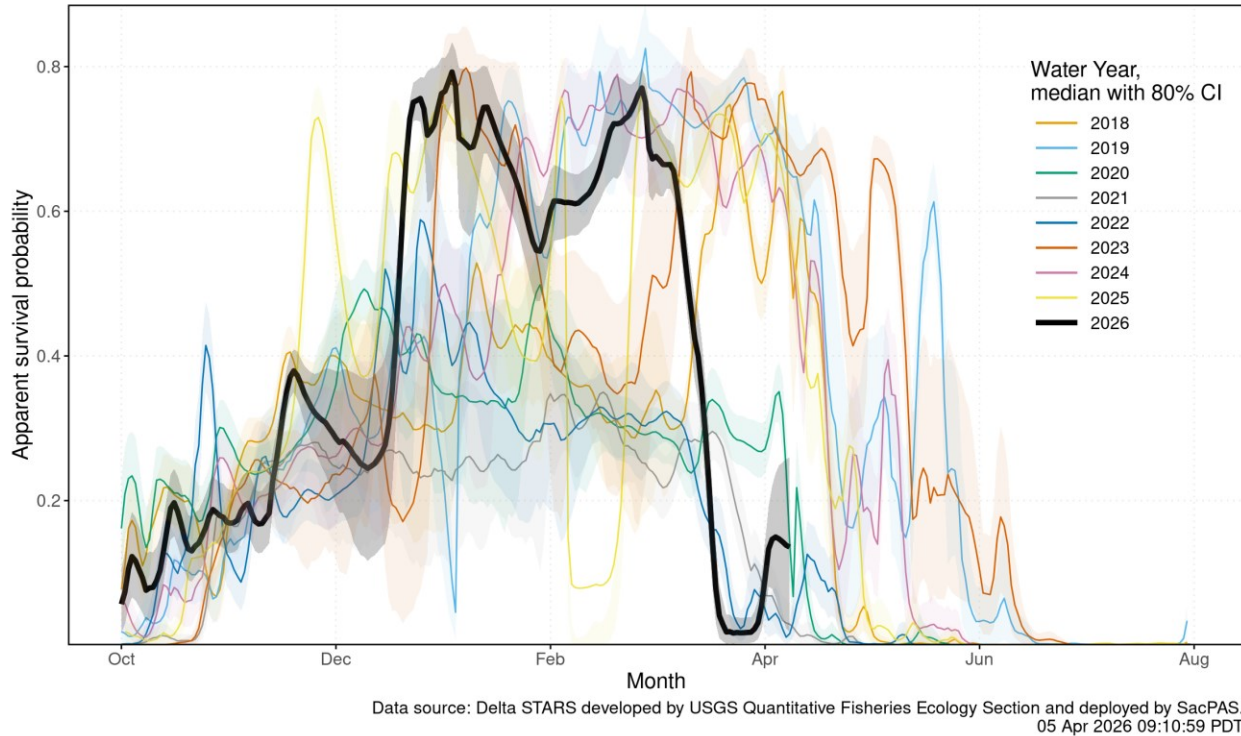


Figure 4: Estimated overall winter-run survival from Knights Landing to Chipps Island. Black line indicates the current water-year, and other colored lines correspond to past water years.

Figure 4 is a line graph depicting median survival of daily cohorts for all routes combined from Knights Landing to Chipps Island. Survival 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 an 80% confidence interval.

Interior Delta Route-specific Survival Probability: Median survival of daily cohorts using the Interior Delta STARS Model - Predicted Natural Winter-run Chinook Daily Cohorts Passage, Knights Landing to Chipps Island

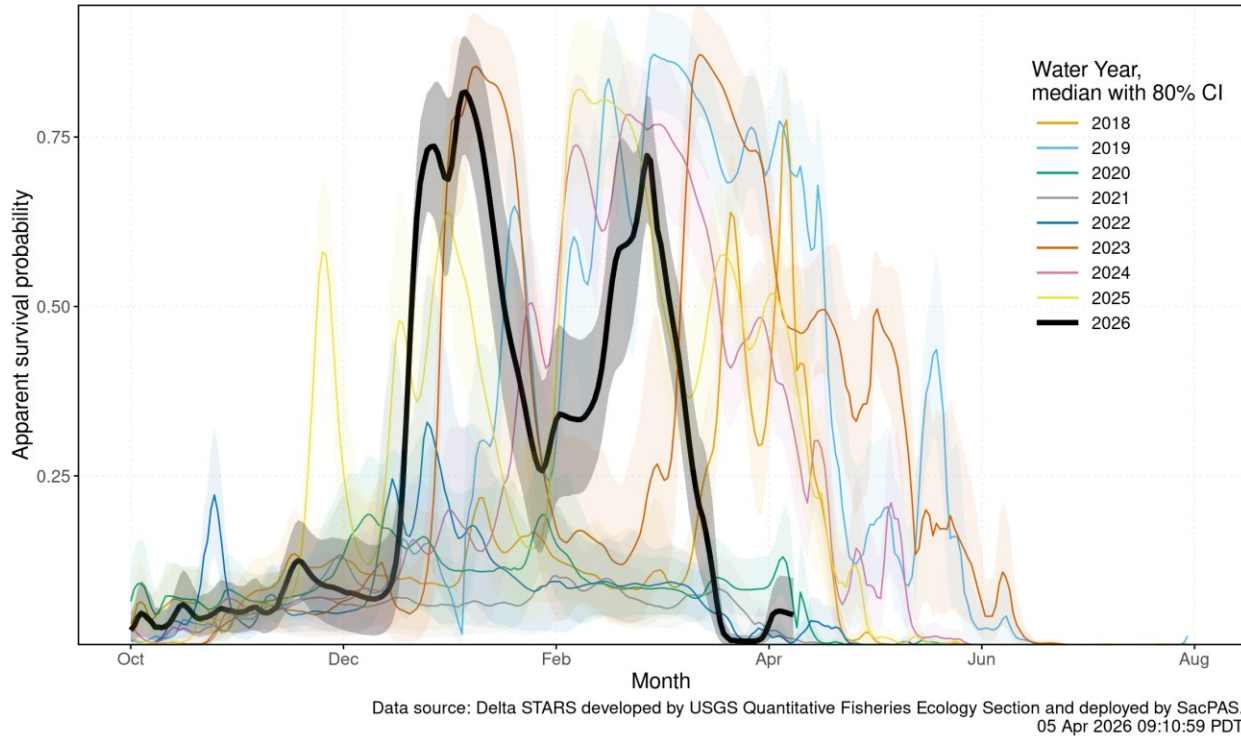


Figure 5: Estimated survival from Knights Landing to Chipps Island of simulated winter-run cohorts that route through the interior Delta. Black line indicates the current water-year, and other colored lines correspond to past water years.

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 with an 80% confidence interval.

Interior Delta Route-specific Probability: Proportion of daily cohorts using the Interior Delta route
 Delta STARS Model -
 Predicted Natural Winter-run Chinook Daily Cohorts Passage, Knights Landing to Chipps Island

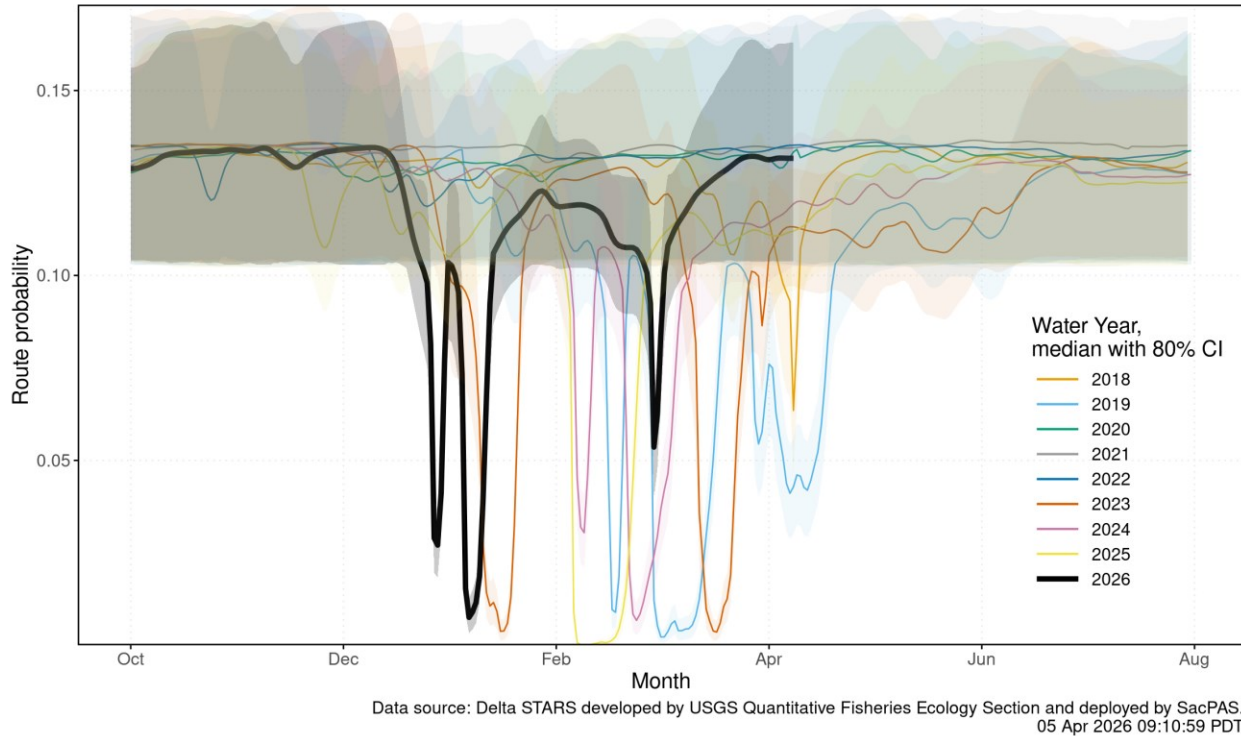


Figure 6: Estimated probability of winter-run routing into the interior Delta. Black line indicates the current water-year, and other colored lines correspond to past water years.

Figure 6 is a line graph depicting survival probability for winter-run Chinook daily cohorts using the Interior Delta routes from Knights Landing to Chipps Island. The 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 with an 80% confidence interval.

ECO-PTM (Ecological Particle Tracking Model)

ECO-PTM Results Evaluation Period: 03/31/2026 – 04/20/2026

Particles Injected: 03/31/2026

Injection Location: Sacramento River at Freeport

Table 3: Salmon Particle Route Ratio After 3 Weeks (Ending 04/20/2026)

OMR Flow Bin	Sutter Slough Route	Steamboat Slough Route	Sacramento River (SS) Route	Sacramento River (GEO) Route	Georgiana Slough Route
-6,500	0.10	0.08	0.81	0.75	0.25
-5,000	0.11	0.09	0.81	0.74	0.26
-3,500	0.11	0.08	0.81	0.74	0.26
-2,000	0.10	0.09	0.81	0.75	0.25

Table 4: Salmon Particle Route-Specific Survival After 3 Weeks (Ending 04/20/2026)

OMR Flow Bin	Sutter Slough Route	Steamboat Slough Route	Sacramento River Route	Georgiana Slough Route	All Routes Combined
-6,500	32%	45%	36%	16%	32%
-5,000	37%	49%	40%	18%	36%
-3,500	34%	48%	38%	24%	35%
-2,000	36%	48%	40%	20%	36%

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 06, 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 06, 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 05, 63% of CCV steelhead have entered the Delta based on Knights Landing RST catch, 57% have exited the Delta based on Chipps Island Trawl Catch, and 64% 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.

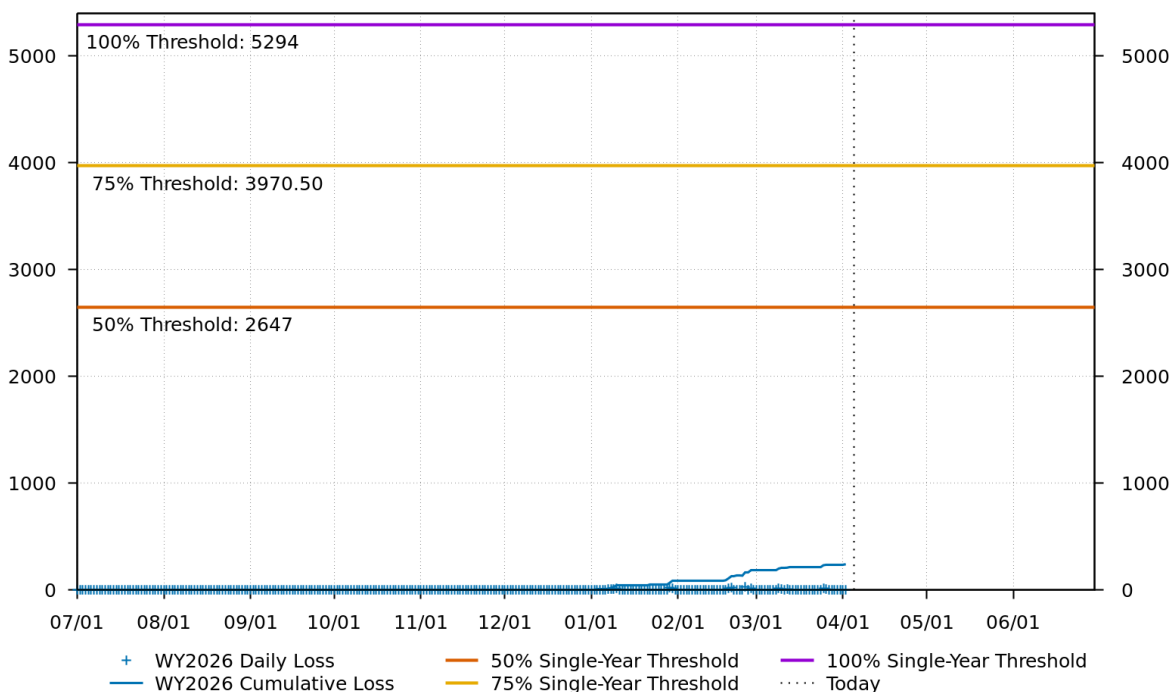
Species	Chipps Island Trawl	Knights Landing RST	Red Bluff Diversion Dam	Sac Trawl (Sherwood)	Salvage	Tisdale RST
Steelhead, Unclipped	57%	60%	4%	63%	64%	58%

Delta Monitoring - Total catch of unclipped steelhead at RSTs at Delta Entry (Tisdale, Knights Landing, Lower Sacramento River) between Mar 22 and Apr 02 is 2 individuals. Total catch at Sacramento Trawl and Beach Seines in the delta between Mar 22 and Apr 02 is 0 individuals. Total catch at Delta Exit at Chipps Island between Mar 22 and Apr 02 is 0 individuals.

Annual Loss

As of April 05, cumulative loss of unclipped steelhead is 240 or 4.54% 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 120.

WY2026 Natural Steelhead Loss
Cumulative Loss to date: 240.16
Cumulative Loss percent of Threshold: 4.54%



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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 displays daily and cumulative natural steelhead loss based on genetic sampling 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 5,294, 75% threshold of 3970.50, and 50% threshold of 2647. As of April 06, 2026, cumulative loss to date is 240.16 fish, representing 4.54% of the threshold.

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.

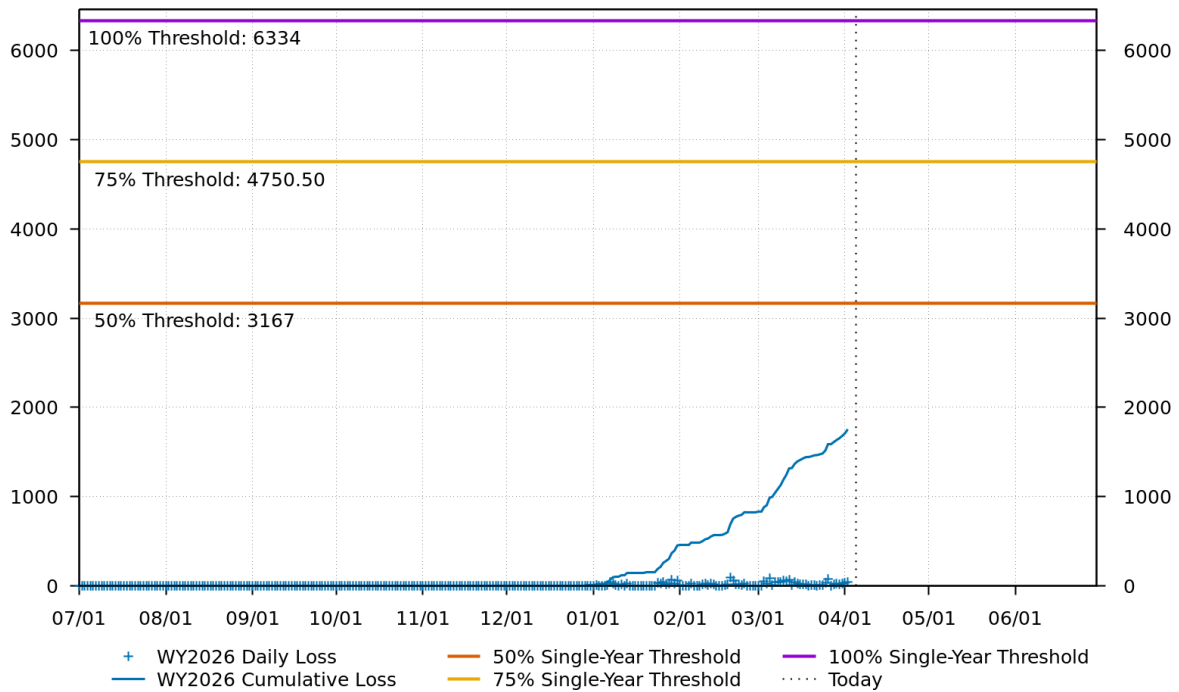
Hatchery	Date of Release	Number Released	Estimated Survival	Juvenile Production Estimate
NIM	2025-11-10	233,109	72%	167,838
Coleman	2025-12-15	555,720	38%	211,174
Coleman	2025-12-17	90,019	38%	34,207
FRH	2026-01-06	376,640	36%	135,590
FRH	2026-01-09	117,715	36%	42,377
MOK	2026-02-17	39,130	25%	9,783
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 1755 or 27.7% 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.

WY2026 Hatchery Steelhead Loss
Cumulative Loss to date: 1754.65
Cumulative Loss percent of Threshold: 27.70%



Running JPE calculated from hatchery releases to date and survival estimate range (adjusted by WSI forecast type).
www.cbr.washington.edu/sacramento/ Threshold is 1% of calculated JPE. 06 Apr 2026 07:49:03 PDT

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

Figure 8 displays daily and cumulative hatchery steelhead loss based on genetic sampling 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 4770.50, and 50% threshold of 3167. As of April 06, 2026, cumulative loss to date is 1754.65 fish, representing 27.70% of the threshold.

Spring-run Chinook

Current Status

Delta Entry Timing - Historically, as of Apr 05, 38% of LAD spring-run have entered the Delta based on Knights Landing RST catch, 9% have exited the Delta based on Chipps Island Trawl Catch, and 14% 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)	Chippis Island Trawl	Salvage
Chinook, LAD Spring-run, Unclipped	62%	62%	66%	38%	9%	14%

Red Bluff Diversion Dam Passage Estimate - As of Apr 01 estimated passage to date of LAD spring-run at Red Bluff Diversion is approximately 0.19 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 22 and Apr 02 is 2005 individuals. Total catch at Sacramento Trawl and Beach Seines in the delta between Mar 22 and Apr 02 is 485 individuals. Total catch at Delta Exit at Chippis Island between Mar 22 and Apr 02 is 66 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%)	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 05, 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 05, 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.

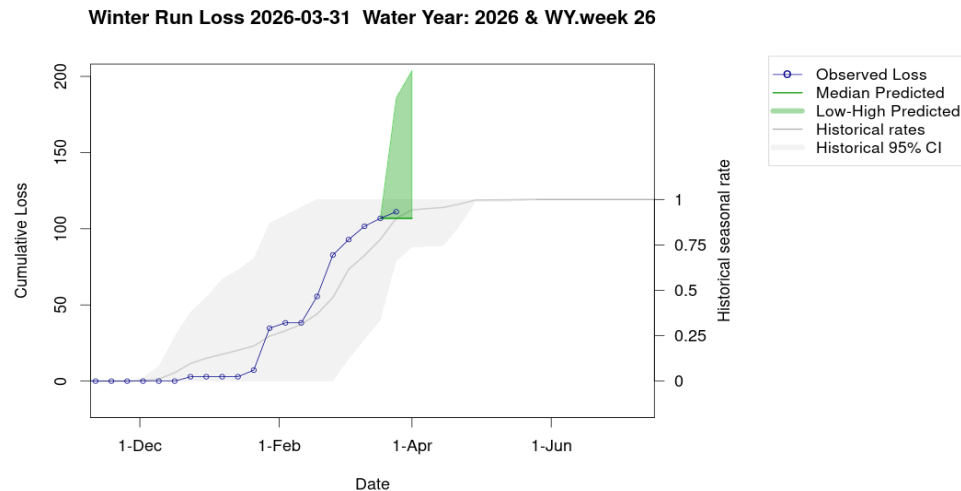


Figure 9: Estimates of winter-run Chinook loss generated by Loss and Salvage Predictor tool.

Figure 9 displays observed cumulative winter-run Chinook loss for Water Year 2026 through April 06, 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 early portion of the water year.

Steelhead Loss 2026-03-31 Water Year: 2026 & WY.week 26

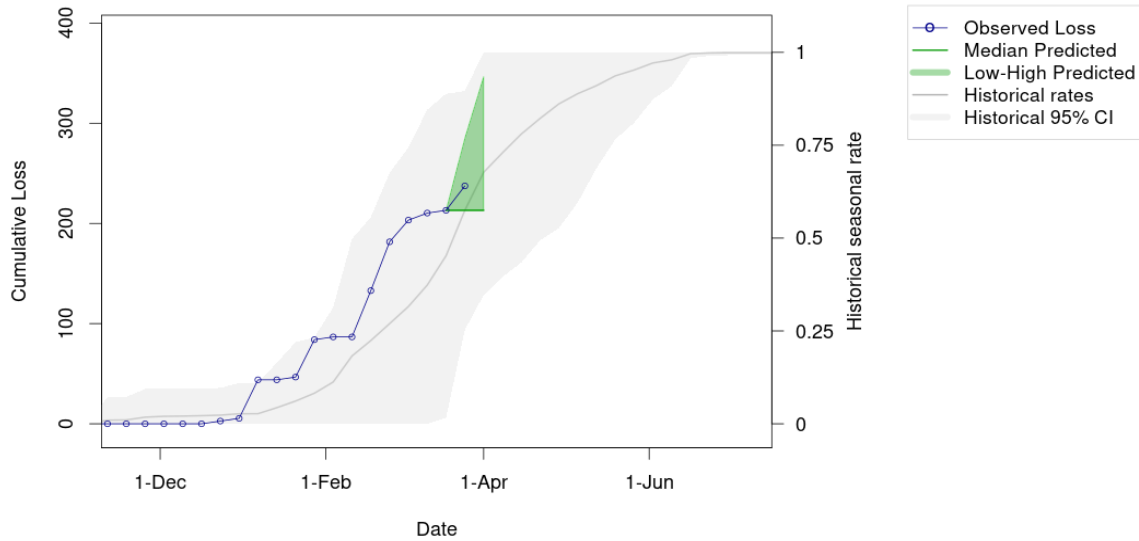


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Evaluation

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.
 - b) **LOW RISK:** Hatchery winter-run (Sac River) cumulative loss is currently 4.78% of the threshold.
 - c) **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.
 - b) **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 4.59% of the threshold. LOW RISK: Hatchery steelhead cumulative loss is currently 27.94% 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:** Adult
- **Abundance estimate:** 2034 (95% CL: 162 to 8,959) as of the week of March 23–27, 2026
- **Releases:** A total of 163,349 cultured Delta smelt have been released for WY 2026. The most recent release of 24,606 fish occurred in Sacramento River at Rio Vista on Dec 16, 2025.
- **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 12 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
EDSM	2026-03-24	West	Suisun Marsh	Adult	1

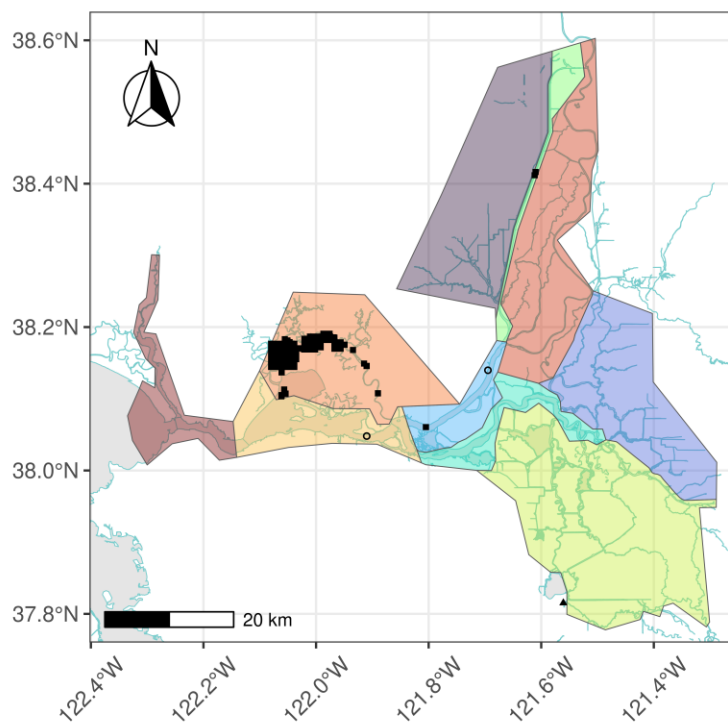
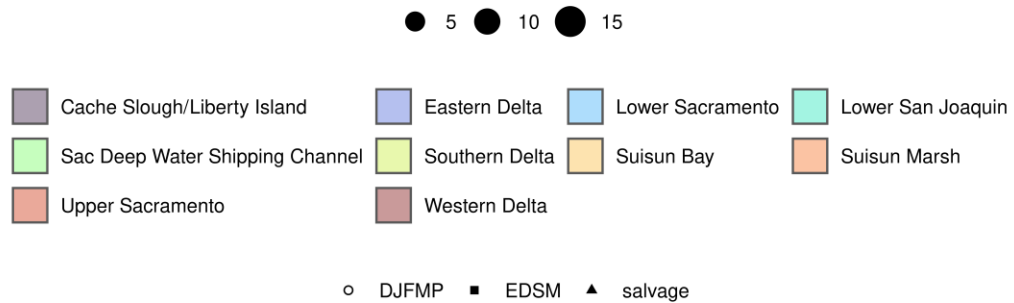


Figure 11: Delta smelt distribution for WY 2026.

Figure 11 shows monitoring locations across the Sacramento–San Joaquin Delta. 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 and EDSM 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

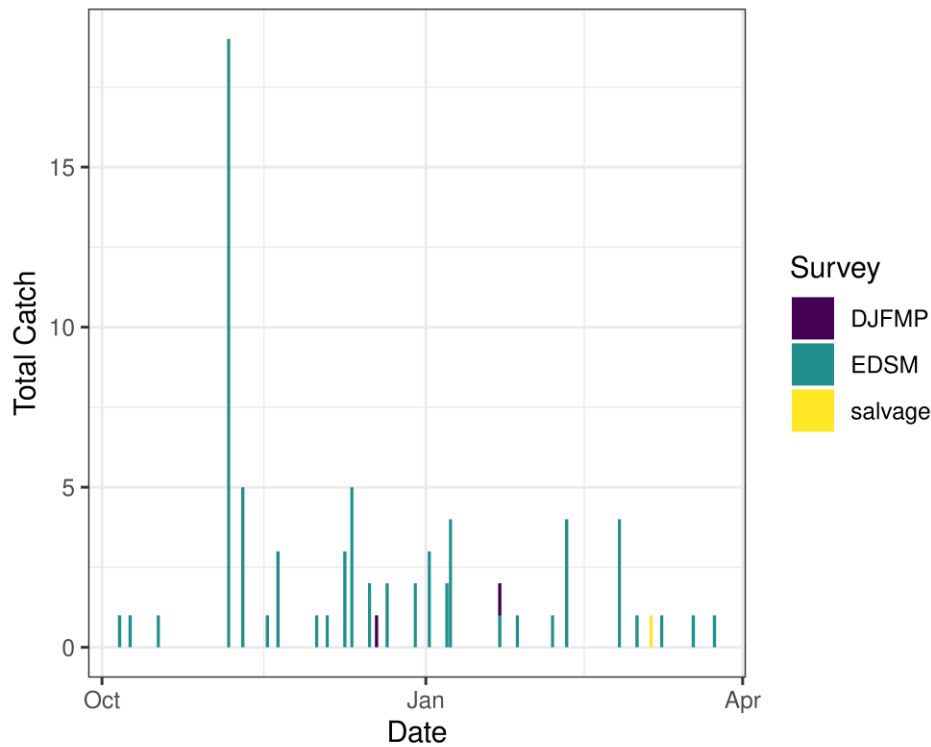


Figure 12: Time series of Delta smelt catch, WY 2026

Figure 12 displays total catch observations over time from October through January for three survey programs: DJFMP, EDSM, and salvage. Bars represent total catch recorded on individual sampling dates, with colors distinguishing the survey type. The figure shows that most detections occurred during EDSM surveys, with relatively few observations from DJFMP and salvage samplings.

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 $\geq 5\%$ 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 $\geq 5\%$ 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.

- b) 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. These results indicate that, if Delta smelt larvae were present, the risk of entrainment would be low.

