

## PARTICIPANTS

- CDFW
- DWR
- NMFS
- SWRCB
- USBR
- USFWS
- Kearns & West

## ACTION ITEMS

- CDFW to share SLS 4 catch data once processing is complete.

## MEETING SUMMARY

### PART 1: Updates on Water Operations and Biological Updates

#### Relevant Actions & Triggers

USBR reported on the OMR management measures currently in effect and whether they have been triggered; CDFW reported on the ITP Conditions of Approval that are currently in effect and whether they have been triggered. Those measures with yellow background are those that are in effect but not triggered; in green are triggered measures; in grey are measures that are no longer relevant. The descriptions below are intended as summaries and do not provide all the details related to each action or trigger. For full descriptions, please see the OMR guidance document or ITP as relevant.

#### Proposed Action

OMR Management Measures	Requirement	Time Frame	Trigger	Triggered?
Integrated Early Winter Pulse Protection (“First Flush” Turbidity Event)	Reduce exports for 14 consecutive days so that the 14-day averaged OMR index for the period shall not be more negative than -2,000 cfs	Dec 1 to Jan 31	(1) Running three-day average of daily flows at Freeport >25,000 cfs; and (2) Running three-day average of daily turbidity at Freeport ≥50 NTU <sup>1</sup> ; or (3) Real-time monitoring indicates a high risk of migration and dispersal into areas at high risk of future entrainment or a spent	No

<sup>1</sup> The current instrumentation measures turbidity in Formazin Nephelometric Units (FNU).

OMR Management Measures	Requirement	Time Frame	Trigger	Triggered?
			delta smelt has been collected in monitoring surveys.	
OMR Management	Manage to a more positive OMR than -5,000 cfs	From the onset of OMR management to the end		Yes (initiated on 1/1/2021 for salmon)
Turbidity Bridge Avoidance ("South Delta Turbidity")	If the daily average turbidity at Bacon Island cannot be maintained less than 12 NTU, manage exports to achieve an OMR no more negative than -2,000 cfs until the daily average turbidity at Bacon Island drops below 12 NTU.	After the first flush or Feb 1 (whichever comes first) and until a ripe or spent female is detected or April 1 (whichever is first)	Average daily turbidity in Old River at Bacon Island (OBI) at a level of more than 12 NTU.	No
Larval and Juvenile Delta Smelt	Run hydrodynamic models and forecasts of entrainment, informed by the EDSM or other relevant survey data to estimate the percentage of larval and juvenile delta smelt that could be entrained. If necessary, manage exports to limit entrainment to be protective based on the modeled recruitment levels.	On or after March 15 of each year until off-ramp criteria are met	If QWEST is negative AND larval or juvenile delta smelt are within the entrainment zone of the pumps based on real-time sampling of spawning adults or young of year life stages	No

IIP Conditions of Approval

Condition of Approval	Requirement	Time Frame	Trigger	Triggered?
8.1.5.2 (Smelt Monitoring Team Risk Assessment)	Outlines contents for weekly risk assessments of Delta Smelt and Longfin Smelt required under 8.1.5 and 8.1.1	Nov 1 <sup>st</sup> through June 30 <sup>th</sup> or until off-ramped by 8.8		Yes
8.3.1 (Integrated Early Winter Pulse Protection)	Reduce south Delta exports for 14 consecutive days to maintain a 14-day average OMR index no more negative than -2,000 cfs, and convene the Smelt Monitoring Team within one day of triggering. After	Dec 1 to Jan 31	Three day running average daily flows at Freeport greater than, or equal to, 25,000 cfs, AND Three day running average of daily turbidity at Freeport is	No

Condition of Approval	Requirement	Time Frame	Trigger	Triggered?
	maintaining a 14-day average OMR index no more negative than -2,000 cfs for 14 days, Permittee shall maintain a 14-day average OMR index no more negative than -5,000 cfs, initiating the OMR Management season.		greater than, or equal to, 50 FNU OR The Smelt Monitoring Team determines that real-time monitoring of abiotic and biotic factors indicates a high risk of DS migration and dispersal into areas at high risk of future entrainment.	
8.3.3 (Adult Longfin Smelt Entrainment Protection)	After December 1, if an Integrated Early Winter Pulse Protection (Condition of Approval 8.3.1) has not yet initiated, Permittee shall reduce south Delta exports to maintain a 14-day average OMR index no more negative than -5,000 cfs and initiate OMR Management if: Cumulative expanded salvage, Dec 1 <sup>st</sup> through Feb 28 <sup>th</sup> , exceeds most recent FMWT Index divided by 10, or SMT determines that there is a high risk of entrainment.	Dec 1 through Feb 28th	Salvage threshold is three Longfin Smelt for WY 2021.	No
8.4.1 (OMR Management for Adult Longfin Smelt)				Off-ramped due to detection of Longfin Smelt larvae on December 28 <sup>th</sup>
8.4.2 (Larval and Juvenile Longfin Smelt Entrainment Protection)	If triggered, it will restrict south Delta exports for seven consecutive days in order to maintain a seven-day average OMR index no more negative than -5,000 cfs and convene the SMT to recommend an OMR flow limit between -1,250 and -5,000 cfs.	January 1st through June 30th or until the temperature offramp occurs	(1) Longfin Smelt larvae or juveniles are found in four or more of the 12 SLS or 20 mm stations in the central or south Delta, Or (2) Longfin Smelt catch per tow exceeds five larvae or juveniles in two or more of the 12 stations in the central or south Delta. The relevant stations are: 809, 812, 815, 901, 902, 906, 910, 912, 914, 915, 918 and 919	Triggered on 1/26, 2/2, and 2/23
8.4.3 High flow offramp for Longfin Smelt	If triggered, Conditions of Approval 8.4.1 and 8.4.2 are not required or would cease if previously required.	Throughout OMR management	When river flows are (a) greater than 55,000 cfs in the Sacramento River at Rio Vista or (b) greater than 8,000 cfs in the San Joaquin River at Vernalis. If flows	No

