BUREAU OF RECLAMATION

Weekly Fish and Water Operations Outlook

12/10/2024 – 12/16/2024

Water Project Operational Intent for Week

Both (CVP and SWP) water projects are operating to the following D-1641 standards:

1. monthly average Delta Outflow (and Rio Vista flow) not less than 4,500 cfs in November and December,
2. E/I ratio no greater than 0.65, and
3. daily Chlorides at Contra Costa Intake (at Rock Slough) no greater than 250 mg/l.

Biological Context

No ESA biological protections "controlling" water project operations have been "triggered" at this time.

Forecasted Weather

Breezy northerly winds, slightly cooler temperatures and dry conditions continue through mid-week. The potential for unsettled weather develops near the end of the week.

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: 200 cfs • Anticipated Weekly Range of Releases: 200 cfs.	• Fall-run Chinook Salmon actively spawning and their eggs incubating. • Spring-run Chinook Salmon eggs are emerging, and juveniles are migrating downstream. • O. mykiss adults are migrating into the creek. (Updated 12/10/2024)
Sacramento River	• Shasta Storage: 2.786 MAF • Current Release: 4,000 cfs • Anticipated Weekly Range of Releases: 4,000 cfs.	• Spring run fry remain in the gravel. • Fall-run adults have completed spawning, fall-run eggs/fry are in the gravel. • Late-fall adults are commencing spawning and holding in the watershed. • Winter-run fry are migrating past RBDD in relatively low numbers. • Small numbers of late fall-run pre-smolts, late fall-run juveniles from last spring, spring-run and fall-run smolts, and O. mykiss juveniles also passing RBDD at this time. (Updated 12/10/2024)
Feather River	• Oroville Storage: 1.930 MAF • Current Release: 1,750 cfs • Anticipated Weekly Range of Releases: 1,750 cfs • Daily temperature maximum: 55 degrees F at Fish Hatchery	• Spring-run Chinook spawning is complete, juveniles are beginning to emerge and are migrating downstream. • Fall-run Chinook salmon adults spawning is nearly complete. • Adult O. mykiss present and migrating upstream. (Updated 12/10/2024)

Tributary/Division	Anticipated Weekly Ranges	Related Environmental and Fish Conditions
American River	• Folsom Storage: 315 TAF • Current Release: 2,000 cfs • Anticipated Weekly Range of Releases: 2,000 cfs	• Fall-run Chinook salmon adults are spawning and eggs are incubating. • Fall-run redds are being observed. (Updated 12/10/2024)
Stanislaus River	• New Melones Storage: 1.826 MAF • Current Release: 200 cfs • Anticipated Range of Weekly Releases: 200 cfs.	• Juvenile and adult O. mykiss are present. • Adult fall-run Chinook Salmon are migrating, spawning, and eggs are incubating. • Redds and carcasses are observed in river. (Updated 12/10/2024)
Delta	• Freeport: 12,000 to 20,000 cfs • Vernalis: 1,000 to 2,000 cfs • Delta Outflow index: 3,000 to 10,000 cfs • Combined Exports: 5,200 to 11,400 cfs • JPP: 3,600 cfs to 4,200 cfs • CCF: 1,000 cfs to 7,200 cfs • Expected Daily OMR Index Values: -5,000 to -10,300 cfs • DCC Gates: Closed on 11/18. • X2 = 76 km • Tides: Transition from Neap to Spring; Full Moon on 12/15.	• Yearling Chinook Salmon and juvenile winter-run are migrating into the Delta. • Delta smelt juveniles, sub-adults and adults are expected to be present in the Suisun Marsh, Suisun Bay, Cache Slough, the Sacramento Deepwater Shipping Channel, and the Lower Sacramento River. Three marked adult Delta smelt have been detected from the 11/18/24 release, one in the Sacramento Deepwater Ship Channel on 11/25/24, one in Cache Slough on 11/27/24, and one in the lower Sacramento River on 12/4/24. • A total of 14,880 individual Delta smelt were released 12/9/24 at Lookout Slough. • Larval longfin smelt have been detected in the central and south Delta, Suisun Marsh, Suisun Bay, and the Confluence. • Juvenile longfin smelt have been detected in Suisun Marsh, Suisun Bay, Grizzly Bay, Lower Sacramento River, and at Chipp's Island. • Adult longfin smelt have been detected in Suisun Marsh, Grizzly Bay, and Chipps Island. (Updated 12/10/2024)

Table 2a-b: WY 2025 relevant Fish and Environmental Criteria and Status in 2019 Reclamation LTO Action Cumulative loss for the duration of 2019 Biological Opinion began upon signature of ROD, 2/19/2020.