Longfin smelt

Biological

- **Longfin smelt life stages:** Juvenile, Adult
- **Longfin smelt count:** 470 adult, 1145 juvenile, and 5472 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
EDSM	2026-03-24	West	Suisun Marsh	Juvenile	4
EDSM	2026-03-25	Far West	Western Delta	Juvenile	1
EDSM	2026-03-25	North	Lower Sacramento	Adult	1

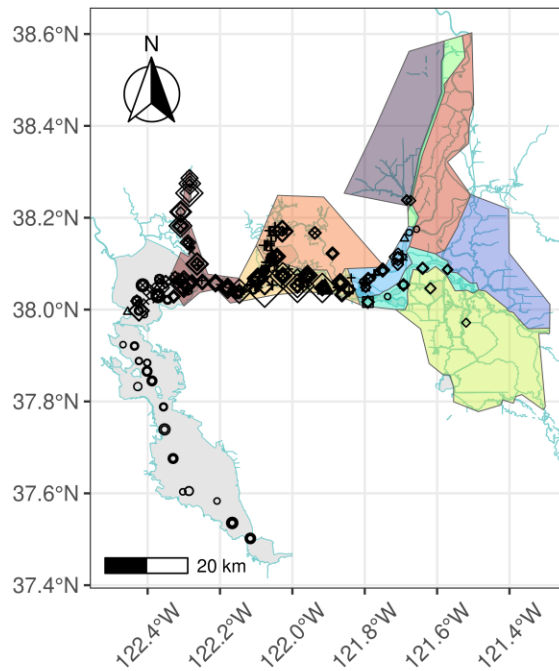
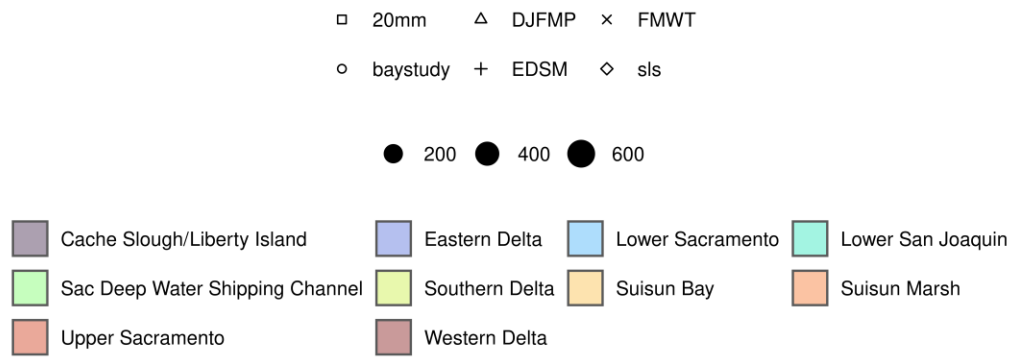


Figure 13: Longfin Smelt Distribution for WY 2026

Figure 13 shows monitoring locations across the Sacramento–San Joaquin Delta. 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 20mm, DJFMP, FMWT, baystudy, EDSM, and sls monitoring programs, with symbol size representing relative sample counts.

Table 15: Longfin smelt water year totals by life stage

Survey	Region	Life Stage	Total
20mm	North	Larva	12
20mm	South	Larva	2
20mm	West	Larva	12
DJFMP	Bay	Juvenile	1
DJFMP	N/A	Adult	267
DJFMP	N/A	Juvenile	31
DJFMP	NA	Adult	1
EDSM	Far West	Adult	24
EDSM	Far West	Juvenile	100
EDSM	North	Adult	1
EDSM	North	Juvenile	1
EDSM	West	Adult	83
EDSM	West	Juvenile	204
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	52
baystudy	Bay	Juvenile	600
baystudy	Far West	Adult	24
baystudy	Far West	Juvenile	107
baystudy	North	Adult	3
baystudy	North	Juvenile	1
baystudy	West	Adult	6
baystudy	West	Juvenile	23
sls	Bay	Larva	300
sls	Far West	Larva	2654
sls	North	Larva	89
sls	South	Larva	52
sls	West	Larva	2197
sls	NA	Juvenile	3
sls	NA	Larva	154

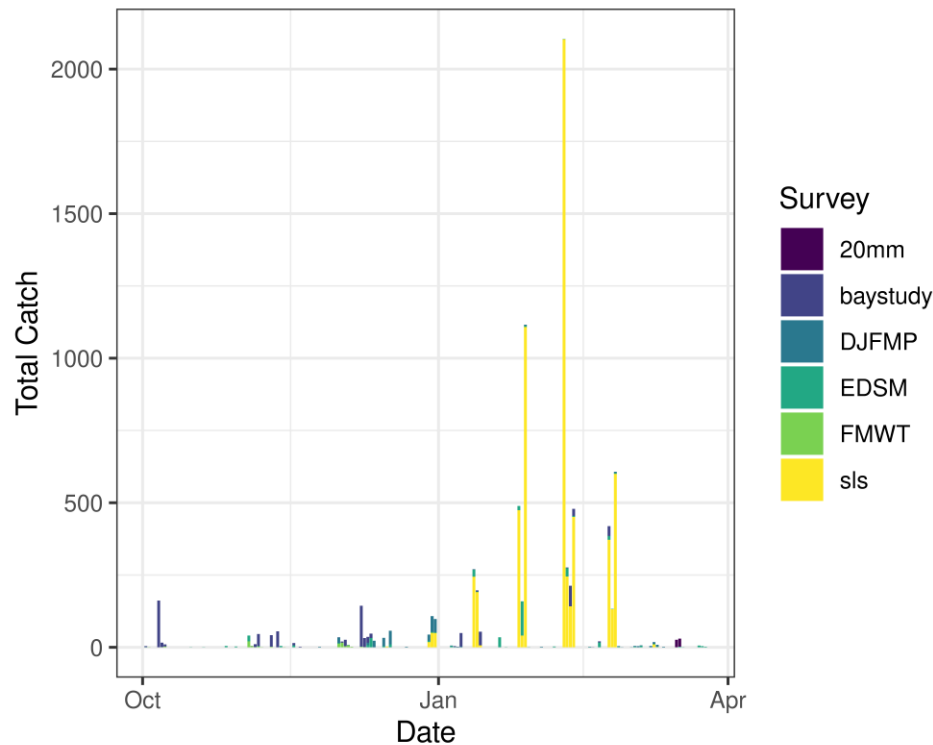


Figure 14: Time series of longfin smelt catch, WY 2026

Figure 14 displays total catch observations over time from October through April for six survey programs: 20mm, baystudy, DJFMP, EDSM, FMWT, and sls. Bars represent total catch recorded on individual sampling dates, with colors distinguishing the survey type. The figure shows that the largest catches occurred during sls surveys, particularly between January and March, with peak catches exceeding 2,000 individuals, while other programs recorded comparatively lower catches throughout the sampling period.

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: 1,952 cfs as of Apr 05, 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: 1,952 cfs as of Apr 05, 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 <0.1% for -6,500 cfs, and 0% for all other levels of OMRI.
 - b) Zone of Influence modeling indicates high 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: 04/06/2026

Forecast Period: 03/31/2026 – 04/20/2026

Forecast Week 1: 03/31/2026 – 04/06/2026

Forecast Week 2: 04/07/2026 – 04/13/2026

Forecast Week 3: 04/14/2026 – 04/20/2026

Index

- Common Assumptions
- Reclamation Forecast Flow and Export Data
- Delta Export Zone of Influence
- PTM (Particle Tracking Model)
 - Neutrally Buoyant Particles (NP)
 - Surface Oriented Particles (PP)
- ECO-PTM (Ecological Particle Tracking Model)
- Longfin Smelt Larval Population and PTM Analysis

Common Assumptions

The model run results cover the period March 31, 2026 through April 20, 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 1861 cfs at the beginning of the forecast period and is estimated to increase to 2100 cfs by the end of the forecast period.
5. San Joaquin River EC at Vernalis is at 632 umhos/cm at the beginning of the forecast period and is estimated to decrease to 582 umhos/cm at the end of the forecast period.
6. Sacramento River flow at Freeport is at 12424 cfs at the beginning of the forecast period and is expected to decrease to 8550 cfs by the end of the forecast period.

7. CCFB inflow is at 2386 cfs at the beginning of the forecast period and is expected to decrease to 600 cfs by the end of the forecast period.
8. Export at Jones Pumping Plant is at 3519 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 03/31/2026 - 04/06/2026	12,428	lo	2,196	med	lomed
Week 2 04/07/2026 - 04/13/2026	11,423	lo	2,200	med	lomed
Week 3 04/14/2026 - 04/20/2026	10,500	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)
Week 1: 03/31/2026 - 04/06/2026	-6,500	4,107	1,102	5,209	79%
Week 1: 03/31/2026 - 04/06/2026	-5,000	3,506	873	4,379	80%
Week 1: 03/31/2026 - 04/06/2026	-3,500	2,819	630	3,449	82%
Week 1: 03/31/2026 - 04/06/2026	-2,000	2,046	601	2,647	77%

Week	OMR Bin (cfs)	CVP Exports (cfs)	SWP Exports (cfs)	Total Exports (cfs)	CVP Exports (% of total)
Week 2: 04/07/2026 - 04/13/2026	-6,500	2,791	601	3,392	82%
Week 2: 04/07/2026 - 04/13/2026	-5,000	2,390	601	2,991	80%
Week 2: 04/07/2026 - 04/13/2026	-3,500	1,932	601	2,533	76%
Week 2: 04/07/2026 - 04/13/2026	-2,000	1,417	601	2,018	70%
Week 3: 04/14/2026 - 04/20/2026	-6,500	902	601	1,503	60%
Week 3: 04/14/2026 - 04/20/2026	-5,000	902	601	1,503	60%
Week 3: 04/14/2026 - 04/20/2026	-3,500	902	601	1,503	60%
Week 3: 04/14/2026 - 04/20/2026	-2,000	902	601	1,503	60%

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

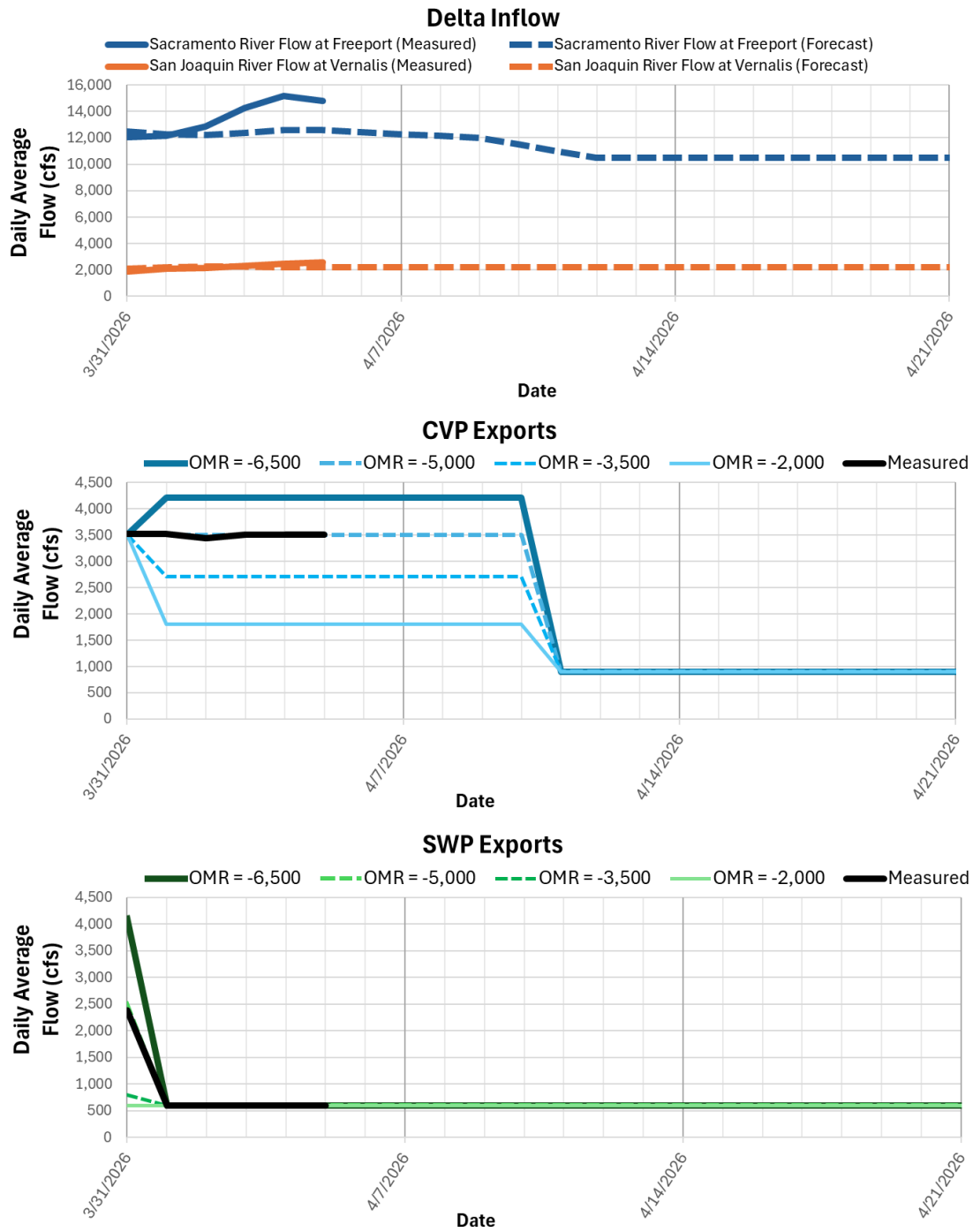


Figure 1: Delta Inflow, CVP Exports, and SWP Exports Summary

Figure 1 is a collection of three line graphs. The top graph shows measured and forecasted Sacramento River flows at Freeport and Vernalis from March 31, 2026 to April 21, 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 for March 31, 2026 to April 21, 2026.

Delta Export Zone of Influence

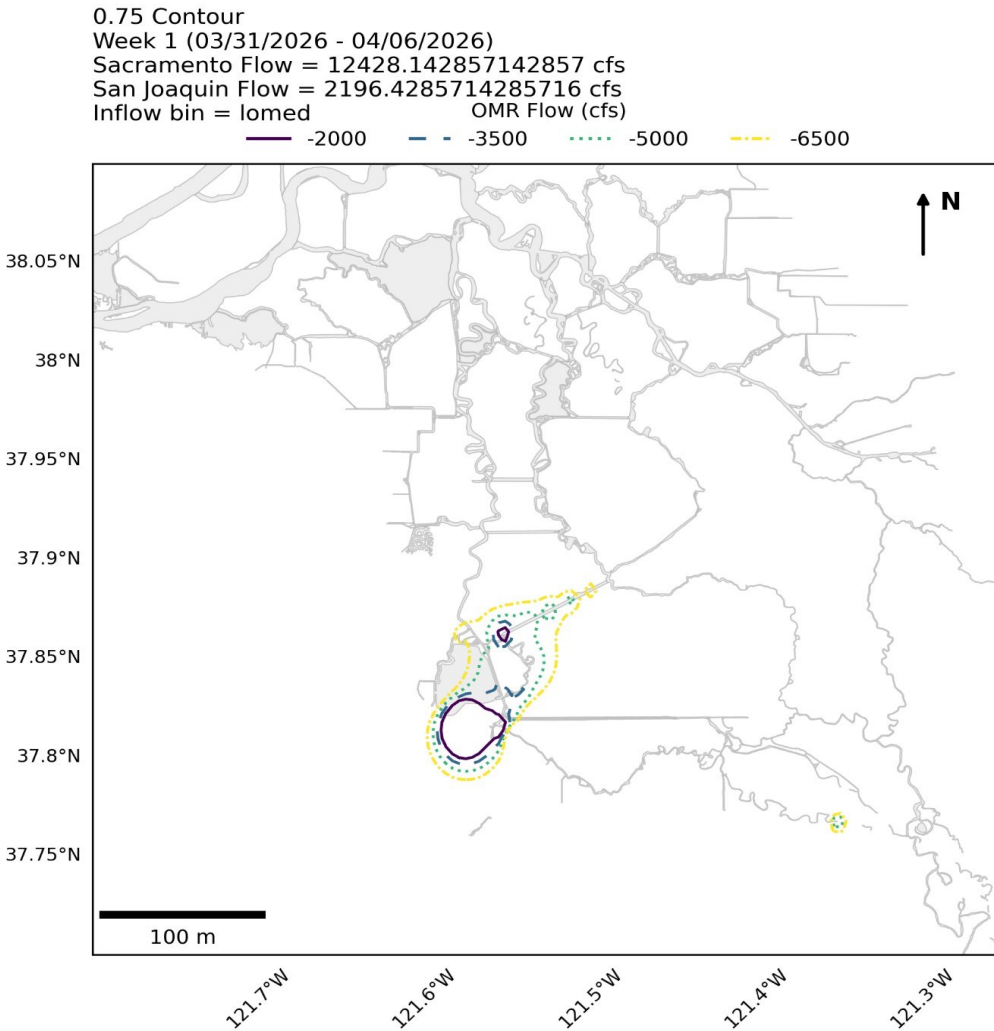


Figure 2: Delta Export Zone of Influence Week 1

Figure 2 is a map of the Delta showing different zone of influences at different OMR flow rates: 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 (March 31, 2026 – April 06 2026) with Sacramento River flow at 12,428 cfs, San Joaquin River flow at 2,196, and lomed inflow bin.

Notes:

- Contours indicate the proportional overlap of hourly average velocity Gaussian KDEs for a 1week 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)

0.75 Contour
 Week 2 (04/07/2026 - 04/13/2026)
 Sacramento Flow = 11422.714285714286 cfs
 San Joaquin Flow = 2200.0 cfs
 Inflow bin = lowmed

OMR Flow (cfs)
 -2000 -3500 -5000 -6500

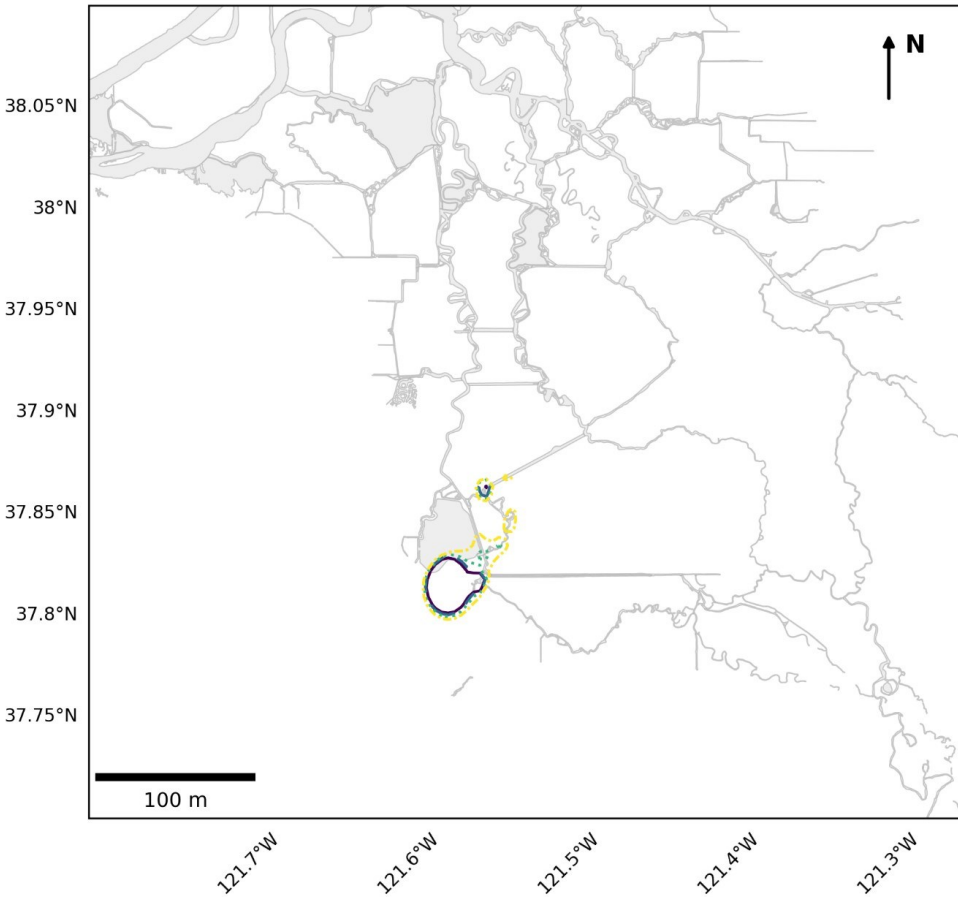


Figure 3: Delta Export Zone of Influence Week 2

Figure 2 is a map of the Delta showing different zone of influences at different OMR flow rates: 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 07, 2026 – April 13, 2026) with Sacramento River flow at 11,422 cfs, San Joaquin River flow at 2,200, and lowmed inflow bin.

Notes:

- Contours indicate the proportional overlap of hourly average velocity Gaussian KDEs for a 1week 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)

0.75 Contour
 Week 3 (04/14/2026 - 04/20/2026)
 Sacramento Flow = 10500.0 cfs
 San Joaquin Flow = 2200.0 cfs
 Inflow bin = lowmed

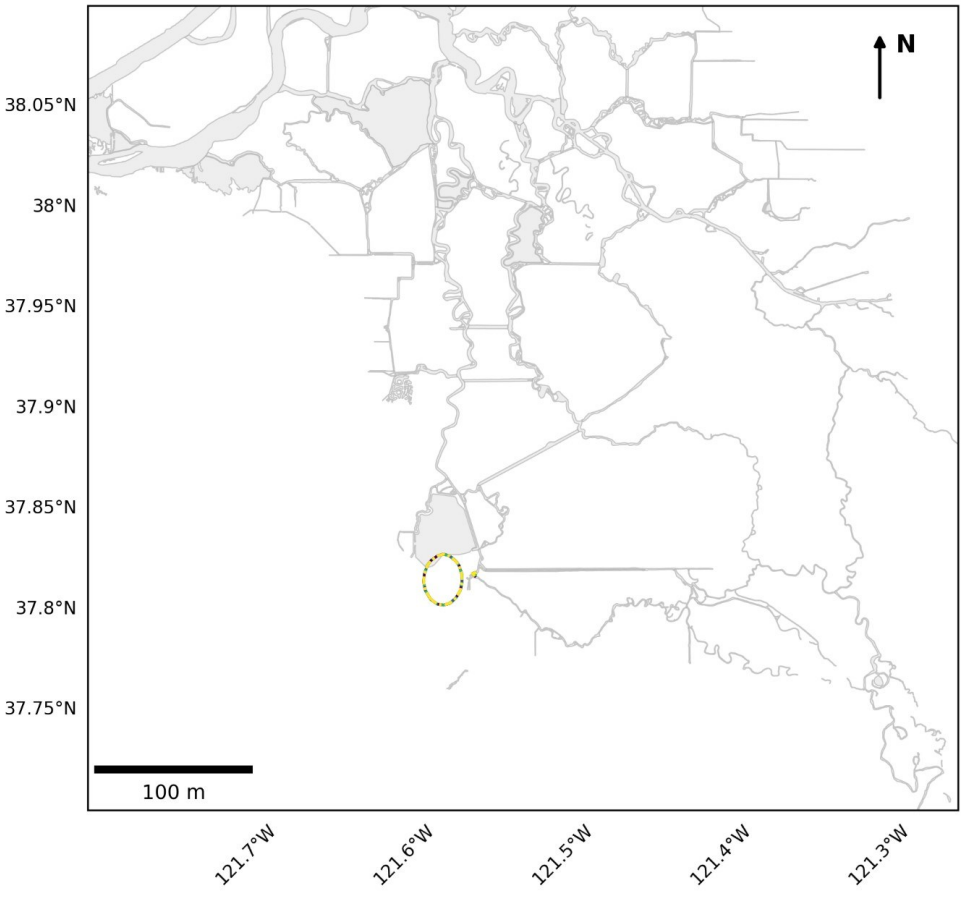


Figure 3: Delta Export Zone of Influence Week 3

Figure 3 is a map of the Delta showing different zone of influences at different OMR flow rates: 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 14, 2026 – April 20, 2026) with Sacramento River flow at 10,500 cfs, San Joaquin River flow at 2,200, and lowmed inflow bin.

Notes:

- Contours indicate the proportional overlap of hourly average velocity Gaussian KDEs for a 1week 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 by Hydrologic Influence Overlap Range (Low >0.75, Medium 0.25–0.75, High <0.25)

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: 03/31/2026 - 04/06/2026	-6,500	655.17	97.3%	17.63	2.6%	0.85	0.1%
Week 1: 03/31/2026 - 04/06/2026	-5,000	660.78	98.1%	12.02	1.8%	0.85	0.1%
Week 1: 03/31/2026 - 04/06/2026	-3,500	665.56	98.8%	7.24	1.1%	0.85	0.1%
Week 1: 03/31/2026 - 04/06/2026	-2,000	671.25	99.6%	1.55	0.2%	0.85	0.1%
Week 2: 04/07/2026 - 04/13/2026	-6,500	662.80	98.4%	10.00	1.5%	0.85	0.1%
Week 2: 04/07/2026 - 04/13/2026	-5,000	669.23	99.3%	3.57	0.5%	0.85	0.1%
Week 2: 04/07/2026 - 04/13/2026	-3,500	670.45	99.5%	2.35	0.3%	0.85	0.1%
Week 2: 04/07/2026 - 04/13/2026	-2,000	671.25	99.6%	1.55	0.2%	0.85	0.1%
Week 3: 04/14/2026 - 04/20/2026	-6,500	672.07	99.8%	0.73	0.1%	0.85	0.1%
Week 3: 04/14/2026 - 04/20/2026	-5,000	672.07	99.8%	0.73	0.1%	0.85	0.1%
Week 3: 04/14/2026 - 04/20/2026	-3,500	672.07	99.8%	0.73	0.1%	0.85	0.1%
Week 3: 04/14/2026 - 04/20/2026	-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

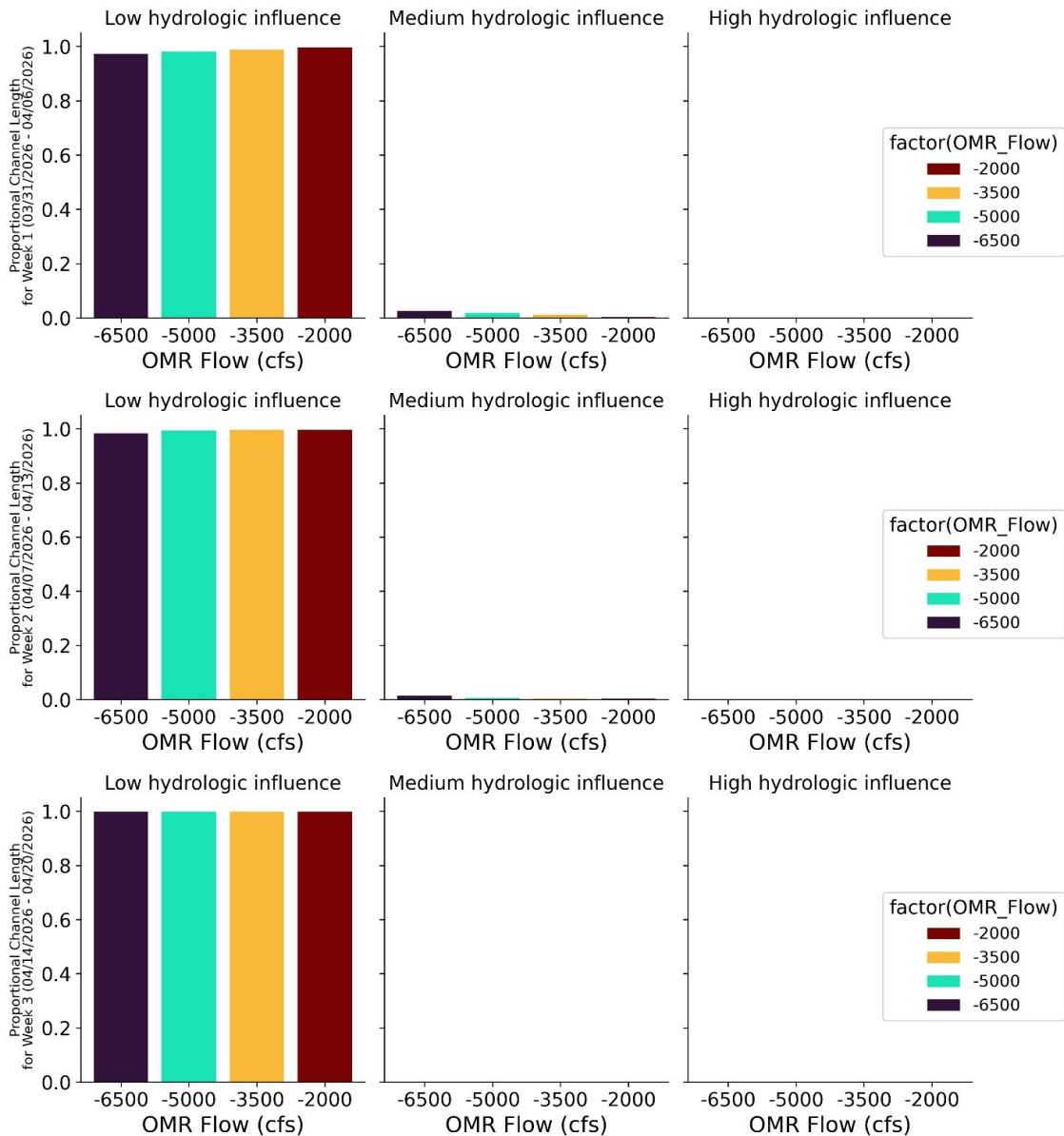


Figure 3: Proportional DSM2 Channel Length Altered from Pumping by Hydrologic Influence Category, Weeks 1–3

Figure 3 is a collection of three grouped bar charts, one for each weekly model run from March 31, 2026 to April 20, 2026. Each chart is divided into three panels by hydrologic influence category (Low, Medium, and High) and shows 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 in the Low hydrologic influence category, with minimal proportional alteration shown in the Medium panel and negligible alteration in the High panel.

