



# Weekly Fish and Water Operations Outlook

11/07/2023 – 11/13/2023

## Water Project Operational Intent for Week

- Monthly Delta Outflow and Rio Vista flow for November greater than 4,500 cfs; E/I ratio not to exceed 0.65.

## Forecasted Weather

- Scattered showers on Monday; additional mountain snow late Monday into Tuesday; drier conditions begin to settle in late Tuesday, becoming dominant for the remainder of this week; some showers in the mountains on Friday, but generally drier conditions prevail; model projections are uncertain for next week, but potential precipitation amounts look light.

## 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>• Fall-run Chinook salmon spawning is ongoing and their eggs are incubating in the gravel.</li> <li>• Late fall run Chinook will soon be migrating into the creek.</li> <li>• Spring-run Chinook salmon eggs are incubating in the gravel (very few redds this year).</li> <li>• Adult <i>O. mykiss</i> are migrating into the creek and juveniles are rearing.</li> </ul> <p><i>(Updated 11/06/2023)</i></p> |

| Tributary/Division | Anticipated Weekly Ranges   | Related Environmental and Fish Conditions   |
|--------------------|---|---|
| Sacramento River   | <ul style="list-style-type: none"> <li>• Shasta Storage: 3.130 MAF</li> <li>• Current Release: 5,000 cfs</li> <li>• Anticipated Weekly Range of Releases: 5,000 cfs.</li> </ul>   | <ul style="list-style-type: none"> <li>• Fall-run Chinook salmon are migrating into tributaries, holding, and spawning.</li> <li>• Late-fall run Chinook adults are moving upstream and holding in the river awaiting spawning in Dec-Jan.</li> <li>• Some (5%) Winter-run fry remain in redds, most have emerged.</li> <li>• Length-at-date spring run fry are being captured at RBDD, and genetic analysis, conducted for run assignment.</li> <li>• Yearling spring-run Chinook salmon was captured at Butte Creek RST on 10/15/23.</li> <li>• O. mykiss juveniles are rearing.</li> <li>• Adult green sturgeon are holding.</li> <li>• Green sturgeon juveniles are rearing.</li> </ul> <p><i>(Updated 11/7/2023)</i></p> |
| Feather River      | <ul style="list-style-type: none"> <li>• Oroville Storage: 2.403 MAF</li> <li>• Current Release: 1,750 cfs</li> <li>• Anticipated Weekly Range of Releases: 1,750 cfs.</li> </ul> | <ul style="list-style-type: none"> <li>• Fall-run Chinook salmon adult spawning has likely begun.</li> <li>• O. mykiss juveniles are rearing. Adults are migrating upstream.</li> <li>• Adult green sturgeon are still holding in the Low Flow Channel.</li> <li>• Spring-run adults have likely completed spawning.</li> </ul> <p><i>(Updated 11/6/2023)</i></p>   |
| American River     | <ul style="list-style-type: none"> <li>• Folsom Storage: 538 TAF</li> <li>• Current Release: 2,000 cfs</li> <li>• Anticipated Weekly Range of Releases: 2,000 cfs</li> </ul>      | <ul style="list-style-type: none"> <li>• O. mykiss juvenile are rearing.</li> <li>• Adult fall-run Chinook are migrating upstream and have begun spawning.</li> </ul> <p><i>(Updated 11/7/2023)</i></p>   |

| Tributary/Division | Anticipated Weekly Ranges  | Related Environmental and Fish Conditions   |
|--------------------|--|---|
| Stanislaus River   | <ul style="list-style-type: none"> <li>• New Melones Storage: 1.896 MAF</li> <li>• Current Release: 200 cfs</li> <li>• Anticipated Weekly Range of Releases: 200 cfs</li> </ul>  | <ul style="list-style-type: none"> <li>• O. mykiss - Adult and juveniles present</li> <li>• Fall-run Chinook salmon are migrating upstream and beginning to spawn</li> <li>• Fall-run Chinook salmon adult observations are low this year compared to other years, with 994 fall-run Chinook salmon passing through the Stanislaus Weir.</li> </ul> <p><i>(Updated 11/7/2023)</i></p> |
| Delta              | <ul style="list-style-type: none"> <li>• Freeport: 7,500 to 9,500 cfs</li> <li>• Vernalis: 1,500 to 2,000 cfs</li> <li>• Delta Outflow index: 4,000 to 5,000 cfs</li> <li>• Combined Exports: 1,900 to 7,700 cfs</li> <li>• JPP: Current 2,700 cfs, Range 900 cfs to 2,700 cfs</li> <li>• CCF: Current 1,000 cfs, Range 1,000 cfs to 5,000 cfs</li> <li>• Expected Daily OMR Index Values: -3,000 cfs to -7,000 cfs</li> <li>• DCC Gates: Open on 11/3, Closing on 11/8 and opening on 11/10 for Rio Vista</li> <li>• X2 is greater than 81 km</li> <li>• Tides: Transitioning from Neap to Spring; New Moon on 11/13</li> </ul> | <ul style="list-style-type: none"> <li>• Adult O. mykiss present</li> <li>• Adult and juvenile Green Sturgeon present</li> <li>• Delta Smelt sub-adults and adults are present in the north delta arc and downstream of the confluence.</li> <li>• Longfin Smelt sub-adults and adults have been detected at Chipps Island.</li> </ul> <p><i>(Updated 10/31/2023)</i></p>             |

