BUREAU OF RECLAMATION

Weekly Fish and Water Operations Outlook

4/22/2025 – 4/29/2025

Water Project Operational Intent for Week

The D-1641 standards for CVP/SWP operations in April and May include:

1. Delta Outflow per X2 requirements, and
2. Export limits.

In addition, the agricultural irrigation season begins on April 1, so there are standards to protect the water quality of irrigation water for diversion.

SWP Exports are equal to the respective State share of COA 8.12.1 of the ITP or 600 cfs, whichever is greater. CVP Exports are in accordance with the respective Federal share of Footnote 18 of D-1641.

Biological Context

Exports are restricted to increase spring outflows and improve migratory conditions in the Delta. No other “triggers” are currently active.

Forecasted Weather

Dry and mild to start the week on Monday and Tuesday. Cooler temperatures with unsettled weather by mid-week into the weekend.

Tables

Table 1: Anticipated weekly operational ranges by tributary. Environmental and fish conditions updated by respective watershed groups at varying intervals that may not coincide with the weekly range of Water Operations

Tributary/Division	Anticipated Weekly Ranges	Related Environmental and Fish Conditions
Clear Creek	• Current Release: 250 cfs • Anticipated Weekly Range of Releases: 225 cfs. (drop occurs on April 22)	• Adult spring run Chinook Salmon are migrating to the creek. • Spring, fall, and late fall Chinook Salmon fry are rearing and emigrating. • O. mykiss/steelhead eggs incubating and hatching and fry are rearing and emigrating. (Updated 4/21/2025)
Sacramento River	• Shasta Storage: 4.370 MAF • Current Release: 7,500 cfs • Anticipated Weekly Range of Releases: 6,000 to 12,000 cfs.	• Spring-run adults are migrating upstream and holding in the Sac. • Winter-run adults are preparing to begin spawning and have been in the system some months now. • Late fall-run adults have completed spawning • Spring, Fall and late fall Chinook Salmon fry are rearing and emigrating. • O. mykiss/steelhead eggs incubating and hatching and fry are rearing and emigrating. (Updated 4/21/2025)
Feather River	• Oroville Storage: 3.162 MAF • Current Release: 6,000 cfs • Anticipated Weekly Range of Releases: 2,000 cfs to 5,000 cfs • Daily temperature maximum: 51 degrees F at Fish Hatchery	• Spring-run Chinook Salmon juveniles are emerging and migrating downstream. • Spring-run Chinook Salmon adults are migrating upstream. • Fall-run Chinook Salmon juveniles are emerging and migrating downstream. • *O. mykiss* are emerging and migrating downstream. (Updated 04/22/2025)

Tributary/Division	Anticipated Weekly Ranges	Related Environmental and Fish Conditions
American River	• Folsom Storage: 910 TAF • Current Release: 5,350 cfs • Anticipated Weekly Range of Releases: 4,700 cfs to 5,350 cfs	• Fall-run Chinook Fry are migrating downstream. (Updated 3/25/2025)
Stanislaus River	• New Melones Storage: 2.000 MAF • Current Release: 350 cfs • Anticipated Range of Weekly Releases: 350 cfs to 1,400 cfs.	• Juvenile and adult *O. mykiss* are present. • Fall-run fry have emerged and are migrating downstream. (Updated 3/18/2025)