Condition of Approval	Requirement	Time Frame	Trigger	Triggered?
			subsequently drop below 40,000 cfs in the Sacramento River at Rio Vista or below 5,000 cfs in the San Joaquin River at Vernalis, the OMR limit previously required as a part of Conditions of Approval 8.4.1 and 8.4.2 shall resume.	
8.5.1 Turbidity Bridge Avoidance	maintain daily average turbidity in Old River at Bacon Island (OBI) at a level of less than 12 NTU. If the daily average turbidity at OBI is greater than 12 NTU, Permittee shall restrict south Delta exports to achieve an OMR flow that is no more negative than -2,000 cfs until the daily average turbidity at OBI is less than 12 NTU.	After the first flush or Feb 1 until end of OMR management or until CDFW is in agreement that the action may be ended or modified.	Turbidity at OBI > 12 FNU	No
8.5.2 (Larval and Juvenile Delta Smelt Protection)	If triggered, this Condition of Approval will restrict south Delta exports for seven consecutive days in order to maintain a seven-day average OMR index no more negative than -5,000 cfs and SMT members will meet to assess the risk of entrainment. The SMT may provide further advice to restrict exports in order to maintain an OMR index more positive than -5,000 cfs. In their assessment, SMT members will determine if risk of entrainment is low, medium, or high; subsequent OMR restrictions will be based on level of risk. Furthermore, if salvage of Delta Smelt exceeds 11 in three days, this Condition of Approval will restrict south Delta exports for seven consecutive days in order to maintain a seven-day average OMR index no more negative than -3,500 cfs.	Nov 1 <sup>st</sup> through June 30 <sup>th</sup> or until off-ramped by 8.8	When the five-day salvage of juvenile Delta Smelt is greater than or equal to one plus the average prior three years' FMWT index (rounded down). The threshold for this year is one.	No
8.12 (Barker Slough Pumping Plant Longfin and Delta)	Barker Slough Pumping Plant will reduce exports so the maximum 7-day average is <60 cfs.	From January 15 through March 31 in dry and critical water years for	Larval Smelt are detected at SLS Station 716 during the period identified for each species, and/or when recommended by the SMT	not triggered by the latest SLS 3 survey results;

Condition of Approval	Requirement	Time Frame	Trigger	Triggered?
Smelt Protection)		Longfin Smelt, and from March 1 <sup>st</sup> through June 30 <sup>th</sup> for Delta Smelt		was triggered for Longfin Smelt 1/19/21, 2/2/21

## Current Operations & Outlook

USBR and DWR shared operations updates from the Outlook. Their observations included:

- USBR CVO reported that the Delta is currently experiencing the end of the descending limb of the flow pulse from last week's precipitation event. The upcoming week will be warmer, drier, and windier.
- Releases from Whiskeytown Dam on Clear Creek are currently 200 cfs with no anticipated changes.
- Releases on the Sacramento River from Keswick Dam are currently at minimum winter flows of 3,250 cfs; USBR does not anticipate changes.
- American River releases from Nimbus Dam are at 950 cfs, with no planned changes through the end of the month.
- Releases from Goodwin Dam on the Stanislaus River decreased from 400 cfs to 200 cfs over the last week as salinity concerns at Vernalis diminished. An instability flow (over two days, peaking between 950 and 1,050 cfs) may be scheduled at the end of the month.
- Jones Pumping Plant exports decreased from 3,330 cfs on Friday (February 19<sup>th</sup>) to 2,550 cfs yesterday (February 22<sup>nd</sup>), and will decrease again to 1,650 cfs on Thursday (February 25<sup>th</sup>), with a further reduction to 1,000 cfs on Friday (February 26<sup>th</sup>). These reductions are a response to lower inflows to the Delta.
- The Delta Cross-channel Gates are currently closed and are expected to remain closed through mid-May per the PA and D-1641 requirements. Construction activities on the gates remain ongoing.
- The Tracy Fish Collection Facility reported the presence of debris from water hyacinth on the trash rack, but USBR is not aware of any disruptions from the debris to operations.
- DWR reported that Feather River releases are at 1,250 cfs. When new minimum flow standards go into effect on Monday (March 1<sup>st</sup>), releases will decrease to 1,000 cfs.
- Yesterday Sacramento River flows at Freeport were around 9,900 cfs and San Joaquin flows at Vernalis were 1,535 cfs. Both will continue to drop in the coming days.
- Clifton Court operations were targeting an OMR Index of -5,000 cfs last week and through the weekend.
- Delta outflows were 7,400 cfs yesterday after a low on Sunday of 6,690 cfs.
- The OMR Index was around -3,600 cfs (February 22<sup>nd</sup>) and will likely shift to a more positive flow of -2,500 cfs to -2,000 cfs later this week.
- X2 is 80 km and will probably drift upstream with decreasing flows.
- QWEST was between -2,000 and -2,500 cfs over the weekend and will increase to -500 to 0 cfs in the coming days as exports decrease.

## Review of Environmental Conditions and Survey Updates

CDFW shared survey updates.

- CDFW distributed Smelt Larva Survey (SLS) 3 and February Bay Study catch data to SMT members via email today (February 23<sup>rd</sup>).

- The Bay Study detected five adult Longfin Smelt (85 to 90 mm, including two in the lower Sacramento River), and 19 juvenile Longfin Smelt. These fish were not checked for expression.
- SLS 4 is sampling this week (currently February 22<sup>nd</sup> to 24<sup>th</sup>, though weather delays may push sampling to February 25<sup>th</sup> and 26<sup>th</sup>). High-priority stations in the central and south Delta were sampled yesterday. Five of the 12 stations have been processed so far, and a total of 29 Longfin Smelt were detected at four of these stations:
  - Station 809: 18 Longfin Smelt (6 to 8 mm, seven with yolk sacs).
  - Station 812: Eight Longfin Smelt (7 to 8 mm, six with yolk sacs).
  - Station 815: Zero Longfin Smelt.
  - Station 901: One Longfin Smelt (6 mm, with yolk sac).
  - Station 902: Two Longfin Smelt (both 7 mm, one with yolk sac).
- The 20 mm Survey will begin the week of March 22<sup>nd</sup>.

