



## Weekly Fish and Water Operations Outlook

11/1/2022 – 11/7/2022

**FORECASTED WEATHER:** Pattern change brings significant cooling, breezy winds and widespread rain and mountain snow mainly Tuesday and Wednesday. Possible morning frost for remainder of week.

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>• Spring-run Chinook salmon eggs are incubating in the gravel. The juveniles will be emerging soon.</li> <li>• Fall-run Chinook Salmon are spawning and their eggs are incubating in the gravel.</li> <li>• O. mykiss adults and juveniles are present.</li> </ul> <p><i>(Updated 10/31/22)</i></p>
Sacramento River	<ul style="list-style-type: none"> <li>• Shasta Storage: 1.418 MAF</li> <li>• Current Release: 3,900 cfs</li> <li>• Anticipated Weekly Range of Releases: 3,900 cfs</li> </ul>	<ul style="list-style-type: none"> <li>• Spring-run Chinook salmon adults have mostly completed spawning. Eggs are in gravel.</li> <li>• Winter-run Chinook juvenile salmon are present in upper river and are both emerging from redds and migrating downstream. Less than 1% of the juveniles remain in the redds the rest have emerged into the river and are slowly migrating downstream</li> <li>• Winter-run Chinook salmon and Spring-run (length-at-date) juveniles being caught in low numbers and genetics being taken to confirm run assignment.</li> <li>• Fall-run Chinook salmon spawning is underway and will last into early December. Carcass surveys for fall-run are underway.</li> </ul> <p><i>(Updated 11/01/22)</i></p>

Tributary/Division	Anticipated Weekly Ranges	Related Environmental and Fish Conditions
Feather River	<ul style="list-style-type: none"> <li>• Oroville Storage: 1.107 MAF</li> <li>• Current Release: 2,400 cfs</li> <li>• Anticipated Weekly Range of Releases: 2,400 cfs to 2,300 cfs</li> <li>• Daily temperature maximum: 51 F at Fish Hatchery</li> </ul>	<ul style="list-style-type: none"> <li>• Adult Fall-run Chinook Salmon are just beginning to spawn, some still migrating upstream and some holding</li> <li>• Adult Spring-run Chinook Salmon spawning is slowing down and coming to an end, eggs are in gravel and incubating.</li> <li>• Approximately 15-20 green sturgeon present from Sunset Pumps to Boyd's Pump.</li> <li>• Adult and juvenile O. mykiss present.</li> </ul> <p><i>(Updated 10/24/22)</i></p>
American River	<ul style="list-style-type: none"> <li>• Folsom Storage: 291 TAF</li> <li>• Current Release: 1,400 cfs</li> <li>• Anticipated Weekly Range of Releases: 1,400 cfs to 1,300 cfs</li> </ul>	<ul style="list-style-type: none"> <li>• Adult fall-run Chinook Salmon are present and beginning to spawn. Eggs are in the gravel.</li> <li>• Juvenile and adult O. mykiss are present.</li> </ul> <p><i>(Updated 10/25/22)</i></p>
Stanislaus River	<ul style="list-style-type: none"> <li>• New Melones Storage: 584 TAF</li> <li>• Current Release: 200 cfs</li> <li>• Anticipated Range of Weekly Releases: 200 cfs</li> </ul>	<ul style="list-style-type: none"> <li>• Juvenile and adult O. mykiss are present.</li> <li>• Adult fall-run Chinook salmon are present and spawning. Eggs are in the gravel.</li> </ul> <p><i>(Updated 10/24/22)</i></p>
Delta	<ul style="list-style-type: none"> <li>• Freeport: 6,000 to 8,000 cfs</li> <li>• Vernalis: 400 to 2,000 cfs</li> <li>• Delta Outflow index: 3,500 to 7,500 cfs</li> <li>• Combined Exports: 1,200 to 2,300 cfs</li> <li>• JPP: 900 cfs to 1,800 cfs</li> <li>• CCF: 300 cfs to 500 cfs</li> <li>• Expected Daily OMR Index Values: -1,000 to -2,000 cfs</li> <li>• DCC Gates: Closed as of 10/31. Scheduled to open 11/4 and close 11/7. Closed during week and open on weekends operation may be adjusted due to real-time conditions.</li> </ul>	<ul style="list-style-type: none"> <li>• Adult O. mykiss present</li> <li>• Adult and juvenile Green Sturgeon present</li> <li>• Two Delta Smelt adults were detected in the Sacramento River Shipping Channel in August and in Suisun Marsh in September.</li> <li>• Longfin Smelt sub-adults have been detected in the lower Sacramento River and downstream of the confluence, including a juvenile LFS at Chipps. Adults have been detected in Suisun Bay and Suisun Marsh.</li> </ul> <p><i>(Updated 11/01/22)</i></p>