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 | 11/6/2023  |
| Natural winter-run Chinook Salmon                                      | WY 2024 loss = TBD* (50% of 1.17% of JPE)  | WY 2024 loss = 0 (0%)  | No change expected | 11/6/2023  |
| Natural Steelhead  | Dec 1 – Mar 31 = 707; (50% of 1,414)<br>Apr 1 – June 15 = 776 (50% of 1,552)   | WY 2024 loss = 0<br>Dec 1 – Mar 31 = 0 (0% of the 50% threshold)<br>Apr 1 – June 15 = 0(0% of the 50% threshold) | No change expected | 11/6/2023  |
| 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 | 11/6/2023  |
| Battle Creek Hatchery winter-run Chinook salmon                        | WY 2024 loss = TBD* (1% of JPE)  | WY 2024 loss = 0 (0%)  | No change expected | 11/6/2023  |
| Proposed Action Hatchery yearling spring-run Chinook salmon surrogates | > 0.5% of each release group   | WY 2024 loss = 0 (0%)  | No change expected | 11/6/2023  |
| Delta Smelt  | After Dec. 1:<br>Running 3-day avg. flows at Freeport >25,000 cfs<br><br>Running 3-day avg. turbidity at Freeport =>50 FNU | Freeport 3-day avg. Flow = Not relevant<br>Turbidity = Not relevant  | Not relevant       | 10/16/2023 |

| Species/run | Threshold   | Current Status                            | Weekly Trend | Updated    |
|-------------|---|---|--------------|------------|
| Delta Smelt | Daily avg. Turbidity at OBI=> 12 FNU                            | OBI Daily Average = Not relevant          | Not relevant | 10/16/2023 |
| 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%)  | 11/6/2023 |
| Hatchery winter-run Chinook salmon | Loss = 5,356   | Cumulative loss = 6.71 (0.13%)   | 11/6/2023 |
| 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) | 11/6/2023 |

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  | In effect             | TBD (based on WY 2023 JPE)                              | N/A                   | N/A          | 11/6/23      | N/A                             |

| 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 | In effect             | 11/1-11/30: loss of 6/day unclipped older juv.<br>Winter-run 12/1-12/31: loss of 26/day unclipped older juv.<br>Winter-run | Max WR discrete daily loss = 0 | N/A          | 11/6/23      | Unclipped WR have not been yet salvaged at SWP/CVP since the season started. |
| 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                            | 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 11/6/2023) | 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      |

| Monitoring survey                               | Region            | Notes (as of 11/6/2023) | Status |
|---|-------------------|-------------------------|--------|
| 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  | Active                  | 1      |
| Sacramento Carcass and Redd Surveys             | Sacramento River  | Active                  | 1      |
| Lower Sacramento RST                            | Sacramento River  | Active                  | 1      |
| Feather River (upper DWR) RST                   | Feather River     | Not Active              | 4      |
| 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      |

| Monitoring survey                      | Region              | Notes (as of 11/6/2023) | Status |
|--|---------------------|-------------------------|--------|
| American River<br>Carcass/Redd Surveys | American<br>River   | Active                  | 1      |
| Caswell RST                            | Stanislaus<br>River | Active                  | 1      |
| Wallace Weir                           | Cache<br>Slough     | Active                  | 1      |
| Butte Creek<br>RST/Diversion Trap      | Butte Creek         | Not Active/Active       | 4/1    |

\*Data has not been received yet