Stanislaus Watershed Team

January 17, 2024

Members Attending

- USBR: Amanda Snow, Catarina Pien, Chase Ehlo, Claire Hsu, Peggy Manza, Spencer Marshall, Zarela Guerrero
- USFWS: J.D. Wikert
- CDFW: Crystal Rigby, Gretchen Murphey, Ryan Kok, Travis Apgar, Steve Tsao
- NMFS: Barb Byrne
- DWR: William McLaughlin
- SWRCB: Yongxuan Gao, Chris Carr
- PSMFC: Logan Day
- SSJID: N/A
- Fishbio: N/A
- Stockton East Water District (SEWD): Justin Hopkins
- WAPA: N/A
- Herum/Crabtree/Suntag Attorneys: N/A
- Kearns & West: Karis Johnston, Bethany Taylor

Action Items

1. Zarela Guerrero and Amanda Snow, USBR, to check USBR records on the effects of peak flows and duration on agriculture in the Sacramento Valley.
    a. Records to include those authored by Patti Clinton.
2. Peggy Manza, USBR, to check with USBR management for approval on proposed flow patterns proposed by NMFS.
    a. If approved, Barb Byrne, NMFS, to make adjustments to the flow patterns for faster ramping rates, including capping flows at 1,500 cfs.
3. Kearns & West to share finalized November and December 2023 summaries [Complete]

Announcements

- N/A

Operations Update and Forecasts/ Hydrology

New Melones Reservoir Update

- The actual volume of water from precipitation has remained low despite the number of precipitation events in the area.
- Storage, at 1.83 MAF, is currently slightly above flood control level.
- Releases are 1,000 cfs to draw storage down to the flood control level.
- Flood control releases may be reevaluated the week of 1/22/24 due to expected precipitation over the 1/19 – 1/21/24 weekend.
- New Melones was offline for a six-week period during November and December 2023.

Daily CVP Water Supply

- Releases are currently 1,000 cfs.
- Storage in New Melones as of 1/17/24 was 1.983 MAF.
- Accumulated inflow to date is 178 cfs (94% of the 15-year average). Inflow is partially coming from the upstream power reservoirs rather than from precipitation alone.

New Melones

- Figures show a steady drawdown of storage during January.
- Inflow has been low for January with the highest-level days being Jan. 2 – 3.
- Units were offline for a six-week period in Nov/Dec.
- In December, releases were made through an outlet for 3 days to bolster storage at Tulloch in order to avoid dropping below a threshold of 475 cfs.

Tulloch

- Elevation increased slightly before decreasing again during January.
- Storage levels decreased on Jan. 1 before increasing through Jan. 5. Beginning Jan. 6, levels started decreasing again.
- December starting elevation was nearly 478 [units] before dropping down to 472, and then was bolstered up to 476, remaining stable at the end of the month.

Goodwin

- January releases began at 200 cfs before increasing to 1,000 cfs for flood control purposes.
- No releases were made to contractors in December.
- Releases remained at approximately 200 cfs for the entirety of December.

Other Operations

- Forecasting
    - The forecast is still in development.
    - At the 90% exceedance level, the San Joaquin Basin is in Critical condition. 90% is the exceedance level for New Melones.
        - Vernalis operates at the 75% exceedance level.
        - Most precipitation received thus far has fallen in Northern CA and remained relatively light.
    - Questions
        - What is the 75% percent exceedance that you will need to operate to for the San Joaquin? Is that Dry?
            - It is considered Dry at 75% exceedance level.
            - San Joaquin Index 75% Jan 1 = 2.35 (Dry = 2.1 – 2.5)

Water Temperature Updates

- Stanislaus River water temperatures have been cool compared to the previous month and are suitable for spawning, holding fish, and egg incubation.
- As an example, at Orange Blossom, temperatures typically remain cooler from mid-December through early March.