Table 2a-b: WY 2023 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 2023 Salmonid Current Loss and Delta Smelt Abiotic Conditions. Additional Real-Time OMR Restrictions and Performance Objectives (4.10.5.10.2) and Onset of OMR Management (4.10.5.10.1). \* TBD – no draft JPE produced, ITL and performance thresholds are TBD currently

Species/run	Threshold	Current Status	Weekly Trend	Updated
Green sturgeon	WY 2023 salvage = 74	WY 2023 salvage = 0 (0%)	No change expected	10/31/2022
Natural winter-run Chinook Salmon	WY 2023 loss = TBD * (50% of 1.17% of JPE)	WY 2023 loss = 0	No change expected	10/31/2022
Natural Steelhead	Dec 1 – Mar 31 = 707 (50% of 1,414) Apr 1 – June 15 = 776 (50% of 1,552)	WY 2023 loss = 0 Dec 1 – Mar 31 = 0 (0%) Apr 1 – June 15 = 0 (0%)	No change expected	10/31/2022
Sacramento River Hatchery winter-run Chinook salmon	WY 2023 loss = TBD* (50% of 0.12% of JPE)	WY 2023 loss = 0 (0%)	No change expected	10/31/2022
Battle Creek Hatchery winter-run Chinook salmon	WY 2023 loss = TBD * (50% of 0.12% of JPE)	WY 2023 loss = 0 (0%)	No change expected	10/31/2022
Proposed Action Hatchery yearling spring-run Chinook salmon surrogates	> 0.5% of each release group	WY 2023 loss = 0 (0%)	No change expected	10/31/2022
Delta Smelt	Daily avg. Turbidity at OBI=> 12 FNU	OBI daily Avg Turbidity = Not relevant	Not relevant	10/31/2022
Delta Smelt	Daily avg. Temperature at CCF > 25°C for three consecutive days	CCF daily avg. Temperature = Not relevant	Not relevant	10/31/2022

Table 2b. 10-Year Salmonid Cumulative Loss

Species/run	Threshold	Current Status	Updated
Natural winter-run Chinook salmon	Loss = 8,738	Cumulative loss = 264.2 (3.0%)	10/31/2022
Hatchery winter-run Chinook salmon	Loss = 5,356	Cumulative loss = 6.71 (0.13%)	10/31/2022
Natural steelhead	Loss = 6,038 (Dec 1 – Mar 31) Loss = 5,826 (Apr 1 – June 15)	Cumulative loss = 530.2 (8.8%, Dec 1 – Mar 31) 474.5 (8.1%, Apr 1 – June 15)	10/31/2022

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
OMR Mgmt. triggered (8.3.2)	Jan. 1 - Jun. 30 <i>(when ≥ 5% of spring-run or winter-run in Delta)</i>	Not in effect	-5% of the Winter-run or Spring-run population in Delta	N/A	N/A	10/31/22	N/A
Winter-run yearly loss (8.6.1)	Nov. 1 - Jun. 30	In effect (based on JPE)	TBD (based on JPE)	N/A	N/A	11/7/22	Still TBD for JPE
Winter-run discrete daily loss (8.6.2)	Nov. 1 - Dec. 31	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	11/7/22	N/A
Mid and late season Winter-run daily loss threshold (8.6.3)	Jan 1 – May 31	Not in effect	N/A	N/A	N/A	11/7/22	N/A
Spring-run surrogate protection (8.6.4)	Feb. 1 - Jun. 30	Not in effect	TBD (based on the number of fish released)	N/A	N/A	11/7/22	N/A

