



# Weekly Fish and Water Operations Outlook

10/3/2023 – 10/9/2023

## Water Project Operational Intent for Week

- Monthly Delta Outflow for October not less than 4,000 cfs; 7-day average not less than 3,000 cfs; E/I ratio not greater than 0.65; Monthly average X2 for October not greater than 80 km.

## Biological Context

- Start of Water Year 2024; no ESA mandated operational constraints “triggered” yet.

## Forecasted Weather

- Dry and mild weather, with modest warming from last weekend. Occasionally breezy winds, peaking Tuesday night into Wednesday morning

## 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	<ul style="list-style-type: none"> <li>• Current Release: 200 cfs</li> <li>• Anticipated Weekly Range of Releases: 200 cfs</li> </ul>	<ul style="list-style-type: none"> <li>• Temperature Criteria: 56°F at Igo – daily average.</li> <li>• Spring-run Chinook Salmon adults are spawning. Snorkel surveys indicated very low numbers (0-2 fish).</li> <li>• Fall-run Chinook Salmon adults are entering the creek. Spawning to commence soon.</li> <li>• <i>O. mykiss</i> juveniles are rearing.</li> </ul>

Tributary/Division	Anticipated Weekly Ranges	Related Environmental and Fish Conditions
Sacramento River	<ul style="list-style-type: none"> <li>• Shasta Storage: 3.325MAF</li> <li>• Current Release: 6,400 cfs</li> <li>• Anticipated Weekly Range of Releases: 5,500 cfs to 6,400 cfs.</li> </ul>	<ul style="list-style-type: none"> <li>• Temperature Criteria: 53.5°F at CCR - daily average.</li> <li>• Spring-run Chinook Salmon adults are holding and spawning</li> <li>• Winter-run eggs in gravel and fry emerging. Fry and pre-smolts are passing RBDD.</li> <li>• O. mykiss juveniles are rearing.</li> <li>• Adult green sturgeon are holding.</li> <li>• Green sturgeon juveniles are rearing.</li> </ul>
Feather River	<ul style="list-style-type: none"> <li>• Oroville Storage: 2.587 MAF</li> <li>• Current Release: 6,500 cfs</li> <li>• Anticipated Weekly Range of Releases: 5,000 to 6,500 cfs.</li> </ul>	<ul style="list-style-type: none"> <li>• Temperature maximum criteria: 51°F +/- 4.0°F at Hatchery</li> <li>• O. mykiss juveniles are rearing.</li> <li>• Adult green sturgeon spawning is likely complete, but some are still holding.</li> <li>• Spring-run adults are migrating upstream and beginning to spawn</li> <li>• Adult-Spring-run carcass surveys began mid-September and will continue through December.</li> <li>• Fall-run are migrating upstream.</li> </ul>
American River	<ul style="list-style-type: none"> <li>• Folsom Storage: 664 TAF</li> <li>• Current Release: 3,000 cfs</li> <li>• Anticipated Weekly Range of Releases: 2,500 to 3,000 cfs</li> </ul>	<ul style="list-style-type: none"> <li>• Temperature criteria: 67 °F at Watt Avenue, 10/7/23 62 °F at Hazel – daily average</li> <li>• O. mykiss juvenile are rearing.</li> <li>• Fall-run Chinook salmon carcass surveys will begin next week</li> </ul>
Stanislaus River	<ul style="list-style-type: none"> <li>• New Melones Storage: 1.897 MAF</li> <li>• Current Release: 300 cfs</li> <li>• Anticipated Range of Weekly Releases: 300 cfs to 1,500 cfs; Fall Pulse flow through early November</li> </ul>	<ul style="list-style-type: none"> <li>• O. mykiss juveniles are rearing.</li> <li>• Adult O. mykiss present</li> <li>• Fall-run Chinook have begun migrating upstream</li> <li>• Adult fall-run Chinook salmon preliminary carcass surveys are seeing a few carcasses. Official carcass survey will begin this week</li> </ul>

Tributary/Division	Anticipated Weekly Ranges	Related Environmental and Fish Conditions
Delta	<ul style="list-style-type: none"> <li>• Freeport: 13,000 to 17,000 cfs</li> <li>• Vernalis: 1,500 to 2,500 cfs</li> <li>• Delta Outflow index: 8,000 to 9,000 cfs</li> <li>• Combined Exports: 6,500 to 10,200 cfs</li> <li>• JPP: Current 3,500 cfs, Range from 3,500 cfs to 4,200 cfs</li> <li>• CCF: Current 6,000 cfs, Range 3,000 cfs to 6,000 cfs</li> <li>• Expected Daily OMR Index Values: -7,000 cfs to -9,000 cfs</li> <li>• DCC Gates: Closed on 10/2, Opening 10/6 for weekend</li> <li>• Tides: Transitioning from Spring to Neap; Last-Quarter Moon 10/6</li> </ul>	<ul style="list-style-type: none"> <li>• X2 = 79 km</li> <li>• SMSCG – Flashboards installed 8/14, gates continue in tidal operation beginning 8/15</li> </ul>

