



Weekly Fish and Water Operations Outlook

4/21/2026 - 4/27/2026

Water Project Operational Intent for Week

Combined CVP and SWP exports are constrained to 100% of the Vernalis flows during the pulse flow period (April 13 to May 13) per D-1641 (see Table 3 for Export Limits). Per ITP COA 8.12.1, SWP Delta exports are also constrained to its proportionate share of the 1:1 ratio with Vernalis flows through May, due to the April water year type forecast of Critical. Per D-1641, X2 requirements (30 days at Chippis and 30 days at Collinsville) and a maximum E/I ratio of 0.35 are effective in April. Per Action 5 and ITP COA 8.3, combined Delta exports do not cause OMRI to be more negative than -5,000 cfs on a 14-day average basis.

Biological Context

The DCC gates are closed to protect migrating salmonids.

Forecasted Weather

A storm system arrives late Monday, bringing rain and snow. thunderstorms and cooler than average temperatures for Tuesday through Wednesday. Beginning Thursday into the weekend, a clearing and warming trend settles into the area.

Tables

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

Tributary/Division	Anticipated Weekly Ranges	Related Environmental and Fish Conditions
Clear Creek	<ul style="list-style-type: none"> • Current Release: 250 cfs • Anticipated Range of Weekly Releases: 225 cfs to 250 cfs 	<ul style="list-style-type: none"> • Spring-run, fall-run, and late fall-run Chinook Salmon juveniles are rearing and out-migrating. • Adult spring-run Chinook are entering the creek and migrating upstream. • Adult O. mykiss/steelhead are spawning, their eggs are incubating, and juveniles are rearing and out-migrating. • (Updated 04/7/2026)
Sacramento River	<ul style="list-style-type: none"> • Shasta Storage: 4.112 MAF • Current Release: 6,000 cfs • Anticipated Weekly Range of Releases: 6,000 cfs to 10,000 cfs 	<ul style="list-style-type: none"> • Juvenile spring-run and fall-run Chinook salmon are emerging and migrating downstream. • Most winter-run Chinook salmon have migrated downstream past RBDD. • Late fall-run Chinook Salmon are migrating upstream. Some are preparing to spawn, while others are actively spawning. Early eggs are in the gravel. • (Updated 04/20/2026)
Feather River	<ul style="list-style-type: none"> • Oroville Storage: 3.269 MAF • Current Release: 5,000 cfs • Anticipated Weekly Range of Releases: 5,000 cfs to 10,000 cfs • Daily temperature maximum: 55 °F at Fish Hatchery 	<ul style="list-style-type: none"> • Fall-run Chinook Salmon spawning is complete. Juveniles are emerging and migrating downstream. • Spring-run Chinook Salmon juveniles are migrating downstream. • Adult O. mykiss are migrating upstream. • Sturgeon are on their spawning grounds. • (Updated 04/21/2026)

Tributary/Division	Anticipated Weekly Ranges	Related Environmental and Fish Conditions
American River	<ul style="list-style-type: none"> • Folsom Storage: 902 TAF • Current Release: 6,500 cfs • Anticipated Weekly Range of Releases: 6,000 to 9,000 cfs 	<ul style="list-style-type: none"> • Fry are emerging and migrating downstream. • (Updated 04/7/2026)
Stanislaus River	<ul style="list-style-type: none"> • New Melones Storage: 1.860 MAF • Current Release: 500 cfs • Anticipated Range of Weekly Releases: 350 cfs to 1,250 cfs 	<ul style="list-style-type: none"> • Fall-run juveniles are emerging and migrating downstream. • Spring-run fry are emerging and moving downstream. • (Updated 4/20/2026)
Delta	<ul style="list-style-type: none"> • Freeport: 24,000 cfs to 34,000 cfs • Vernalis: 1,500 cfs to 3,100 cfs • Delta Outflow index: 24,000 to 37,000 cfs • Combined Exports: 1,800 to 2,600 cfs • JPP: 900 cfs to 1,500 cfs • CCF: 600 to 1,300 cfs • Expected Daily OMR Index Values: - 1,100 cfs to - 1,800 cfs • Rio Vista Flows: 20,000 cfs to 30,000 cfs • DCC Gates: Closed • X2 at 68 km • Qwest daily: +5,900 cfs • Qwest 7-day average: +9,500 cfs • Qwest Forecasted Daily Range: +2,800 cfs to +13,000 cfs • JPF: 4,300 cfs to 5,500 cfs • Tides: Transition from Spring to Neap; First Quarter Moon on April 23. 	<ul style="list-style-type: none"> • LAD spring-run and winter-run Chinook salmon juveniles are being observed by monitoring surveys. • 163,349 unmarked Delta smelt were released in fall 2025. A total of 44 adult and 30 juvenile Delta smelt have been observed in Suisun Marsh, the lower Sacramento River, the SDWSC, and at CVP salvage facilities. The most recent observations were of two adults caught by EDSM in Suisun Marsh on 3/24/26 and 3/18/26. An adult was detected in salvage at the TFCF on 3/6/2026. • A total of 303 sub-adult and adult Longfin Smelt have been observed in the Chipps Island Trawl for WY2026, with the last detection being on 03/12/2026. • 20mm 3 (4/13-4/16) preliminarily detected a total of 4 larval Longfin Smelt at stations 809 and 812. • 20mm detected a larval White Sturgeon at station 711 on the Sacramento River on 3/16/2026. • (Updated 04/20/2026)