PTM (Particle Tracking Model) Results

PTM Flux Evaluation Period: 03/31/2026 – 04/20/2026

Particles Injected: 03/31/2026

PTM Injection and Flux Locations

● = Injection Point (DSM2 node)

▬ = Flux Location

← = Reference Flux Direction

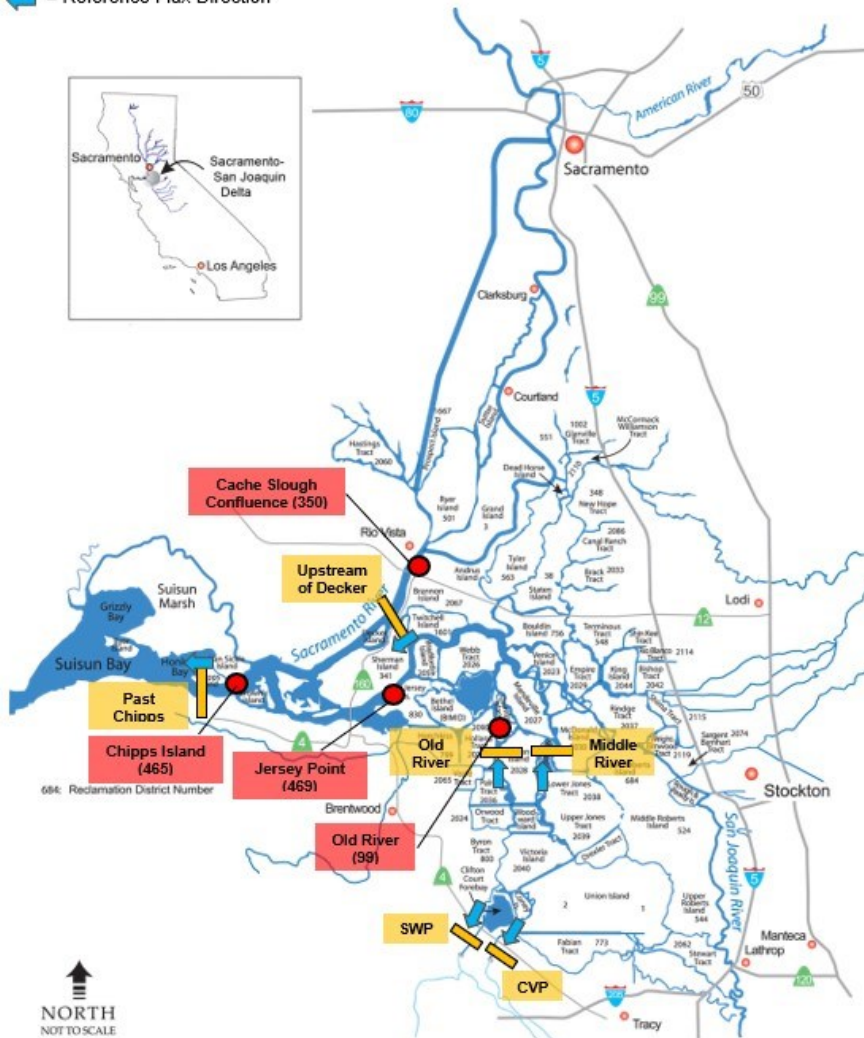


Figure 4: PTM Injection and Flux Locations in the Sacramento-San Joaquin Delta

Figure 4 is a map of the Sacramento-San Joaquin Delta showing PTM injection points (DSM2 nodes) and flux locations used for the March 31–April 20, 2026 evaluation period, with particles injected on March 31, 2026. Five injection points are marked with red circles and five flux locations with yellow bars, with blue arrows indicating reference flux direction. An inset 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: 04/06/2026	-6,500	78.4	0.0	21.6	0.0	0.0	0.0
Week 1 End: 04/06/2026	-5,000	82.4	0.0	17.6	0.0	0.0	0.0
Week 1 End: 04/06/2026	-3,500	82.8	0.0	17.3	0.0	0.0	0.0
Week 1 End: 04/06/2026	-2,000	85.3	0.0	14.7	0.0	0.0	0.0
Week 2 End: 04/13/2026	-6,500	85.5	0.0	14.5	0.0	0.0	0.0
Week 2 End: 04/13/2026	-5,000	87.3	0.5	12.8	0.0	0.0	0.0
Week 2 End: 04/13/2026	-3,500	89.3	0.0	10.7	0.0	0.0	0.0
Week 2 End: 04/13/2026	-2,000	91.6	0.0	8.4	0.0	0.0	0.0
Week 3 End: 04/20/2026	-6,500	93.8	0.1	6.3	0.0	0.0	0.0
Week 3 End: 04/20/2026	-5,000	94.3	0.6	5.7	0.0	0.0	0.0
Week 3 End: 04/20/2026	-3,500	94.7	0.2	5.3	0.0	0.0	0.0
Week 3 End: 04/20/2026	-2,000	95.4	0.0	4.6	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: 04/06/2026	-6,500	2.5	71.4	97.5	0.0	0.0	0.0
Week 1 End: 04/06/2026	-5,000	4.5	72.5	95.6	0.1	0.0	0.0
Week 1 End: 04/06/2026	-3,500	4.6	70.0	95.4	0.0	0.0	0.0
Week 1 End: 04/06/2026	-2,000	4.9	74.5	95.1	0.0	0.0	0.0
Week 2 End: 04/13/2026	-6,500	38.3	77.1	62.2	0.5	0.0	0.0
Week 2 End: 04/13/2026	-5,000	41.3	77.4	59.2	0.4	0.0	0.1
Week 2 End: 04/13/2026	-3,500	42.2	76.3	58.2	0.4	0.0	0.0
Week 2 End: 04/13/2026	-2,000	50.3	79.0	49.9	0.2	0.0	0.0
Week 3 End: 04/20/2026	-6,500	66.6	81.3	34.1	0.5	0.1	0.1
Week 3 End: 04/20/2026	-5,000	67.4	82.0	33.2	0.5	0.0	0.1
Week 3 End: 04/20/2026	-3,500	68.4	79.9	32.1	0.5	0.0	0.0
Week 3 End: 04/20/2026	-2,000	75.7	82.3	24.7	0.4	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: 04/06/2026	-6,500	1.2	18.0	99.1	0.3	0.0	0.0
Week 1 End: 04/06/2026	-5,000	2.6	18.6	97.5	0.1	0.0	0.0
Week 1 End: 04/06/2026	-3,500	3.5	14.2	96.7	0.2	0.0	0.0
Week 1 End: 04/06/2026	-2,000	3.5	16.1	96.9	0.4	0.0	0.0
Week 2 End: 04/13/2026	-6,500	22.2	25.8	79.2	0.8	0.6	0.0
Week 2 End: 04/13/2026	-5,000	26.1	26.4	74.7	0.7	0.0	0.1
Week 2 End: 04/13/2026	-3,500	28.7	20.9	71.9	0.6	0.0	0.0
Week 2 End: 04/13/2026	-2,000	32.4	21.6	68.2	0.6	0.0	0.0
Week 3 End: 04/20/2026	-6,500	52.0	29.5	49.8	1.1	0.6	0.1
Week 3 End: 04/20/2026	-5,000	59.4	30.3	41.6	0.9	0.0	0.1
Week 3 End: 04/20/2026	-3,500	63.1	25.6	37.6	0.7	0.0	0.0
Week 3 End: 04/20/2026	-2,000	65.9	24.9	34.9	0.8	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: 04/06/2026	-6,500	0.0	0.4	19.1	45.2	35.4	0.4
Week 1 End: 04/06/2026	-5,000	0.0	0.9	28.9	58.1	12.9	0.1
Week 1 End: 04/06/2026	-3,500	0.0	0.7	44.0	54.7	1.3	0.0
Week 1 End: 04/06/2026	-2,000	0.1	1.2	58.1	41.8	0.0	0.0
Week 2 End: 04/13/2026	-6,500	0.4	1.4	14.0	22.7	60.3	2.6
Week 2 End: 04/13/2026	-5,000	0.7	2.8	24.0	25.1	47.9	2.3
Week 2 End: 04/13/2026	-3,500	0.8	2.8	34.1	34.9	29.0	1.2
Week 2 End: 04/13/2026	-2,000	1.8	3.5	50.2	42.4	5.2	0.4
Week 3 End: 04/20/2026	-6,500	1.8	2.8	12.1	19.4	61.2	5.4
Week 3 End: 04/20/2026	-5,000	3.7	5.6	20.5	21.6	49.1	5.1
Week 3 End: 04/20/2026	-3,500	5.1	6.2	29.3	30.6	31.2	3.9
Week 3 End: 04/20/2026	-2,000	8.3	7.9	42.3	39.2	8.5	1.6

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

PTM Results for Neutral Particles. OMR Scenario = -6,500. Particles Injected 3/31/2026 at DSM2 Node 465 (Chippis).

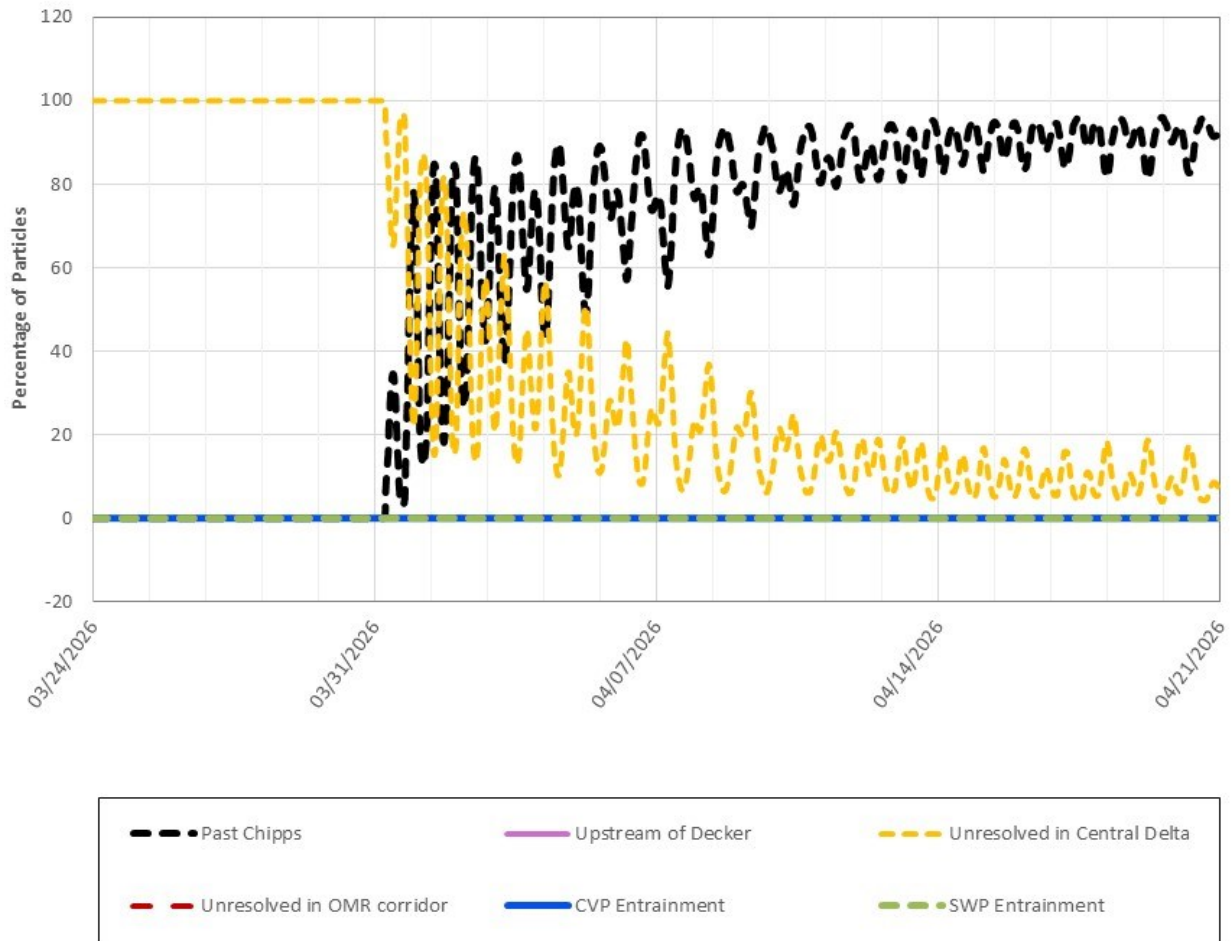


Figure 5: PTM Results for Neutral Particles at Chippis Island, OMR Scenario -6,500

Figure 5 is a line graph showing the percentage of neutral particles over time from March 31 to April 21, 2026, for particles injected on March 31, 2026, at DSM2 Node 465 (Chippis). Six flux locations are represented by different colored dashed lines. Past Chippis (black) increases rapidly immediately after injection, rising to approximately 80–90% and remaining the dominant pathway through the remainder of the period. In contrast, Unresolved in Central Delta (yellow) declines sharply from near 100% shortly after injection, exhibiting oscillations before gradually decreasing to near 10% by late April. Upstream of Decker (purple), Unresolved in OMR corridor (red), CVP Entrainment (blue), and SWP Entrainment (green) remain near zero throughout the evaluation period, indicating minimal contribution from these pathways.

PTM Results for Neutral Particles. OMR Scenario = -5,000. Particles Injected 3/31/2026 at DSM2 Node 465 (Chipps).

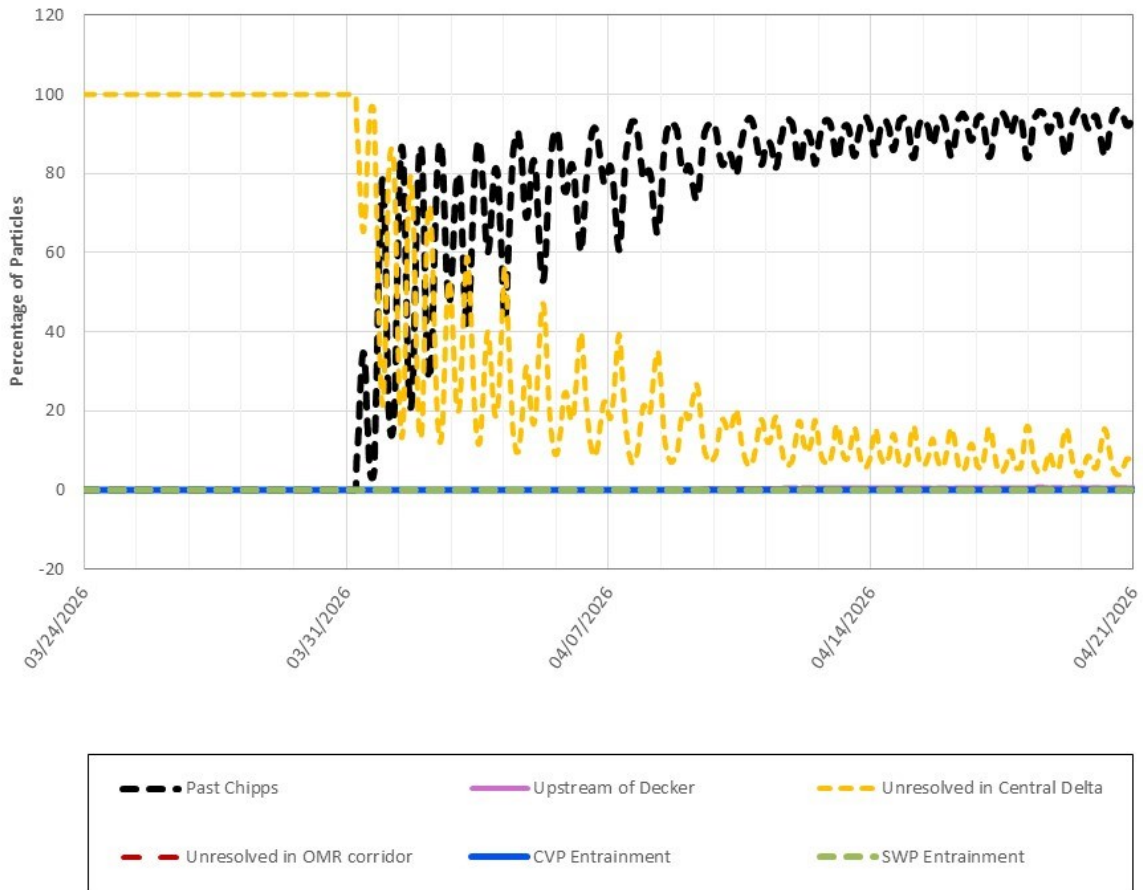


Figure 6: PTM Results for Neutral Particles at Chipps Island, OMR Scenario -5,000

Figure 6 is a line graph showing the percentage of neutral particles over time from late March to April 21, 2026, for particles injected on March 31, 2026, at DSM2 Node 465 (Chipps) under the OMR -5,000 cfs scenario. Six flux locations are represented by different colored dashed lines. Past Chipps (black) increases rapidly immediately after injection, rising to approximately 80–95% and remaining the dominant pathway throughout the evaluation period. In contrast, Unresolved in Central Delta (yellow) declines sharply from near 100% following injection, exhibiting oscillatory behavior before gradually decreasing to around 10% by late April. Upstream of Decker (purple), Unresolved in the OMR corridor (red), CVP Entrainment (blue), and SWP Entrainment (green) remain near zero throughout the period, indicating minimal contribution from these pathways.

PTM Results for Neutral Particles. OMR Scenario = -3,500. Particles Injected 3/31/2026 at DSM2 Node 465 (Chippis).

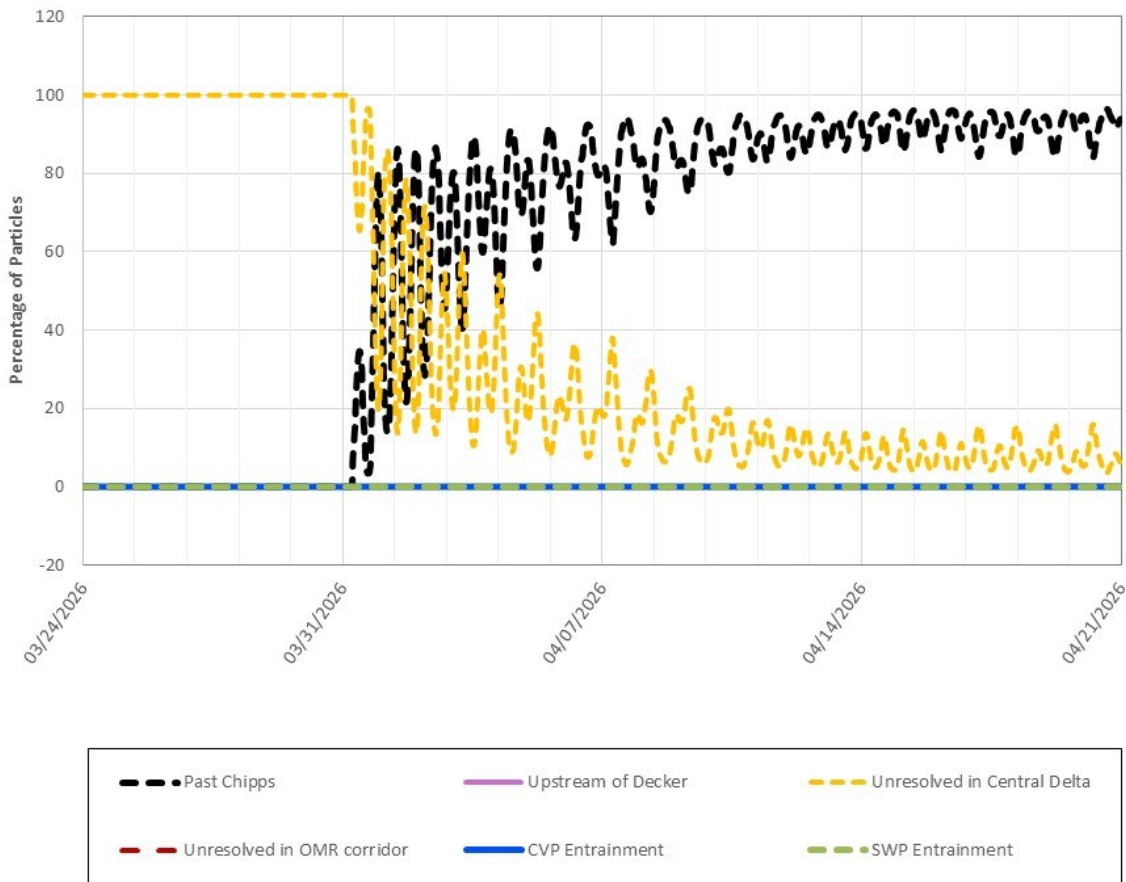


Figure 7: PTM Results for Neutral Particles at Chippis Island, OMR Scenario -3,500

Figure 7 is a line graph showing the percentage of neutral particles over time from late March to April 21, 2026, for particles injected on March 31, 2026, at DSM2 Node 465 (Chippis) under the OMR -3,500 cfs scenario. Six flux locations are represented by different colored dashed lines. Past Chippis (black) increases rapidly immediately after injection, rising to approximately 85–95% and remaining the dominant pathway throughout the evaluation period. In contrast, Unresolved in Central Delta (yellow) declines from near 100% following injection, showing moderate oscillations with a smaller peak than observed under more negative OMR scenarios, before gradually decreasing to around 10% by late April. Upstream of Decker (purple), Unresolved in the OMR corridor (red), CVP Entrainment (blue), and SWP Entrainment (green) remain near zero throughout the period, indicating minimal contribution from these pathways.

PTM Results for Neutral Particles. OMR Scenario = -2,000. Particles Injected 3/31/2026 at DSM2 Node 465 (Chippis).

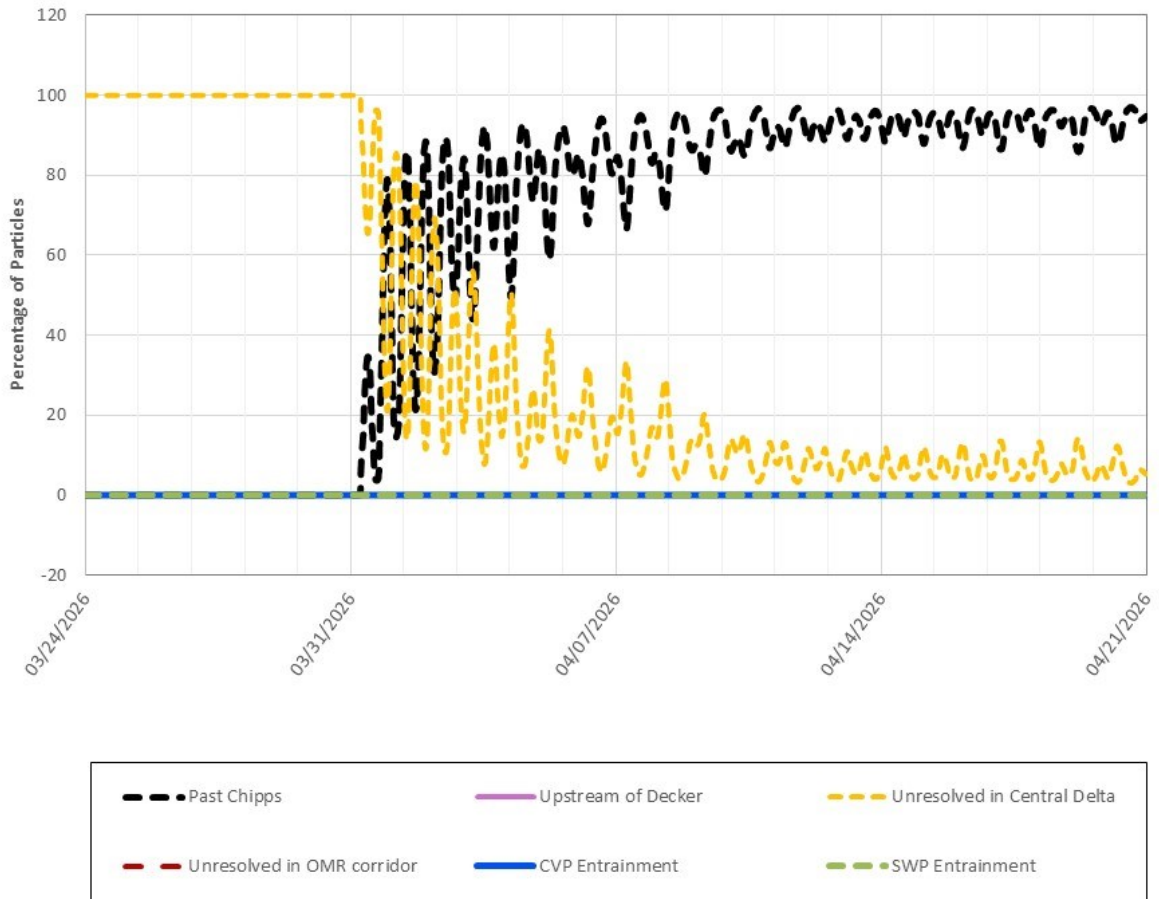


Figure 8: PTM Results for Neutral Particles at Chippis Island, OMR Scenario -2,000

Figure 8 is a line graph showing the percentage of neutral particles over time from late March to April 21, 2026, for particles injected on March 31, 2026, at DSM2 Node 465 (Chippis) under the OMR -2,000 cfs scenario. Six flux locations are represented by different colored dashed lines. Past Chippis (black) increases rapidly immediately after injection, rising to approximately 85–95% and remaining the dominant pathway throughout the evaluation period. In contrast, Unresolved in Central Delta (yellow) declines from near 100% following injection, exhibiting moderate oscillations before gradually decreasing to around 5–10% by late April. Upstream of Decker (purple), Unresolved in the OMR corridor (red), CVP Entrainment (blue), and SWP Entrainment (green) remain near zero throughout the period, indicating minimal contribution from these pathways.

PTM Results for Neutral Particles. OMR Scenario = -6,500. Particles Injected 3/31/2026 at DSM2 Node 350 (Cache Slough).

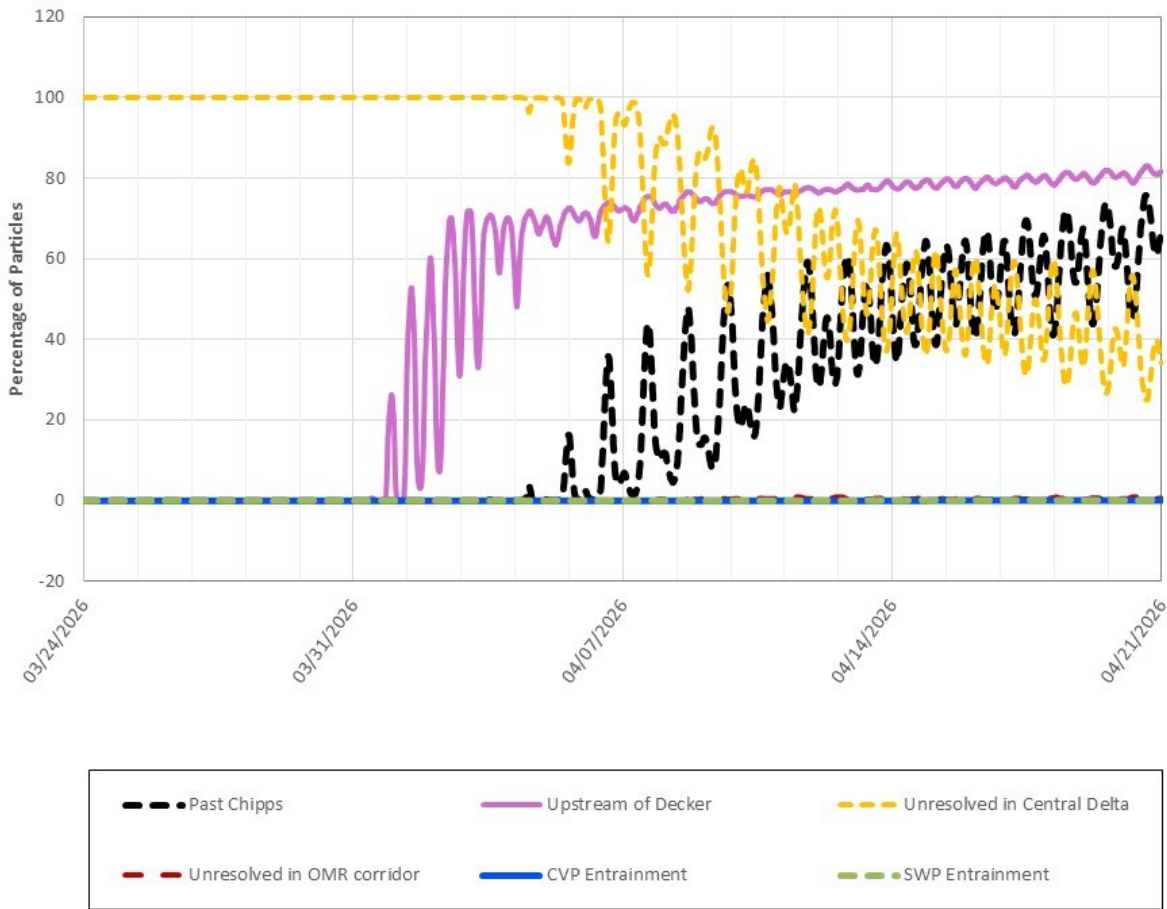


Figure 9: PTM Results for Neutral Particles at Cache Slough Confluence, OMR Scenario -6,500

Figure 9 is a line graph showing the percentage of neutral particles over time from late March to April 21, 2026, for particles injected on March 31, 2026, at DSM2 Node 350 (Cache Slough) under the OMR -6,500 cfs scenario. Six flux locations are represented by different colored dashed lines. Upstream of Decker (purple) increases rapidly shortly after injection, rising to approximately 70–80% and remaining elevated throughout the evaluation period. Past Chipps (black) increases more gradually after injection, reaching roughly 60–70% by late April. In contrast, Unresolved in Central Delta (yellow) remains near 100% immediately following injection before declining steadily, with oscillations, to approximately 25–35% by the end of the period. Unresolved in the OMR corridor (red), CVP Entrainment (blue), and SWP Entrainment (green) remain near zero throughout the period, indicating minimal contribution from these pathways.

PTM Results for Neutral Particles. OMR Scenario = -5,000. Particles Injected 3/31/2026 at DSM2 Node 350 (Cache Slough).

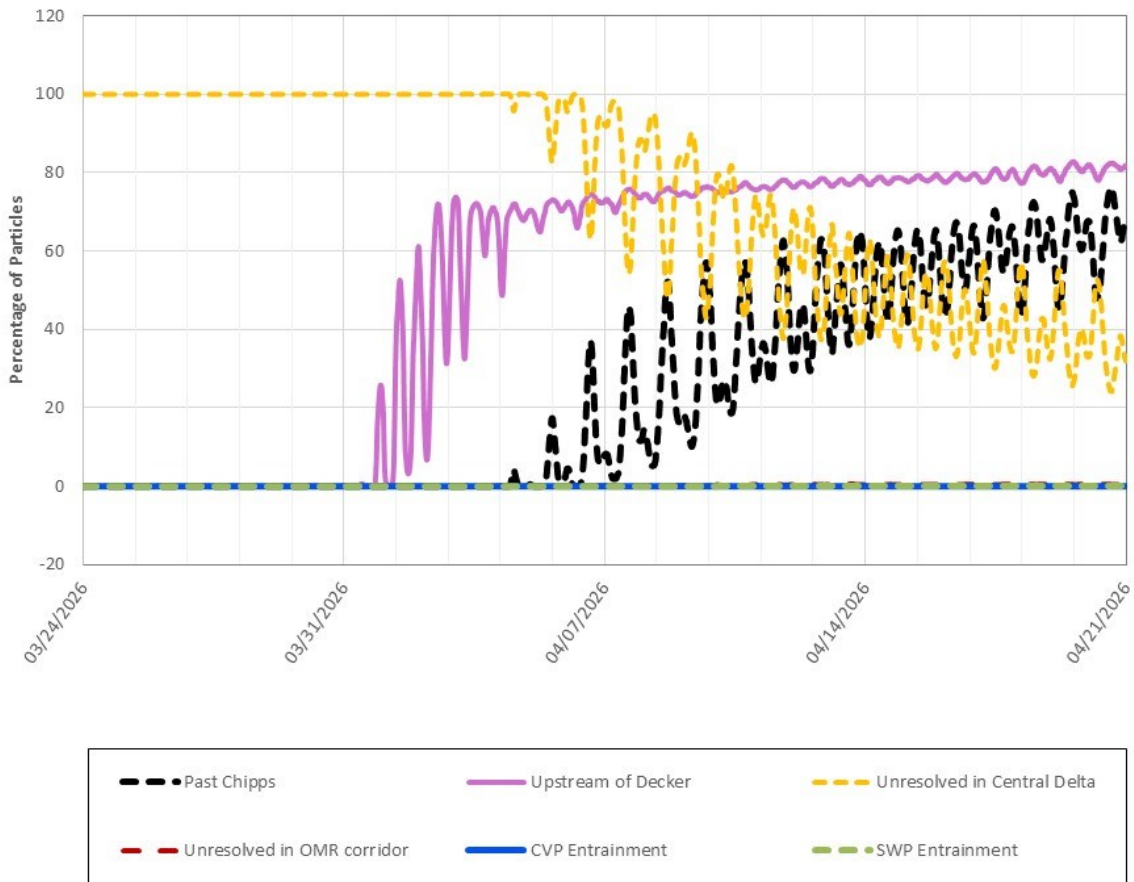


Figure 10: PTM Results for Neutral Particles at Cache Slough Confluence, OMR Scenario -5,000

Figure 10 is a line graph showing the percentage of neutral particles over time from late March to April 21, 2026, for particles injected on March 31, 2026, at DSM2 Node 350 (Cache Slough) under the OMR -5,000 cfs scenario. Six flux locations are represented by different colored dashed lines. Upstream of Decker (purple) increases rapidly shortly after injection, rising to approximately 70–80% and remaining relatively stable through the evaluation period. Past Chipps (black) increases gradually after injection, reaching roughly 60–70% by late April. In contrast, Unresolved in Central Delta (yellow) remains near 100% immediately following injection before declining steadily with oscillations to approximately 25–35% by the end of the period. Unresolved in the OMR corridor (red), CVP Entrainment (blue), and SWP Entrainment (green) remain near zero throughout the period, indicating minimal contribution from these pathways.

