Weekly Fish and Water Operations Outlook 10/31/2023 – 11/06/2023

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

* Milder daytime temperatures this week; overnight temperatures remain cool; light precipitation chances for northern portion of Sacramento Valley; below normal high temperatures in the extended period.

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 | * Current Release: 200 cfs * Anticipated Weekly Range of Releases: 200 cfs | * Fall-run Chinook salmon adults are beginning to spawn. A few redds and carcasses have been observed. * Spring-run Chinook salmon eggs are incubating in the gravel (very few redds this year). * Adult O. mykiss are migrating into the creek and juveniles are rearing. * *O. mykiss* juveniles are rearing.   (*Updated 10/30/2023*) |
| Sacramento River | * Shasta Storage: 3.159 MAF * Current Release: 6,500 cfs * Anticipated Weekly Range of Releases: 5,000 cfs to 6,500 cfs. | * Fall-run Chinook salmon are migrating into tributaries, holding, and spawning. * Late-fall run Chinook adults are moving upstream and holding in the river awaiting spawning in Dec-Jan. * Some (5%) Winter-run fry remain in redds, most have emerged. * Length-at-date spring run fry are being captured at RBDD, and genetic analysis, conducted for run assignment. * *O.* *mykiss* juveniles are rearing. * Adult green sturgeon are holding. * Green sturgeon juveniles are rearing.   *(Updated 10/30/2023)* |
| Feather River | * Oroville Storage: 2.431 MAF * Current Release: 2,100 cfs * Anticipated Weekly Range of Releases: 1,750 to 2,100 cfs. | * Fall-run Chinook salmon adult spawning has likely begun. * *O. mykiss* juveniles are rearing.    Adults are migrating upstream. * Adult green sturgeon are still holding in the Low Flow Channel. * Spring-run adults have likely completed spawning.   (*Updated 10/31/2023*) |
| American River | * Folsom Storage: 559 TAF * Current Release: 2,500 cfs * Anticipated Weekly Range of Releases:  2,000 cfs to 2,500 cfs | * *O. mykiss* juvenile are rearing. * Adult fall-run Chinook are migrating upstream, holding, and have begun spawning.   (*Updated 10/31/2023*) |
| Stanislaus River | * New Melones Storage: 1.889 MAF * Fall attraction pulse flow finishing * Base flow anticipated 250 cfs | * *O. mykiss* - Adult and juveniles present * Fall-run Chinook salmon are migrating upstream and beginning to spawn * Fall-run Chinook salmon adult observations are low this year compared to other years, with only 840 fall-run Chinook salmon passing through the Stanislaus Weir.   (*Updated 10/31/2023*) |
| Delta | * Freeport: 8,000 to 10,500 cfs * Vernalis: 1,500 to 3,500 cfs * Delta Outflow index: 4,000 to 12,000 cfs * Combined Exports: 1,200 to 9,380 cfs * JPP: Current 900 cfs, Range 900 cfs to 2,700 cfs * CCF: Current 300 cfs,  Range 300 cfs to 6,680 cfs * Expected Daily OMR Index Values: 0 cfs to   -6,000 cfs   * DCC Gates: Closed on 10/30, Opening 11/3 ; gate maintenance opening tests during week. * X2 is at 76 km * Tides: Transitioning from Spring to neap; Last Quarter Moon on 11/5 | * Adult O. mykiss present * Adult and juvenile Green Sturgeon present * Delta Smelt sub-adults and adults are present in the north delta arc and downstream of the confluence. * Longfin Smelt sub-adults and adults have been detected at Chipps Island.   (*Updated 10/31/2023*) |

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 | 10/30/2023 |
| Natural winter-run Chinook Salmon | WY 2024 loss = TBD\*  (50% of 1.17% of JPE) | WY 2024 loss = 0 (0%) | No change expected | 10/30/2023 |
| 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 | 10/30/2023 |
| 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 | 10/30/2023 |
| Battle Creek  Hatchery winter-run Chinook salmon | WY 2024 loss = TBD\* (1% of JPE) | WY 2024 loss = 0 (0%) | No change expected | 10/30/2023 |
| Proposed Action Hatchery yearling spring-run Chinook salmon surrogates | > 0.5% of each release group | WY 2024 loss = 0 (0%) | No change expected | 10/30/2023 |
| 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 |
| 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%) | 10/30/2023 |
| Hatchery winter-run Chinook salmon | Loss = 5,356 | Cumulative loss =  6.71 (0.13%) | 10/30/2023 |
| 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) | 10/30/2023 |

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 | 10/30/23 | In effect beginning 11/1/23 |
| 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 | 10/30/23 | In effect beginning 11/1/23 |
| 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 10/31/2023) | 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 | 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 | 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 | Active | 1 |
| 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