Table 2: WY 2026 Salmonid Current Loss and Delta and Longfin Smelt Abiotic Conditions.

Species/run	Threshold	Current Status	Weekly Trend	Updated
Green sturgeon	Annual ITL= 14 3-year rolling average ITL= 5	Salvage = 11	Occasional salvage possible	4/21/26
Winter-run Chinook Salmon juveniles (JPE= 1,057,452 (genetically confirmed unclipped); 130,096 (LSNFH Sacramento River); 5,186 (LSNFH Battle Creek))	Genetically confirmed unclipped Annual ITL = 5,922; loss threshold= 10,575 LSNFH releases (Annual ITL and loss threshold) Sacramento River = 1,301 Battle Creek = 52	Confirmed Natural-Origin Genetic loss= 45.43(0.43%) LSNFH loss = 57.91 (4.45%)	Salvage not likely to occur.	4/21/26
Central Valley Steelhead	¹ Clipped = 3565 ² Unclipped = 5914	Hatchery Loss = 1,822 (28.46 of threshold) Natural-origin loss = 248 (4.64%)	Salvage of clipped and unclipped fish is likely to continue in the upcoming week.	04/14/26
Spring-run Chinook salmon surrogate releases	Yearling: Annual ITL: 0.5% of 75,119 = 376 60,873 = 304; 57,109=286 Loss Threshold: 1% of 75,119 = 751 60,873 = 609 57,109 = 571 Young of Year= TBD	Yearling loss = 257.32 Group 1 (75,119) Loss: 0 Group 2 (60,873) Loss: 261.57 Group 3 (57,109) Loss: 35.06 0 (0.00% of annual loss threshold) spring-run surrogate YOY (Feather River Spring-Run) N/A	Salvage of YOY is possible but salvage of yearling is unlikely.	04/21/26

Species/run	Threshold	Current Status	Weekly Trend	Updated
First Flush (onset of Entrainment Management Season)	Freeport flows \geq 25,000 cfs AND Freeport turbidity \geq 50 FNU	See Table 3b First flush conditions were met on 12/23/25 and implemented by CVP on 12/25/25-1/7/26.	N/A	12/29/25
Delta smelt adults	JPF < 0 AND daily average turbidity \geq 12 FNU in OMR corridor UNTIL Average water temperatures at Jersey Point or Rio Vista \geq 12°C (53.6°F) for 3 consecutive days	Not active Jersey Point temp: 12.05 °C on 2/10 12.09 °C on 2/11 12.13 °C on 2/12	N/A	3/16/26
Delta smelt larvae and juveniles	After onset of spawning, if JPF < 0 AND turbidity is \geq 12 FNU in the south Delta	Active, not triggered Daily JPF: 6,088 cfs (as of 4/19) Avg turbidity in south Delta: 3.4 FNU (as of 4/14)	Turbidity in south Delta is low	4/21/26
Longfin smelt adults	If JPF < 0 and assessment indicates annual loss will exceed 5% of adult population abundance	Active, not triggered Daily JPF: 6,088cfs (as of 4/19) Annual loss of adult LFS: 0	No WY26 salvage to date	4/21/26
Longfin smelt larvae and juveniles	If JPF < 0 and population model indicates need to reduce entrainment to avoid population decline	Active, not triggered Daily JPF: 6,088 cfs (as of 4/19)	No WY26 salvage to date, production model for larval LFS shows very low potential entrainment this week.	4/21/2026

¹Based on combined releases and estimated survival across Coleman, Feather River, Nimbus, and Mokelumne hatcheries.