CDFW explained that SLS 6 and the first 20 mm Survey typically fall in the same week, but COVID restrictions will make it logistically impossible to run both surveys concurrently this year. CDFW proposed two alternatives and asked the SMT for feedback.

- Move SLS 6 up by one week (from the week of March 21<sup>st</sup> to the week of March 15<sup>th</sup>), or
- Keep SLS 6 during the week of March 22<sup>nd</sup> but shorten it to a single-day survey focused on only the south and central Delta.

SMT members recommended shifting SLS 6 to the week of March 15<sup>th</sup>. USFWS suggested extending SLS sampling until the average size of Delta Smelt is at least 20 mm (i.e., when they will be more efficiently caught by the 20 mm Survey). CDFW will consider this request for future survey planning.

CDFW also noted that the Old River Bridge will be closed to vessel traffic in March or April, which will affect access to Station 918 (the southernmost station near Clifton Court Forebay). CDFW is looking into options to avoid sampling disruptions.

USFWS reported on the Enhanced Delta Smelt Monitoring (EDSM) Program.

- Zero Delta Smelt were detected last week (February 16<sup>th</sup> to 19<sup>th</sup>), so there was no abundance estimate generated.
- Zero Longfin Smelt were detected last week. One Longfin Smelt (84 mm, no sign of expression) was collected yesterday in the western Delta strata (East San Pablo Bay subregion).
- This week three crews will be on the water Monday through Thursday (February 22<sup>nd</sup> to 25<sup>th</sup>), with a potential extension to Friday if winds keep crews off the water midweek. Today they are sampling the lower Sacramento River, lower San Joaquin River, and Suisun Marsh strata.
- Fish Culture and Conservation Laboratory (FCCL) Broodstock Collection requested that EDSM retain any live Delta Smelt catches for transfer to FCCL during the remainder of the Phase 1 adult sampling season. USFWS and FCCL are discussing a possible temperature cutoff for retaining live fish.
- The Chipps Island Trawl detected five Longfin Smelt last week (February 16<sup>th</sup> to 19<sup>th</sup>), ranging from 75 to 112 mm. The three larger fish were transferred to FCCL and were not checked for expression. The two smaller fish were checked for expression; the 75 mm Longfin Smelt was expressing eggs and the 78 mm Longfin Smelt was not showing signs of expression.

USFWS pointed out that fish being retained will not be checked for expression, and one way the Proposed Action Turbidity Bridge Avoidance measure can be terminated is via detection of a ripe or spent female. USFWS recommended the SMT be mindful of how the transfer of EDSM catch to FCCL might affect the flow of information.

CDFW provided a salvage update (February 16<sup>th</sup> to 19<sup>th</sup>).

- No salvage of Delta Smelt or Longfin Smelt.
- No larvae were detected at the Tracy Fish Collection Facility.
- There were no power outages or stoppage in pumping or salvage counts during this period.

USBR shared water quality data [three-station average daily water temperature as of February 22<sup>nd</sup> was 12.28° C; daily average turbidity at Old River at Bacon Island (OBI) was 3.41 FNU and is currently 3.70 FNU] and the seven-day weather forecast for Antioch (sunny and clear with a wind advisory on Wednesday for north winds as high as 34 mph). X2 is currently 79 km.

## PART 2: Open Discussion on Species Status (Structured-Unstructured Time)

SMT members discussed the results of the February 16<sup>th</sup> particle tracking model (PTM) run (Appendix A) and how it could inform the likelihood of entrainment for Longfin Smelt.

- CDFW noted that the two export scenarios in the PTM run (-5,000 cfs and -3,500 cfs) are both more negative than the current OMR Index (-3,000 cfs) and anticipated OMR Index for the upcoming week (-2,500 to -2,000 cfs). Additionally, Longfin Smelt with yolk sacs were detected at Stations 901 and 812 in SLS 4, and the PTM results indicate some entrainment from these locations into the OMR corridor at an OMR Index of -3,500 cfs. QWEST was negative last week (around -2,000 cfs) but will approach 0 cfs this week as exports decrease.
- DWR pointed out that the presence of yolk sacs larvae suggests spawning is still ongoing in the lower San Joaquin River, and that yolk sac larvae are more likely than any other life stage to behave like particles. Thus, larvae outside the mainstem San Joaquin River are likely at very high risk of entrainment.
- DWR also observed that conditions this week are the inverse of last week, i.e., hydrological conditions will improve in the coming week (more positive OMR Index and QWEST), but the distribution of Longfin Smelt is less favorable based on SLS 4 initial results.
- CDFW reflected on their concern last week that a -5,000 cfs scenario may compromise the improved spatial distribution of LFS larvae afforded by the recent storm event going forward. Operations hovered around -5,000 cfs last week. The current more upstream distribution of larvae found in SLS 4 and results from the PTM model may support this original concern.
- NMFS shared that over 50 steelhead were salvaged last week, during a period of negative QWEST values and an OMR Index of -5,000 cfs. There may be a population of recently hatched Longfin Smelt already entrained in the OMR corridor.
- SMT members agreed that an OMR Index of -5,000 cfs and -3,500 cfs were both high-risk scenarios.
- SMT members agreed that if they classified any scenario as high risk the group would also provide a specific OMR Index recommendation.
- CDFW suggested that recommending further restrictions on the OMR Index (i.e., limiting to -1,250 cfs) could result in less salvage at the facilities per the relationship presented in Grimaldo et al. 2009, but that such benefit may be muted for Longfin Smelt already in the OMR corridor.
- CDFW noted that although operations may not be able to directly advect larvae already in the OMR corridor downstream, a less negative OMRI would allow these fish enough time to grow to an appropriate size to be capable of swimming out of the corridor. Alternatively, under this scenario fish rearing in the corridor could simply be entrained at a later date.
- CDFW observed that the -3,500 cfs scenario in the PTM likely underestimates the number of entrained particles, as the OMR Index was near -5,000 cfs most of last week (i.e., more negative than in the model). The modelers confirmed this assumption is accurate.