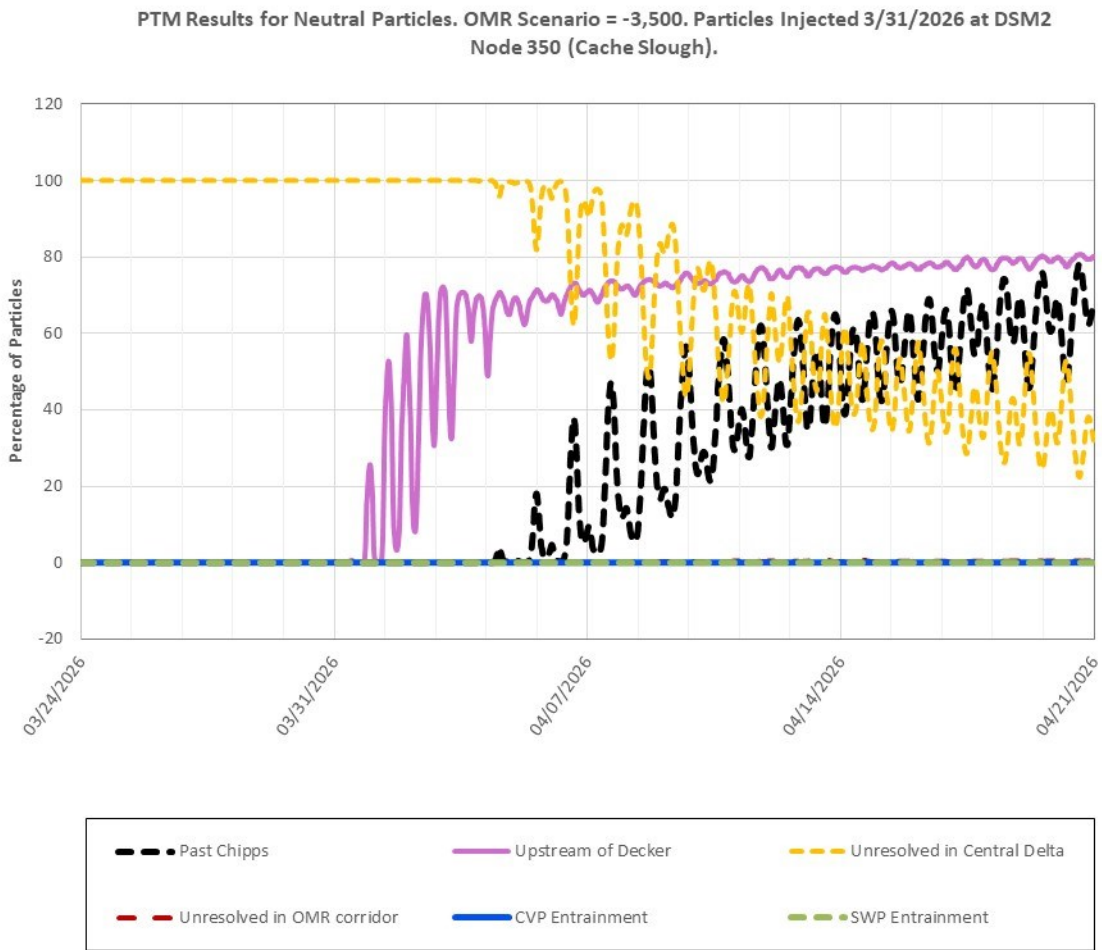


Figure 11: PTM Results for Neutral Particles at Cache Slough Confluence, OMR Scenario -3,500

Figure 11 is a line graph showing the percentage of neutral particles over time from late March to April 21, 2026, for particles injected on March 31, 2026, at DSM2 Node 350 (Cache Slough) under the OMR -3,500 cfs scenario. Six flux locations are represented by different colored dashed lines. Upstream of Decker (purple) increases rapidly shortly after injection, rising to approximately 65–75% and gradually stabilizing near 75–80% through the remainder of the evaluation period. Past Chipps (black) increases more gradually after injection, reaching roughly 60–70% by late April. In contrast, Unresolved in Central Delta (yellow) remains near 100% immediately following injection before declining steadily, with oscillatory behavior, to approximately 30–40% by the end of the period. Unresolved in the OMR corridor (red), CVP Entrainment (blue), and SWP Entrainment (green) remain near zero throughout the period, indicating minimal contribution from these pathways.

PTM Results for Neutral Particles. OMR Scenario = -2,000. Particles Injected 3/31/2026 at DSM2 Node 350 (Cache Slough).

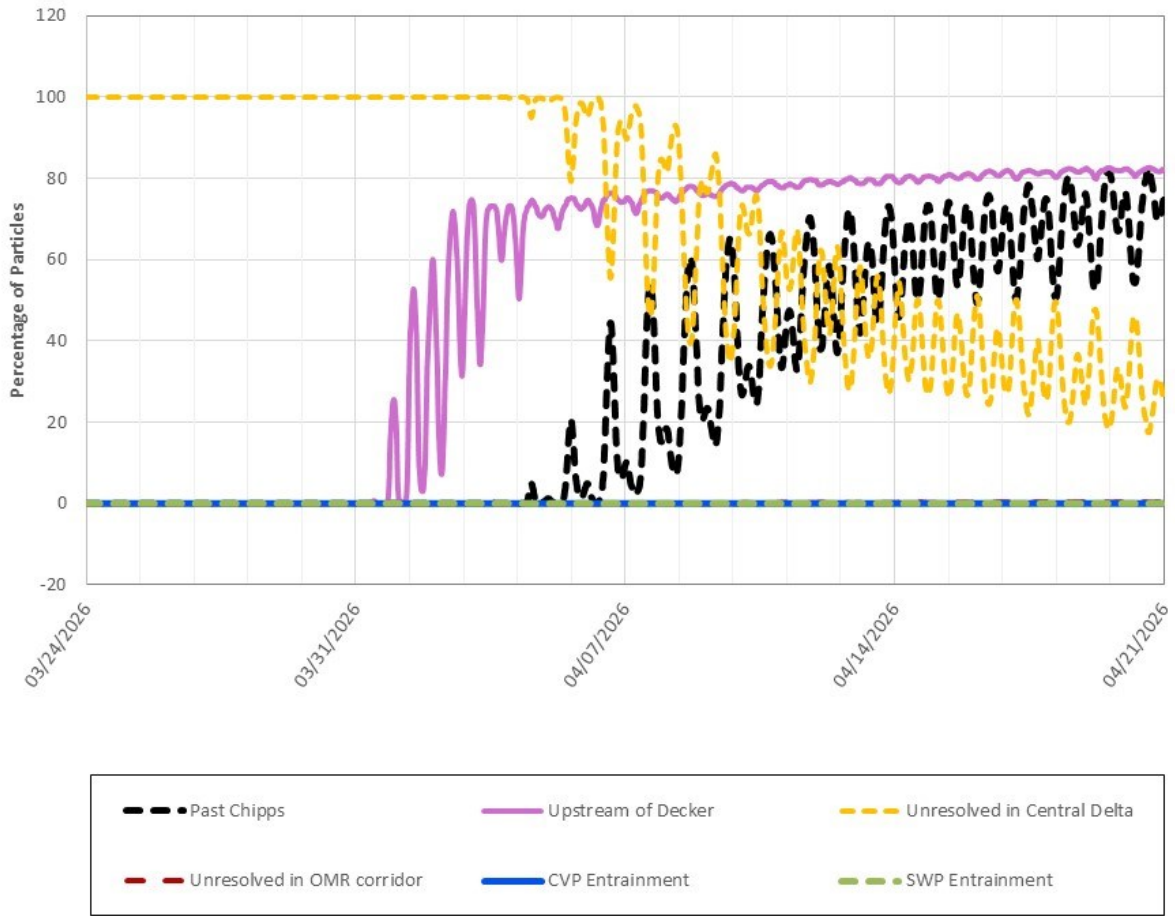


Figure 12: PTM Results for Neutral Particles at Cache Slough Confluence, OMR Scenario -2,000

Figure 12 is a line graph showing the percentage of neutral particles over time from late March to April 21, 2026, for particles injected on March 31, 2026, at DSM2 Node 350 (Cache Slough) under the OMR -2,000 cfs scenario. Six flux locations are represented by different colored dashed lines. Upstream of Decker (purple) increases rapidly shortly after injection, rising to approximately 70–75% and gradually stabilizing near 80–85% through the remainder of the evaluation period. Past Chipps (black) increases more gradually after injection, reaching roughly 70–80% by late April. In contrast, Unresolved in Central Delta (yellow) remains near 100% immediately following injection before declining steadily, with oscillatory behavior, to approximately 20–30% by the end of the period. Unresolved in the OMR corridor (red), CVP Entrainment (blue), and SWP Entrainment (green) remain near zero throughout the period, indicating minimal contribution from these pathways.

PTM Results for Neutral Particles. OMR Scenario = -6,500. Particles Injected 3/31/2026 at DSM2 Node 469 (Jersey Point).

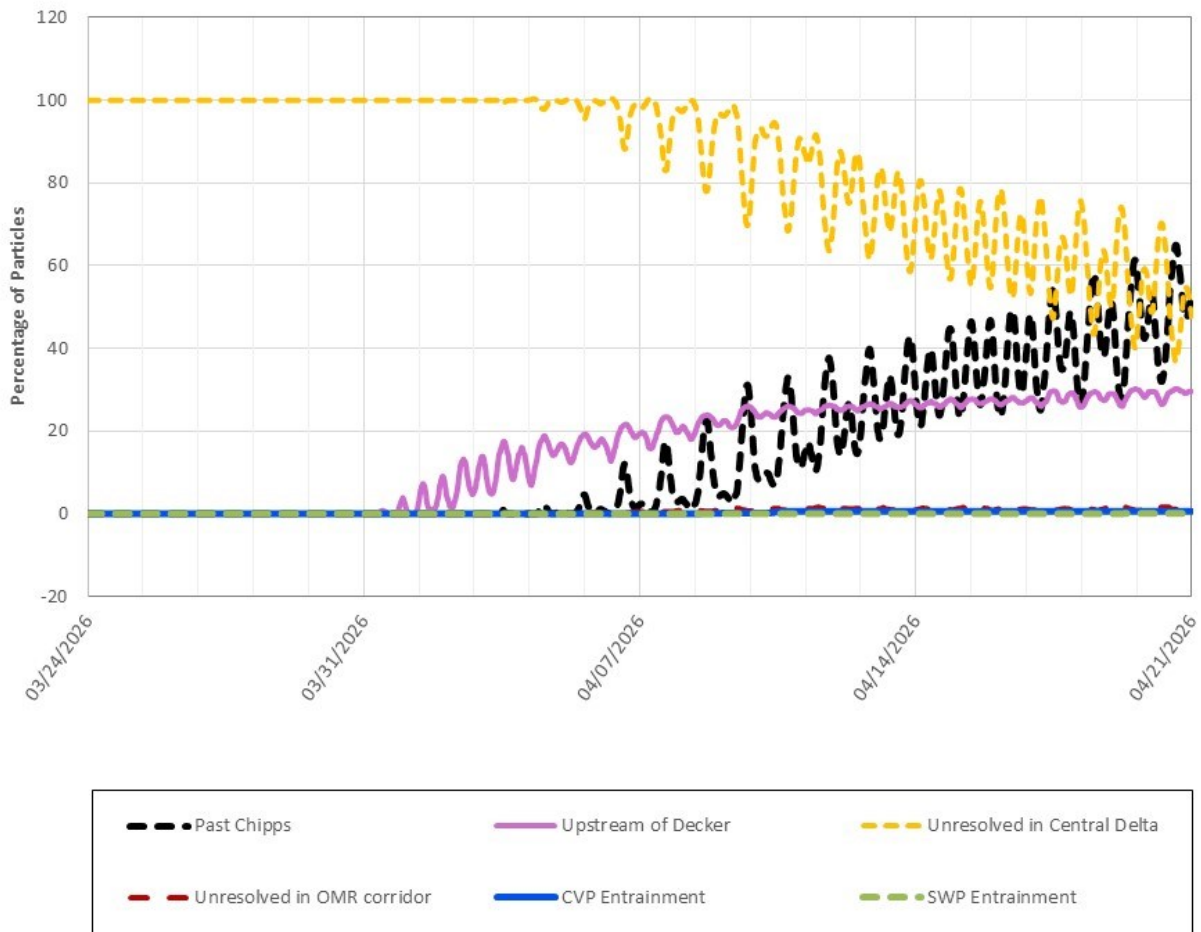


Figure 13: PTM Results for Neutral Particles at Jersey Point, OMR Scenario -6,500

Figure 13 is a line graph showing the percentage of neutral particles over time from late March to April 21, 2026, for particles injected on March 31, 2026, at DSM2 Node 469 (Jersey Point) under the OMR -6,500 cfs scenario. Six flux locations are represented by different colored dashed lines. Unresolved in Central Delta (yellow) remains near 100% immediately following injection before declining steadily, with oscillatory behavior, to approximately 50–60% by the end of the evaluation period. Past Chipps (black) increases gradually after injection, reaching roughly 50–60% by late April. Upstream of Decker (purple) increases slowly throughout the period, reaching approximately 25–30% by the end of the simulation. Unresolved in the OMR corridor (red), CVP Entrainment (blue), and SWP Entrainment (green) remain near zero throughout the period, indicating minimal contribution from these pathways.

PTM Results for Neutral Particles. OMR Scenario = -5,000. Particles Injected 3/31/2026 at DSM2 Node 469 (Jersey Point).

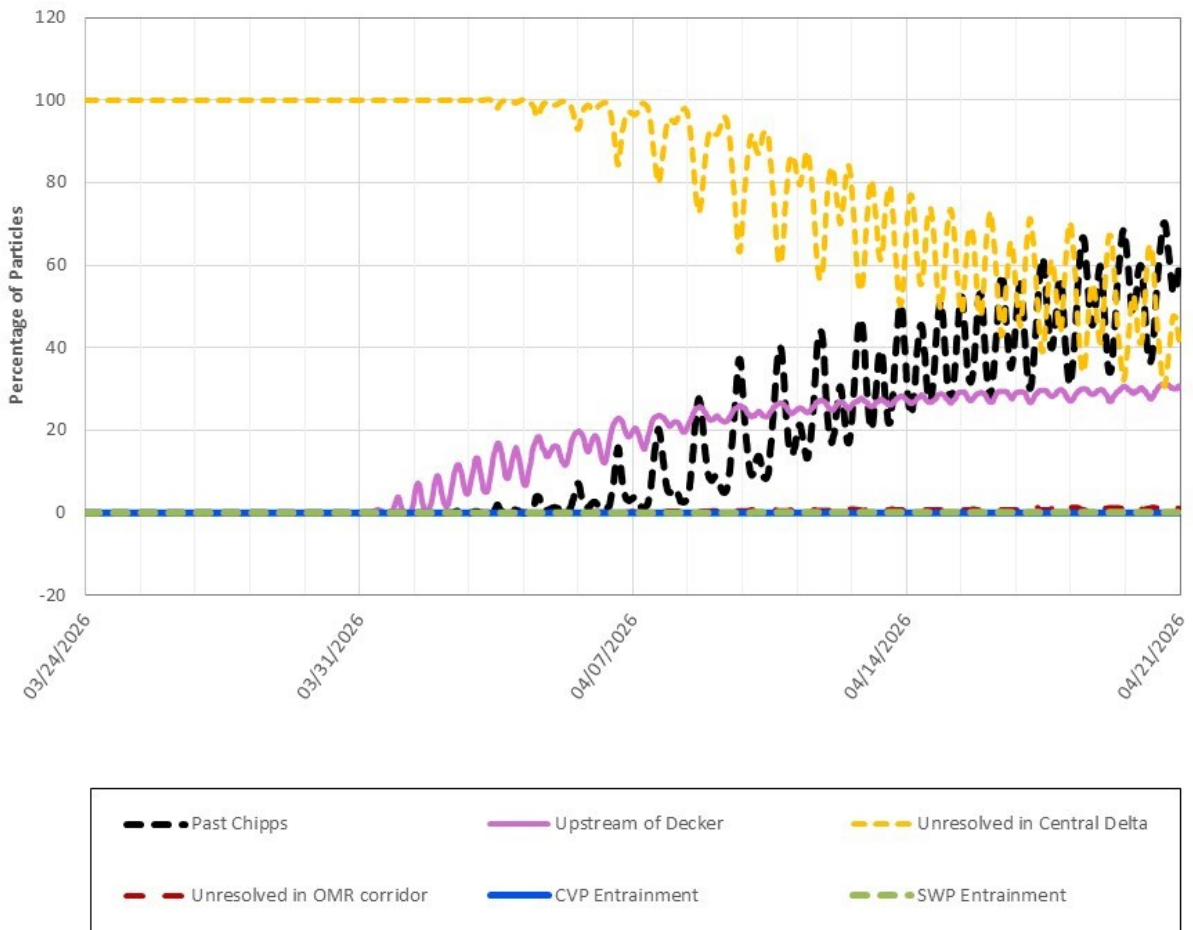


Figure 14: PTM Results for Neutral Particles at Jersey Point, OMR Scenario -5,000

Figure 14 is a line graph showing the percentage of neutral particles over time from late March to April 21, 2026, for particles injected on March 31, 2026, at DSM2 Node 469 (Jersey Point) under the OMR -5,000 cfs scenario. Six flux locations are represented by different colored dashed lines. Unresolved in Central Delta (yellow) remains near 100% immediately following injection before declining steadily, with oscillatory behavior, to approximately 45–60% by the end of the evaluation period. Past Chipps (black) increases gradually after injection, reaching roughly 60–70% by late April. Upstream of Decker (purple) increases slowly throughout the period, reaching approximately 25–30% by the end of the simulation. Unresolved in the OMR corridor (red), CVP Entrainment (blue), and SWP Entrainment (green) remain near zero throughout the period, indicating minimal contribution from these pathways.

PTM Results for Neutral Particles. OMR Scenario = -3,500. Particles Injected 3/31/2026 at DSM2 Node 469 (Jersey Point).

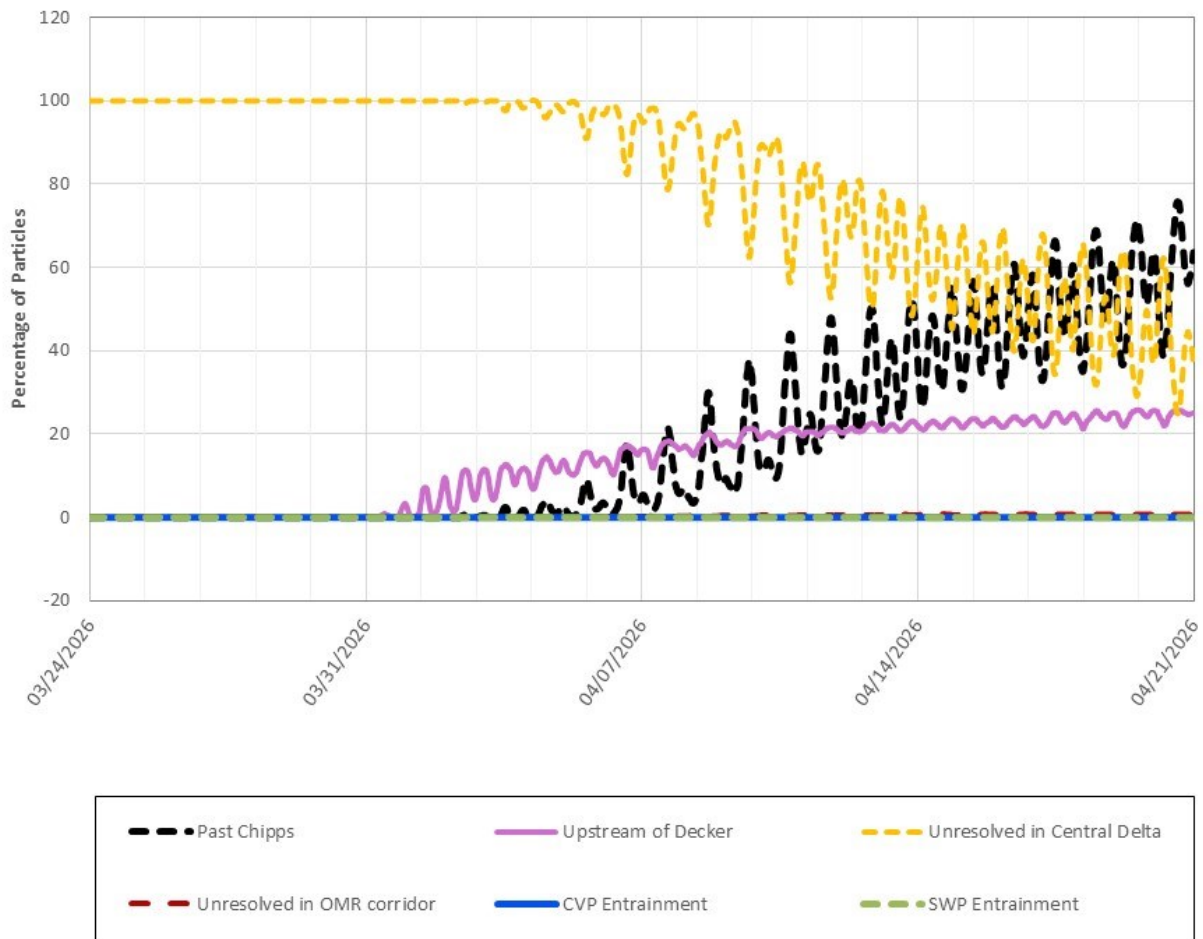


Figure 15: PTM Results for Neutral Particles at Jersey Point, OMR Scenario -3,500

Figure 15 is a line graph showing the percentage of neutral particles over time from late March to April 21, 2026, for particles injected on March 31, 2026, at DSM2 Node 469 (Jersey Point) under the OMR -3,500 cfs scenario. Six flux locations are represented by different colored dashed lines. Unresolved in Central Delta (yellow) remains near 100% immediately following injection before declining steadily, with oscillatory behavior, to approximately 40–50% by the end of the evaluation period. Past Chipps (black) increases gradually after injection, reaching roughly 60–70% by late April. Upstream of Decker (purple) increases slowly throughout the period, reaching approximately 20–25% by the end of the simulation. Unresolved in the OMR corridor (red), CVP Entrainment (blue), and SWP Entrainment (green) remain near zero throughout the period, indicating minimal contribution from these pathways.

PTM Results for Neutral Particles. OMR Scenario = -2,000. Particles Injected 3/31/2026 at DSM2 Node 469 (Jersey Point).

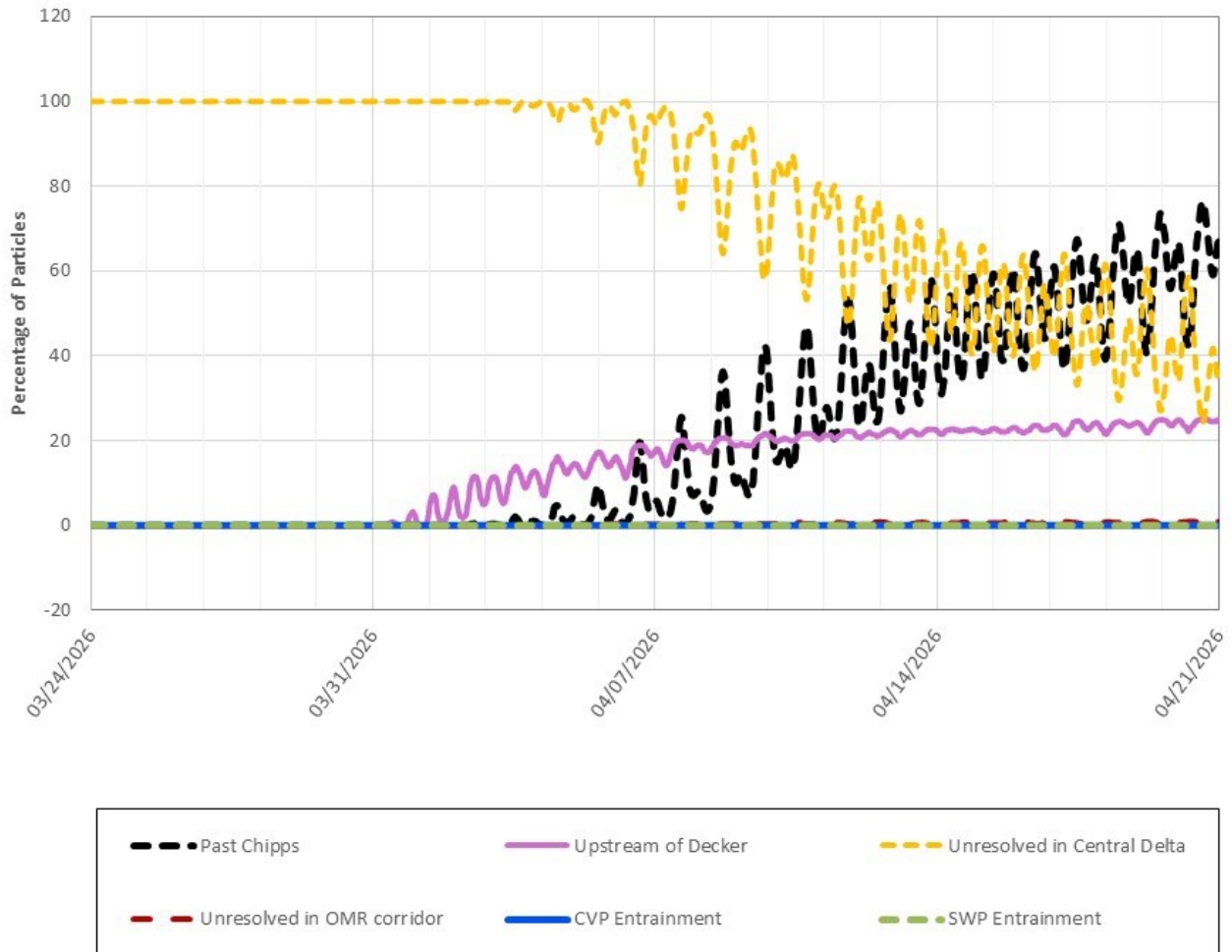


Figure 16: PTM Results for Neutral Particles at Jersey Point, OMR Scenario -2,000

Figure 16 is a line graph showing the percentage of neutral particles over time from February 3 to March 3, 2026, for particles injected on February 10, 2026, at DSM2 Node 469 (Jersey Point) under the OMR -2,000 cfs scenario. Six flux locations are represented by different colored dashed lines. Past Chipps (black) increases steadily following injection, rising to approximately 90–95% and remaining the dominant pathway through the end of the period. In contrast, Unresolved in Central Delta (yellow) declines sharply from near 100% shortly after injection to approximately 10% by early March. Upstream of Decker (pink) increases gradually after injection, reaching roughly 15–20% by the end of the period. Unresolved in the OMR corridor (red), CVP Entrainment (blue), and SWP Entrainment (green) remain near zero throughout the evaluation period, indicating minimal contribution from these pathways.

PTM Results for Neutral Particles. OMR Scenario = -6,500. Particles Injected 3/31/2026 at DSM2 Node 99 (Old River).

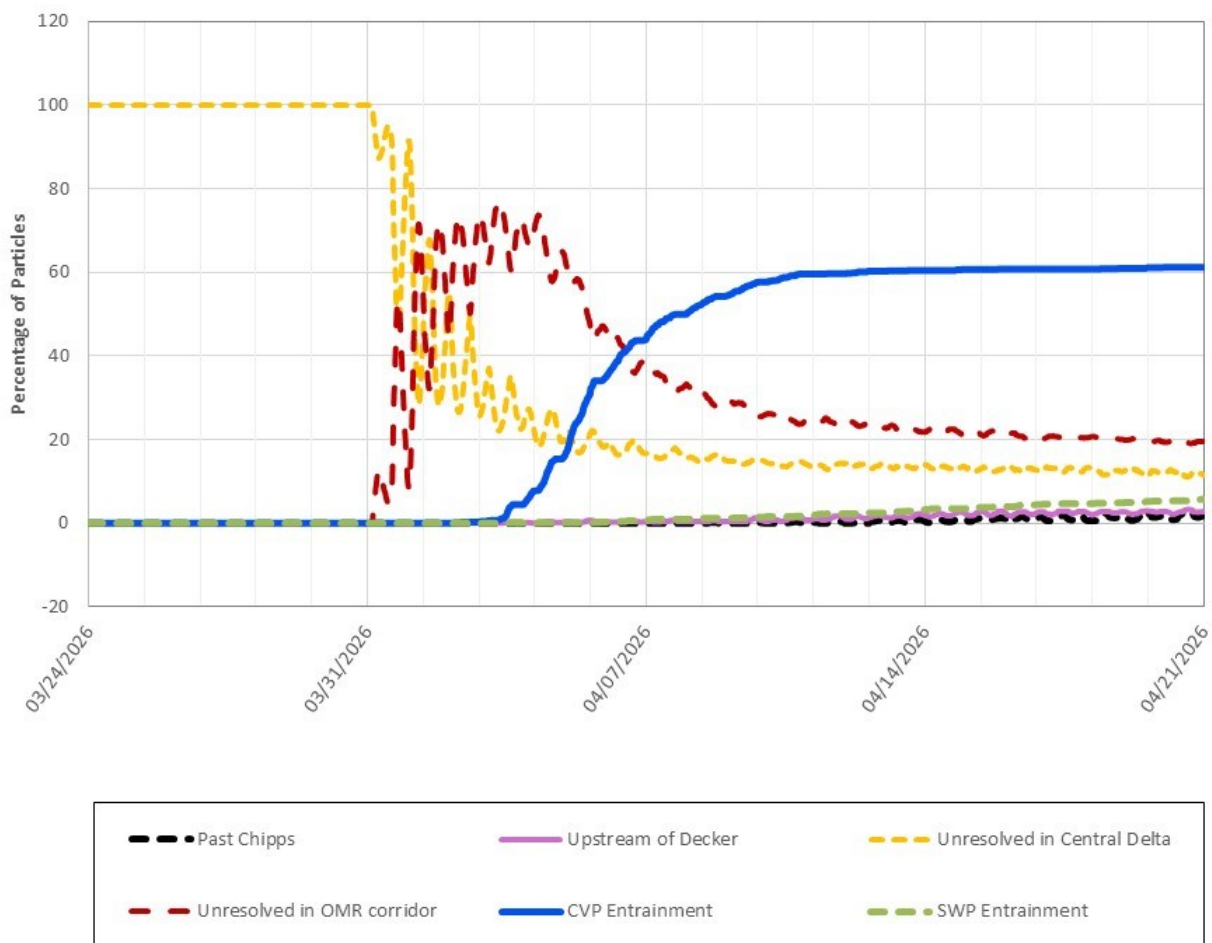


Figure 17: PTM Results for Neutral Particles at Old River, OMR Scenario -6,500

Figure 17 is a line graph showing the percentage of neutral particles over time from late March to April 21, 2026, for particles injected on March 31, 2026, at DSM2 Node 99 (Old River) under the OMR -6,500 cfs scenario. Six flux locations are represented by different colored dashed lines. Unresolved in the OMR corridor (red) increases sharply shortly after injection, peaking near 70–75%, before steadily declining to approximately 20% by the end of the evaluation period. CVP Entrainment (blue) rises rapidly following injection and becomes the dominant pathway, reaching approximately 60–65% by early April and stabilizing thereafter. SWP Entrainment (green) increases more gradually, reaching roughly 5–10% by late April. In contrast, Unresolved in Central Delta (yellow) declines from near 100% shortly after injection to approximately 10–15% by the end of the period, while Past Chippis (black) and Upstream of Decker (purple) remain minimal throughout the evaluation period.

