



Weekly Fish and Water Operations Outlook

6/11/2024 – 6/17/2024

Water Project Operational Intent for Week

- Reclamation and DWR propose joint water project operations be limited to a 14-day average OMRI flow no more negative than -5,000 cfs.

Forecasted Weather

- A significant heat-up from the weekend will occur at the start of the week; temperatures will trend cooler late in the week.

Table 1: Anticipated weekly operational ranges by tributary. Note that all reservoir storage, flow, X2 position, etc. shown below are entered into the table as of 6/10. 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: 150 cfs • Anticipated Weekly Range of Releases: 150 cfs to 500 cfs, attraction pulse | <ul style="list-style-type: none"> • Juvenile Chinook Salmon are rearing and out-migrating in low numbers. • Juvenile O. mykiss are rearing. • Adult spring run Chinook Salmon are migrating into Clear Creek. <p><i>(Updated 6/10/2024)</i></p> |

| Tributary/Division | Anticipated Weekly Ranges | Related Environmental and Fish Conditions |
|--------------------|--|--|
| Sacramento River | <ul style="list-style-type: none"> • Shasta Storage: 4.243 MAF • Current Release: 9,000 cfs • Anticipated Weekly Range of Releases: 9,000 cfs to 10,000 cfs | <ul style="list-style-type: none"> • Most Late-fall run Chinook eggs/alevins are finished residing in the gravel, some later February-March spawned fry remain in the gravel. Fry are actively migrating downstream. • Spring run smolts are absent from upper river sampling. • Fall run smolts are declining to very low numbers in upper river sampling • Spring run adults are moving upstream in the Sac and into various tributaries where they will spend the summer before spawning in Sep-Oct. • Adult winter-run are arriving in the upper river and holding. Spawning for winter-run has begun. Juvenile steelhead are outmigrating in low numbers. • Larval Green Sturgeon are being captured in moderate numbers while adult spawning continues into June-July. <p><i>(Updated 6/10/2024)</i></p> |
| Feather River | <ul style="list-style-type: none"> • Oroville Storage: 3.524 MAF • Current Release: 3,800 cfs • Anticipated Weekly Range of Releases: 2,000 cfs to 5,000 cfs. | <ul style="list-style-type: none"> • Fall-run Chinook salmon fry are migrating downstream, majority have left the system. • O. mykiss juveniles are rearing or migrating downstream. • Majority of adult green sturgeon are still holding in the LFC near Fish Barrier Dam. • A majority of Spring-run Chinook salmon juveniles have left the system. • Adult spring-run Chinook salmon are migrating up into the system past the fish monitoring station. Some have entered the hatchery and have been tagged. <p><i>(Updated 5/21/2024)</i></p> |
| American River | <ul style="list-style-type: none"> • Folsom Storage: 945 TAF • Current Release: 3,000 cfs • Anticipated Weekly Range of Releases: 3,000 cfs to 4,000 cfs | <ul style="list-style-type: none"> • O. mykiss juveniles are rearing. • Fall-run Chinook salmon fry have nearly completed downstream migration. • O. mykiss Adults are present. <p><i>(Updated 5/14/2024)</i></p> |

| Tributary/Division | Anticipated Weekly Ranges | Related Environmental and Fish Conditions |
|--------------------|---|---|
| Stanislaus River | <ul style="list-style-type: none"> • New Melones Storage: 2.104 MAF • Current Release: 850 cfs • Anticipated Weekly Range of Releases: Possible 850 cfs to 1,500 cfs. | <ul style="list-style-type: none"> • O. mykiss Adult and juveniles are present. • Fall-run Chinook juveniles are nearly done outmigrating. <p><i>(Updated 6/10/2024)</i></p> |
| Delta | <ul style="list-style-type: none"> • Freeport: 13,000 to 16,000 cfs • Vernalis: 2,500 to 3,200 cfs • Delta Outflow index: 10,000 to 13,000 cfs • Combined Exports: 3,800 to 6,700 cfs • JPP: Current 4,200 cfs, Anticipated Weekly Range: 3,500 cfs to 4,200 cfs • CCF: Current 1,700 cfs, Anticipated Weekly Range = 300 cfs to 2,500 cfs • San Luis Storage: Total = 1.157 MAF; Fed share = 741 TAF; State share = 416 TAF • Expected OMR Index Values: - 3,500 cfs to -5,000 cfs • DCC Gates: Closed on 6/10 and Open on 6/14 • X2 = 73 km • Tides: Transitioning from Neap to Spring; First Quarter Moon on 6/13 | <ul style="list-style-type: none"> • Juvenile and adult O. mykiss present. • Juvenile Chinook Salmon present. • Adult winter-run Chinook Salmon are present. • Adult and juvenile Green Sturgeon are present. • Adult spring-run Chinook Salmon are present. • Adult DS spawning is ongoing. DS larvae have been detected in Suisun Bay, Suisun Marsh, the Lower Sacramento, Cache Slough/Liberty Island, and the Deep Water Shipping Channel since 4/29. No Delta Smelt have been detected in Salvage since 4/29. One larval DS was detected in the South Delta on 5/13. • Longfin Smelt sub-adults and adults have been detected in Carquinez Strait and downstream. Longfin Smelt larvae and juveniles are in the Napa River, Carquinez Strait, San Pablo Bay, Suisun Bay and Marsh, and the Confluence. LFS spawning has likely ended. <p><i>(Updated 6/10/2024)</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. The Final WR JPE for BY 2023 is 234,896. The ITL and performance thresholds are TBD.