²No operational threshold for unclipped steelhead. Incidental Take Limit from NMFS 2024 Biological Opinion.

Table 3a-e: Relevant Water Year 2026 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	4/20/26	N/A
Winter-run Annual Loss (8.4.3)	July 1 - Jun. 30	In Effect – JPE was finalized on 1/8/26.	Natural-origin Winter-run Loss Threshold: 5,287.26 Hatchery-origin Winter-run Loss Threshold: 156.12 Battle Creek Loss threshold: 6.22	Confirmed Genetic WR Annual Loss = 45.43 Hatchery origin Winter-run Loss = 57.91 Battle Creek Winter-run Loss = 2.33	Salvage of natural- and hatchery-origin winter-run is unlikely in the next week based on seasonal migration timing and loss over the previous week.	4/20/26	All LAD WR have been processed for rapid genetics to the date. No further salvage from hatchery group has occurred.
Natural-origin Winter-run Early Season Weekly Loss Thresholds (8.2.1)	Nov. 1- Dec. 31	Not in Effect	Dec 1-Dec 31 = 231.64	N/A	N/A	1/5/26	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 – JPE finalized on 1/8/26.	Week 15 through end of OMR Management (4/9-6/30): $0.0000 \times 0.5 \times 494.47 = 0.00$	7 day rolling sum on 4/20/26: 0	Salvage of natural winter-run is unlikely in the next week based on seasonal migration timing	4/20/26	N/A
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	<p>Yearling Releases:</p> <p>Group 1: 0.25% of 75,119 = 187.80</p> <p>Group 2: 0.25% of 60,873 = 152.18</p> <p>Group 3: 0.25% of 60,873 = 142.77</p> <p>YOY Releases:</p> <p>Feather River Hatchery:</p> <p>Group 1: 0.25% of 2,034,278 = 5,085.70</p> <p>Group 2: 0.25% of 488,217 = 1,220.54</p> <p>Group 3: 0.25% of 511,803 = 1,279.51</p> <p>Group 4: 0.25% of 290,859 = 727.15</p> <p>Coleman Fish Hatchery:</p> <p>Group 1: 0.25% of 740,784 = 1,851.96</p> <p>Group 2: 0.25% of 502,534 = 1,256.34</p>	<p>Confirmed Yearling loss:</p> <p>Group 1: 0</p> <p>Group 2: 261.65</p> <p>Group 3: 35.08</p> <p>Confirmed YOY Loss:</p> <p>Group 1: 0</p> <p>Group 2: 0</p> <p>Group 3: 0</p> <p>Group 4: 0</p> <p>Group 5: 0</p> <p>Group 6: 0</p>	Salvage of YOY is possible but salvage of yearling is unlikely.	4/20/26	No salvage of clipped CHN SR surrogates from any of these groups at Delta Fish Facilities recently.

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	Not Active. (Triggered on 12/23/25, in effect 12/25/25 – 1/7/26)	three-day Freeport (FPT) daily flow running avg >= 25,000 AND [three-day Freeport turbidity running avg >=50 NTU OR Smelt Monitoring Team recommendation]	N/A	N/A	1/20/26	N/A
Adult Delta Smelt Entrainment Protection (“Turbidity Bridge Avoidance”) (8.3.2)	After First Flush or Dec. 20 until 3-day average temperature at Jersey Point (SJJ) or Rio Vista (RVB) exceeds 12 °C (53.6 °F)	Not Active	Occurs after First Flush 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)	N/A	N/A	2/23/26	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	COA 8.4.1: Active, not triggered	SLS/20mm Secchi depth for 12 south Delta stations \leq 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	SLS/20mm Secchi depth for 12 south Delta stations = 1.56 m (20mm 3) Rio Vista: 23,641 cfs Vernalis: 2,488 cfs	Flows and turbidity expected to soon reach their peak following weekend storm, then decline later in the week	4/13/26	20mm 3 is on the water 4/13/26-4/15/26

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 = 125	N/A	N/A	3/23/26	N/A
Larval and Juvenile Longfin Smelt Entrainment Protection (8.4.2)	Jan. 1 – Jun. 30	Active, not triggered	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 avg QWEST = 9,478 cfs 20mm 3 catch at: 809 = 4 812 = 0 Rio Vista: 23,641 cfs Vernalis: 2,488 cfs	QWest expected to soon peak following weekend storm, then decline later in the week. Larval presence expected to remain stable or decrease at 809/812	4/13/26	20mm 3 is on the water 4/13/26-4/15/26