PTM Results for Neutral Particles. OMR Scenario = -5,000. Particles Injected 3/31/2026 at DSM2 Node 99 (Old River).

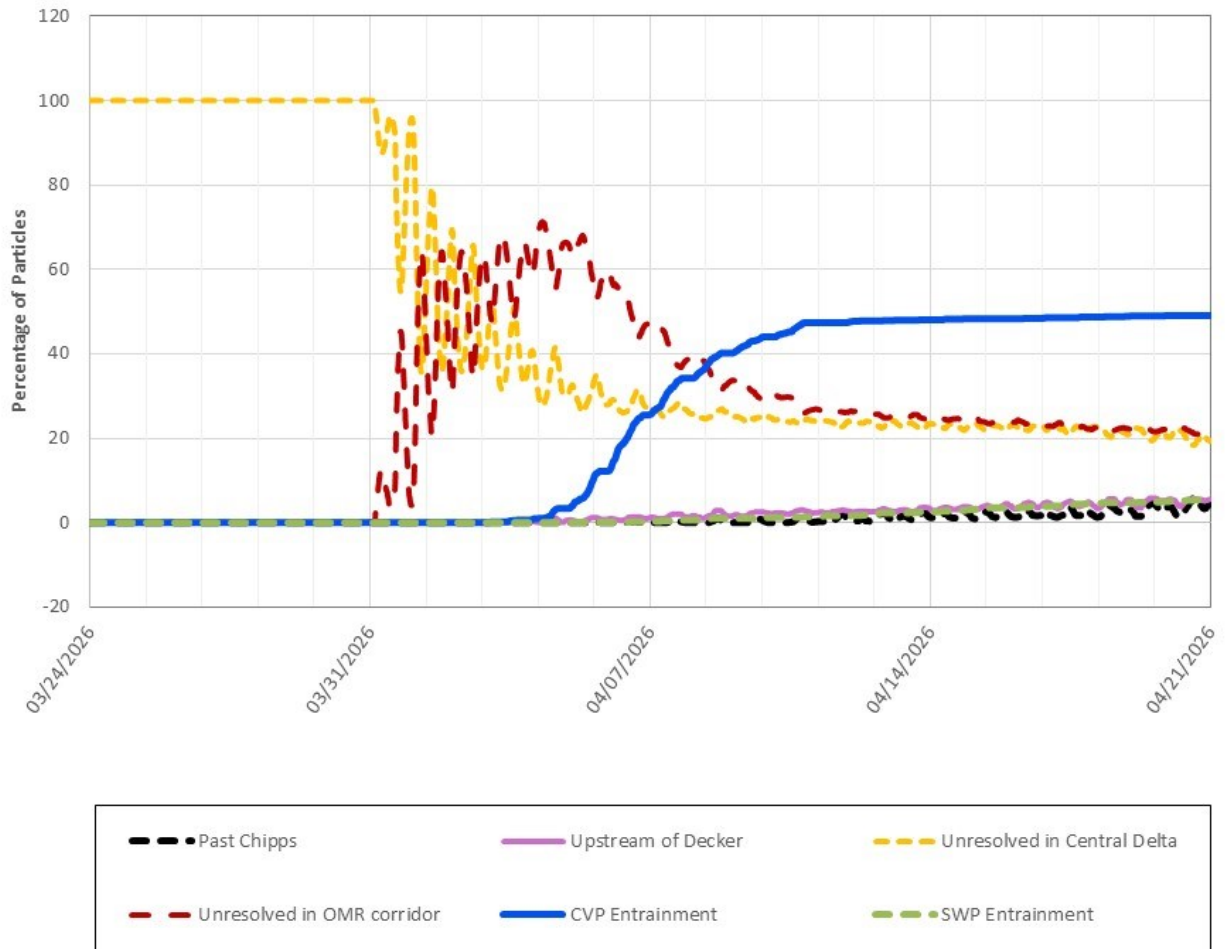


Figure 18: PTM Results for Neutral Particles at Old River, OMR Scenario -5,000

Figure 18 is a line graph showing the percentage of neutral particles over time from late March to April 21, 2026, for particles injected on March 31, 2026, at DSM2 Node 99 (Old River) under the OMR -5,000 cfs scenario. Six flux locations are represented by different colored dashed lines. Unresolved in the OMR corridor (red) increases rapidly shortly after injection, peaking around 65–70%, before steadily declining to approximately 20–25% by the end of the evaluation period. CVP Entrainment (blue) rises steadily after injection, becoming the dominant pathway and reaching approximately 45–50% by early April. SWP Entrainment (green) increases more gradually, reaching roughly 5–10% by late April. In contrast, Unresolved in Central Delta (yellow) declines from near 100% shortly after injection to approximately 15–25% by the end of the period, while Past Chipps (black) and Upstream of Decker (purple) remain minor pathways throughout the evaluation period.

PTM Results for Neutral Particles. OMR Scenario = -3,500. Particles Injected 3/31/2026 at DSM2 Node 99 (Old River).

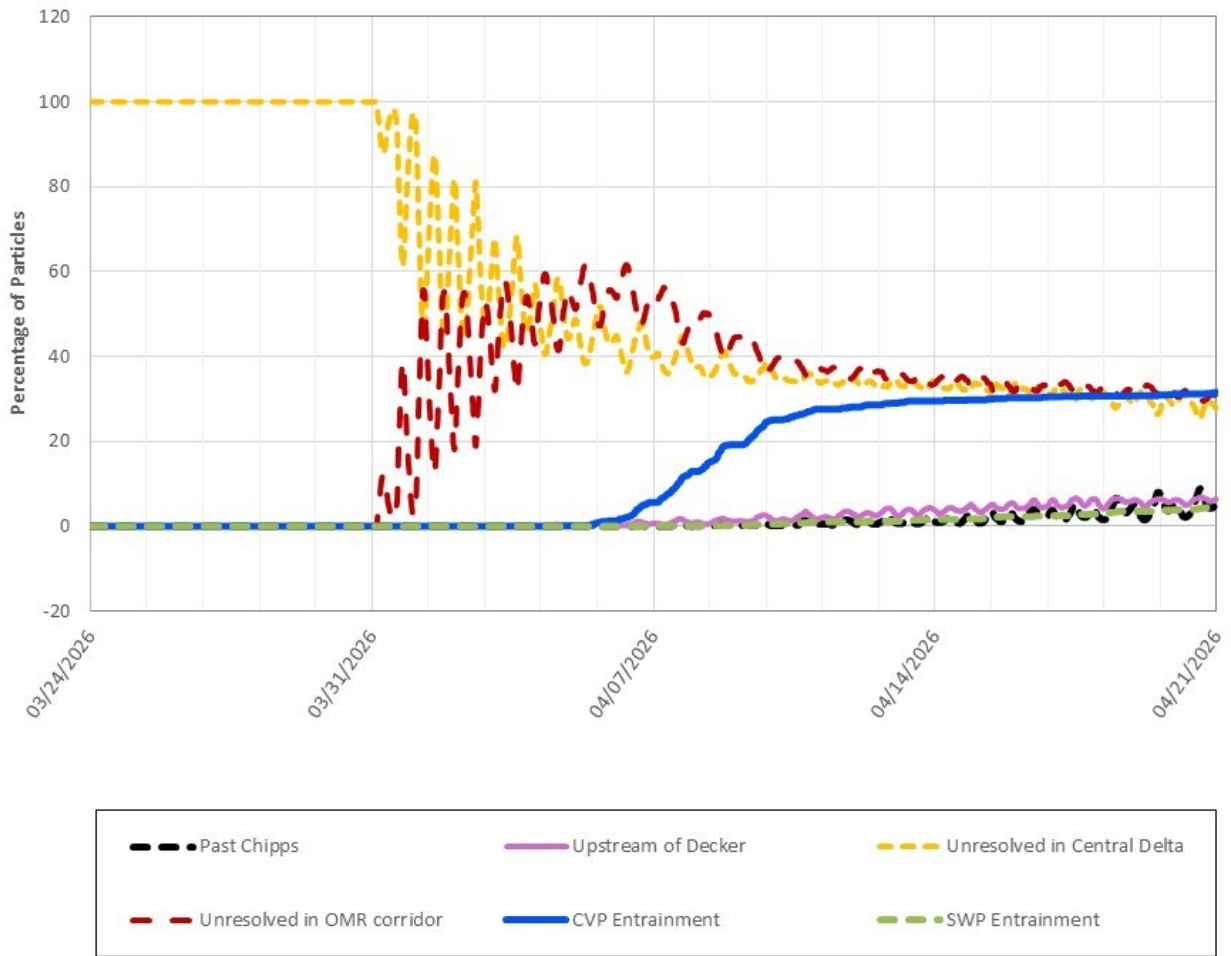


Figure 19: PTM Results for Neutral Particles at Old River, OMR Scenario -3,500

Figure 19 is a line graph showing the percentage of neutral particles over time from late March to April 21, 2026, for particles injected on March 31, 2026, at DSM2 Node 99 (Old River) under the OMR -3,500 cfs scenario. Six flux locations are represented by different colored dashed lines. Unresolved in the OMR corridor (red) increases rapidly shortly after injection, peaking around 55–60%, before gradually declining to approximately 30–35% by the end of the evaluation period. CVP Entrainment (blue) rises steadily after injection, reaching roughly 30–35% by early April and stabilizing thereafter. SWP Entrainment (green) increases more gradually, reaching approximately 5–10% by late April. In contrast, Unresolved in Central Delta (yellow) declines from near 100% shortly after injection to approximately 25–35% by the end of the period, while Past Chipps (black) and Upstream of Decker (purple) remain minor pathways throughout the evaluation period.

PTM Results for Neutral Particles. OMR Scenario = -2,000. Particles Injected 3/31/2026 at DSM2 Node 99 (Old River).

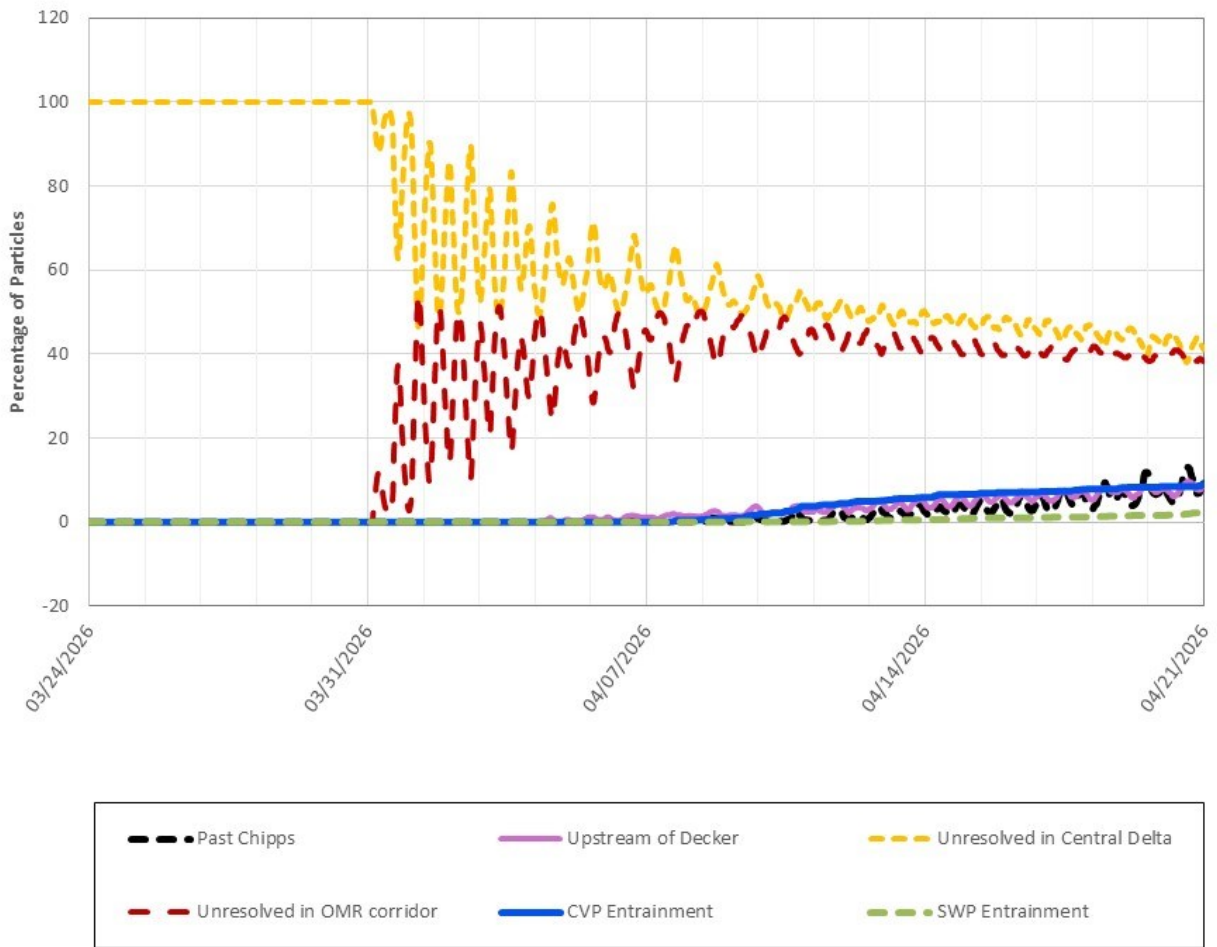


Figure 20: PTM Results for Neutral Particles at Old River, OMR Scenario -2,000

Figure 20 is a line graph showing the percentage of neutral particles over time from late March to April 21, 2026, for particles injected on March 31, 2026, at DSM2 Node 99 (Old River) under the OMR -2,000 cfs scenario. Six flux locations are represented by different colored dashed lines. Unresolved in Central Delta (yellow) remains near 100% immediately following injection before declining steadily, with oscillatory behavior, to approximately 40–50% by the end of the evaluation period. Unresolved in the OMR corridor (red) increases rapidly shortly after injection, peaking around 45–50%, and then stabilizing near 35–40% through the remainder of the period. CVP Entrainment (blue) and SWP Entrainment (green) increase gradually after injection but remain relatively low, each staying below approximately 10% by late April. Past Chipps (black) also remains a minor pathway, increasing slowly to roughly 10–15%, while Upstream of Decker (purple) remains minimal throughout the evaluation 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: 04/06/2026	-6,500	87.5	0.0	12.5	0.0	0.0	0.0
Week 1 End: 04/06/2026	-5,000	88.1	0.0	11.9	0.0	0.0	0.0
Week 1 End: 04/06/2026	-3,500	89.2	0.0	10.8	0.0	0.0	0.0
Week 1 End: 04/06/2026	-2,000	91.4	0.0	8.6	0.0	0.0	0.0
Week 2 End: 04/13/2026	-6,500	94.4	0.1	5.6	0.0	0.0	0.0
Week 2 End: 04/13/2026	-5,000	94.7	0.0	5.3	0.0	0.0	0.0
Week 2 End: 04/13/2026	-3,500	95.5	0.1	4.5	0.0	0.0	0.0
Week 2 End: 04/13/2026	-2,000	96.8	0.0	3.2	0.0	0.0	0.0
Week 3 End: 04/20/2026	-6,500	95.9	0.0	4.2	0.1	0.0	0.0
Week 3 End: 04/20/2026	-5,000	97.0	0.1	3.0	0.0	0.0	0.0
Week 3 End: 04/20/2026	-3,500	97.1	0.1	2.9	0.0	0.0	0.0
Week 3 End: 04/20/2026	-2,000	97.7	0.1	2.3	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: 04/06/2026	-6,500	16.1	65.9	84.1	0.3	0.0	0.0
Week 1 End: 04/06/2026	-5,000	17.6	69.4	82.5	0.1	0.0	0.0
Week 1 End: 04/06/2026	-3,500	18.1	67.8	81.9	0.0	0.0	0.0
Week 1 End: 04/06/2026	-2,000	20.4	69.5	79.6	0.0	0.0	0.0
Week 2 End: 04/13/2026	-6,500	57.1	72.3	44.0	0.8	0.2	0.1
Week 2 End: 04/13/2026	-5,000	60.8	75.1	40.0	0.7	0.0	0.0
Week 2 End: 04/13/2026	-3,500	61.6	73.5	38.9	0.5	0.0	0.0
Week 2 End: 04/13/2026	-2,000	66.4	75.1	33.6	0.0	0.0	0.0
Week 3 End: 04/20/2026	-6,500	76.8	77.1	24.4	0.7	0.4	0.1
Week 3 End: 04/20/2026	-5,000	79.4	78.7	21.3	0.5	0.2	0.0
Week 3 End: 04/20/2026	-3,500	80.3	77.6	20.3	0.6	0.0	0.0
Week 3 End: 04/20/2026	-2,000	82.1	78.2	18.0	0.1	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: 04/06/2026	-6,500	5.9	19.3	94.9	0.8	0.0	0.0
Week 1 End: 04/06/2026	-5,000	8.9	17.3	91.9	0.8	0.0	0.0
Week 1 End: 04/06/2026	-3,500	10.6	19.1	89.5	0.1	0.0	0.0
Week 1 End: 04/06/2026	-2,000	13.0	17.3	87.0	0.0	0.0	0.0
Week 2 End: 04/13/2026	-6,500	44.8	25.2	57.5	1.1	1.1	0.0
Week 2 End: 04/13/2026	-5,000	49.0	22.3	52.4	0.9	0.4	0.1
Week 2 End: 04/13/2026	-3,500	56.9	23.2	43.8	0.6	0.0	0.1
Week 2 End: 04/13/2026	-2,000	60.3	21.2	40.0	0.3	0.0	0.0
Week 3 End: 04/20/2026	-6,500	73.1	28.3	29.8	1.8	1.1	0.0
Week 3 End: 04/20/2026	-5,000	77.0	24.7	24.4	0.9	0.4	0.1
Week 3 End: 04/20/2026	-3,500	80.0	25.6	20.8	0.7	0.0	0.1
Week 3 End: 04/20/2026	-2,000	82.1	22.8	18.3	0.4	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: 04/06/2026	-6,500	0.0	0.6	17.1	39.5	42.9	0.5
Week 1 End: 04/06/2026	-5,000	0.0	0.7	26.8	49.4	23.6	0.2
Week 1 End: 04/06/2026	-3,500	0.0	1.3	40.4	54.0	5.6	0.1
Week 1 End: 04/06/2026	-2,000	0.1	1.2	56.0	43.8	0.1	0.0
Week 2 End: 04/13/2026	-6,500	1.4	1.6	12.7	23.0	60.5	2.4
Week 2 End: 04/13/2026	-5,000	1.5	2.4	20.9	25.7	49.5	2.4
Week 2 End: 04/13/2026	-3,500	3.0	4.5	32.3	31.9	30.7	2.0
Week 2 End: 04/13/2026	-2,000	4.6	4.9	47.5	36.2	10.8	0.9
Week 3 End: 04/20/2026	-6,500	4.4	2.9	9.4	20.2	61.2	4.8
Week 3 End: 04/20/2026	-5,000	8.1	4.2	13.6	22.1	51.0	5.2
Week 3 End: 04/20/2026	-3,500	11.5	7.9	23.3	27.7	32.2	5.3
Week 3 End: 04/20/2026	-2,000	15.3	8.9	35.4	33.7	13.3	2.3

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

PTM Results for Surface Oriented Particles. OMR Scenario = -6,500. Particles Injected 3/31/2026 at DSM2 Node 465 (Chippis).

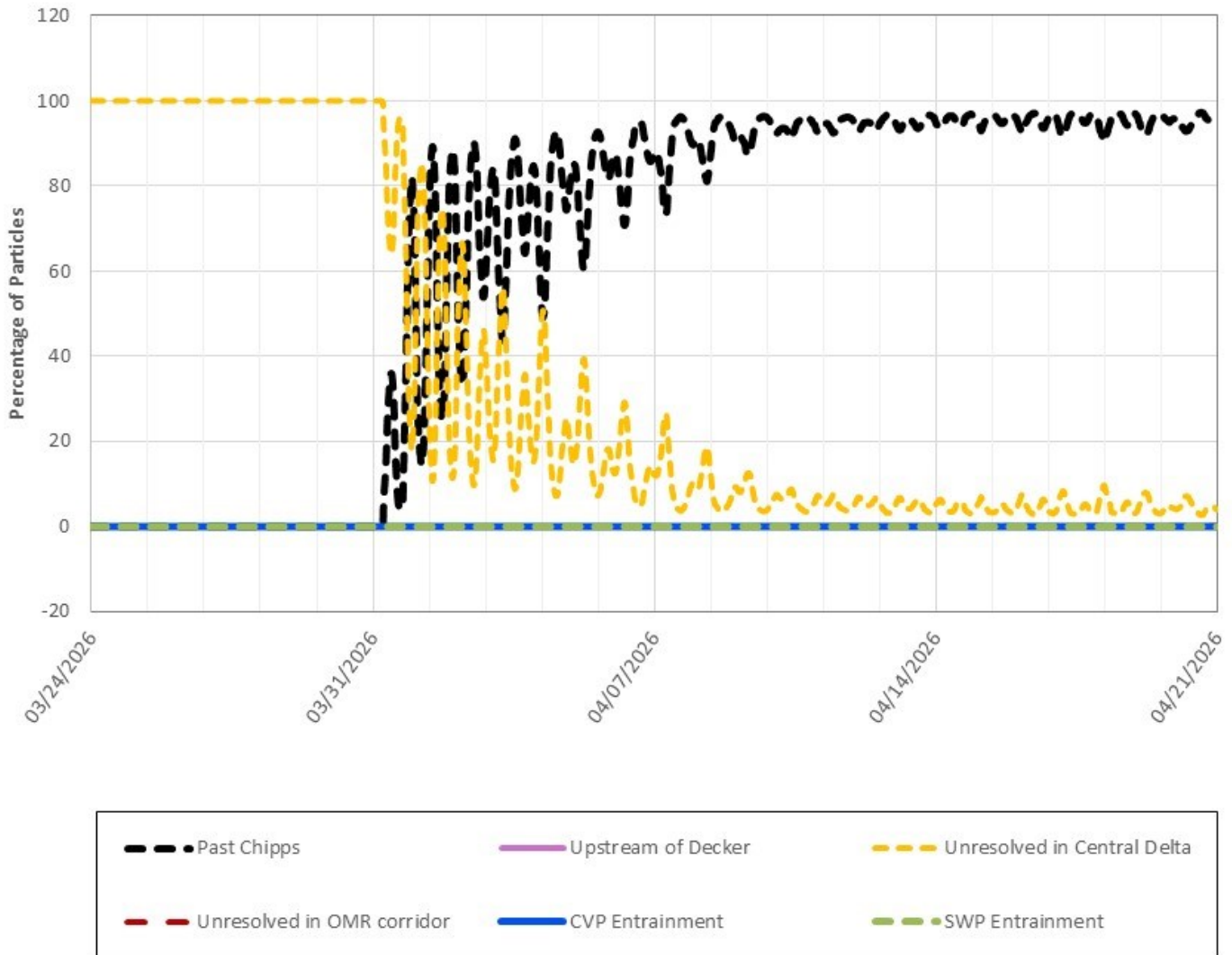


Figure 21: PTM Results for Surface Oriented Particles at Chippis Island, OMR Scenario -6,500

Figure 21 is a line graph showing the percentage of surface-oriented particles over time from late March to April 21, 2026, for particles injected on March 31, 2026, at DSM2 Node 465 (Chippis) under the OMR -6,500 cfs scenario. Six flux locations are represented by different colored dashed lines. Past Chippis (black) increases rapidly immediately after injection, rising to approximately 90–95% and remaining the dominant pathway throughout the evaluation period. In contrast, Unresolved in Central Delta (yellow) declines sharply from near 100% following injection, exhibiting strong oscillations before decreasing to approximately 5–10% by the end of the period. Unresolved in the OMR corridor (red), CVP Entrainment (blue), SWP Entrainment (green), and Upstream of Decker (purple) remain near zero throughout the evaluation period, indicating minimal contribution from these pathways.

PTM Results for Surface Oriented Particles. OMR Scenario = -5,000. Particles Injected 3/31/2026 at DSM2 Node 465 (Chippis).

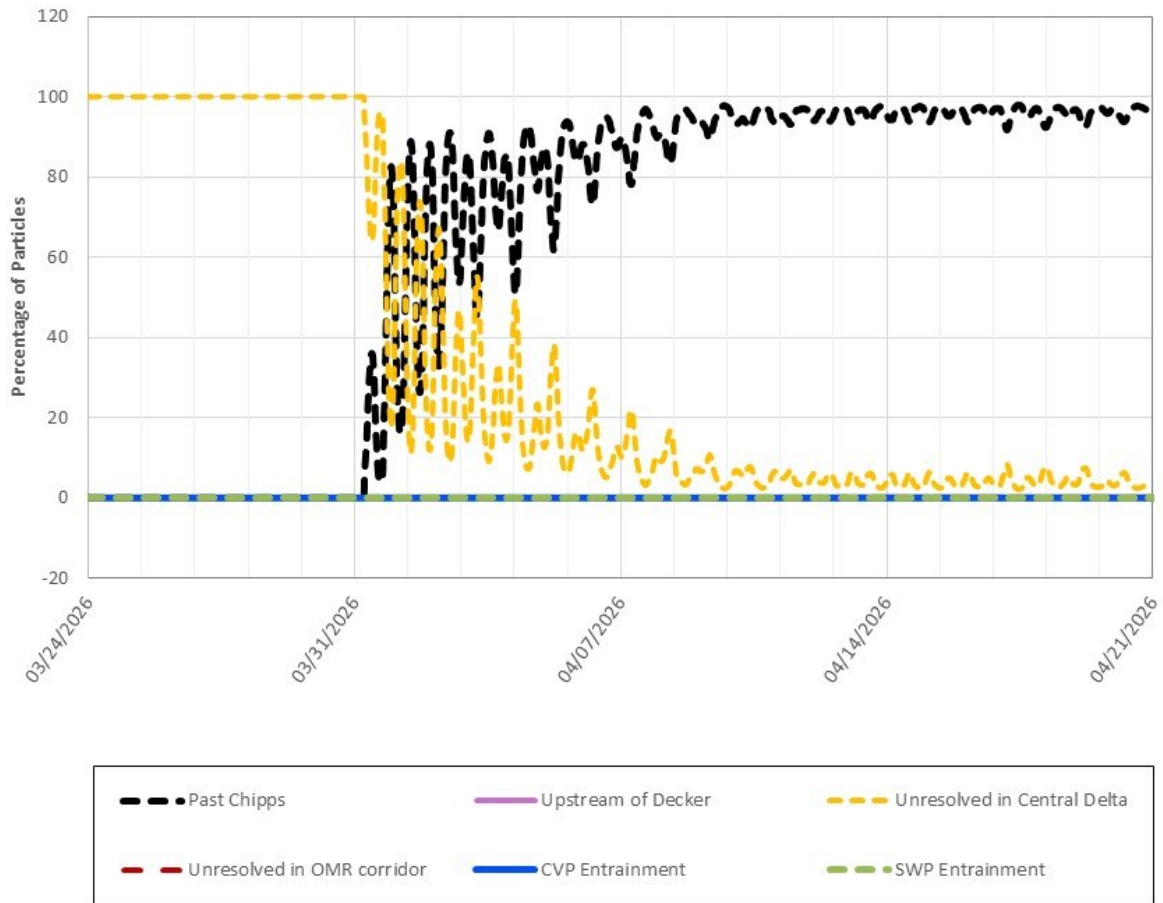


Figure 22: PTM Results for Surface Oriented Particles at Chippis Island, OMR Scenario -5,000

Figure 22 is a line graph showing the percentage of surface-oriented particles over time from late March to April 21, 2026, for particles injected on March 31, 2026, at DSM2 Node 465 (Chippis) under the OMR -5,000 cfs scenario. Six flux locations are represented by different colored dashed lines. Past Chippis (black) increases rapidly immediately after injection, rising to approximately 85–95% and remaining the dominant pathway throughout the evaluation period. In contrast, Unresolved in Central Delta (yellow) declines sharply from near 100% following injection, exhibiting strong oscillations before decreasing to near zero by late April. Unresolved in the OMR corridor (red), CVP Entrainment (blue), SWP Entrainment (green), and Upstream of Decker (purple) remain near zero throughout the evaluation period, indicating minimal contribution from these pathways.

PTM Results for Surface Oriented Particles. OMR Scenario = -3,500. Particles Injected 3/31/2026 at DSM2 Node 465 (Chippis).