Tributary/Division	Anticipated Weekly Ranges	Related Environmental and Fish Conditions
Delta	• Freeport: 25,000 to 35,500 cfs • Vernalis: 2,000 to 3,000 cfs • Delta Outflow index: 24,000 to 35,000 cfs • Combined Exports: 1,500 to 3,100 cfs • JPP: 900 to 2,500 cfs • CCF: 600 cfs • Expected Daily OMR Index Values: -600 to -2,400 cfs • DCC Gates: Closed on 11/18. • X2 = 61 km • Tides: Transitioning from Neap to Spring; New Moon on 4/27	• YOY Chinook Salmon are migrating through the Delta and exiting the system. • Most recently, an adult Delta smelt was detected by EDSM on 3/17/25 in the SDWSC. One larval Delta smelt was detected on 4/4/25 in the SDWSC by the 20-mm survey. Cumulative salvage is 17. • A total of 124,946 individual adult Delta smelt were released in WY2025. So far, there have been 79 confirmed detections of cultured Delta smelt. • One larval Delta smelt was detected in larval sampling at TFCF on 4/16/25. • Larval longfin smelt have been detected in the Central and South Delta, the Sacramento River, Suisun Marsh, Suisun Bay, the Confluence, the Napa River, Carquinez Strait, and San Pablo Bay. • Juvenile longfin smelt have been detected in South and Central San Francisco Bay, San Pablo Bay, the Napa River, Suisun Marsh, Suisun Bay, and at Chipps Island. • Adult longfin smelt were last detected the week of March 10. Early March detections ranged from San Pablo Bay to the Confluence. • Adult, juvenile, and larval LFS have been detected in salvage. Cumulative adult LFS salvage = 8 and cumulative juvenile LFS salvage = 126. (Updated 4/22/2025)

Table 2: WY 2025 Salmonid Current Loss and Delta Smelt Abiotic Conditions. Additional Real-Time OMR Restrictions and Performance Objectives (4.10.5.10.2, 4.10.5.10.3) and Onset of OMR Management (4.10.5.10.1). Genetic identification of salmon is not used in calculating loss, but results are included in the Assessment as they become available.

Species/run	Threshold	Current Status	Weekly Trend	Updated
Green sturgeon	WY 2025 salvage = 74	WY 2025 salvage = 0 (0%)	No change expected	4/21/2025
Natural winter-run Chinook Salmon (JPE= 98,982)	Incidental Take Limit= 554 Annual thresholds 50%= 277 fish 75%= 415 fish 100%= 554 fish	Loss= 28.82 (0.029% of JPE) 7-day rolling sum as of 4/13/25 = 0	Salvage is unlikely in the upcoming week.	4/15/25
Natural Steelhead	100% threshold - 3000	WY 2025 loss = 553 (18.5% of threshold) as of 4/20/25	Salvage continuing at similar rates	4/21/25
Steelhead Weekly Loss Threshold	7-day rolling sum of steelhead salvage exceeds loss of 120 fish	No exceedances – 7 day rolling sum as of 4/20/25 = 19	Salvage continuing at similar rates	4/21/25
Sacramento River Hatchery winter-run Chinook salmon (JPE= 135,342)	Annual thresholds 50%= 81 fish 75%= 122 fish 100%= 162 fish	Loss = 216.58 (133%) 50%= exceeded 3/18 75%= exceeded 3/19 100%= exceeded 3/22	Salvage is unlikely in the upcoming week.	4/15/25
Battle Creek Hatchery winter-run Chinook salmon	JPE = 2,868	Loss = 0 (0%)	Released on 4/16/25.	4/21/25
Proposed Action Hatchery yearling spring-run Chinook salmon surrogates	See Table 3a	See Table 3a	See Table 3a	4/7/25
Delta Smelt	See Table 3b	See Table 3b	See Table 3b	1/06/2025
Longfin Smelt	See Table 3c	See Table 3c	See Table 3c	1/06/2025

Table 3a-d: Relevant Water Year 2023 Fish Criteria and Status for Listed Fish under the SWP Long-Term Incidental Take Permit.

