



— BUREAU OF —  
RECLAMATION

## Weekly Fish and Water Operations Outlook 10/17/2023 – 10/23/2023

### Water Project Operational Intent for Week

- Monthly Delta Outflow for October not less than 4,000 cfs; 7-day running averaged Delta Outflow not less than 3,000 cfs; E/I ratio not to exceed 0.65; Monthly average X2 for October is no greater than 80 km.

### Biological Context

- No ESA mandated operational constraints “triggered” yet.

### Forecasted Weather

- Some light showers on Monday, mainly in Coastal Range, then warmer and drier weather returns. Cooler temperatures forecasted for next 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	<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>• Maximum temperature from 10/10-10/16: 56.4°F</li><li>• Minimum temperature from 10/10-10/16: 51.7°F (CDEC gauge @ IGO)</li><li>• Spring-run Chinook Salmon adults are spawning. Snorkel surveys indicated very low numbers (0-2 fish).</li></ul>

		<ul style="list-style-type: none"> <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> <p>(Updated 10/17/2023)</p>
Sacramento River	<ul style="list-style-type: none"> <li>Shasta Storage: 3.243 MAF</li> <li>Current Release: 6,100 cfs</li> <li>Anticipated Weekly Range of Releases: 6,100 cfs to 6,500 cfs.</li> </ul>	<ul style="list-style-type: none"> <li>Temperature Criteria: 53.5°F at CCR - daily average.</li> <li>Maximum temperature from 10/10-10/16: 53.66°F</li> <li>Minimum temperature from 10/10-10/16: 48.21°F (CDEC gauge @ CCR)</li> <li>Spring-run Chinook Salmon have completed spawning.</li> <li>Fall-run are migrating into tributaries, holding, and spawning</li> <li>Some (20%) Winter-run fry remain in redds, most have emerged. Fry and pre-smolts are passing RBDD.</li> <li><i>O. mykiss</i> juveniles are rearing.</li> <li>Adult green sturgeon are holding.</li> <li>Green sturgeon juveniles are rearing.</li> </ul> <p>(Updated 10/16/2023)</p>
Feather River	<ul style="list-style-type: none"> <li>Oroville Storage: 2.495 MAF</li> <li>Current Release: 2,450 cfs</li> <li>Anticipated Weekly Range of Releases: 1,750 to 2,450 cfs.</li> </ul>	<ul style="list-style-type: none"> <li>Temperature maximum criteria: 51°F +/- 4.0°F at Hatchery</li> <li>Maximum temperature from 10/10-10/16: 49.95°F</li> <li>Minimum temperature from 10/10-10/16: 47.99°F (CDEC gauge @ ORF)</li> <li><i>O. mykiss</i> juveniles are rearing.</li> <li>Adult green sturgeon spawning is likely complete, but some are still holding.</li> <li>Spring-run adults have mostly completed spawning.</li> <li>Adult carcass surveys began mid-September and will continue through December.</li> <li>Fall-run adult spawning has begun.</li> </ul> <p>(Updated 10/17/2023)</p>
American River	<ul style="list-style-type: none"> <li>Folsom Storage: 610 TAF</li> <li>Current Release: 2,500 cfs</li> <li>Anticipated Weekly Range of Releases: 2,500 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>Maximum temperature from 10/10-10/16: 63.5°F</li> <li>Minimum temperature from 10/10-10/16: 61.6 °F (CDEC gauge @ AFO)</li> <li><i>O. mykiss</i> juvenile are rearing.</li> <li>Adult fall-run Chinook are migrating upstream and holding.</li> <li>Fall-run Chinook salmon carcass surveys are beginning this week</li> </ul> <p>(Updated 10/16/2023)</p>
Stanislaus River	<ul style="list-style-type: none"> <li>New Melones Storage: 1.892 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><i>O. mykiss</i> juveniles are rearing.</li> <li>Adult <i>O. mykiss</i> present</li> <li>Fall-run Chinook salmon have begun migrating upstream</li> <li>Adult fall-run Chinook salmon carcass surveys began. No redds have been</li> </ul>

		observed so far but adults are being observed. (Updated 10/16/2023)
Delta	<ul style="list-style-type: none"> <li>Freeport: 9,000 to 11,000 cfs</li> <li>Vernalis: 1,500 to 3,000 cfs</li> <li>Delta Outflow index: 8,000 to 10,000 cfs</li> <li>Combined Exports: 1,800 to 3,600 cfs</li> <li>JPP: Current 2,600 cfs, Range from 1,800 cfs to 2,600 cfs</li> <li>CCF: Current 800 cfs, Range 0 cfs to 1,000 cfs</li> <li>Expected Daily OMR Index Values: -1,000 cfs to -2,500 cfs</li> <li>DCC Gates: Closed on 10/16, Opening 10/20 for weekend</li> <li>Tides: Transitioning from Spring to Neap; First Quarter Moon 10/21</li> </ul>	<ul style="list-style-type: none"> <li>X2 &gt; 81 km</li> <li>SMSG – Flashboards installed 8/14, gate tidal operation began 8/15; projected to stop 10/20.</li> </ul> (Updated 10/16/2023)

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	10/16/2023
Natural winter-run Chinook Salmon	WY 2024 loss = TBD* (50% of 1.17% of JPE)	WY 2024 loss = 0 (0%)	No change expected	10/16/2023
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	10/16/2023
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	10/16/2023
Battle Creek Hatchery winter-run Chinook salmon	WY 2024 loss = TBD* (1% of JPE)	WY 2024 loss = 0 (0%)	No change expected	10/16/2023
Proposed Action Hatchery yearling spring-run Chinook salmon surrogates	> 0.5% of each release group	WY 2024 loss = 0 (0%)	No change expected	10/16/2023
Delta Smelt	After Dec. 1:	Freeport 3-day avg. Flow = Not relevant	Not relevant	10/16/2023

Species/run	Threshold	Current Status	Weekly Trend	Updated
	Running 3-day avg. flows at Freeport >25,000 cfs  Running 3-day avg. turbidity at Freeport => 50 FNU	Turbidity = Not relevant		
Delta Smelt	Daily avg. Turbidity at OBI=> 12 FNU	OBI Daily Average = Not relevant	Not relevant	10/16/2023
Delta Smelt	Daily avg. Temperature at CCF > 25°C for three consecutive days	CCF daily avg. Temperature = Not relevant	Not relevant	10/16/2023

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%)	10/16/2023
Hatchery winter-run Chinook salmon	Loss = 5,356	Cumulative loss = 6.71 (0.13%)	10/16/2023
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)	10/16/2023

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	Will be updated when in effect
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	Will be updated when in effect

Action	Timeframe	Current Action Status	Threshold(s)	Current Relevant Data	Weekly Trend	Last Updated	Comments
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	9/29/23	Will be updated when in effect
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	Will be updated when in effect
Spring-run surrogate protection (8.6.4)	Feb. 1 - Jun. 30	Not in effect	TBD		N/A	9/29/23	Will be updated when in effect

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 10/17/2023)	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

Monitoring survey	Region	Notes (as of 10/17/2023)	Status
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 (Monday-Friday)	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
Lower Sacramento RST	Sacramento River	Active	1
Feather River (upper DWR) RST	Feather River	Active	1
Feather River (lower CDFW) RST	Feather River	Active	1
SJRRP CDFW Field Monitoring	San Joaquin River	Active	1
SJRRP USBR Field Monitoring	San Joaquin River	Active	1
Stanislaus Fish Weir	Stanislaus River	Active	1
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