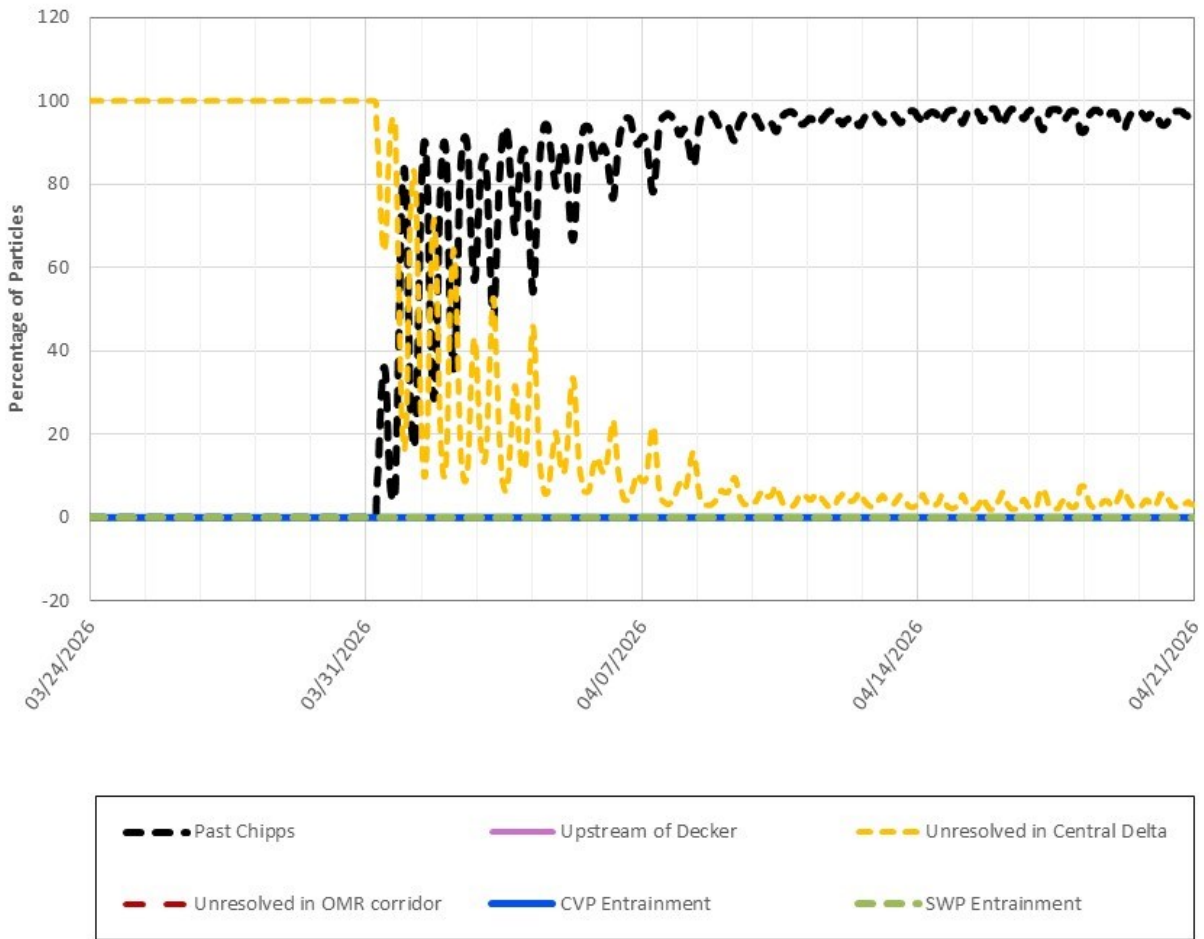


Figure 23: PTM Results for Surface Oriented Particles at Chippis Island, OMR Scenario -3,500

Figure 23 is a line graph showing the percentage of surface-oriented particles over time from late March to April 21, 2026, for particles injected on March 31, 2026, at DSM2 Node 465 (Chippis) under the OMR -3,500 cfs scenario. Six flux locations are represented by different colored dashed lines. Past Chippis (black) increases rapidly immediately after injection, rising to approximately 90–95% and remaining the dominant pathway throughout the evaluation period. In contrast, Unresolved in Central Delta (yellow) declines sharply from near 100% following injection, exhibiting oscillatory behavior before decreasing to near zero by late April. Unresolved in the OMR corridor (red), CVP Entrainment (blue), SWP Entrainment (green), and Upstream of Decker (purple) remain near zero throughout the evaluation period, indicating minimal contribution from these pathways.

PTM Results for Surface Oriented Particles. OMR Scenario = -2,000. Particles Injected 3/31/2026 at DSM2 Node 465 (Chipps).

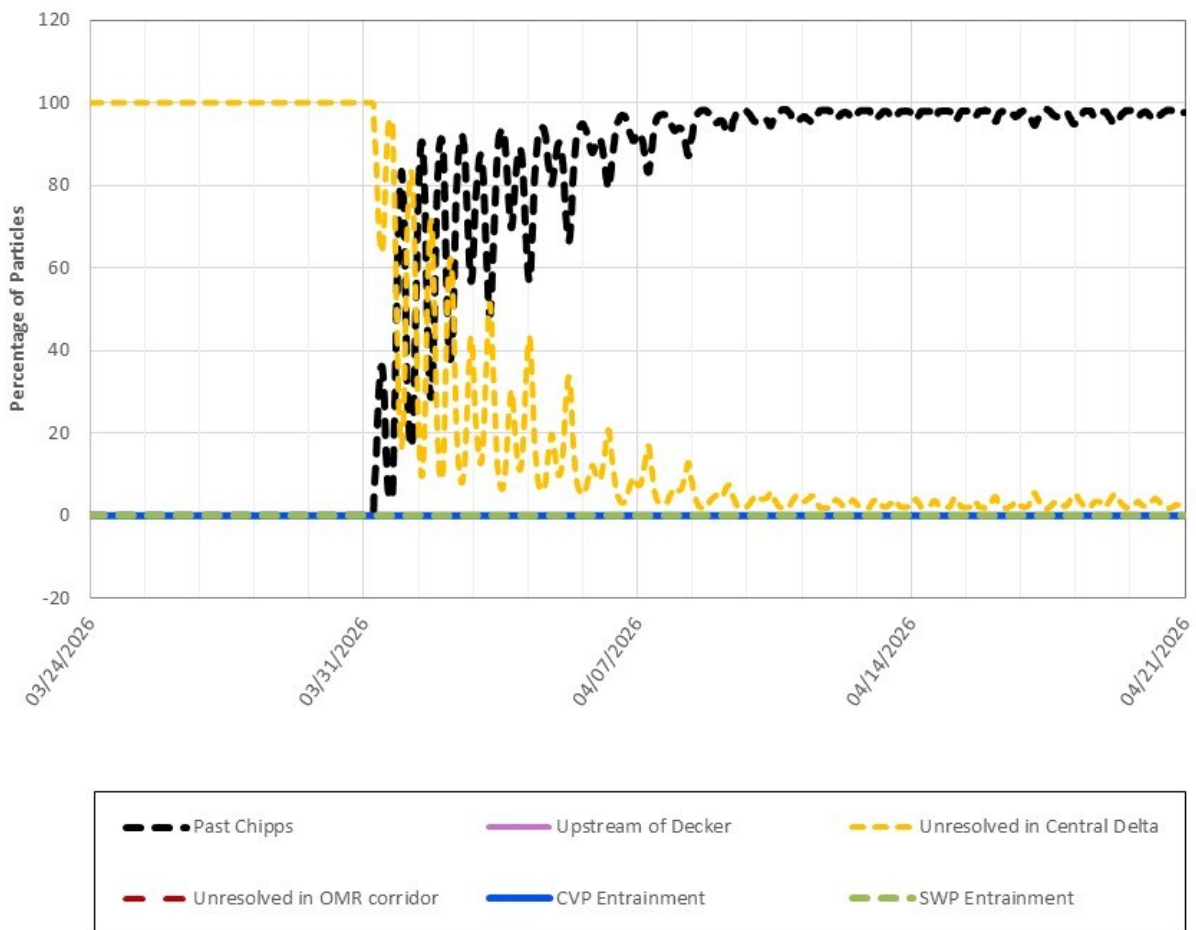


Figure 24: PTM Results for Surface Oriented Particles at Chipps Island, OMR Scenario -2,000

Figure 24 is a line graph showing the percentage of surface-oriented particles over time from February 3 to March 3, 2026, for particles injected on February 10, 2026, at DSM2 Node 465 (Chipps) under the OMR -2,000 cfs scenario. Six flux locations are represented by different colored dashed lines. Past Chipps (black) increases rapidly immediately after injection, rising to approximately 95–100% and remaining the dominant pathway throughout the evaluation period. In contrast, Unresolved in Central Delta (yellow) declines sharply from near 100% following injection, exhibiting pronounced oscillations before decreasing to near zero by late February. Unresolved in the OMR corridor (red), CVP Entrainment (blue), SWP Entrainment (green), and Upstream of Decker (purple) remain near zero throughout the evaluation period, indicating minimal contribution from these pathways.

PTM Results for Surface Oriented Particles. OMR Scenario = -6,500. Particles Injected 3/31/2026 at DSM2 Node 350 (Cache Slough).

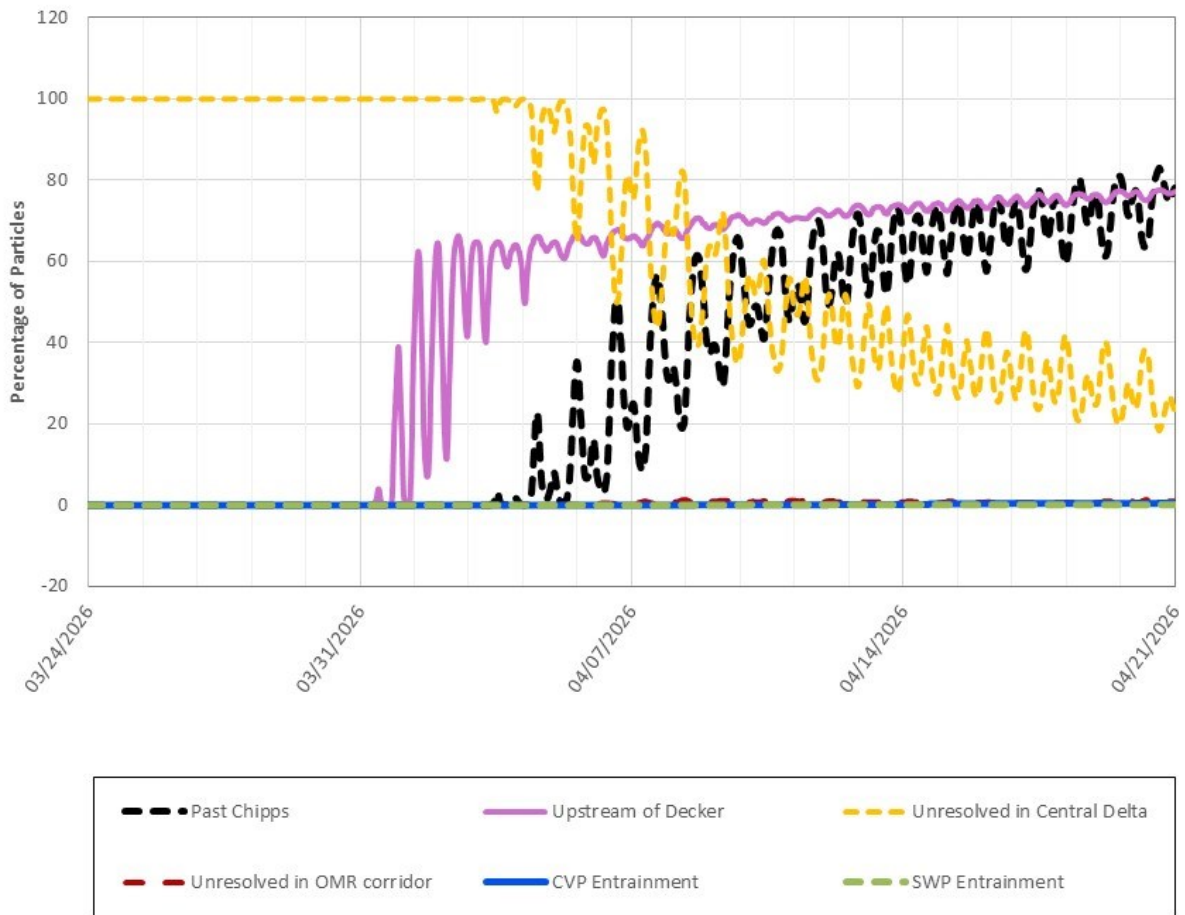


Figure 25: PTM Results for Surface Oriented Particles at Cache Slough Confluence, OMR Scenario -6,500

Figure 25 is a line graph showing the percentage of surface-oriented particles over time from late March to April 21, 2026, for particles injected on March 31, 2026, at DSM2 Node 350 (Cache Slough) under the OMR -6,500 cfs scenario. Six flux locations are represented by different colored dashed lines. Upstream of Decker (pink) increases rapidly shortly after injection, rising to approximately 60–70% and gradually stabilizing near 70–75% through the remainder of the evaluation period. Past Chippis (black) increases more gradually after injection, reaching roughly 75–80% by late April. In contrast, Unresolved in Central Delta (yellow) remains near 100% immediately following injection before declining steadily, with pronounced oscillations, to approximately 20–30% by the end of the period. Unresolved in the OMR corridor (red), CVP Entrainment (blue), and SWP Entrainment (green) remain near zero throughout the evaluation period, indicating minimal contribution from these pathways.

PTM Results for Surface Oriented Particles. OMR Scenario = -5,000. Particles Injected 3/31/2026 at DSM2 Node 350 (Cache Slough).

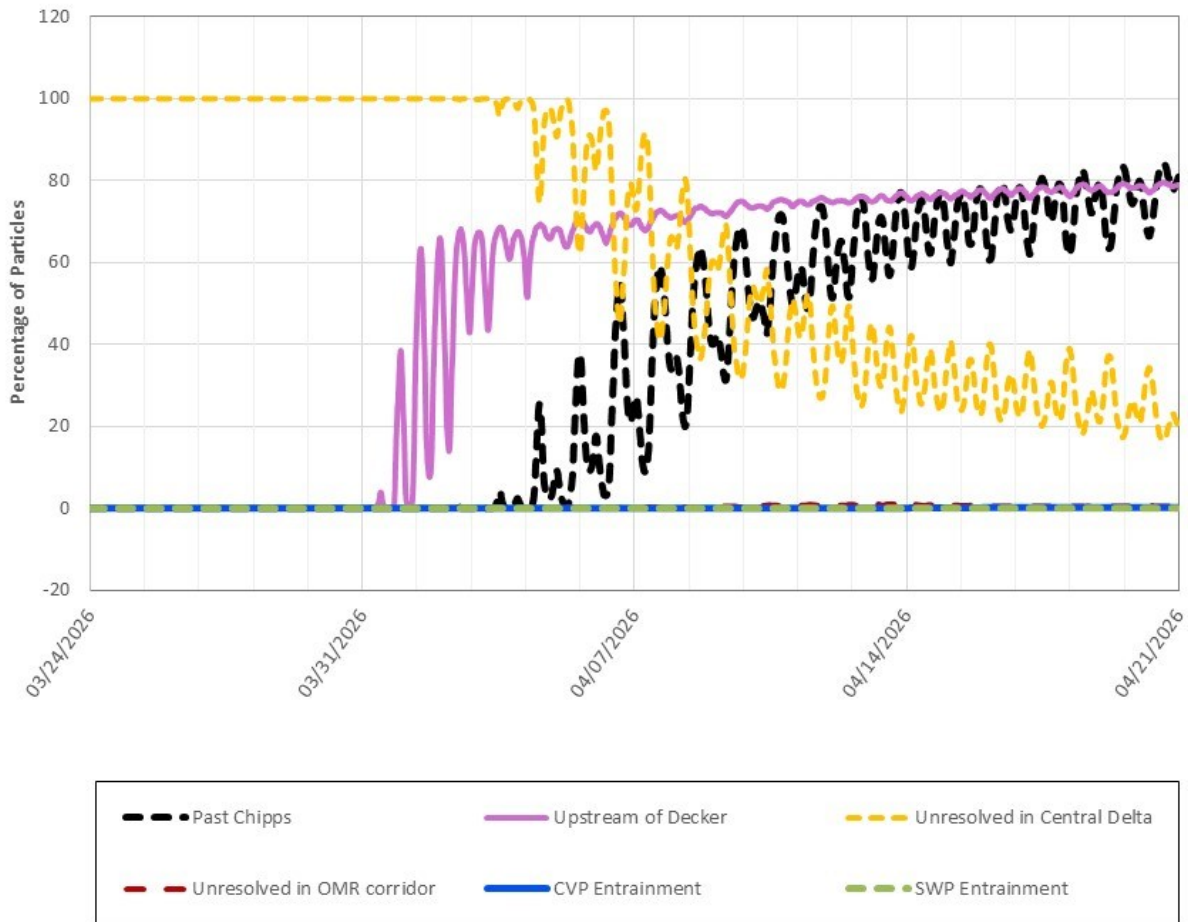


Figure 26: PTM Results for Surface Oriented Particles at Cache Slough Confluence, OMR Scenario -5,000

Figure 26 is a line graph showing the percentage of surface-oriented particles over time from February 3 to March 3, 2026, for particles injected on February 10, 2026, at DSM2 Node 350 (Cache Slough) under the OMR -5,000 cfs scenario. Six flux locations are represented by different colored dashed lines. Upstream of Decker (pink) increases rapidly shortly after injection, rising to approximately 60–70% and stabilizing near 75–80% through the remainder of the evaluation period. Past Chipps (black) increases more gradually after injection, becoming a dominant pathway and reaching roughly 80–85% by early March. In contrast, Unresolved in Central Delta (yellow) remains near 100% immediately following injection before declining steadily with oscillatory behavior to approximately 20–30% by the end of the period. Unresolved in the OMR corridor (red), CVP Entrainment (blue), and SWP Entrainment (green) remain near zero throughout the evaluation period, indicating minimal contribution from these pathways.

PTM Results for Surface Oriented Particles. OMR Scenario = -3,500. Particles Injected 3/31/2026 at DSM2 Node 350 (Cache Slough).

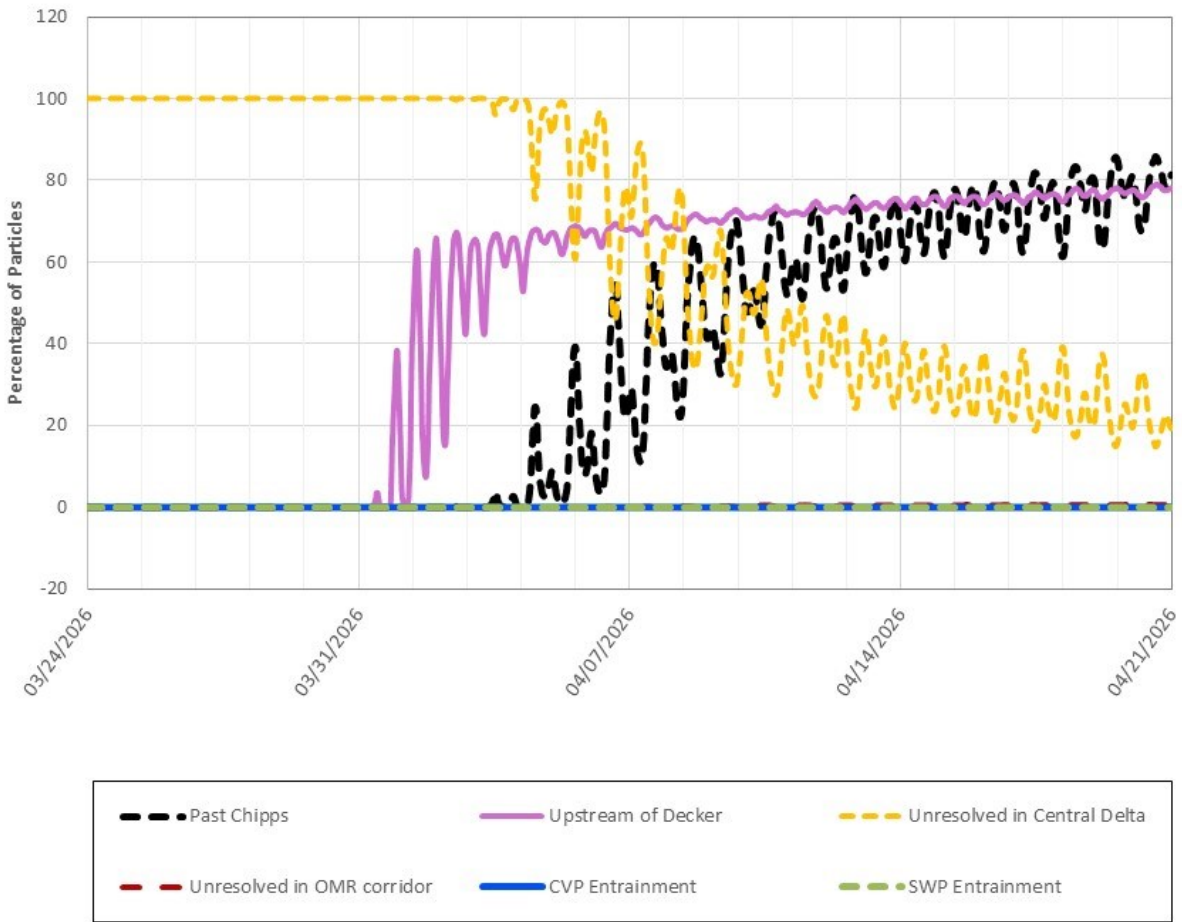


Figure 27: PTM Results for Surface Oriented Particles at Cache Slough Confluence, OMR Scenario -3,500

Figure 27 is a line graph showing the percentage of surface-oriented particles over time from February 3 to March 3, 2026, for particles injected on February 10, 2026, at DSM2 Node 350 (Cache Slough) under the OMR -3,500 cfs scenario. Six flux locations are represented by different colored dashed lines. Upstream of Decker (pink) increases rapidly shortly after injection, rising to approximately 60–70% and gradually stabilizing near 75–80% through the remainder of the evaluation period. Past Chipps (black) increases more gradually after injection, reaching roughly 80–85% by early March. In contrast, Unresolved in Central Delta (yellow) remains near 100% immediately following injection before declining steadily, with pronounced oscillations, to approximately 20–30% by the end of the period. Unresolved in the OMR corridor (red), CVP Entrainment (blue), and SWP Entrainment (green) remain near zero throughout the evaluation period, indicating minimal contribution from these pathways.

PTM Results for Surface Oriented Particles. OMR Scenario = -2,000. Particles Injected 3/31/2026 at DSM2 Node 350 (Cache Slough).

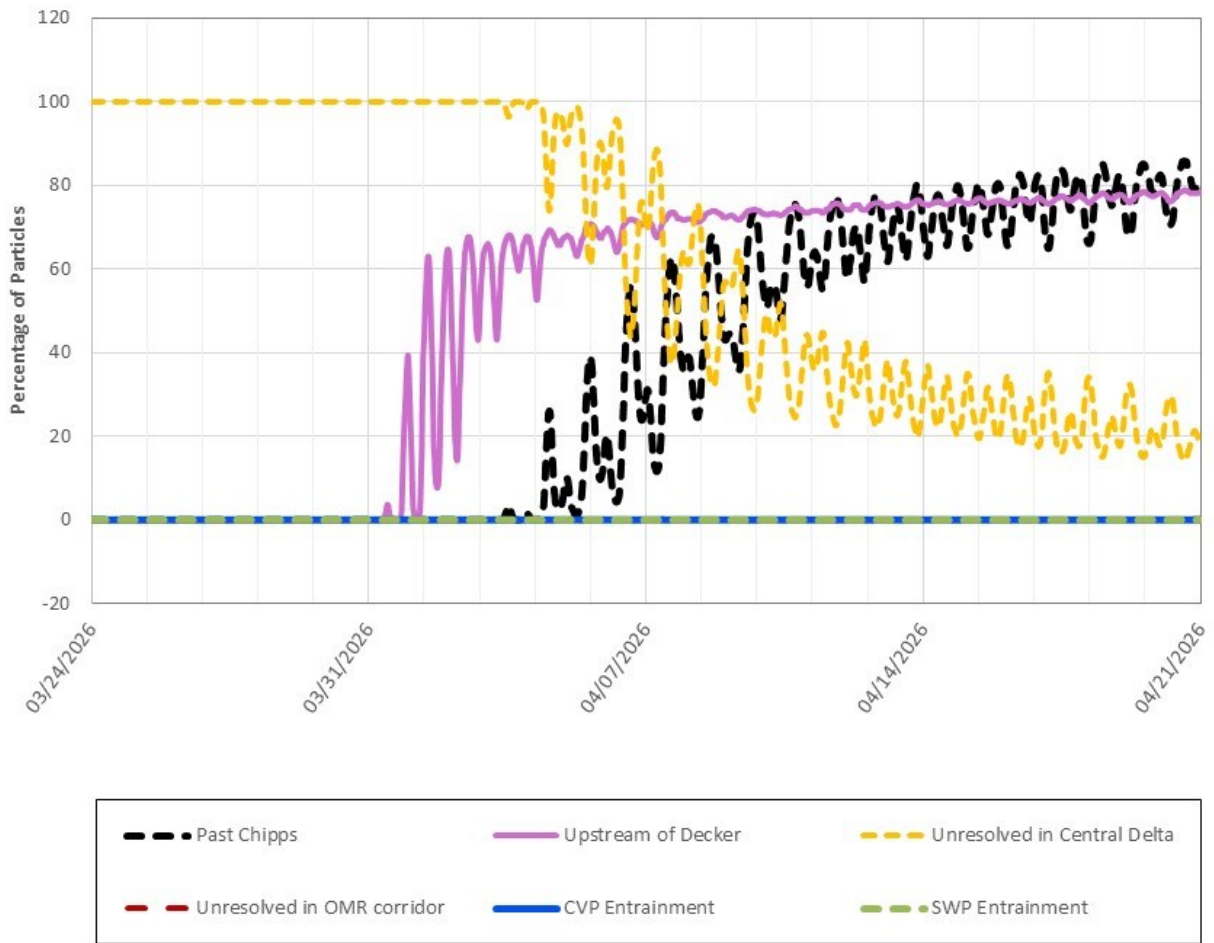


Figure 28: PTM Results for Surface Oriented Particles at Cache Slough Confluence, OMR Scenario -2,000

Figure 28 is a line graph showing the percentage of surface-oriented particles over time from February 3 to March 3, 2026, for particles injected on February 10, 2026, at DSM2 Node 350 (Cache Slough) under the OMR -2,000 cfs scenario. Six flux locations are represented by different colored dashed lines. Upstream of Decker (pink) increases rapidly shortly after injection, rising to approximately 60–70% and gradually stabilizing near 75–80% through the remainder of the evaluation period. Past Chipps (black) increases more gradually after injection, reaching roughly 80–90% by early March. In contrast, Unresolved in Central Delta (yellow) remains near 100% immediately following injection before declining steadily, with pronounced oscillations, to approximately 10–20% by the end of the period. Unresolved in the OMR corridor (red), CVP Entrainment (blue), and SWP Entrainment (green) remain near zero throughout the evaluation period, indicating minimal contribution from these pathways.

PTM Results for Surface Oriented Particles. OMR Scenario = -6,500. Particles Injected 3/31/2026 at DSM2 Node 469 (Jersey Point).

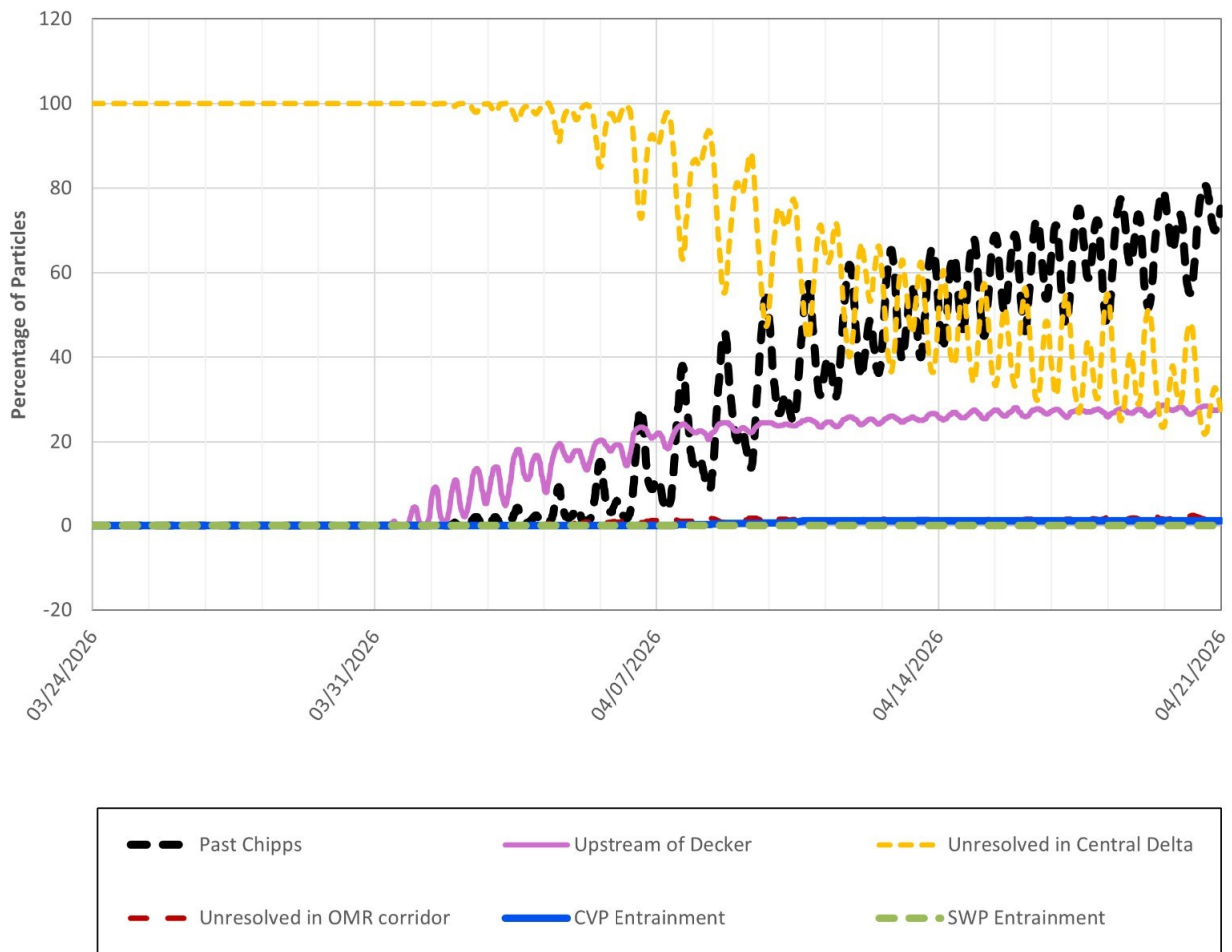


Figure 29: PTM Results for Surface Oriented Particles at Jersey Point, OMR Scenario -6,500

Figure 29 is a line graph showing the percentage of surface-oriented particles over time from late March to April 21, 2026, for particles injected on March 31, 2026, at DSM2 Node 469 (Jersey Point) under the OMR -6,500 cfs scenario. Six flux locations are represented by different colored dashed lines. Unresolved in Central Delta (yellow) remains near 100% immediately following injection before declining steadily, with pronounced oscillations, to approximately 25–35% by the end of the evaluation period. Past Chipps (black) increases gradually after injection, becoming a dominant pathway and reaching roughly 70–80% by late April. Upstream of Decker (purple) increases steadily throughout the period, reaching approximately 25–30% by the end of the simulation. Unresolved in the OMR corridor (red), CVP Entrainment (blue), and SWP Entrainment (green) remain near zero throughout the evaluation period, indicating minimal contribution from these pathways.

PTM Results for Surface Oriented Particles. OMR Scenario = -5,000. Particles Injected 3/31/2026 at DSM2 Node 469 (Jersey Point).