Table 3a: Chinook Salmon

Action	Timeframe	Current Action Status	Threshold(s)	Current Relevant Data	Weekly Trend	Last Updated	Comments
Onset of OMR Management (8.3)	Jan. 1 - Jun. 30	In effect	Begins January 1 or earlier if COA 8.3.1, COA 8.3.2, or COA 8.3.3 are in effect (see Table 3b)	N/A	N/A	3/10/25	N/A
Winter-run Annual Loss (8.4.3)	July 1 - Jun. 30	In effect	-Natural-origin Winter-run Loss Threshold: 0.5% of JPE -Hatchery-origin Winter-run Loss Threshold: 0.12% of JPE -Battle Creek Loss threshold: 3.44	Confirmed Genetic WR Annual Loss = 45.94 Hatchery origin Winter-run Loss = 216.58 Battle Creek Winter-run Loss = 0	Unlikely to observe salvage of hatchery origin winter-run based on historical salvage.	4/22/25	No LAD WR was salvaged last week. 50%, 75%, and 100% of hatchery loss threshold was hit on 3/18/25, 3/19/25, and 3/22/25 respectively. 117,225 BY 2024 WR was released in Battle Creek on 4/16/25.
Natural-origin Winter-run Early Season Weekly Loss Thresholds (8.2.1)	Nov. 1- Dec. 31	Not in Effect	N/A	N/A	N/A	2/4/25	N/A

Action	Timeframe	Current Action Status	Threshold(s)	Current Relevant Data	Weekly Trend	Last Updated	Comments
Natural-origin Winter-run Weekly Loss (8.4.4)	Jan 1 – June 30	In effect	Thresholds based on Table 4, Column E of 2024 SWP ITP: [Annual Loss Threshold (based on JPE surrogate) x 50% of Annual Loss Threshold x Winter-run in Delta (based on Column E)]	4/2/25-6/30/25 Threshold: 0	Based on salvage thru 4/22 7-day LAD loss: 0 Total loss of 7 day rolling sum (includes **genetically** confirmed): 0	4/22/25	N/A

Action	Timeframe	Current Action Status	Threshold(s)	Current Relevant Data	Weekly Trend	Last Updated	Comments
Spring-run Protection Action and Surrogate Annual Loss (8.4.5)	Natural-origin: Oct. – June 30 Hatchery-origin: Nov. 1 – June 30	Natural-origin: In effect Hatchery-origin: In effect	Group 1: 1,747.23 (0.25% of 698,892 fish released) Group 2: 193.39 (0.25% of 77,355 fish released) Group 3: 186.10 (0.25% of 74,725) YOY spring run surrogates: Group 1: 1,191.85 (0.25% of 476,741) Group 2: 1,189.58 (0.25% of 475,831) Group 3: 1,260.76 (0.25% of 504,304) Group 4: 1,737.93 (0.25% of 695,170)	Current Loss for Group #1 through 3/24/25: 1,050.61 (60.13% of the loss threshold) Current Loss for Group #2 through 2/9/25: 72.52 (37.50% of the loss threshold) Current Loss for Group #3 through 2/9/25: 43.33 (23.28% of the loss threshold) Current loss for FR YOY spring-run surrogate Group 1: 16.56 (1.39 % of the loss threshold) Current loss for FR YOY spring-run surrogate Group 2: 76.26 (6.41 % of the loss threshold) Current loss FR YOY spring-run surrogate Group 3: 0 Current loss FR YOY spring-run surrogate Group 4: 0	Likely to see more salvage	Yearling Group 1, 2 & 3 and YOY Group 1, 2, 3, and 4 updated through 4/18/25 for the SWP and 4/20/25 for the CVP.	Loss occurred from YOY Spring-run surrogate group # 2 during the week of 4/14-4/21.