- DWR confirmed CDFW's interpretation of the PTM.
- USFWS recommended categorizing risk as moderate up to -2,500 cfs.
- CDFW suggested an OMR Index of -3,500 cfs would be a moderate risk scenario for Longfin Smelt in the lower San Joaquin River, while an OMR Index of -2,500 cfs would represent a high risk of entrainment for fish farther upstream (i.e., Franks Tract, OMR Corridor).
- CDFW noted that operations are not currently operating to a specific OMR Index, thus it would likely be helpful for the SMT to recommend a specific OMR Index limit.
- CDFW noted that an OMR Index of -2,500 cfs would also be beneficial to Delta Smelt, as water temperatures are currently above 12° C and thus conducive to Delta Smelt spawning.

SMT member agreed that an OMR Index of -2,500 cfs represents a high risk of entrainment, and thus, under Condition of Approval 8.4.2, SMT members agreed to recommend operations target an OMR Index no more negative than -2,500 cfs.

CDFW recommended that the routing risk for adult Longfin Smelt in the Sacramento River and confluence remain at moderate risk of moving into the central Delta of their own volition, given ripe Longfin Smelt were detected and spawning is still ongoing. CDFW also shared that the temperature thresholds identified in Wang 2007<sup>2</sup> (14° C upper limit for Longfin Smelt spawning and 15° C for yolk sac larvae) indicate current conditions are still within the range for potential spawning.

SMT members discussed how current conditions may affect the risk of entrainment and distribution of Delta Smelt.

- USBR asked if the risk of entrainment for adult Delta Smelt has changed, and if the potential risk for larval Delta Smelt entrainment may have begun.
  - CDFW shared that historic SLS data indicates larval Delta Smelt typically begin to appear in mid-March, thus the transition of entrainment risk from adult to larval Delta Smelt will likely not occur for a few more weeks.
  - DWR suggested the assessment could include language acknowledging that spawning could have begun but the assessment is still focused on the adult life stage at this time.
- USBR asked if the predicted high winds out of the north are likely to cause turbidity at OBI to increase above 12 FNU (NTU) or lead to a widespread turbidity event.
  - The group agreed the forecasted wind event, particularly in combination with the anticipated OMR Index values, is unlikely to result in turbidity at OBI to exceeding 12 FNU (NTU) or generate a widespread turbidity event.

## PART 3: Live-edit Assessments

### ITP Longfin Smelt Risk Assessment

CDFW updated the ITP assessment based on the discussion documented in Part 2 above.

### Proposed Action Weekly Evaluation of Delta Smelt, including Distribution, Abiotic Conditions, Risk Assessment Questions, and Executive Summary

USBR reviewed updates to the assessment, which largely focused on the latest detection data and anticipated changes in conditions (including turbidity, OMR Index, and QWEST values). Edits included:

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<sup>2</sup>Wang 2007, "Spawning, Early Life Stages, and Early Life Histories of the Osmerids Found in the Sacramento-San Joaquin Delta of California," <https://www.usbr.gov/mp/TFFIP/docs/tracy-reports/tracy-rpt-vol-38-spawning-early-life-stages.pdf>.



- An acknowledgement that EDSM may contribute live catch to FCCL.
- A statement in the biological conditions section that the three-station temperature exceeded 12°C, which initiates the period when conditions are conducive to Delta Smelt Spawning.
- Updated current turbidity and OMR index values and catch data.
- Noting that increased turbidity is expected in response to high north winds, but the 12 FNU (NTU) threshold at OBI is unlikely to be met.

The group reviewed the relevant assessment questions: (1) Between December 1 and January 31, has any first flush condition been exceeded? (2) Do Delta Smelt have a high risk of migration and dispersal into areas at high risk of future entrainment? (3) Has a spent female been collected? (4) If OMR of -2,000 cfs does not reduce daily average OBI turbidity below 12 NTU/FNU, what OMR target is deemed protective between -2,000 and -5,000 cfs? (5) If daily average OBI turbidity is greater than 12 NTU/FNU, what do other station locations show? (6) If daily average OBI is greater than 12 NTU/FNU, is a turbidity bridge avoidance action not warranted? What is the supporting information?

- There were no changes to the responses to questions one and two.
- The responses to questions three, four, five, and six were updated to reflect the latest dates and data.
- Question 8 was reworded to be consistent with the current Guidance Document, though the SMT does not yet need to respond to this question.

USBR reviewed updates to the Executive Summary:




- Acknowledgement that winds may affect turbidity midweek, but no precipitation is forecasted for the upcoming seven days.
- SMT members agreed it was not necessary to comment on temperatures and the potential for spawning in the Executive Summary, as this information is captured elsewhere in the assessment.
- SMT members discussed adding language indicating the projected OMR Index limits are sufficiently protective of Delta Smelt. Ultimately, the group agreed there was not enough data to support a statement of this nature. SMT members will revisit this discussion at next week's meeting.