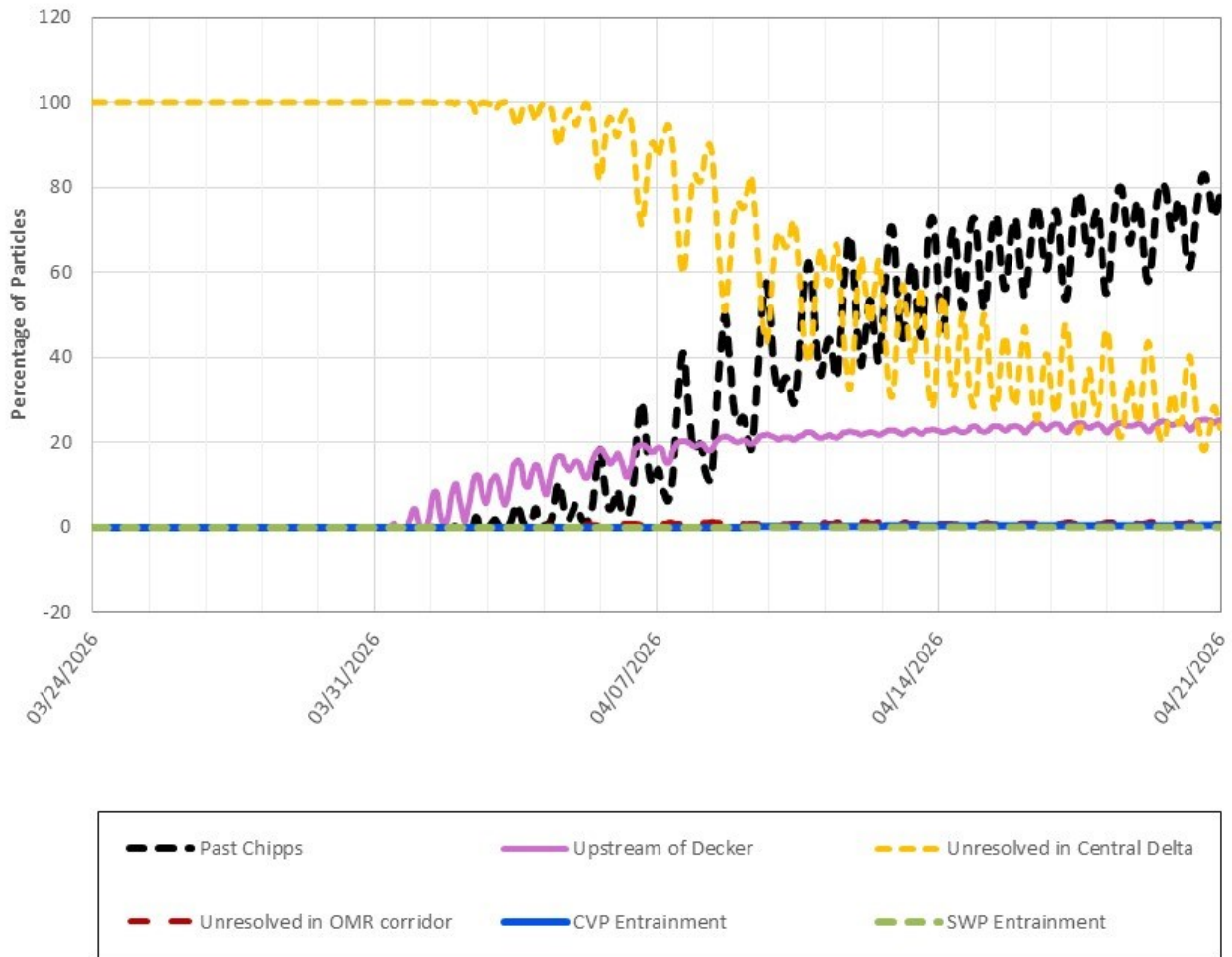


Figure 30: PTM Results for Surface Oriented Particles at Jersey Point, OMR Scenario -5,000

Figure 30 is a line graph showing the percentage of surface-oriented particles over time from February 3 to March 3, 2026, for particles injected on February 10, 2026, at DSM2 Node 469 (Jersey Point) under the OMR -5,000 cfs scenario. Six flux locations are represented by different colored dashed lines. Unresolved in Central Delta (yellow) remains near 100% immediately following injection before declining steadily, with pronounced oscillations, to approximately 20–30% by the end of the evaluation period. Past Chipps (black) increases gradually after injection, becoming the dominant pathway and reaching roughly 70–80% by early March. Upstream of Decker (pink) increases more slowly, reaching approximately 20–25% by the end of the period. Unresolved in the OMR corridor (red), CVP Entrainment (blue), and SWP Entrainment (green) remain near zero throughout the evaluation period, indicating minimal contribution from these pathways.

PTM Results for Surface Oriented Particles. OMR Scenario = -3,500. Particles Injected 3/31/2026 at DSM2 Node 469 (Jersey Point).

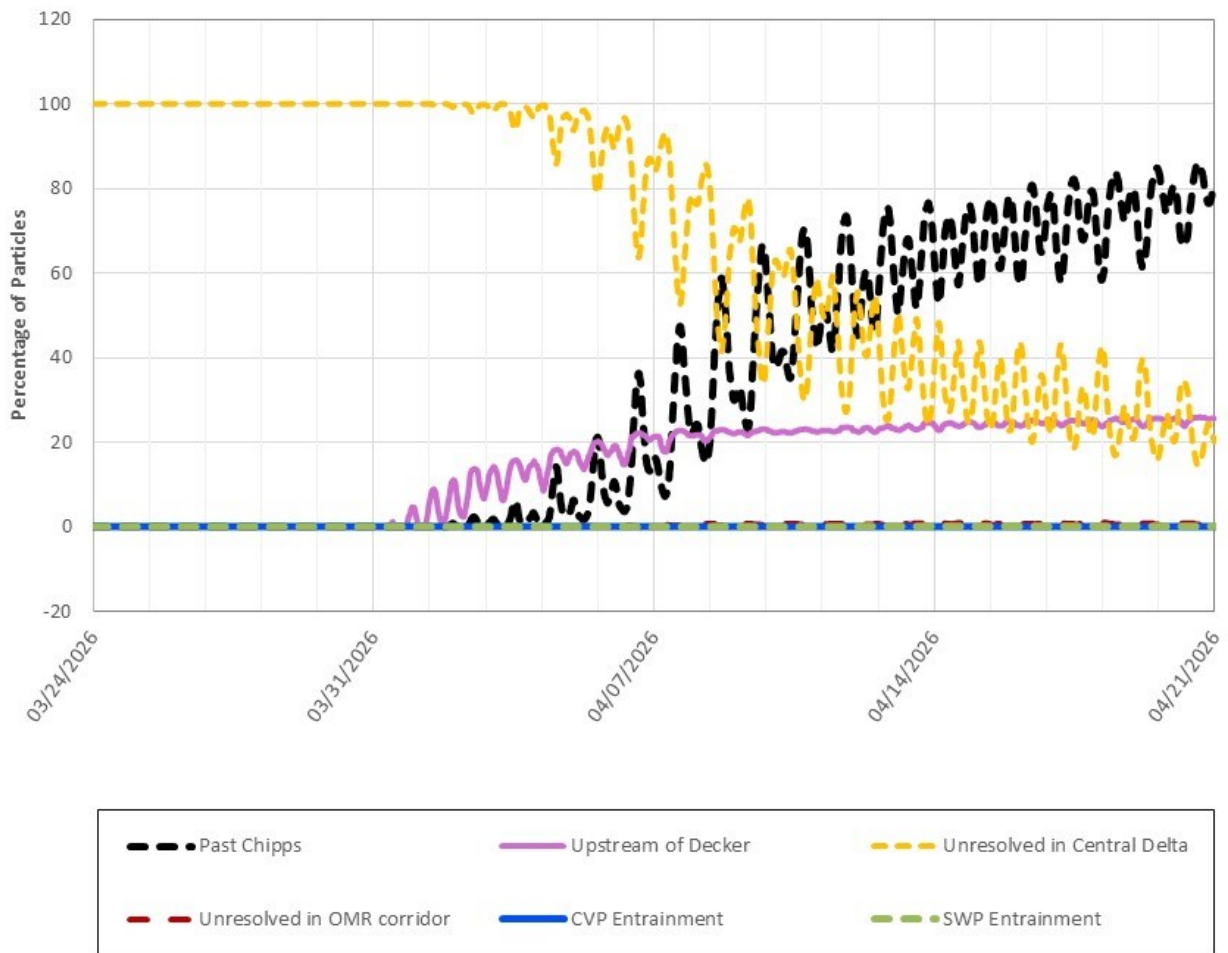


Figure 31: PTM Results for Surface Oriented Particles at Jersey Point, OMR Scenario -3,500

Figure 31 is a line graph showing the percentage of surface-oriented particles over time from late March to April 21, 2026, for particles injected on March 31, 2026, at DSM2 Node 469 (Jersey Point) under the OMR -3,500 cfs scenario. Six flux locations are represented by different colored dashed lines. Unresolved in Central Delta (yellow) remains near 100% immediately following injection before declining steadily, with pronounced oscillations, to approximately 20–25% by the end of the evaluation period. Past Chipps (black) increases gradually after injection, becoming the dominant pathway and reaching roughly 75–85% by late April. Upstream of Decker (pink) increases gradually throughout the period, reaching approximately 20–25% by the end of the simulation. Unresolved in the OMR corridor (red), CVP Entrainment (blue), and SWP Entrainment (green) remain near zero throughout the evaluation period, indicating minimal contribution from these pathways.

PTM Results for Surface Oriented Particles. OMR Scenario = -2,000. Particles Injected 3/31/2026 at DSM2 Node 469 (Jersey Point).

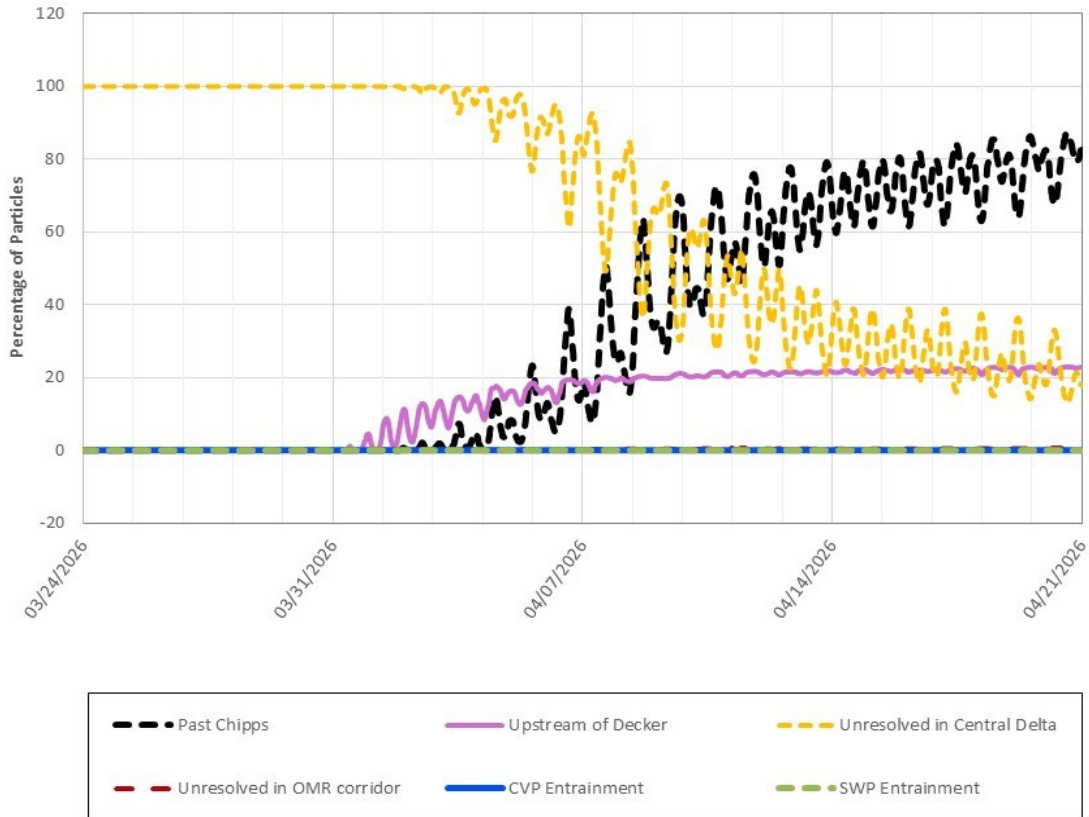


Figure 32: PTM Results for Surface Oriented Particles at Jersey Point, OMR Scenario -2,000

Figure 32 is a line graph showing the percentage of surface-oriented particles over time from late March to April 21, 2026, for particles injected on March 31, 2026, at DSM2 Node 469 (Jersey Point) under the OMR -2,000 cfs scenario. Six flux locations are represented by different colored dashed lines. Unresolved in Central Delta (yellow) remains near 100% immediately following injection before declining steadily, with pronounced oscillations, to approximately 15–25% by the end of the evaluation period. Past Chipps (black) increases gradually after injection, becoming the dominant pathway and reaching roughly 80–90% by late April. Upstream of Decker (pink) increases slowly throughout the period, reaching approximately 20–25% by the end of the simulation. Unresolved in the OMR corridor (red), CVP Entrainment (blue), and SWP Entrainment (green) remain near zero throughout the evaluation period, indicating minimal contribution from these pathways.

PTM Results for Surface Oriented Particles. OMR Scenario = -6,500. Particles Injected 3/31/2026 at DSM2 Node 99 (Old River).

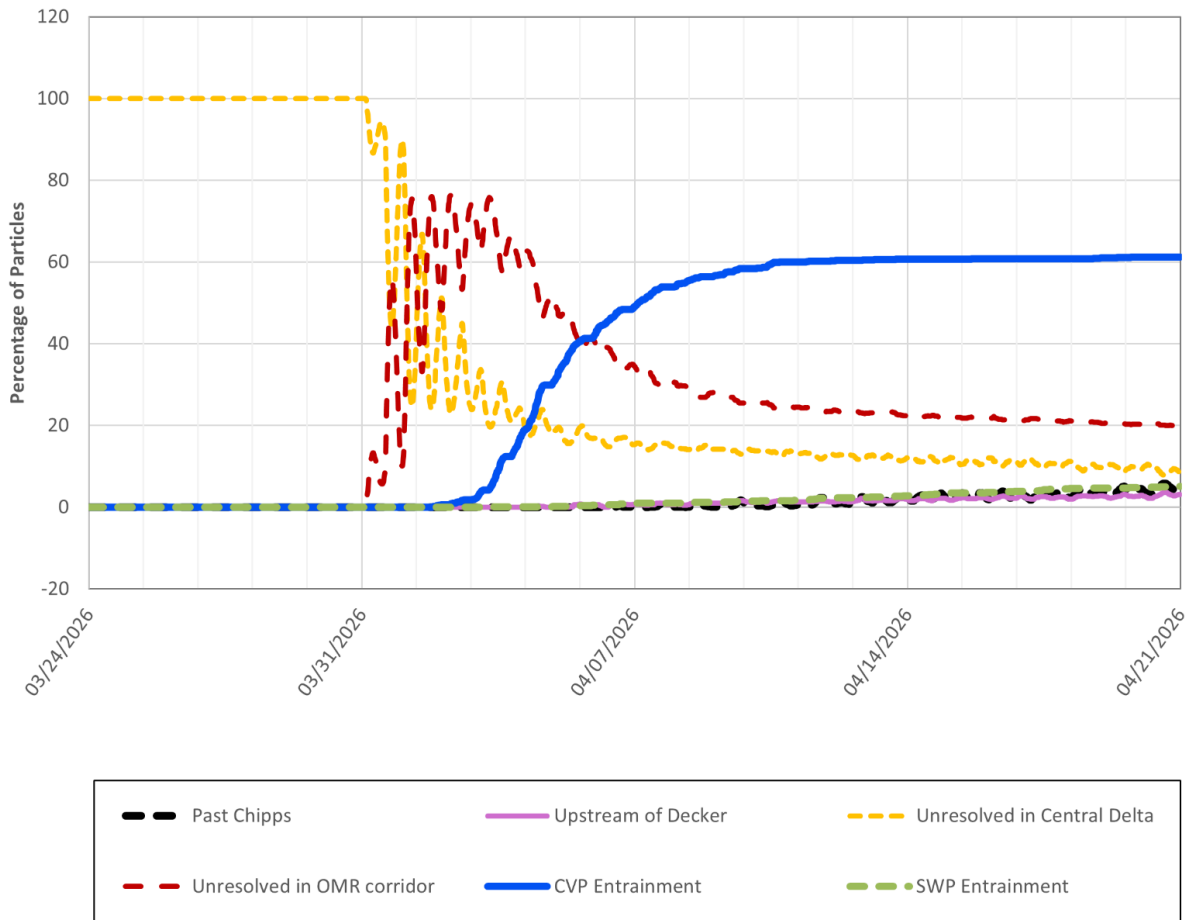


Figure 33: PTM Results for Surface Oriented Particles at Old River, OMR Scenario - 6,500

Figure 33 is a line graph showing the percentage of surface-oriented particles over time from late March to April 21, 2026, for particles injected on March 31, 2026, at DSM2 Node 99 (Old River) under the OMR -6,500 cfs scenario. Six flux locations are represented by different colored dashed lines. Unresolved in the OMR corridor (red) increases rapidly shortly after injection, peaking around 70–75%, before steadily declining to approximately 20% by the end of the evaluation period. CVP Entrainment (blue) rises sharply after injection and becomes the dominant pathway, reaching approximately 60% by early April and remaining stable thereafter. SWP Entrainment (green) increases gradually but remains relatively low, reaching roughly 5% by late April. In contrast, Unresolved in Central Delta (yellow) declines from near 100% shortly after injection to approximately 10% by the end of the period, while Past Chipps (black) and Upstream of Decker (purple) remain minimal throughout the evaluation period.

PTM Results for Surface Oriented Particles. OMR Scenario = -5,000. Particles Injected 3/31/2026 at DSM2 Node 99 (Old River).

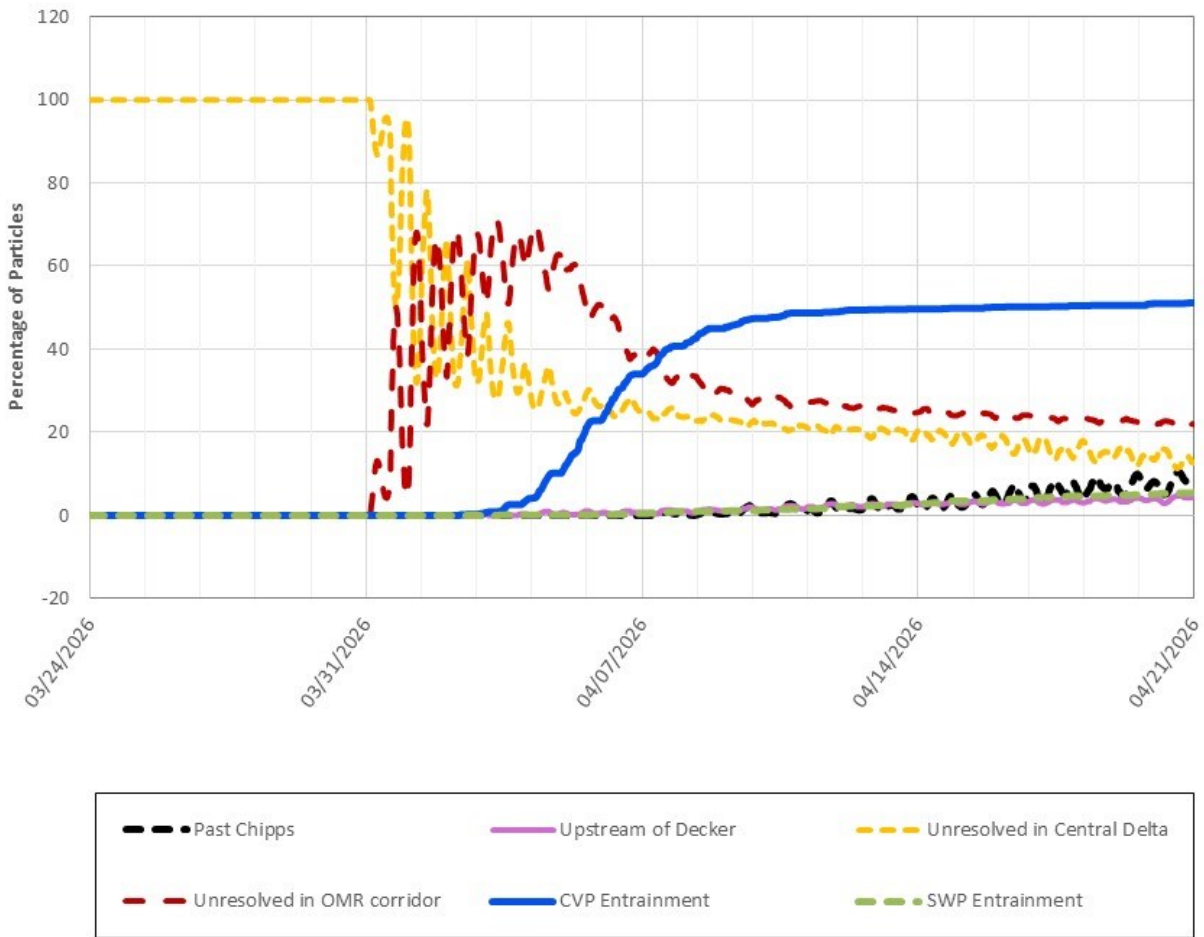


Figure 34: PTM Results for Surface Oriented Particles at Old River, OMR Scenario - 5,000

Figure 34 is a line graph showing the percentage of surface-oriented particles over time from late March to April 21, 2026, for particles injected on March 31, 2026, at DSM2 Node 99 (Old River) under the OMR -5,000 cfs scenario. Six flux locations are represented by different colored dashed lines. Unresolved in the OMR corridor (red) increases rapidly shortly after injection, peaking around 65–70%, before declining steadily to approximately 20–25% by the end of the evaluation period. CVP Entrainment (blue) rises sharply following injection and becomes the dominant pathway, reaching approximately 50–55% by early April and remaining relatively stable thereafter. SWP Entrainment (green) increases gradually but remains a minor pathway, reaching only about 5% by late April. In contrast, Unresolved in Central Delta (yellow) declines from near 100% shortly after injection to approximately 10–15% by the end of the period, while Past Chipps (black) and Upstream of Decker (purple) remain low throughout, each generally below about 10%.

PTM Results for Surface Oriented Particles. OMR Scenario = -3,500. Particles Injected 3/31/2026 at DSM2 Node 99 (Old River).

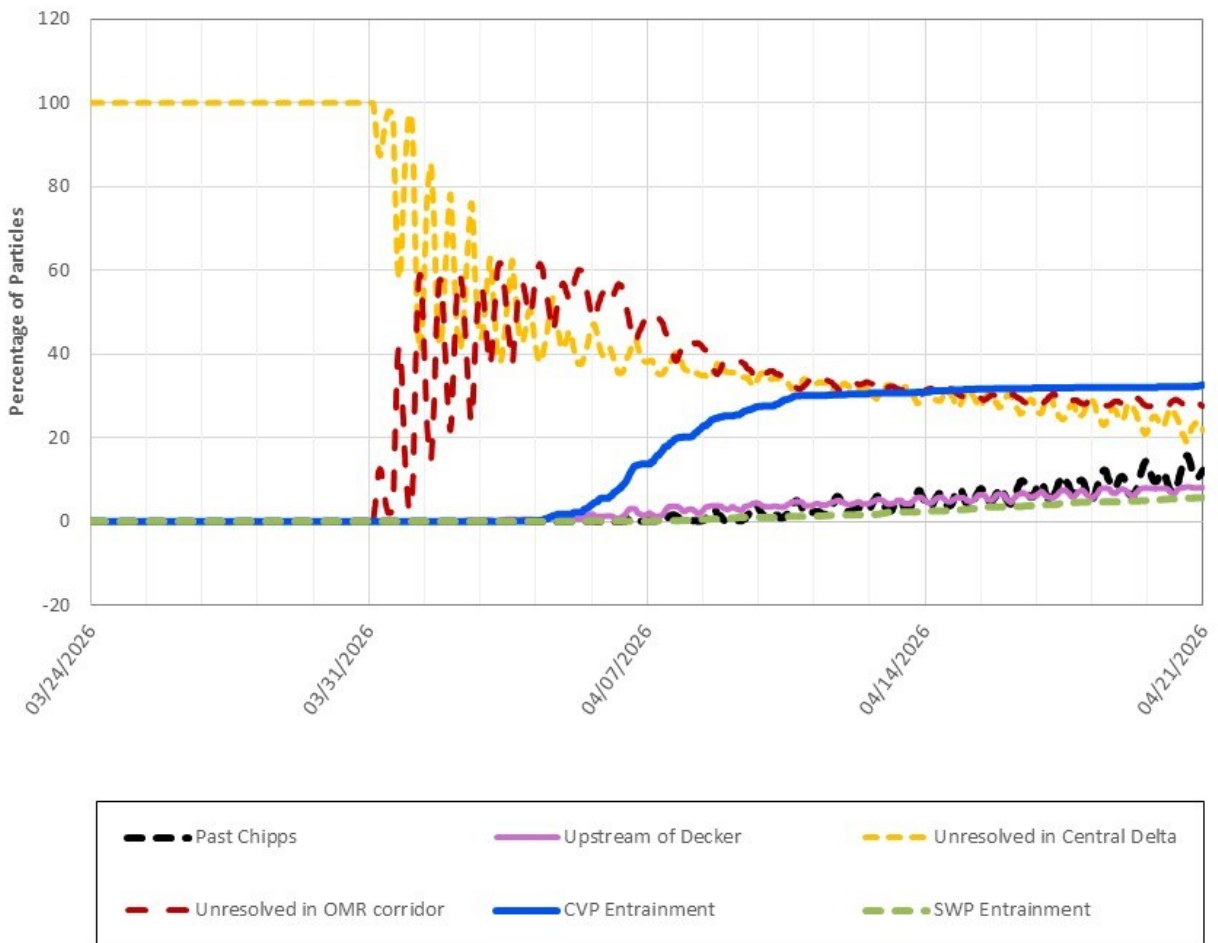


Figure 35: PTM Results for Surface Oriented Particles at Old River, OMR Scenario - 3,500

Figure 35 is a line graph showing the percentage of surface-oriented particles over time from late March to April 21, 2026, for particles injected on March 31, 2026, at DSM2 Node 99 (Old River) under the OMR -3,500 cfs scenario. Six flux locations are represented by different colored dashed lines. Unresolved in the OMR corridor (red) increases rapidly shortly after injection, peaking near 60–65%, before steadily declining to approximately 25–30% by the end of the evaluation period. CVP Entrainment (blue) rises steadily following injection, becoming the dominant pathway and reaching approximately 30–35% by early April, while SWP Entrainment (green) increases more gradually to about 5–10% by late April. In contrast, Unresolved in Central Delta (yellow) declines from near 100% shortly after injection to approximately 20–30% by the end of the period. Past Chipps (black) and Upstream of Decker (pink) remain minor pathways throughout the evaluation period, each generally below about 15%.

PTM Results for Surface Oriented Particles. OMR Scenario = -2,000. Particles Injected 3/31/2026 at DSM2 Node 99 (Old River).

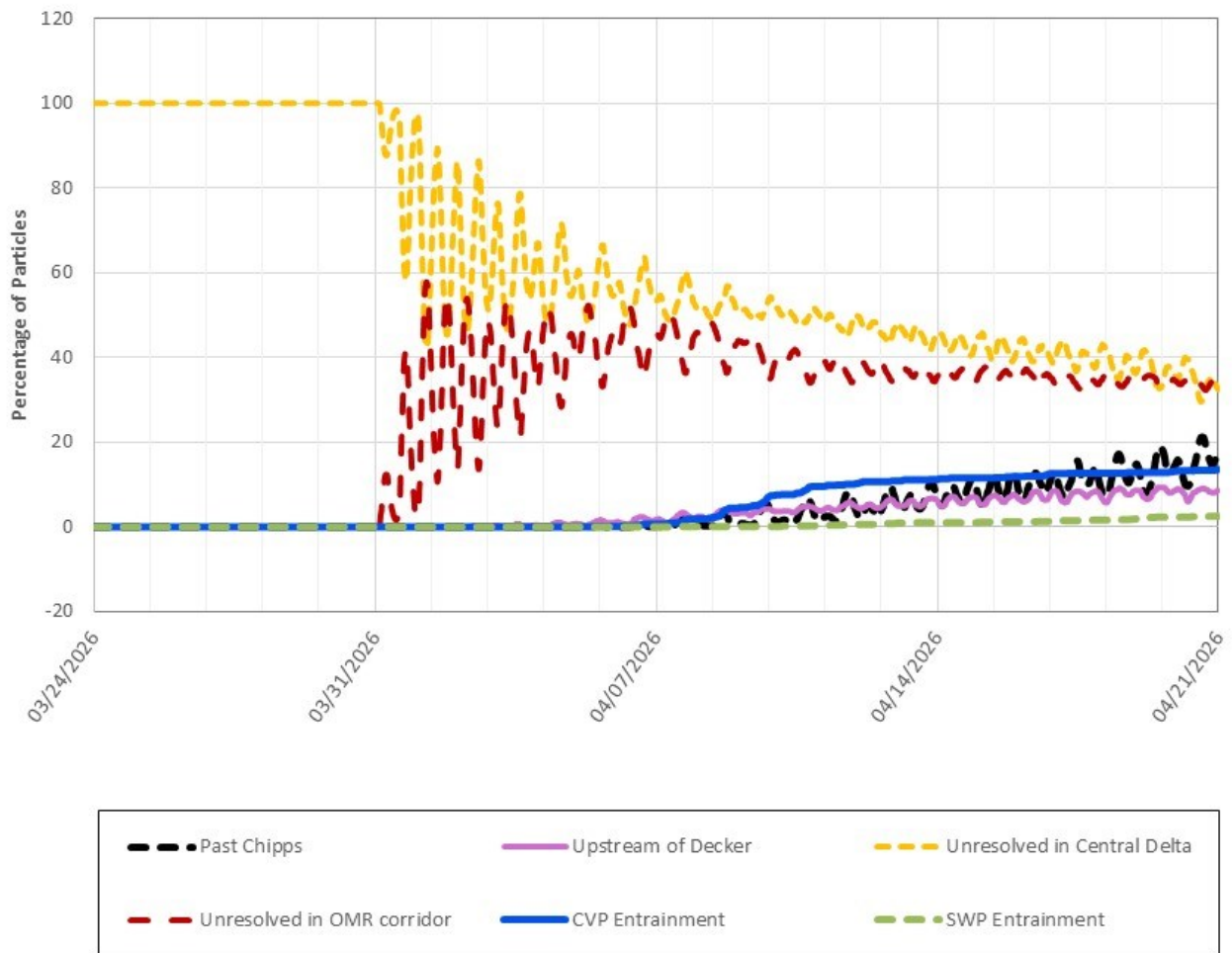


Figure 36: PTM Results for Surface Oriented Particles at Old River, OMR Scenario - 2,000

Figure 36 is a line graph showing the percentage of surface-oriented particles over time from late March to April 21, 2026, for particles injected on March 31, 2026, at DSM2 Node 99 (Old River) under the OMR -2,000 cfs scenario. Six flux locations are represented by different colored dashed lines. Unresolved in Central Delta (yellow) remains near 100% immediately following injection before declining steadily, with oscillatory behavior, to approximately 30–40% by the end of the evaluation period. Unresolved in the OMR corridor (red) increases rapidly shortly after injection, peaking around 50–55%, and then gradually stabilizing near 30–35% through the remainder of the period. Past Chipps (black) increases gradually after injection, reaching roughly 15–20% by late April. CVP Entrainment (blue) rises slowly to about 10–15%, while SWP Entrainment (green) remains minimal, generally below 5%. Upstream of Decker (purple) increases gradually to approximately 10% by the end of the period, indicating modest contribution relative to unresolved pathways.