| Species/run | Threshold | Current Status | Weekly Trend | Updated |
|----------------|----------------------|--------------------------|--------------------|-----------|
| Green sturgeon | WY 2024 salvage = 74 | WY 2024 salvage = 0 (0%) | No change expected | 5/27/2024 |

| Species/run | Threshold | Current Status | Weekly Trend | Updated |
|---|---|---|--------------------|---------|
| Natural winter-run Chinook Salmon | <p>WY 2024 loss = 2748 (100% of 1.17% of JPE)</p> <p>Single-year ITL= 4698 (2% of JPE)</p> <p>Three-year rolling average ITL = 5,145 (number needed to achieve the average of 1.3% of JPE for the last 3 years: 1776)</p> | <p>WY 2024 loss = 4205.05 (89.5% of single-year ITL)</p> <p>100% threshold exceeded 3/20/2024</p> <p>75% threshold exceeded 3/7/2024</p> <p>50% threshold exceeded 2/25/2024</p> | No change expected | 6/10/24 |
| Natural Steelhead | <p>Dec 1 – Mar 31 = 1414; Incidental Take =3,040</p> <p>Apr 1 – June 15 = 1552</p> | <p>WY 2024 loss = 5285.59</p> <p>Dec 1 – Mar 31 = 3374.81</p> <p>Incidental Take limit exceeded on 3/20/24</p> <p>Apr 1 – June 15 = 1910.78 (63% of the Incidental Take Limit)</p> <p>100% threshold exceeded on 4/26/2024</p> <p>75% threshold exceeded 4/15/2024</p> <p>50% threshold exceeded 4/9/2024</p> | Decreasing | 6/10/24 |
| Sacramento River Hatchery winter-run Chinook salmon | WY 2024 loss = 140.93 (50% of 0.12% of JPE) | WY 2024 loss = 4.33 (3.07%) | No change expected | 6/10/24 |
| Battle Creek Hatchery winter-run Chinook salmon | WY 2024 loss = 234.90 (1% of JPE) | WY 2024 loss = 0 (0%) | No change expected | 6/10/24 |

| Species/run | Threshold | Current Status | Weekly Trend | Updated |
|--|--|---|--------------------|---------------------------------|
| Proposed Action Hatchery yearling spring-run Chinook salmon surrogates | > 0.5% of each release group 1) 12/22/2023 group 1: 60,764 = 303.82 2) 12/29/2023 group 2: 71,049 = 355.25 3) 1/11/2024 group 3: 67,018 = 335.09 | WY 2024 loss = 1) 36.84 (12.12%) 2) 38.96 (11%) 3) 81.18 (24.2%) | No Change Expected | 6/10/24 |
| Delta Smelt | After Dec. 1: Running 3-day avg. flows at Freeport >25,000 cfs AND Running 3-day avg. turbidity at Freeport =>50 FNU | Offramped. Implemented 1/23/2024-2/5/2024. Flow = N/A; Turbidity = N/A | Not relevant | 2/12/2024 |
| Delta Smelt | Daily avg. Turbidity at OBI=>12 FNU | Offramped. OBI Daily Average = N/A | Not relevant | 4/1/2024 |
| Delta Smelt | Daily avg. Temperature at CCF > 25°C for three consecutive days | In effect. Not triggered. CCF (CLC CDEC station) 3-day avg. Temperature = 24.4°C | Increase expected | 6/10/2024 (data as of 6/9/2024) |