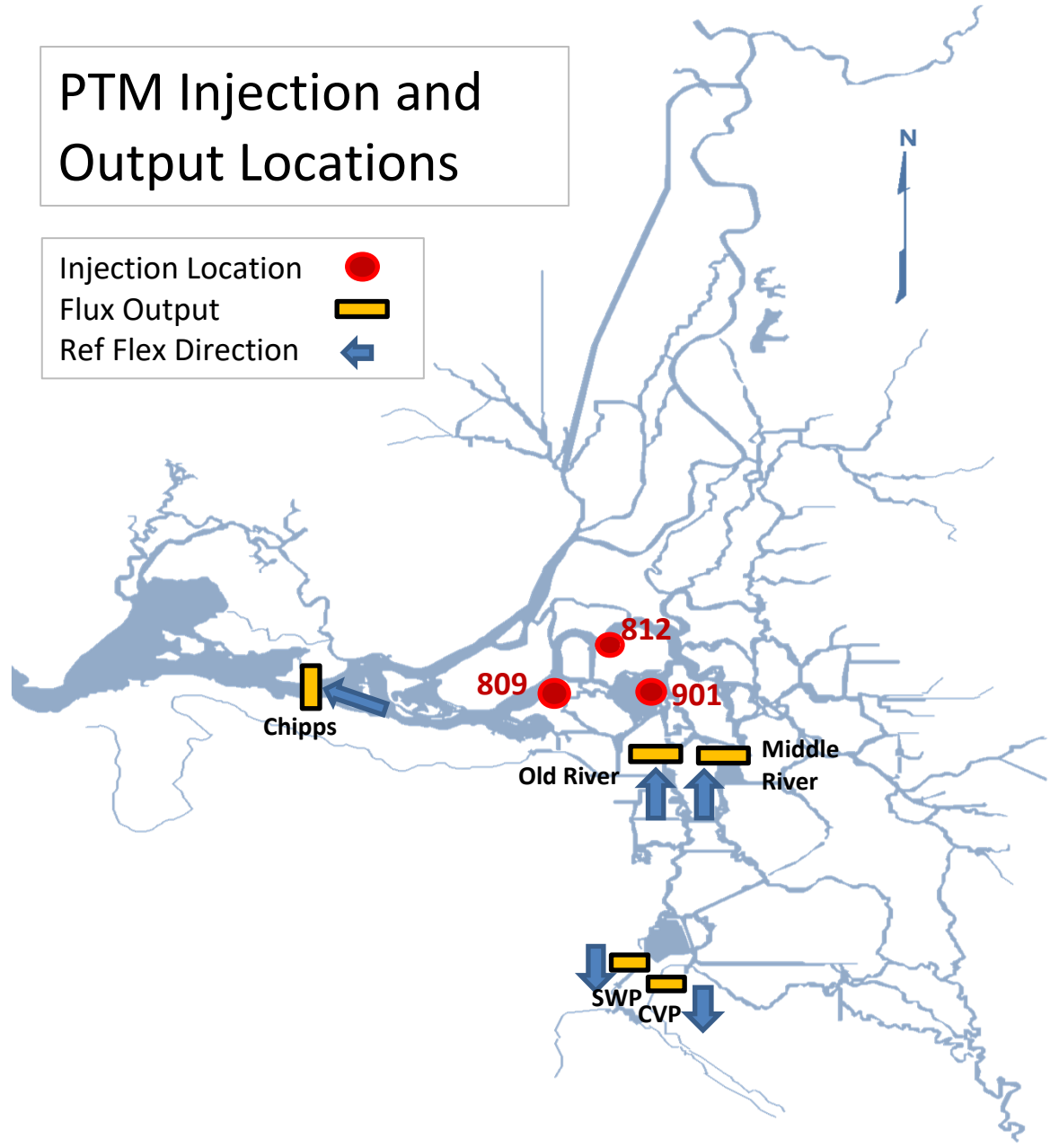
No non-consensus issues were identified.

### **Additional Considerations/Discussion**

Agencies reported no items for elevation to WOMT other than the recommendation that operations target an OMR Index no more negative than -2,500 cfs under Condition of Approval 8.4.2.

# PTM Injection and Output Locations

Injection Location   
Flux Output   
Ref Flex Direction 



## End of Week Summary

Particles Injected

2/16/2021

### 1 Week (02-23-2021)

		Particles Entrained by Projects	Particles in OMR Corridor	Particles Passed Chipps
809	-3500 cfs OMR	0%	1%	1%
	-5000 cfs OMR	0%	1%	1%
812	-3500 cfs OMR	0%	0%	0%
	-5000 cfs OMR	0%	0%	0%
901	-3500 cfs OMR	9%	36%	0%
	-5000 cfs OMR	14%	39%	0%

### 2 Weeks (03-02-2021)

		Particles Entrained by Projects	Particles in OMR Corridor	Particles Passed Chipps
809	-3500 cfs OMR	1%	2%	12%
	-5000 cfs OMR	2%	4%	9%
812	-3500 cfs OMR	0%	2%	0%
	-5000 cfs OMR	2%	7%	0%
901	-3500 cfs OMR	34%	22%	1%
	-5000 cfs OMR	50%	16%	1%

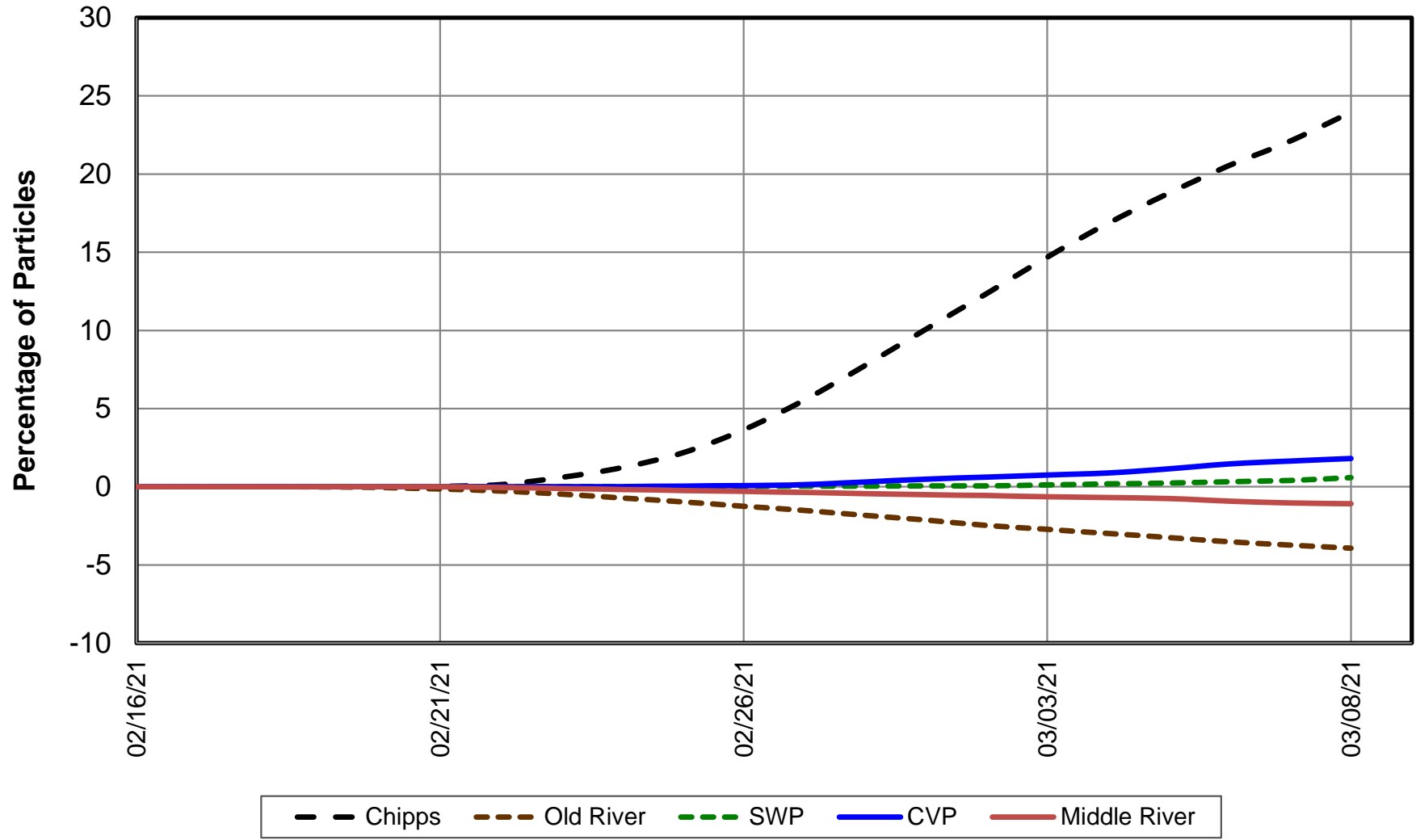
### 3 Weeks (03-08-2021)