Table 2a: 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%)	No change expected	12/09/2024
Natural winter-run Chinook Salmon	WY 2025 loss = TBD * (50% of 1.17% of JPE)	WY 2025 loss = 2.6	No change expected	12/10/2024
Natural Steelhead	Dec 1 – Mar 31 = 707 (50% of 1,414) Apr 1 – June 15 = 776 (50% of 1,552)	WY 2025 loss = 0 Dec 1 – Mar 31 = 0 (0%) Apr 1 – June 15 = 0 (0%)	No change expected	12/09/2024
Sacramento River Hatchery winter-run Chinook salmon	WY 2025 loss = TBD* (50% of 0.12% of JPE)	WY 2025 loss = 0 (0%)	No change expected	12/09/2024
Battle Creek Hatchery winter-run Chinook salmon	WY 2025 loss = TBD * (50% of 0.12% of JPE)	WY 2025 loss = 0 (0%)	No change expected	12/09/2024
Proposed Action Hatchery yearling spring-run Chinook salmon surrogates	> 0.5% of each release group Group 1 = 3,494 (698,892 * 0.5%)	WY 2025 loss = 732.16 (21%)*	Salvage likely to continue	12/10/2024
Delta Smelt	After Dec. 1: Running 3-day avg. flows at Freeport >25,000 cfs Running 3-day avg. turbidity at Freeport =>50 FNU	Freeport 3-day avg. Flow = 16,874.67 cfs Turbidity = 12.30 FNU	Flow and turbidity expected to decrease	12/10/2024

Species/run	Threshold	Current Status	Weekly Trend	Updated
Delta Smelt	Daily avg. Turbidity at OBI=>12 FNU	OBI Daily Average = Not relevant	Not relevant	10/28/2024
Delta Smelt	Daily avg. Temperature at CCF > 25°C for three consecutive days	CCF daily avg. Temperature = Not relevant	Not relevant	10/28/2024

Table 2b. 10-Year Salmonid Cumulative Loss

Species/run	Threshold	Current Status	Updated
Natural winter-run Chinook salmon	Loss = 8,738	Cumulative loss = 4575.3 (52.36%)	12/09/2024
Hatchery winter-run Chinook salmon	Loss = 5,356	Cumulative loss = 11.04 (0.21%)	12/09/2024
Natural steelhead	Loss = 6,038 (Dec 1 – Mar 31) Loss = 5,826 (Apr 1 – June 15)	Cumulative loss = 4951.27 (82%, Dec 1 – Mar 31) 2923.28 (50.2%, Apr 1 – June 15)	12/09/2024

Table 3a-d: Relevant Water Year 2025 Fish Criteria and Status for Listed Fish under the SWP Long-Term Incidental Take Permit.

Table 3a: Chinook Salmon

* No draft WR JPE for WY 2025. Final JPE letter is expected in January.

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	Not 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	11/12/24	N/A

Action	Timeframe	Current Action Status	Threshold(s)	Current Relevant Data	Weekly Trend	Last Updated	Comments
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	TBD (based on JPE)	N/A	11/12/24	N/A
2024 Winter-run Early Season Natural-origin Discrete Daily Loss (8.17)	Nov. 1 - Dec. 20 (or when ROD is signed)	In effect	12/1-12/31: loss of 26/day unclipped older juv. Chinook Salmon	Max daily Loss of 13.00 occurred on 12/4 and 12/5.	Likely to see more salvage	12/9/24	No older juvenile resulted to Winter run after genetical analysis yet.
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	11/12/24	Begins when ROD is signed or Dec. 21
Natural-origin Winter-run Weekly Loss (8.4.4)	Jan 1 – June 30	Not in effect	Thresholds based on Table 4, Column E of 2024 SWP ITP: [50% of Annual Loss Threshold x Winter-run in Delta (based on Column E)]	January 1-January 7 Threshold: TBD (based on JPE)	N/A	11/12/24	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: first surrogate release	**1,747.23** (0.25% of 698,892 fish released)	Current loss for this hatchery-origin spring run group is 732.16 (42% of the loss threshold)	Likely to see more salvage	12/10/24	No natural origin Chinook salmon has been salvaged yet for WY 25 The first loss from this group has occurred on 11/29/24 at CVP.