Table 3b: Delta Smelt

Action	Timeframe	Current Action Status	Threshold(s)	Current Relevant Data	Weekly Trend	Last Updated	Comments
First Flush Action (8.3.1)	Dec. 1 – last day of February	Off ramped Action triggered on Dec. 16, implemented from Dec. 19 through Jan 1, 2025	- three-day Freeport (FPT) daily flow running avg>= 25,000 AND [three-day Freeport turbidity running avg >=50 NTU OR Smelt Monitoring Team recommendation]	FPT 3-day avg. Flow = Not relevant Turbidity = Not relevant	N/A	1/6/2025	N/A
Adult Delta Smelt Entrainment Protection ("Turbidity Bridge Avoidance") (8.3.2)	After IEWPP or Dec. 20 until 3-day average temperatures at Jersey Point (SJJ) or Rio Vista (RVB) exceed 12 °C (53.6 °F)	Not active; offramped as of 2/25/25	Occurs after the Integrated Early Winter Pulse protection or December 20 (whichever comes first) until 3-day average temperature offramp at Jersey Point (SJJ) or Rio Vista (RVB) > 12 °C (53.6 °F) -OBI, OSJ, and HOL turbidity>12 FNU -Vernalis flow >10,000 cfs (temporary offramp); <8,000 cfs (reinstated)	OSJ Turbidity = Not relevant HOL Turbidity = Not relevant OBI Turbidity = Not relevant 3-d SJJ temp = Not relevant 3-d RVB temp = Not relevant Vernalis Flow = Not relevant	N/A	2/25/25	N/A

Action	Timeframe	Current Action Status	Threshold(s)	Current Relevant Data	Weekly Trend	Last Updated	Comments
Larval and Juvenile Delta smelt Protection (8.4.1)	After Adult Delta smelt Entrainment Protection ends	Active as of 2/25/25. Not triggered.	SLS/20mm Secchi depth for 12 south delta stations <= 1m -Rio Vista flows >55,0000 cfs or Vernalis flows >8,000 cfs (temporary offramp); <40,000 cfs (Rio Vista) or <5,000 (Vernalis) action reinstated	Secchi depth = 116 cm 20-mm Survey 3 Rio Vista flows = 29,656 cfs Vernalis flows = 2,575 cfs	Flows decreasing	4/21/25	N/A

Table 3c: Longfin Smelt

Action	Timeframe	Current Action Status	Threshold(s)	Current Relevant Data	Weekly Trend	Last Updated	Comments
Adult LFS Protection (8.3.3)	Dec. 1 - end of February	Not active	-Cum. salvage > (Age 1+ LFS Index/20) +1 = 181 fish	Cum LFS salvage greater than 60mm = Not relevant	No change expected	3/17/25	N/A

Action	Timeframe	Current Action Status	Threshold(s)	Current Relevant Data	Weekly Trend	Last Updated	Comments
Larval and Juvenile Longfin Smelt Entrainment Protection (8.4.2)	Jan. 1 – Jun. 30	Active; not triggered. Triggered on 1/19 and 1/28. Implemented 1/20-1/26	-7-day average QWEST < +1,500 cfs, AND LFS larvae or juveniles in most recent SLS or 20 mm survey at 809 & 812 > 50; OR cumulative salvage > 50 or 75% avg annual salvage 2009-present -Rio Vista flows >55,0000 cfs or Vernalis flows >8,000 cfs (temporary offramp); <40,000 cfs (Rio Vista) or <5,000 (Vernalis) reinstated	7-day average QWEST = +5,165 cfs Larval/juvenile (>20mm) 809 + 812 catch (20-mm 3) = 0 (preliminary) Cumulative juvenile (>20mm) salvage = 126 Rio Vista flows = 29,656 cfs Vernalis flows = 2,575 cfs	Flows decreasing	4/22/25	N/A