Table 2a-b: WY 2024 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 2024 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. \* TBD – no draft JPE produced, ITL and performance thresholds are TBD currently

Species/run	Threshold	Current Status	Weekly Trend	Updated
Green sturgeon	WY 2024 salvage = 74	WY 2024 salvage = 0 (0%)	No change expected	10/2/2023
Natural winter-run Chinook Salmon	WY 2024 loss = TBD* (50% of 1.17% of JPE)	WY 2024 loss = 0 (0%)	No change expected	10/2/2023
Natural Steelhead	Dec 1 – Mar 31 = 707; (50% of 1,414) Apr 1 – June 15 = 776 (50% of 1,552)	WY 2024 loss = 0 Dec 1 – Mar 31 = 0 (0% of the 50% threshold) Apr 1 – June 15 = 0(0% of the 50% threshold)	No change expected	10/2/2023

Species/run	Threshold	Current Status	Weekly Trend	Updated
Sacramento River Hatchery winter-run Chinook salmon	WY 2024 loss = TBD* (50% of 0.12% of JPE)	WY 2024 loss = 0 (0%)	No change expected	10/2/2023
Battle Creek Hatchery winter-run Chinook salmon	WY 2024 loss = TBD* (1% of JPE)	WY 2024 loss = 0 (0%)	No change expected	10/2/2023
Proposed Action Hatchery yearling spring-run Chinook salmon surrogates	> 0.5% of each release group	WY 2024 loss = 0 (0%)	No change expected	10/2/2023
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 = Not relevant Turbidity = Not relevant	Not relevant	10/2/2023
Delta Smelt	Daily avg. Turbidity at OBI=>12 FNU	OBI Daily Average = Not relevant	Not relevant	10/2/2023
Delta Smelt	Daily avg. Temperature at CCF > 25°C for three consecutive days	CCF daily avg. Temperature = Not relevant	Not relevant	10/2/2023

Table 2b. 10-Year Salmonid Cumulative Loss

Species/run	Threshold	Current Status	Updated
Natural winter-run Chinook salmon	Loss = 8,738	Cumulative loss = 368.95 (4.2%)	10/2/2023
Hatchery winter-run Chinook salmon	Loss = 5,356	Cumulative loss = 6.71 (0.13%)	10/2/2023
Natural steelhead	Loss = 6,038 (Dec 1 – Mar 31) Loss = 5,826 (Apr 1 – June 15)	Cumulative loss = 1576.46 (26.1%, Dec 1 – Mar 31) 976.75(16.8%, Apr 1 – June 15)	10/2/2023

Table 3a: Relevant Water Year 2024 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
OMR Mgmt. triggered (8.3.2)	Jan. 1 - Jun. 30 (when ≥ 5% of spring-run or winter-run in Delta)	Not in effect	-5% of the Winter-run or Spring-run population in Delta	N/A	N/A	9/29/23	N/A
Winter-run yearly loss (8.6.1)	Nov. 1 - Jun. 30	Not in effect	TBD based on WY 2023 JPE)	N/A	N/A	9/29/23	N/A
Winter-run discrete daily loss (8.6.2)	Nov. 1 - Dec. 31	Not in effect	11/1-11/30: loss of 6/day unclipped older juv. Winter-run 12/1-12/31: loss of 26/day unclipped older juv. Winter-run	N/A	N/A	9/29/23	N/A
Mid and late season Winter-run daily loss threshold (8.6.3)	Jan 1 – May 31	Not In effect	TBD	N/A	N/A	9/29/23	N/A
Spring-run surrogate protection (8.6.4)	Feb. 1 - Jun. 30	Not in effect	TBD	N/A	N/A	9/29/23	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 10/3/2023)	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	Not Active	4
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
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	Not Active*	1
Redd dewatering and stranding surveys	Sacramento River	Not Active	4
Sacramento Carcass and Redd Surveys	Sacramento River	Active	1

<b>Monitoring survey</b>	<b>Region</b>	<b>Notes (as of 10/3/2023)</b>	<b>Status</b>
Lower Sacramento RST	Sacramento River	Active	1
Feather River (upper DWR) RST	Feather River	Active	1
Feather River (lower CDFW) RST	Feather River	Not Active	4
SJRRP CDFW Field Monitoring	San Joaquin River	Not Active	4
SJRRP USBR Field Monitoring	San Joaquin River	Interrupted	3
Stanislaus Fish Weir	Stanislaus River	Not Active	4
American River Carcass/Redd Surveys	American River	Not Active	4
Caswell RST	Stanislaus River	Active	1
Wallace Weir	Cache Slough	Not Active	4
Butte Creek RST/Diversion Trap	Butte Creek	Not Active/Active	4/1

\*Data has not been received yet