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	Active	- three-day Freeport daily flow running avg>= 25,000 AND [three-day Freeport turbidity running avg >=50 NTU OR Smelt Monitoring Team recommendation]	Freeport 3-day avg. Flow = 16,874.67 cfs Turbidity = 12.3 FNU	Flow and turbidity expected to decrease	12/10/24	Data from 12/9/24

Action	Timeframe	Current Action Status	Threshold(s)	Current Relevant Data	Weekly Trend	Last Updated	Comments
Adult Delta Smelt Entrainment Protection ("Turbidity Bridge Avoidance") (8.3.2)	Dec. 20 - temps at Jersey Point or Rio Vista reaching 53.6 F	Not active	Occurs after the Integrated Early Winter Pulse protection or December 20 (whichever comes first) until 3-day average temperature offramp at JP or RV > 53.6 F -OBI, OSJ, and HOL turbidity>12 FNU	OBI Turbidity: Not relevant 3-d JP temp: 3-d RV temp:	Not relevant	N/A	N/A
Larval and Juvenile Delta smelt Protection (8.4.1)	ongoing	Not active	-If 3-d temp at Jersey Point or Rio Vista >= 12C, and SLS/20mm Secchi for 12 south delta stations <= 1m, then –3500 OMR	Current 5-day salvage = Not relevant 3-day SJJ temp = Not relevant Secchi = Not relevant	Not relevant	N/A	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 - Feb. 28/29	Active	-Cum. salvage > (Age 1+ LFS Index/20) +1 = 42 fish (Aug.-Oct. Bay Study Index)	Cum salvage total = 0	No change expected	12/3/24	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	Not Active	-7-d avg QWEST < +1,500 cfs, AND LFS larvae or juveniles in most recent SLS or 20 mm survey at 809 & 812 > catch threshold; OR cumulative salvage > 75% avg annual salvage 2009-present	N/A	N/A	N/A	N/A
High Flow OMR Off-Ramp for Longfin Smelt (8.4.2)	Based on the status of 8.3.3, 8.4.1, & 8.4.2	Not Active	-Sac. R. at Rio Vista>55,000, OR SJR at Vernalis >8,000	Rio Vista = 9,000-15,000 cfs SJ = 1,000 to 2,000 cfs	N/A	12/9/24	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)	Not in Effect	-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	N/A	N/A	N/A	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 CCF is > or equal to 25 C for 3 consecutive days Salmonids: -Current daily average water temperature is > 22.2 C at Mossdale and Prisoners Point for 7 days (can be non-consecutive).	N/A	N/A	N/A	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 12/10/2024)	Status
SWP regular counts, CWT reading	Delta	Active	1
SWP larval sampling	Delta	Not Active	4
CVP regular counts, CWT reading	Delta	Active	1
CVP larval sampling	Delta	Not Active	4
Smelt Larval Survey	Delta	Active	1
LEPS	Delta	Not Active	4
20mm Survey	Delta	Not Active	4
Fall Mid-water Trawl	Delta	Active	1
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

Monitoring survey	Region	Notes (as of 12/10/2024)	Status
EMP	Delta	Active	1
Mossdale	Delta	Active	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
Yuba River (Hallwood) RST	Yuba River	Active	1
Butte Creek Carcass Surveys	Butte Creek	Active	1
Butte Creek RST	Butte Creek	Active	1
Redd dewatering and stranding surveys	Sacramento River	Active	1
Sacramento Carcass and Redd Surveys	Sacramento River	Active	1
Lower Sacramento RST	Sacramento River	Active	1
Feather River (upper DWR) RST	Sacramento River	Active (1 trap)	1
Feather River (lower CDFW) RST	Sacramento River	Active	4
Feather River Carcass Survey	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
Stanislaus River Carcass Survey	San Joaquin River	Active	1
American River Carcass Survey	Sacramento River	Active	1

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