		Particles Entrained by Projects	Particles in OMR Corridor	Particles Passed Chipps
809	-3500 cfs OMR	2%	3%	24%
	-5000 cfs OMR	5%	4%	16%
812	-3500 cfs OMR	2%	6%	1%
	-5000 cfs OMR	9%	13%	1%
901	-3500 cfs OMR	45%	15%	4%
	-5000 cfs OMR	61%	10%	2%

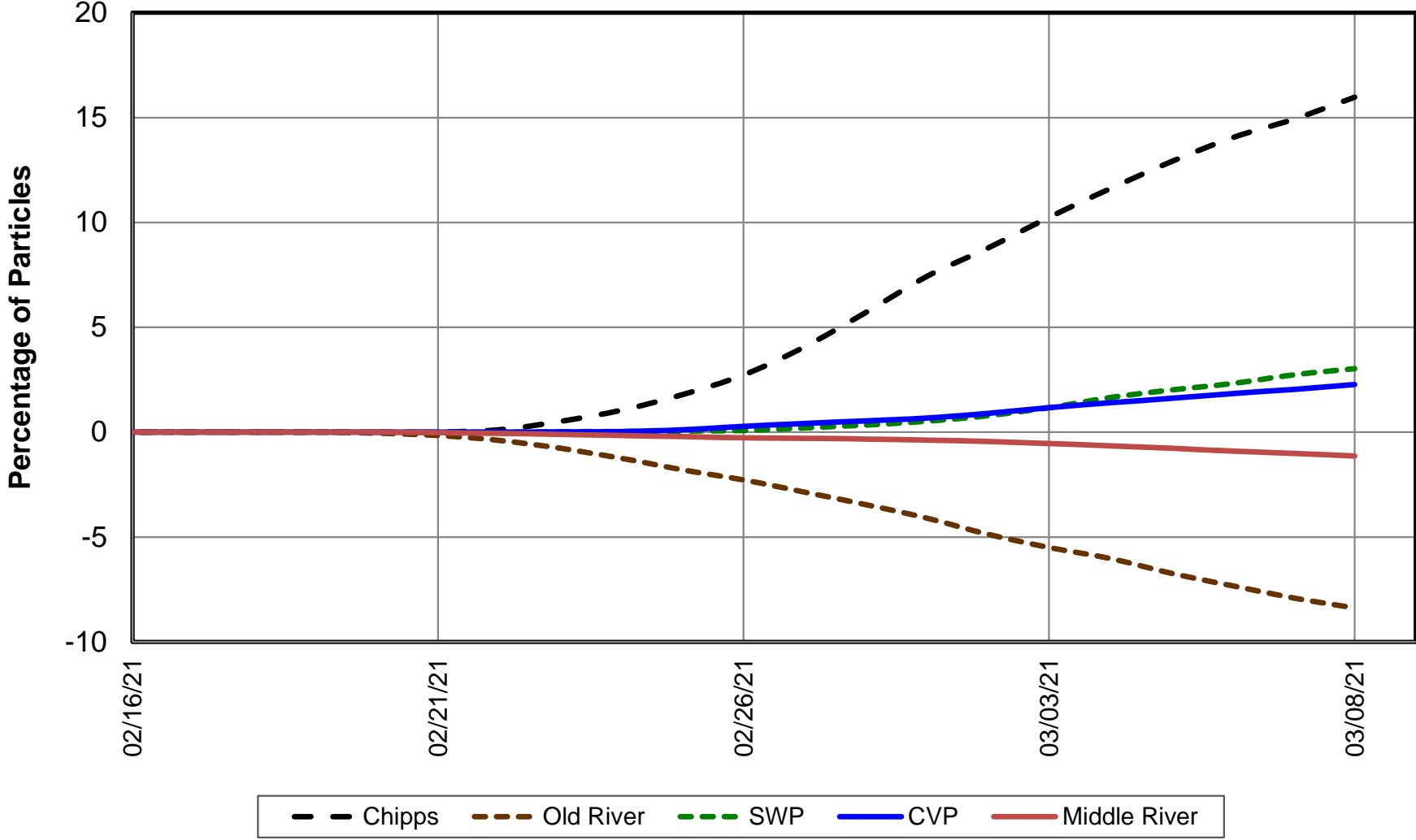
#### Notes:

- 1 Particles Entrained by Projects is the sum of CVP and SWP flux
- 2 Particles in OMR Corridor is the sum of Old River Flux and Middle River Flux minus Particles Entrained by Projects
- 3 Particles Passed Chipps is the chipps flux

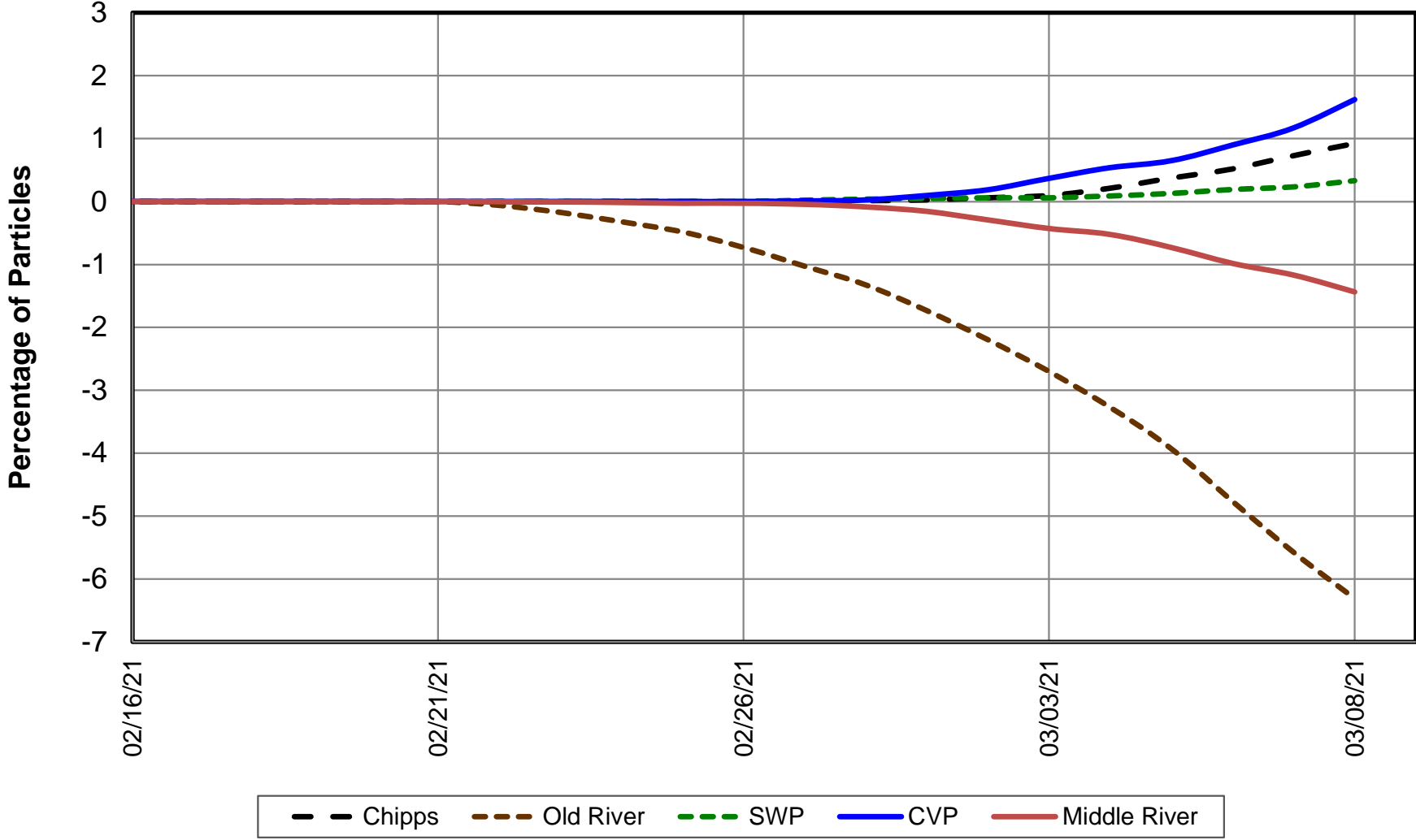
# -3500 cfs OMR Case, Particles inserted at Sampling Site 809 on 02-16-2021