Table 3b: Delta Smelt

Action	Timeframe	Current Action Status	Threshold(s)	Current Relevant Data	Weekly Trend	Last Updated	Comments
Integrated Early Winter Pulse Protection ('First Flush') (8.3.1)	Dec. 1 - Jan. 31	Not in effect	- three-day Freeport daily flow running avg >= 25,000 AND  [three-day Freeport turbidity running avg >= 50 NTU OR Smelt Monitoring Team recommendation]	N/A	N/A	10/24/22	N/A
Turbidity Bridge Avoidance (8.5.1)	Dec. 15 - Apr. 1	Not in effect	Occurs after the Integrated Early Winter Pulse protection or February 1 (whichever until April 1) comes first - avg. OBI turbidity > 12 NTU	N/A	N/A	10/31/22	N/A
Larval and/Juvenile Delta smelt Protection (8.5.2)	ongoing	In effect, not triggered	- 5-day cum. salvage of juv. DS >= 1 [average 3-yr FMWT index + 1] OR, - 3-day cum. Salvage of juv. DS > 11	N/A	N/A	10/31/22	N/A

Table 3c: Longfin Smelt

Action	Timeframe	Current Action Status	Threshold(s)	Current Relevant Data	Weekly Trend	Last Update	Comments
Early Adult Protection (8.3.3)	Dec. 1 - Feb. 28	Not in effect	-Cum. salvage > [most recent FMWT/10] = 1 fish (Sept.-Oct. Index) OR -Smelt Monitoring Team determines high likelihood of LFS movement into high-risk areas	N/A	N/A	10/31/22	N/A
OMR Mgt. for Adults (8.4.1)	Dec. 1 -Feb. 28	Not in effect	-Smelt Monitoring Team recommendation	N/A	N/A	10/31/22	N/A
Larval and Juvenile Longfin Smelt Entrainment Protection (8.4.2)	Jan 1 – Jun 30	Not in effect	-LFS larvae or juveniles in >=4 SLS or 20 mm stations in central and south Delta, OR -LFS catch/tow >5 larvae or juveniles in >=2stations	N/A	N/A	10/31/22	N/A
High Flow OMR Off-Ramp for Longfin Smelt (8.4.3)	Based on the status of 8.3.3, 8.4.1, & 8.4.2	In effect, not triggered	-Sac. R. at Rio Vista >55,000, OR SJR at Vernalis >8,000	Rio Vista = 2,000 to 7,000 cfs SJ = 400 to 800 cfs	N/A	11/7/22	N/A

Table 3d: OMR

Action	Timeframe	Current Action Status	Threshold(s)	Current Relevant Data	Weekly Trend	Last Updated	Comments
OMR Mgmt. Offramp (8.8)	Jun. 1 – Jun. 30	Not in effect	->95% of the Winter-run and Spring run populations have migrated past Chipps Island AND -Current daily average water temperature at Mossdale and Prisoners Point. • Days exceeded: Criteria met as of 6/16/2022	N/A	N/A	10/10/22	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 11/1/2022)	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
Spring Kodiak Trawl	Delta	Not Active	4
Fall Mid-water Trawl	Delta	Active	1
Summer Towntnet Survey	Delta	Not Active	4
Bay Study	Delta	Active	1
DJFMP- Chipps and Sacramento Trawls	Delta	Active (sampling four days a week starting in February)	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 screw trap	Sacramento River	Active	1

<b>Monitoring survey</b>	<b>Region</b>	<b>Notes (as of 11/1/2022)</b>	<b>Status</b>
Knights Landing screw trap	Sacramento River	Active	1
Tisdale screw trap	Sacramento River	Active	1
GCID screw trap	Sacramento River	Active	1
Yuba River (Hallwood) screw trap	Yuba River	Active – weekdays only	1
Redd dewatering and stranding surveys	Sacramento River	Not Active	4
Sacramento Carcass and Redd Surveys	Sacramento River	Active	1
Lower Sacramento Rotary Screw Trap	Sacramento River	Active	1
Feather River (upper DWR)	Sacramento River	Not Active	4
Feather River (lower CDFW)	Sacramento River	Active	1
SJRRP CDFW Field Monitoring	San Joaquin River	Active	1
SJRRP USFWS and USBR Field Monitoring	San Joaquin River	Not Active	4
Stanislaus Fish Weir	San Joaquin River	Active	1