BUREAU OF RECLAMATION

Weekly Fish and Water Operations Outlook

6/18/2024 – 6/24/2024

Water Project Operational Intent for Week

- Reclamation and DWR propose joint water project operations be conducted according to D-1641 requirements.

Forecasted Weather

- Dry and generally seasonable through midweek, with a warming trend expected late week into the weekend.

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 6/17. 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: 500 cfs • Anticipated Weekly Range of Releases: 175 cfs to 500 cfs, attraction pulse	• 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. *(Updated 6/10/2024)*

Tributary/Division	Anticipated Weekly Ranges	Related Environmental and Fish Conditions
Sacramento River	• Shasta Storage: 4.184 MAF • Current Release: 9,000 cfs • Anticipated Weekly Range of Releases: 9,000 cfs to 10,000 cfs	• 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. *(Updated 6/10/2024)*
Feather River	• Oroville Storage: 3.489 MAF • Current Release: 4,500 cfs • Anticipated Weekly Range of Releases: 2,000 cfs to 5,000 cfs.	• 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. • 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. *(Updated 6/18/2024)*
American River	• Folsom Storage: 932 TAF • Current Release: 3,500 cfs • Anticipated Weekly Range of Releases: 3,500 cfs to 4,000 cfs	• O. mykiss juveniles are rearing. • Fall-run Chinook salmon fry have nearly completed downstream migration. • O. mykiss Adults are present. *(Updated 5/14/2024)*

Tributary/Division	Anticipated Weekly Ranges	Related Environmental and Fish Conditions
Stanislaus River	• New Melones Storage: 2.086 MAF • Current Release: 2,500 cfs • Anticipated Weekly Range of Releases: Possible 1,500 cfs to 2,500 cfs.	• O. mykiss Adult and juveniles are present. • Fall-run Chinook juveniles are nearly done outmigrating. *(Updated 6/10/2024)*
Delta	• Freeport: 13,000 to 16,000 cfs • Vernalis: 2,000 to 3,500 cfs • Delta Outflow index: 9,000 to 12,000 cfs • Combined Exports: 3,000 to 7,200 cfs • JPP: Current 2,700 cfs, Anticipated Weekly Range: 2,700 cfs to 4,200 cfs • CCF: Current 800 cfs, Anticipated Weekly Range = 300 cfs to 3,000 cfs • San Luis Storage: Total = 1.109 MAF; Fed share = 713 TAF; State share = 396 TAF • Expected OMR Index Values: -2,500 cfs to –6,000 cfs • DCC Gates: Open on 6/14; testing on 6/21 • X2 = 73 km • Tides: Transitioning from Spring to Neap; Full Moon on 6/21	• Juvenile and adult O. mykiss present. • Juvenile Chinook Salmon present in small numbers. • Adult winter-run Chinook Salmon are present • Adult and juvenile Green Sturgeon are present. • Adult spring-run Chinook Salmon are present. • 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. *(Updated 6/18/2024)*

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
Natural winter-run Chinook Salmon	WY 2024 loss = 2748 (100% of 1.17% of JPE) Single-year ITL= 4698 (2% of JPE) Three-year rolling average ITL = 5,145 (number needed to achieve the average of 1.3% of JPE for the last 3 years: 1776)	WY 2024 loss = 4205.05 (89.5% of single- year ITL) 100% threshold exceeded 3/20/2024 75% threshold exceeded 3/7/2024 50% threshold exceeded 2/25/2024	No change expected	6/17/24
Natural Steelhead	Dec 1 – Mar 31 = 1414; Incidental Take =3,040 Apr 1 – June 15 = 1552	WY 2024 loss = 5294.25 Dec 1 – Mar 31 = 3374.81 Incidental Take limit exceeded on 3/20/24 Apr 1 – June 15 = 1919.44 (63% of the Incidental Take Limit) 100% threshold exceeded on 4/26/2024 75% threshold exceeded 4/15/2024 50% threshold exceeded 4/9/2024	Decreasing	6/17/24

Species/run	Threshold	Current Status	Weekly Trend	Updated
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	6/17/24
Battle Creek Hatchery winter-run Chinook salmon	WY 2024 loss = 234.90 (1% of JPE)	WY 2024 loss = 0 (0%)	No change expected	6/17/24
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	6/17/24
End of OMR Management	Salmonids (Steelhead): >95% past Chipps Island daily average water temperatures at Mossdale exceed 71.6°F for 7 days during June, may be non-consecutive	Offramped on 6/12. Days above 71.6°F= 7	N/A	6/18/2024
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

Species/run	Threshold	Current Status	Weekly Trend	Updated
Delta Smelt	Daily avg. Temperature at CCF > 25°C for three consecutive days	In effect. Triggered 6/13/24. CCF (CLC CDEC station) 3- day daily Temperature 6/11-6/13 = 25.3C, 26.0C, 25.8C	Not relevant	6/18/2024 (data as of 6/13/2024)

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

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	6/18/2024	In effect as of January 1.

Action	Timeframe	Current Action Status	Threshold(s)	Current Relevant Data	Weekly Trend	Last Updated	Comments
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.	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 7 days as of 6/12.	N/A	6/18/24	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

Action	Timeframe	Current Action Status	Threshold(s)	Current Relevant Data	Weekly Trend	Last Updated	Comments
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
End of OMR Management (8.8)	June 1 – June 30	In effect	When the daily mean water temperature at Clifton Court Forebay reaches 25C for 3 consecutive days	3 consecutive days of 25C at CCF reached on 6/13/24	Not relevant	6/18/24	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

Action	Timeframe	Current Action Status	Threshold(s)	Current Relevant Data	Weekly Trend	Last Updated	Comments
End of OMR Management (8.8)	June 1 – June 30	In effect	When the daily mean water temperature at Clifton Court Forebay reaches 25C for 3 consecutive days	3 consecutive days of 25C at CCF reached on 6/13/24	Not relevant	6/18/24	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 1/17/2023)	Status
SWP regular counts, CWT reading	Delta	Active	1
CVP regular counts, CWT reading	Delta	Active	1
CVP larval sampling	Delta	Not Active	4
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 Townet 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

Monitoring survey	Region	Notes (as of 1/17/2023)	Status
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	Not Active	4
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
Stanislaus Fish Weir	Stanislaus River	Not Active (since mid-April)	4
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	Not Active (as of 6/12)	4