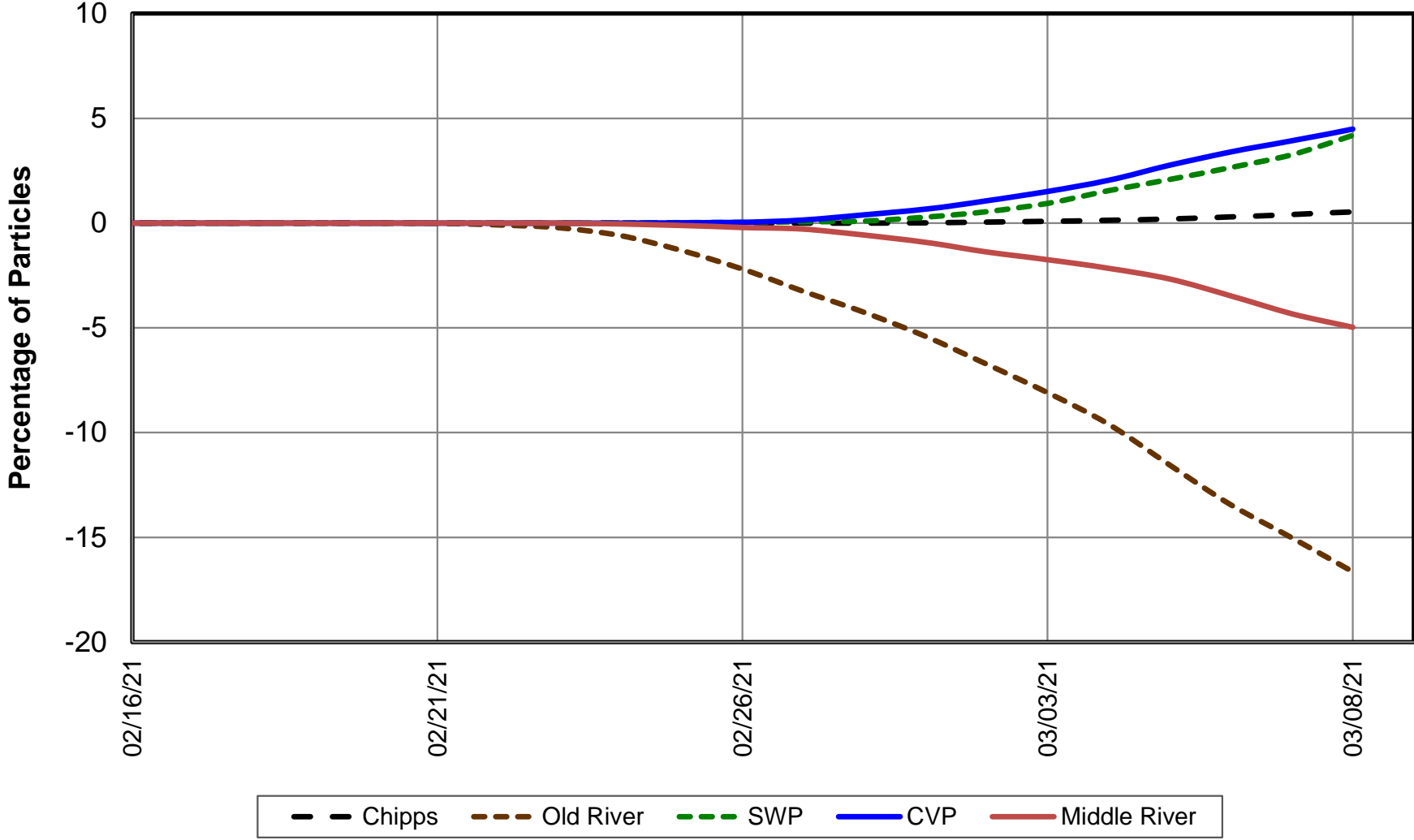
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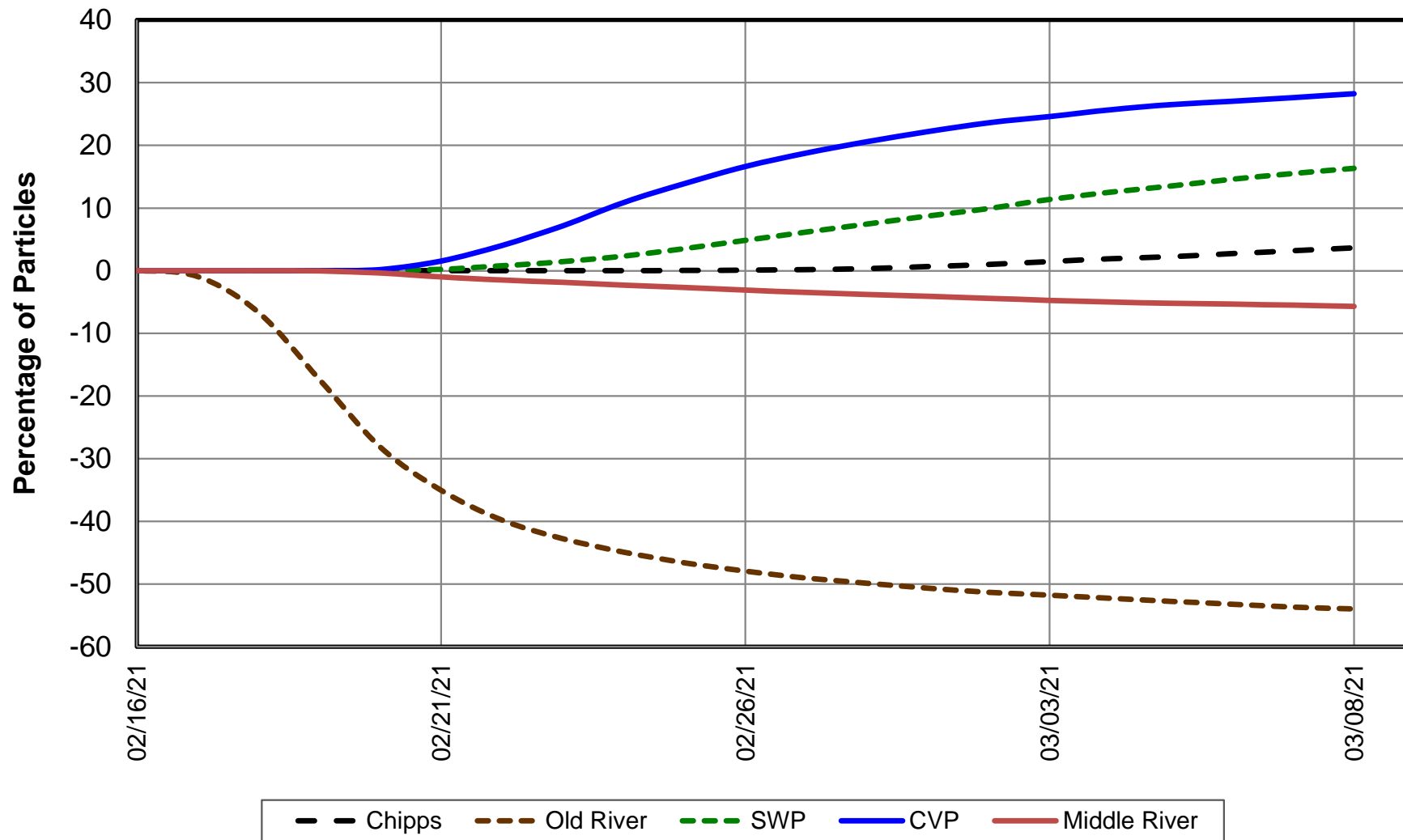
# -3500 cfs OMR Case, Particles inserted at Sampling Site 812 on 02-16-2021



# -5000 cfs OMR Case, Particles inserted at Sampling Site 812 on 02-16-2021



# -3500 cfs OMR Case, Particles inserted at Sampling Site 901 on 02-16-2021





# -5000 cfs OMR Case, Particles inserted at Sampling Site 901 on 02-16-2021