Table 2b. 10-Year Salmonid Cumulative Loss

| Species/run | Threshold | Current Status | Updated |
|------------------------------------|--|---|---------|
| Natural winter-run Chinook salmon | Loss = 8,738 | Cumulative loss = 4575.3 (52.36%) | 6/10/24 |
| Hatchery winter-run Chinook salmon | Loss = 5,356 | Cumulative loss = 11.04 (0.21%) | 6/10/24 |
| Natural steelhead | Loss = 6,038 (Dec 1 – Mar 31) Loss = 5,826 (Apr 1 – June 15) | Cumulative loss = 4951.27 (82%, Dec 1 – Mar 31) 2923.28 (50.2%, Apr 1 – June 15) | 6/10/24 |

Table 3a-c: 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 $\geq 5\%$ of spring-run or winter-run in Delta) | In effect | $\geq 5\%$ of the Winter-run or Spring-run population in Delta | N/A | N/A | 2/26/2024 | In effect as of January 1. |
| Winter-run yearly loss (8.6.1) | Nov. 1 - Jun. 30 | In effect | 2,748.28 (1.17% of Natural LAD WR of Final JPE) 232.30 (0.12% of LSNFH WR of Final JPE) | Loss of total LAD WR = 4205.05 Loss of total hatchery WR = 4.33 (1.86% of hatchery WR threshold) | Salvage may occur in the upcoming week | 6/3/24 | Natural-origin LAD winter-run Chinook salmon (WR) were not observed in salvage the previous week. The 100% Annual Loss Threshold was exceeded on 3/20/24. |
| Winter-run discrete daily loss (8.6.2) | Nov. 1 - Dec. 31 | Not In effect | 26 older juvenile/day | Max Older Juvenile discrete daily loss observed last week = N/A | N/A | 1/22/2024 | N/A |
| Mid and late season Winter-run daily loss threshold (8.6.3) | Jan 1 – May 31 | Not In effect | Loss threshold for May 5/1-5/31: 0 (0% of WR JPE) | No loss has occurred for older LAD in previous week. | Salvage of older juveniles may occur in the upcoming week. | 6/3/2024 | 23 genetically confirmed WR have been observed in salvage so far this season. |

| Action | Timeframe | Current Action Status | Threshold(s) | Current Relevant Data | Weekly Trend | Last Updated | Comments |
|---|------------------|-----------------------|--|---|---|--------------|---|
| Spring-run surrogate protection (8.6.4) | Feb. 1 - Jun. 30 | In effect | Feather River Hatchery CWT (Group 1) loss threshold: 1,749.64 Feather River Hatchery CWT (Group 2) loss threshold: 1,751.57 Feather River Hatchery CWT (Group 3) loss threshold: 1,400.76 Coleman National Fish Hatchery CWT (Group 1) loss threshold: 1,792.94 Coleman National Fish Hatchery CWT (Group 2) loss threshold: 266.33 Nimbus Fish Hatchery CWT (Group 1) loss threshold: 525.88 | None have been observed at the salvage facilities yet | Salvage may occur from any of these groups in the upcoming week | 6/3/24 | All releases for this action has been completed for the season. |

| Action | Timeframe | Current Action Status | Threshold(s) | Current Relevant Data | Weekly Trend | Last Updated | Comments |
|-------------------------------|------------------|-----------------------|---|--|---|--------------|----------|
| End of OMR Management COA 8.8 | June 1 – June 30 | In Effect | Greater than 95% of WR and SR exited past Chipps Island and Mossdale and Prisoners Point exceeding 22.2 °C for 7 nonconsecutive days in June. | 99% - 100% of Winter Run have exited past Chipps Island. 99% -100% of Spring Run have exited past Chipps Island. Mossdale and Prisoner Point exceeded 22.2 °C for 4 days from 6/6-6/9. | Temperatures to likely exceed 22.2 °C in upcoming week. | 6/9/24 | 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 | Off-ramped | - three-day Freeport daily flow running avg >= 25,000 AND [three-day Freeport turbidity running avg >=50 FNU OR Smelt Monitoring Team recommendation] | Not relevant | Not relevant | 2/12/24 | N/A |
| Turbidity Bridge Avoidance (8.5.1) | Dec. 15 - Apr. 1 | Off-ramped | Occurs after the Integrated Early Winter Pulse protection or February 1 whichever comes first until April 1 -avg. OBI turbidity > 12 FNU | Not relevant | Not relevant | 4/1/2024 | N/A |
| Larval and/Juvenile Delta smelt Protection (8.5.2) | Nov. 1 – Jun. 30 | In effect; not triggered by 20mm 6 | - If 5-day cum. salvage of juv.DS >= 1 [average 3-yr FMWT index + 1], then -5000 OMR - If DS in SLS/20mm or 3-d temp at Jersey Point >= 12C, and SLS/20mm Secchi for 12 south delta stations <= 1m, then -3500 OMR | Current 5-day salvage = 0 3-day average SJJ temp exceeded 12C on 1/31/2024 Average Secchi Depth = 109 cm (as of 5/27-5/30) | Secchi depth stable | 6/4/24 | N/A |