Table 3d: OMR

Action	Timeframe	Current Action Status	Threshold(s)	Current Relevant Data	Weekly Trend	Last Updated	Comments
OMR Storm Flex (8.5)	Start of OMR – Onramp of Larval and Juvenile DS Protection Action (8.4.1) or last day of February (whichever occurs first)	Off-ramped as of 2/25/25	-Delta is in excess -QWEST is > +1,500 cfs -X2 is < 81 km - Daily average turbidity at OSJ, HOL, and OBI are <12 FNU -Higher level of outflow available for diversion due to storm flows -Measurable amount of precipitation has occurred -None of COA's are controlling operations (8.2.1, 8.3.2, 8.3.3, 8.4.2, 8.4.3, 8.4.4, 8.4.5, 8.4.7) -Cumulative loss at CVP and SWP of yearling CNFH LFR Chinook salmon (as yearling CHNSR surrogates) is < 0.5% with any of the release groups	QWEST=Not relevant X2 = Not relevant Turbidity = Not relevant No relevant salmon loss threshold exceedances (see Tables 2a & 3a) No COA's are controlling operations	N/A	2/25/25	N/A

Action	Timeframe	Current Action Status	Threshold(s)	Current Relevant Data	Weekly Trend	Last Updated	Comments
End of OMR Management (8.6)	Jun. 1 – Jun. 30	Not in effect	Smelt: -Daily mean water temperature at Clifton Court Forebay (CLC) is > or equal to 25 C for 3 consecutive days Salmonids: -Daily mean water temperature is > 22.2 C at Mossdale and Prisoners Point for 7 days (can be non-consecutive).	N/A	N/A	11/12/24	N/A

Table 4: Fish monitoring gear efficiency and disruptions. Status Categories: [1] Active (ongoing sampling), [2] Partial Interruption (some sampling interruptions), [3] Interrupted (sampling fully suspended), [4] Not Active (sampling not scheduled)

Monitoring survey	Region	Notes (as of 4/22/2025)	Status
SWP regular counts, CWT reading	Delta	Active	1
SWP larval sampling	Delta	Active	1
CVP regular counts, CWT reading	Delta	Active	1
CVP larval sampling	Delta	Active	1
Smelt Larval Survey	Delta	Not Active	4
LES	Delta	Active	1
20mm Survey	Delta	Active	1
Fall Mid-water Trawl	Delta	Not Active	4
Summer Townet Survey	Delta	Not Active	4
Bay Study	Delta	Active	1

Monitoring survey	Region	Notes (as of 4/22/2025)	Status
DJFMP- Chipps and Sacramento Trawls	Delta	Chipps – Inactive Sacramento – Active	2
DJFMP- Seines	Delta	Active	1
EDSM	Delta	Not Active	4
EMP	Delta	Active	1
Mossdale	Delta	Active (CDFW)	1
USGS Flow monitoring	Delta	Active	1
Red Bluff Diversion Dam Rotary Screw Trap (RST)	Sacramento River	Active	1
Knights Landing RST	Sacramento River	Active	1
Tisdale RST	Sacramento River	Active	1
GCID RST	Sacramento River	Not Active	4
Mill Creek RST	Mill Creek	Active	1
Deer Creek RST	Deer Creek	Not Active	4
Yuba River (Hallwood) RST	Yuba River	Active	1
Butte Creek Carcass Surveys	Butte Creek	Not Active	4
Butte Creek RST	Butte Creek	Active	1
Redd dewatering and stranding surveys	Sacramento River	Active	1
Sacramento Carcass and Redd Surveys (late fall-run Chinook Salmon)	Sacramento River	Active	1
Lower Sacramento RST	Sacramento River	Active	1
Feather River (upper DWR) RST	Sacramento River	Active	1
Feather River (lower CDFW) RST	Sacramento River	Active	1
Feather River Carcass Survey (fall-run Chinook Salmon)	Sacramento River	Active	1
SJRRP CDFW Field Monitoring	San Joaquin River	Active	1
SJRRP USFWS and USBR Field Monitoring	San Joaquin River	Active	1
Stanislaus Fish Weir	San Joaquin River	Active	1

Monitoring survey	Region	Notes (as of 4/22/2025)	Status
Stanislaus River Carcass Survey (steelhead)	San Joaquin River	Active	1
American River Carcass Survey	Sacramento River	Not Active	4

Preference (i.e., a y-intercept of 0.5)