Table 3d: White Sturgeon

Action	Timeframe	Current Action Status	Threshold(s)	Current Relevant Data	Weekly Trend	Last Updated	Comments
White Sturgeon Entrainment Protection Action (8.4.7)	Year-round	<p>Active; not triggered</p> <p>Flow Conditions: Not met</p> <p>Survey Conditions: Met on 3/16/26 by 20mm catch of 14mm white sturgeon in Sac River, active until 6/14/26</p>	<p>YOY WS detected in one of the listed north or central Delta survey stations in the last 90 days</p> <p>Mean total exports for the last 90 days $\geq 14,296.76 + (-0.41) \times (90\text{-day average Vernalis flow})$</p>	<p>YOY WS detections= 1 on 3/16/26</p> <p>90-Day Avg Vernalis flows = 3,696cfs</p> <p>90-Day Avg Exports = 6,143cfs</p>	<p>YOY detections possible</p> <p>Flow/ Exports conditions unlikely to meet criterion</p>	04/07/26	<p>Flow Conditions not met</p> <p>WY 2026 salvage = 0</p>

Table 3e: 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)	Not In Effect	<ul style="list-style-type: none"> • 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 	<p>7-day avg QWEST = 2,800 cfs</p> <p>X2 = 55 km</p> <p>Daily avg turbidity: OSJ: 7.85 FNU HOL: 5.52 FNU OBI: 5.59 FNU</p> <p>Cumulative Loss of yearling SR surrogates: 224.05</p>	N/A	2/23/2026	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	<p>Smelt: Daily mean water temperature at Clifton Court Forebay (CLC) is > or equal to 25°C for 3 consecutive days</p> <p>Salmonids: Daily mean water temperature is > 22.2 C at Mossdale and Prisoners Point for 7 days (can be non-consecutive).</p>	N/A	N/A	N/A	N/A
Spring Outflow (COA 8.12.1)	April 1 – May 31	In effect	<p><u>Based on the San Joaquin Valley Water Year Type:</u></p> <p><u>Critical year:</u> ratio of Vernalis flow to SWP and CVP combined exports shall be 1 to 1.</p> <p><u>Dry year:</u> ratio of Vernalis flow to SWP and CVP combined exports shall be 2 to 1.</p> <p><u>Below Normal year:</u> ratio of Vernalis flow to SWP and CVP combined exports shall be 3 to 1.</p> <p><u>Above Normal/Wet year:</u> ratio of Vernalis flow to SWP and CVP combined exports shall be 4 to 1</p>	April Forecast: Critical year; exports are constrained to 1:1	N/A	4/20/26	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), [5] Unknown (information unconfirmed).

Monitoring survey	Region	Notes (as of 4/21/2026)	Status
SWP regular counts, CWT reading	Delta	Active	1
CVP regular counts, CWT reading	Delta	Active	1
Smelt Larval Survey	Delta	Not Active	4
LES	Delta	Not Active	4
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
DJFMP- Chipps and Sacramento Trawls	Delta	Active	1
DJFMP- Seines	Delta	Active	1
EDSM	Delta	Active	1
EMP	Delta	Active	1
Mossdale Trawls	Delta	Active (USFWS)	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	Active	1
Yuba River (Hallwood) RST	Yuba River	Active	1
Butte Creek Carcass Surveys	Butte Creek	Not Active	4
Butte Creek RST	Butte Creek	Active	1
Yolo Bypass Rotary Screw Trap	Yolo Bypass	Active	1
Yolo Bypass Beach Seine	Yolo Bypass	Active	1
Yolo Bypass Fyke Trap	Yolo Bypass	Active	1

Monitoring survey	Region	Notes (as of 4/21/2026)	Status
Redd dewatering and stranding surveys	Sacramento River	Active	1
Sacramento Carcass and Redd Surveys (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
Sonar, telemetry (sturgeon)	Feather River	Active	1
Egg mats (sturgeon)	Feather 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
Stanislaus River Carcass Survey (steelhead)	San Joaquin River	Not Active	4
Tuolumne Carcass Survey	Tuolumne River	Not Active	4
Merced Carcass Survey	Merced River	Not Active	4
Tuolumne RST	Tuolumne River	Active	1
American River Carcass Survey	Sacramento River	Not Active	4

* Qualitative larval sampling efforts for both the CVP and SWP have concluded and have been removed from the list as of 10/7/25.