



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"> • Current Release: 200 cfs • Anticipated Weekly Range of Releases: 200 cfs | <ul style="list-style-type: none"> • Temperature Criteria: 56°F at Igo – daily average. • Maximum temperature from 10/10-10/16: 56.4°F • Minimum temperature from 10/10-10/16: 51.7°F (CDEC gauge @ IGO) • Spring-run Chinook Salmon adults are spawning. Snorkel surveys indicated very low numbers (0-2 fish). • Fall-run Chinook Salmon adults are entering the creek. Spawning to commence soon. • O. mykiss juveniles are rearing. <p>(Updated 10/17/2023)</p> |

| Tributary/Division | Anticipated Weekly Ranges | Related Environmental and Fish Conditions |
|--------------------|--|--|
| Sacramento River | <ul style="list-style-type: none"> • Shasta Storage: 3,243 MAF • Current Release: 6,100 cfs • Anticipated Weekly Range of Releases: 6,100 cfs to 6,500 cfs. | <ul style="list-style-type: none"> • Temperature Criteria: 53.5°F at CCR - daily average. • Maximum temperature from 10/10-10/16: 53.66°F • Minimum temperature from 10/10-10/16: 48.21°F (CDEC gauge @ CCR) • Spring-run Chinook Salmon have completed spawning. • Fall-run are migrating into tributaries, holding, and spawning • Some (20%) Winter-run fry remain in redds, most have emerged. Fry and pre-smolts are passing RBDD. • O. mykiss juveniles are rearing. • Adult green sturgeon are holding. • Green sturgeon juveniles are rearing. <p><i>(Updated 10/16/2023)</i></p> |
| Feather River | <ul style="list-style-type: none"> • Oroville Storage: 2,495 MAF • Current Release: 2,450 cfs • Anticipated Weekly Range of Releases: 1,750 to 2,450 cfs. | <ul style="list-style-type: none"> • Temperature maximum criteria: 51°F +/- 4.0°F at Hatchery • Maximum temperature from 10/10-10/16: 49.95°F • Minimum temperature from 10/10-10/16: 47.99°F (CDEC gauge @ ORF) • O. mykiss juveniles are rearing. • Adult green sturgeon spawning is likely complete, but some are still holding. • Spring-run adults have mostly completed spawning. • Adult carcass surveys began mid-September and will continue through December. • Fall-run adult spawning has begun. <p><i>(Updated 10/17/2023)</i></p> |

| Tributary/Division | Anticipated Weekly Ranges | Related Environmental and Fish Conditions |
|--------------------|--|---|
| American River | <ul style="list-style-type: none"> • Folsom Storage: 610 TAF • Current Release: 2,500 cfs • Anticipated Weekly Range of Releases: 2,500 cfs | <ul style="list-style-type: none"> • Temperature criteria: 67 °F at Watt Avenue, 10/7/23 62 °F at Hazel – daily average • Maximum temperature from 10/10-10/16: 63.5°F • Minimum temperature from 10/10-10/16: 61.6 °F (CDEC gauge @ AFO) • O. mykiss juvenile are rearing. • Adult fall-run Chinook are migrating upstream and holding. • Fall-run Chinook salmon carcass surveys are beginning this week <p><i>(Updated 10/16/2023)</i></p> |
| Stanislaus River | <ul style="list-style-type: none"> • New Melones Storage: 1.892 MAF • Current Release: 300 cfs • Anticipated Range of Weekly Releases: 300 cfs to 1,500 cfs; Fall Pulse Flow through early November | <ul style="list-style-type: none"> • O. mykiss juveniles are rearing. • Adult O. mykiss present • Fall-run Chinook salmon have begun migrating upstream • Adult fall-run Chinook salmon carcass surveys began. No redds have been observed so far but adults are being observed. <p><i>(Updated 10/16/2023)</i></p> |
| Delta | <ul style="list-style-type: none"> • Freeport: 9,000 to 11,000 cfs • Vernalis: 1,500 to 3,000 cfs • Delta Outflow index: 8,000 to 10,000 cfs • Combined Exports: 1,800 to 3,600 cfs • JPP: Current 2,600 cfs, Range from 1,800 cfs to 2,600 cfs • CCF: Current 800 cfs, Range 0 cfs to 1,000 cfs • Expected Daily OMR Index Values: -1,000 cfs to -2,500 cfs • DCC Gates: Closed on 10/16, Opening 10/20 for weekend • Tides: Transitioning from Spring to Neap; First Quarter Moon 10/21 | <ul style="list-style-type: none"> • X2 > 81 km • SMSCG – Flashboards installed 8/14, gate tidal operation began 8/15; projected to stop 10/20. <p><i>(Updated 10/16/2023)</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 | 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: 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 | 10/16/2023 |
| Delta Smelt | Daily avg. Turbidity at OBI=>12 FNU | OBI Daily Average = Not relevant | Not relevant | 10/16/2023 |

| Species/run | Threshold | Current Status | Weekly Trend | Updated |
|-------------|---|---|--------------|------------|
| 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 | 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 | 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 Towntnet Survey | Delta | Not Active | 4 |

| Monitoring survey | Region | Notes (as of 10/17/2023) | Status |
|---|-------------------|--------------------------|--------|
| 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 (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