ECO-PTM (Ecological Particle Tracking Model)

ECO-PTM Results Evaluation Period: 03/31/2026 – 04/20/2026

Particles Injected: 03/31/2026

Injection Location: Sacramento River at Freeport

Table 12. Salmon Particle Route Ratio After 3 Weeks (Ending 04/20/2026)

OMR Flow Bin	Sutter Slough Route	Steamboat Slough Route	Sacramento River (SS) Route	Sacramento River (GEO) Route	Georgiana Slough Route
-6,500	0.10	0.08	0.81	0.75	0.25
-5,000	0.11	0.09	0.81	0.74	0.26
-3,500	0.11	0.08	0.81	0.74	0.26
-2,000	0.10	0.09	0.81	0.75	0.25

Table 13. Salmon Particle Route-Specific Survival After 3 Weeks (Ending 04/20/2026)

OMR Flow Bin	Sutter Slough Route	Steamboat Slough Route	Sacramento River Route	Georgiana Slough Route	All Routes Combined
-6,500	32%	45%	36%	16%	32%
-5,000	37%	49%	40%	18%	36%
-3,500	34%	48%	38%	24%	35%
-2,000	36%	48%	40%	20%	36%

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: 03/31/2026 – 04/20/2026

Particles Injected: 03/31/2026

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.

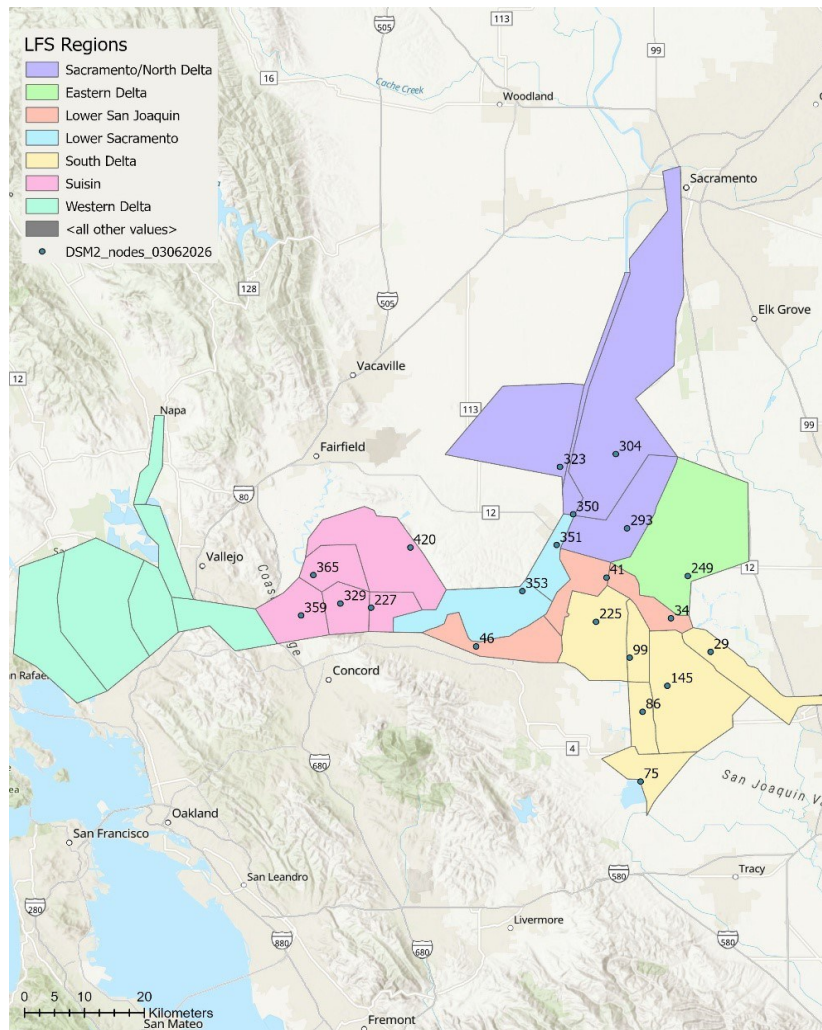


Figure 37: DSM2 PTM Regions in the Sacramento-San Joaquin Delta

Figure 37 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 channels and node locations are also displayed, with node numbers labeled throughout the map.

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.

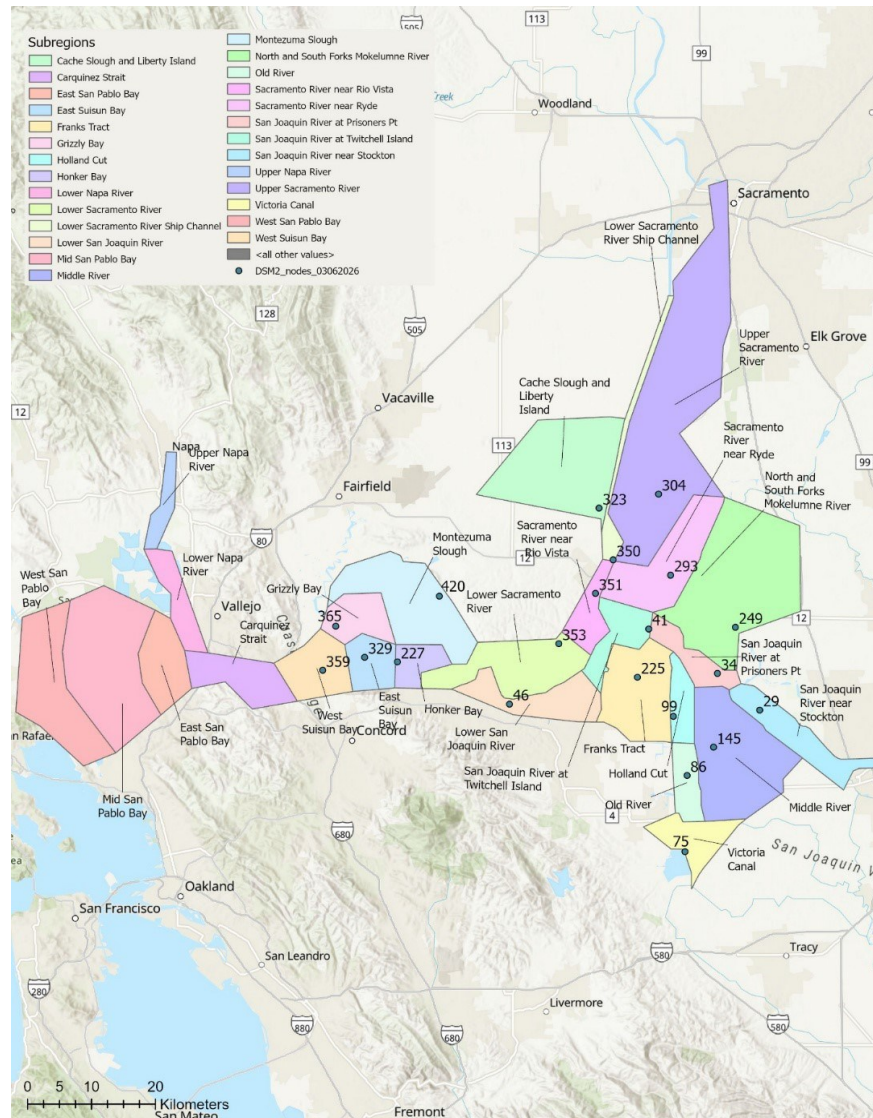


Figure 38: EDSM Subregions and DSM2 Node Locations in the Sacramento-San Joaquin Delta

Figure 38 is a map of the Sacramento-San Joaquin Delta showing the 27 EDSM program subregions, each distinguished by a different color, spanning waterways from the Upper Sacramento River and North Delta down through the South Delta, Suisun Marsh, and San Pablo Bay. DSM2 node locations are displayed throughout the map with node numbers labeled, representing the injection points used to estimate cumulative particle flux into CVP and SWP facilities for each corresponding subregion. The map reflects node locations as of March 6, 2026.

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 SixAgency Monitoring Survey Design Team. The percent of samples processed as of 03/27/2026 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: Percent Coverage of LFS Regions by SLS Survey Date

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%	86%	100%	100%	100%	56%	88%
5	2/23/2026	100%	57%	100%	100%	100%	78%	4%
6	3/9/2026	100%	43%	71%	67%	100%	56%	16%

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

DSM2 Injection Node	EDSM Subregion	LFS Region
323	Cache Slough and Liberty Island	Sacramento/ North Delta
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 04/06/2026

OMR (cfs)	Combined Exports (cfs)	Region Metric	West	Suisun	Sacramento/ North Delta	Lower San Joaquin	Lower Sacramento	South Delta	East	Total (#)	Total (%)
N/A	N/A	LFS Larva Abundance (Survey 6: 3/9/2026)	2568108	14411532	304865	3100001	1410811	0	0	21795317	0
-6500	5209	PTM Entrained (%)	0	0	0	<0.1	0	0	0	N/A	N/A
-5000	4379	PTM Entrained (%)	0	0	0	0	0	0	0	N/A	N/A
-3500	3449	PTM Entrained (%)	0	0	0	0	0	0	0	N/A	N/A
-2000	2647	PTM Entrained (%)	0	0	0	0	0	0	0	N/A	N/A
-6500	5209	LFS Larva Entrained (#)	0	0	0	434	0	0	0	434	<0.1%
-5000	4379	LFS Larva Entrained (#)	0	0	0	0	0	0	0	0	0.0%
-3500	3449	LFS Larva Entrained (#)	0	0	0	0	0	0	0	0	0.0%
-2000	2647	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 17. LFS Entrainment Estimate using PTM with Surface Oriented Particles: Week 2 ending 04/13/2026

OMR (cfs)	Combined Exports (cfs)	Region Metric	West	Suisun	Sacramento/ North Delta	Lower San Joaquin	Lower Sacramento	South Delta	East	Total (#)	Total (%)
N/A	N/A	LFS Larva Abundance (Survey 6: 3/9/2026)	2568108	14411532	304865	3100001	1410811	0	0	21795317	0
-6500	3392	PTM Entrained (%)	0	0	0.4	0.9	0.1	0	0	N/A	N/A
-5000	2991	PTM Entrained (%)	0	0	0.1	0.3	0	0	0	N/A	N/A
-3500	2533	PTM Entrained (%)	0	0	0	0.2	0	0	0	N/A	N/A
-2000	2018	PTM Entrained (%)	0	0	0	<0.1	0	0	0	N/A	N/A
-6500	3392	LFS Larva Entrained (#)	0	0	1219	26593	1411	0	0	29223	0.1%
-5000	2991	LFS Larva Entrained (#)	0	0	305	9096	0	0	0	9401	<0.1%
-3500	2553	LFS Larva Entrained (#)	0	0	0	6983	0	0	0	6983	<0.1%
-2000	2018	LFS Larva Entrained (#)	0	0	0	217	0	0	0	217	<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

Table 18. LFS Entrainment Estimate using PTM with Surface Oriented Particles: Week 3 ending 04/20/2026

OMR (cfs)	Combined Exports (cfs)	Region Metric	West	Suisun	Sacramento/ North Delta	Lower San Joaquin	Lower Sacramento	South Delta	East	Total (#)	Total (%)
N/A	N/A	LFS Larva Abundance (Survey 6: 3/9/2026)	2568108	14411532	304865	3100001	1410811	0	0	21795317	0
-6500	1503	PTM Entrained (%)	0	0	0.4	1.1	0.1	0	0	N/A	N/A
-5000	1503	PTM Entrained (%)	0	0	0.2	0.5	0	0	0	N/A	N/A
-3500	1503	PTM Entrained (%)	0	0	0	0.3	0	0	0	N/A	N/A
-2000	1503	PTM Entrained (%)	0	0	0	<0.1	0	0	0	N/A	N/A
-6500	1503	LFS Larva Entrained (#)	0	0	1219	35031	1411	0	0	37662	0.2%
-5000	1503	LFS Larva Entrained (#)	0	0	610	15162	0	0	0	15771	<0.1%
-3500	1503	LFS Larva Entrained (#)	0	0	0	10223	0	0	0	10223	<0.1%
-2000	1503	LFS Larva Entrained (#)	0	0	0	867	0	0	0	867	<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

Average PTM Results by Injection Region for Position Oriented Particles Entrained at CVP and SWP. OMR Scenario = -6,500. Particles Injected 3/31/2026.

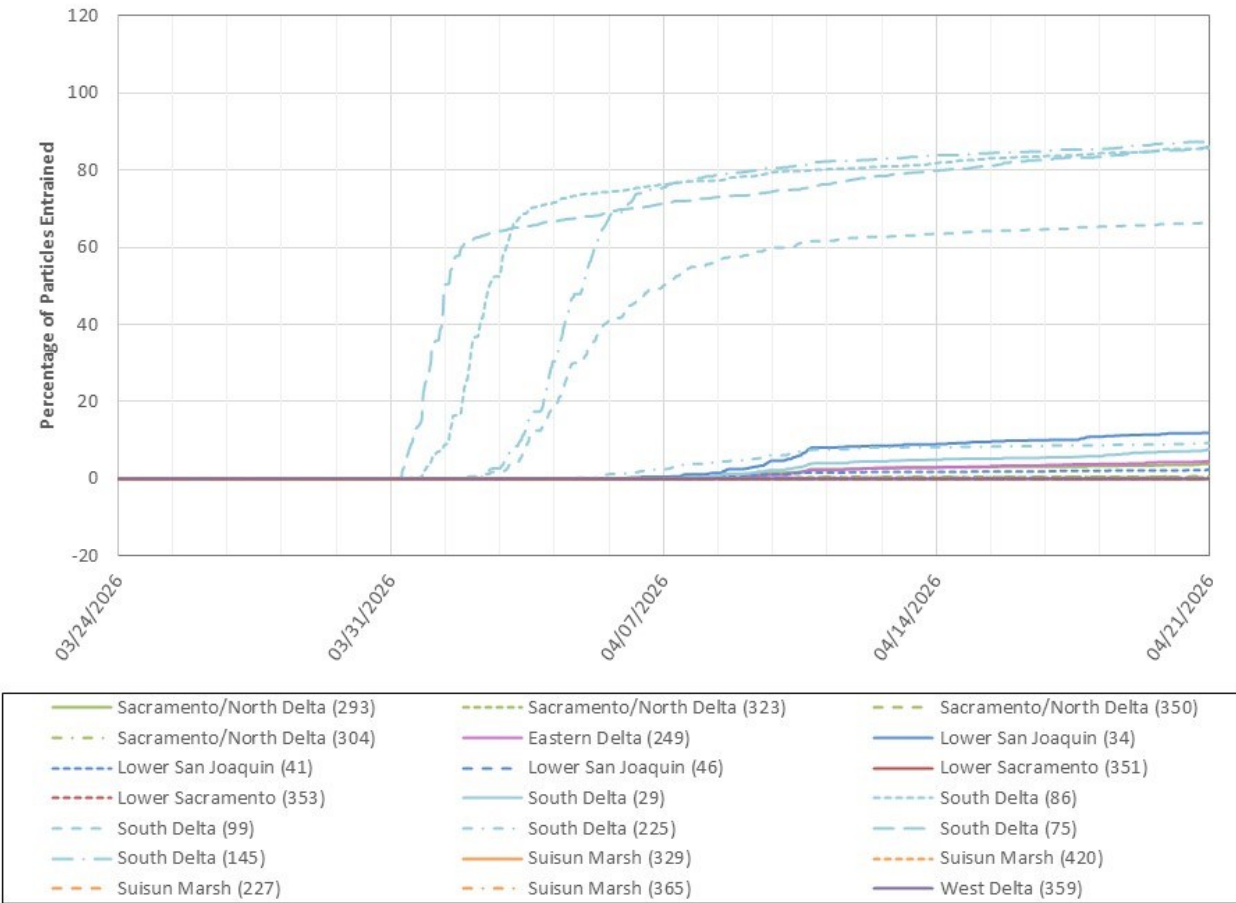


Figure 38: Average PTM Results by Injection Region for Position Oriented Particles Entrained at CVP and SWP, OMR Scenario -6,500

Figure 38 is a line graph showing the average percentage of position-oriented particles entrained at CVP and SWP over time from late March to April 21, 2026, for particles injected on March 31, 2026, grouped by seven DSM2 injection regions under the OMR -6,500 cfs scenario. Multiple South Delta trajectories (light blue) show the highest entrainment, increasing rapidly shortly after injection and reaching approximately 80–90% by early April, remaining dominant through the end of the evaluation period. Eastern Delta (pink) and Lower San Joaquin (blue) show moderate entrainment, rising gradually to roughly 5–15% by late April. In contrast, Sacramento/North Delta, Lower Sacramento, Suisun Marsh, and West Delta regions remain near zero throughout the period, indicating minimal entrainment outside of South Delta-influenced regions.

Average PTM Results by Injection Region for Position Oriented Particles Entrained at CVP and SWP. OMR Scenario = -5,000. Particles Injected 3/31/2026.

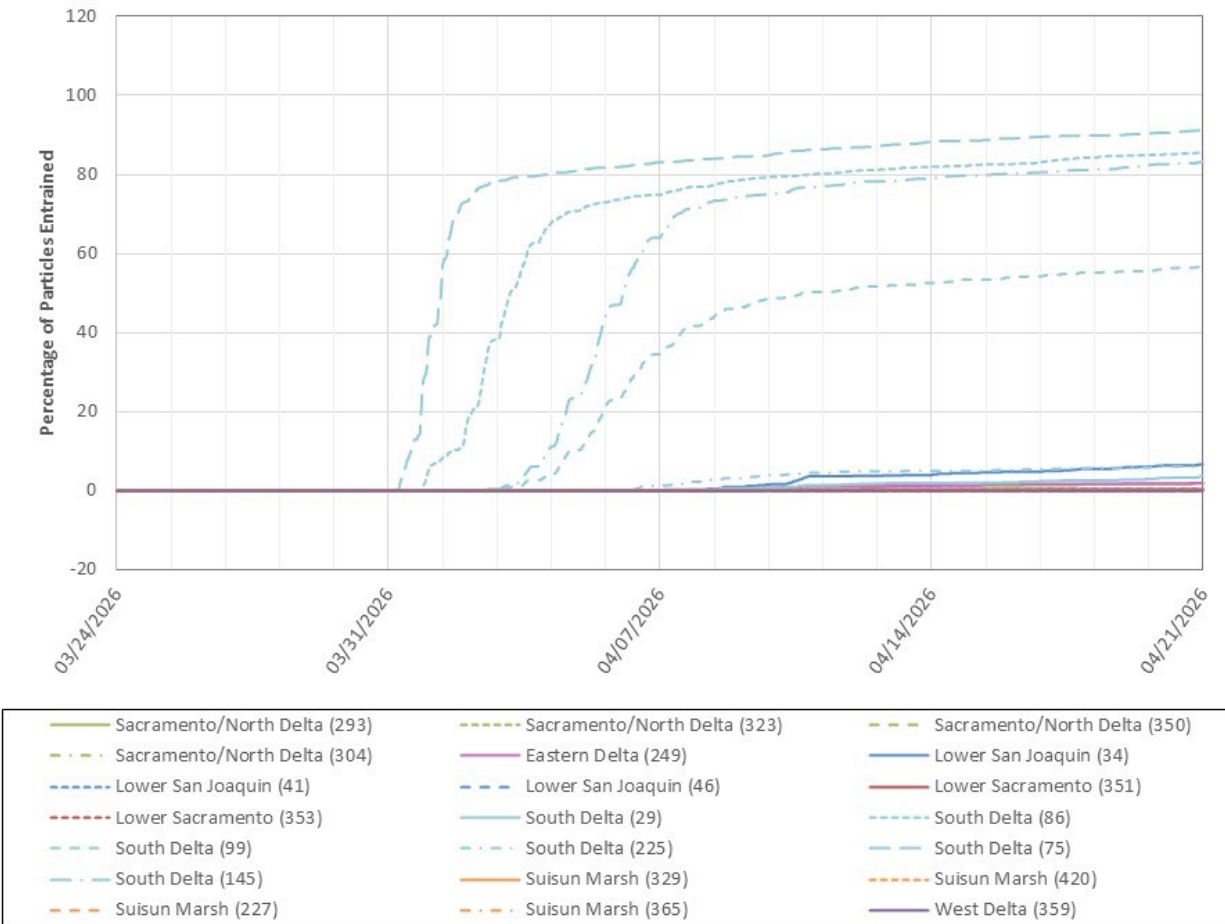


Figure 39: Average PTM Results by Injection Region for Position Oriented Particles Entrained at CVP and SWP, OMR Scenario -5,000

Figure 39 is a line graph showing the average percentage of position-oriented particles entrained at CVP and SWP over time from late March to April 21, 2026, for particles injected on March 31, 2026, grouped by seven DSM2 injection regions under the OMR -5,000 cfs scenario. South Delta (light blue) shows the highest entrainment, increasing rapidly shortly after injection and reaching approximately 75-90% by early April, remaining dominant through the end of the evaluation period. Eastern Delta (pink) and Lower San Joaquin (blue) show low to moderate entrainment, gradually increasing to roughly 2-8% by late April. In contrast, Sacramento/North Delta, Lower Sacramento, Suisun Marsh, and West Delta regions remain near zero throughout the period, indicating minimal entrainment outside of South Delta-influenced regions.

Average PTM Results by Injection Region for Position Oriented Particles Entrained at CVP and SWP. OMR Scenario = -3,500. Particles Injected 3/31/2026.

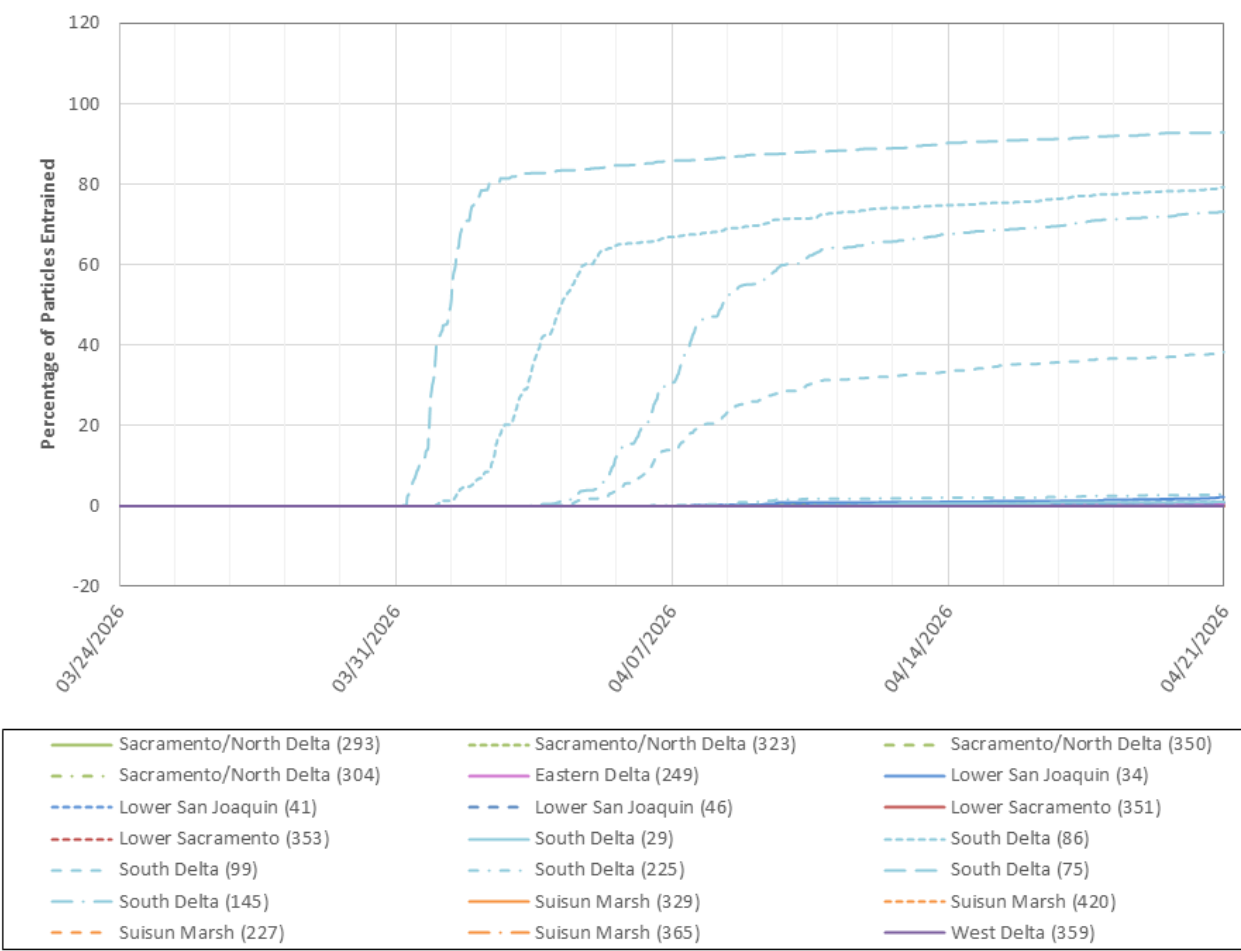


Figure 40: Average PTM Results by Injection Region for Position Oriented Particles Entrained at CVP and SWP, OMR Scenario -3,500

Figure 40 is a line graph showing the average percentage of position-oriented particles entrained at CVP and SWP over time from late March to April 21, 2026, for particles injected on March 31, 2026, grouped by seven DSM2 injection regions under the OMR -3,500 cfs scenario. South Delta (light blue) shows the highest entrainment, increasing rapidly shortly after injection and reaching approximately 80–95% by early April, remaining dominant through the end of the evaluation period. Eastern Delta (pink) and Lower San Joaquin (blue) exhibit very low entrainment, increasing only slightly to roughly 1–5% by late April. Sacramento/North Delta, Lower Sacramento, Suisun Marsh, and West Delta remain near zero throughout the period, indicating minimal entrainment outside of South Delta-influenced regions.

Average PTM Results by Injection Region for Position Oriented Particles Entrained at CVP and SWP. OMR Scenario = -2,000. Particles Injected 3/31/2026.

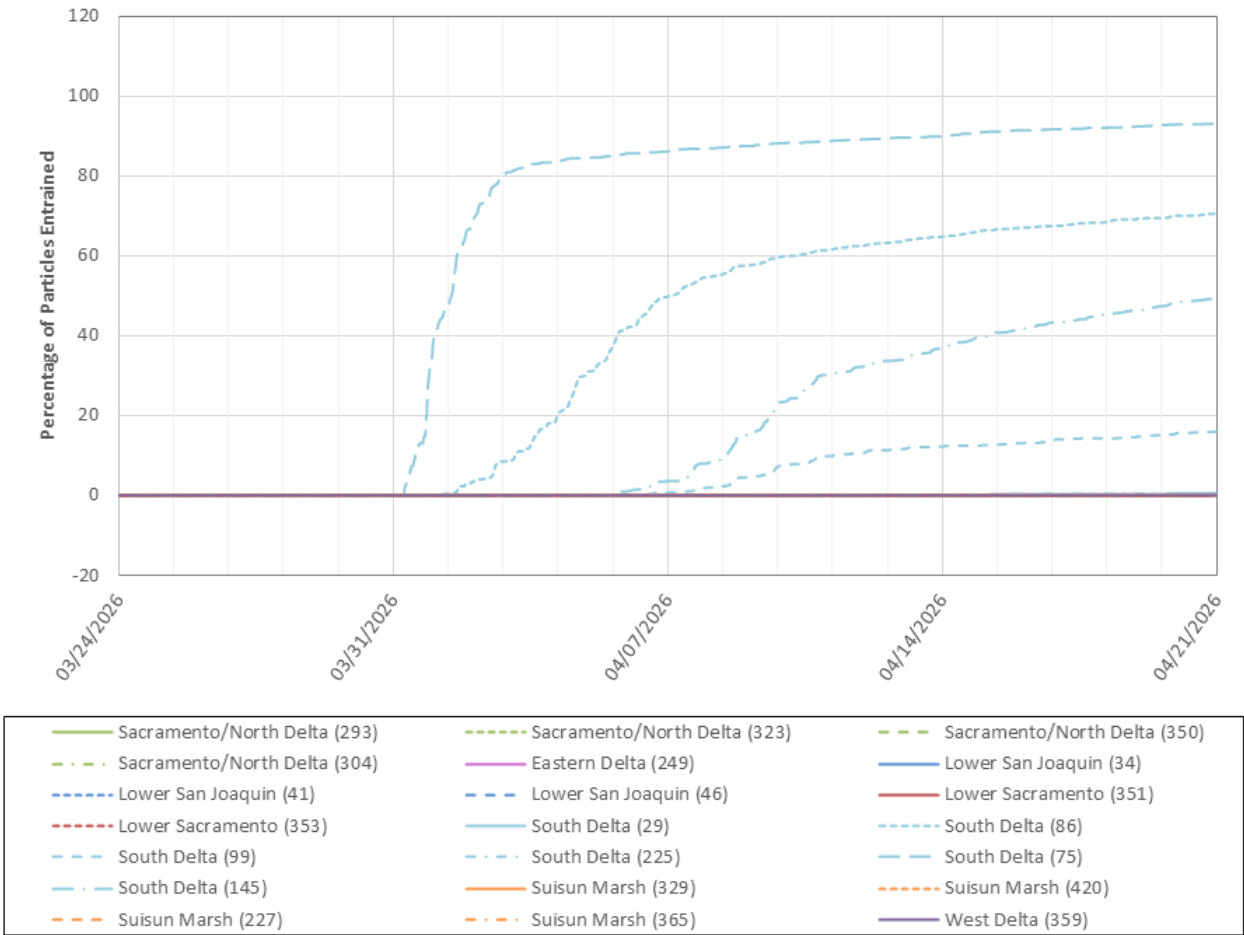


Figure 41: Average PTM Results by Injection Region for Position Oriented Particles Entrained at CVP and SWP, OMR Scenario -2,000

Figure 41 is a line graph showing the average percentage of position-oriented particles entrained at CVP and SWP over time from late March to April 21, 2026, for particles injected on March 31, 2026, grouped by seven DSM2 injection regions under the OMR -2,000 cfs scenario. Multiple South Delta trajectories (light blue) are the only region exhibiting notable entrainment, increasing rapidly after injection and reaching approximately 60–90% by early April, with values continuing to rise gradually through the end of the evaluation period. In contrast, Eastern Delta (pink), Lower San Joaquin (blue), Sacramento/North Delta, Lower Sacramento, Suisun Marsh, and West Delta remain at or near zero throughout the period, indicating minimal entrainment outside of South Delta-influenced regions.