Table 3c: Longfin Smelt

| Action | Timeframe | Current Action Status | Threshold(s) | Current Relevant Data | Weekly Trend | Last Updated | Comments |
|--|--|--------------------------|---|--|--------------------|--------------|----------|
| Early Adult Protection (8.3.3) | Dec. 1 - Feb. 28 | Off-ramped | -Cum. salvage > [most recent FMWT/10] = 46 fish (Sept.-Dec. Index) OR -Smelt Monitoring Team determines high likelihood of LFS movement into high-risk areas | Cumulative salvage = 0 | N/A | 12/26/23 | N/A |
| OMR Mgt. for Adults (8.4.1) | Onset of OMR mgmt -Feb. 28 | Off-ramped | -Smelt Monitoring Team recommendation | N/A | N/A | 12/19/23 | N/A |
| Larval and Juvenile Longfin Smelt Entrainment Protection (8.4.2) | Jan 1 – Jun 30 | Not triggered by 20 mm 6 | -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 | 20mm 6 did not detect any larvae in the South and Central Delta. | N/A | 6/4/24 | 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 | Not triggered | -Sac. R. at Rio Vista >55,000, OR SJR at Vernalis >8,000 | Rio Vista = 8,000 – 14,000 cfs SJ = 3,000 – 4,500 cfs | Flows are variable | 6/3/24 | 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 6/4/2024) | Status |
|--|-------------------|--------------------------------------|--------|
| SWP regular counts, CWT reading | Delta | Active | 1 |
| SWP larval sampling | Delta | Active | 1 |
| CVP regular counts, CWT reading | Delta | Active | 1 |
| CVP larval sampling | Delta | Active | 1 |
| Smelt Larval Survey | Delta | Not Active | 4 |
| LEPS | Delta | Active | 1 |
| 20mm Survey | Delta | Active | 1 |
| Fall Mid-water Trawl | Delta | Not Active | 4 |
| Summer Towntnet Survey | Delta | Active | 1 |
| Bay Study | Delta | Active | 1 |
| DJFMP- Chipps and Sacramento Trawls | Delta | Active | 1 |
| DJFMP- Seines | Delta | Active | 1 |
| EDSM | Delta | Active | 1 |
| Environmental Monitoring Program (EMP) | Delta | Active | 1 |
| Mossdale Trawl | 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 | Not Active (since 6/4) | 4 |
| Tisdale RST | Sacramento River | Not Active (ended for season on 6/5) | 4 |
| Yuba River (Hallwood) RST | Yuba River | Active | 1 |
| Redd dewatering and stranding surveys | Sacramento River | Active | 1 |
| Sacramento Carcass and Redd Surveys (Late fall-run Chinook salmon) | Sacramento River | Active | 1 |
| Sacramento Carcass and Redd Surveys (Winter-run Chinook salmon) | Sacramento River | Active | 1 |
| Lower Sacramento RST | Sacramento River | Not Active | 4 |
| Feather River (upper DWR) RST | Feather River | Active | 1 |
| Feather River (lower CDFW) RST | Feather River | Active | 1 |
| Lower American River at Watt Ave RST | American River | Active | 1 |
| SJRRP CDFW Field Monitoring | San Joaquin River | Active | 1 |
| SJRRP USBR Field Monitoring | San Joaquin River | Not Active | 4 |

| Monitoring survey | Region | Notes (as of 6/4/2024) | Status |
|---|------------------|-------------------------------|---------------|
| Stanislaus Fish Weir | Stanislaus River | Active | 1 |
| American River Carcass/Redd Surveys (Fall-run Chinook salmon) | American River | Not Active | 4 |
| Stanislaus Redd Survey (Steelhead) | Stanislaus River | Not Active | 4 |
| Caswell RST | Stanislaus River | Active | 1 |
| Wallace Weir | Cache Slough | Not Active | 4 |
| Butte Creek RST/Diversion Trap | Butte Creek | Active | 1 |