Flow Planning

- Update from USBR
    - Peggy Manza, USBR, sent a memo to the fishery agencies. Because USBR is operating at flood control releases, the agencies are asking: is USBR going to decide if this has met the intent of the Stepped Release Plan (SRP) for January because the volume of water has been exceeded? USBR decided that the intent of the SRP has *not* been met. A different decision was made last year due to multiple flood control releases from Lake Tulloch which resulted in a pattern of dramatic drops and increases. During that time, New Melones storage was very low (holding in the 600-700 TAF storage range), so it was assumed that the intent had been met. This year's flood control releases are much less dramatic and are coming from New Melones rather than Lake Tulloch because the flood control rule is in place, indicating a sufficient January volume that can be allocated for a Winter Instability Flow (WIF) action in February. The WIF is expected to benefit the fisheries by controlling storage volume to encourage preferred fish movement patterns. USBR does not require the fishery agencies to use the designated January flow volume and is allowing them the option to combine the January and February volumes. The January allocation, (calculated as 5 days at 400 cfs) is

based on the Water Year 2023 type (Wet) because the first official Bulletin 120 has not yet occurred. February will be the first official Bulletin 120.

- Manza has suggested the fishery agencies present three flow patterns as options:
    - A Wet January + Critical February pattern
    - A Wet January + Dry February pattern
    - A Wet January + Below Normal February pattern (the least likely option unless heavy precipitation occurs during the last two weeks of January)
- If a combined WIF is chosen on 1/17/24, USBR will run the proposals through various groups of policy makers for approval and consistency with the 2019 BiOp.
- Questions / Comments for USBR
    - Clarification requested from NMFS on USBR's approval of a combined pulse. Previously thought USBR would allow the combined amount as long as it was volume neutral. SWT agreed previously there is a biological benefit. NMFS has no issue with a combined pulse.
        - Manza clarified that CBO is okay with the combined WIF, but they are not the sole decision makers. BDO is the tracker of all the policy and final decisions: they review guidance documents, previous actions, and the 2019 BiOp in order to make a decision that is consistent. USBR also needs CCAO, the operator of New Melones, to confirm they approve.
    - Clarification requested on the timeline for processing this request through BDO.
        - Manza, USBR will submit the proposed flows from NMFS to BDO on 1/17/24. She will alert them that a quick turnaround time is required for planning purposes.

- Flow Patterns and Reasoning for the combined WIF
    - NMFS shared an updated spreadsheet on 1/17/24 that outlines the proposed combination patterns (Wet + Critical / Dry / Below Normal). Please refer to this previously distributed file for detailed information.
        - USBR included the message to BDO will include a request to use the doubled ramping rates for ramp downs. If BDO agrees, the proposed patterns can be altered for a faster drawdown.
        - CDFW shared special permission was required for faster drawdown in a previous instance.
        - USBR will ask for permission, and if approved, agencies will have the option to implement it or not.

- CDFW asked if the revised ramp down rates will be included in the upcoming consultation. It would be nice to apply those rates to the next BiOp.
    - USBR was unsure if this was included.

- Questions / Comments for NMFS
    - Support from USFWS for the increased ramping rates. Having additional days scheduled for higher flows is favorable for mobilizing fish as well as leaf litter and terrestrial insects.
    - USBR to check for permission for the proposed flow patterns and increased ramping rates.
    - NMFS noted that with a Critical February, there's not time to increase flows higher than 1,500 cfs in order to be able to decrease in time. However, if there is more water available to use, the peak flow could be set to 1,750 cfs. Manza will check with USBR to ensure this does not appear to cause any issues.
    - Differing opinions shared regarding optimal peak flow levels:
        - USFWS shared a preference to limit peak flow to 1,500 cfs. Viewed 8 hours at 1,500 cfs to give better results than 4 hours at 1,750 cfs, since duration could be the key factor. One of the objectives is to get water into the off-channel habitats. A flow of even 1,250 cfs starts to move into an active floodplain condition.
        - CDFW expressed preference to alternate peak levels between 1,500 cfs and 1,750 cfs in order to provide variance from the typical maximum flow of 1,500 cfs.
            - USBR clarified the State Water Resources Control Board sets the maximum flow to 1,500 cfs with the exception of flood control releases. The WIF is not categorized as a flood control release.
            - May need clear guidance on what flow levels and duration affect agriculture. USBR has received anecdotal evidence that two weeks is optimal; USBR to research records. Sustained high flows can lead to detrimental conditions.
            - There is sensitivity around the 1,500 cfs flows. Suggestion to cap at 1,500 cfs to avoid issues with the WIF.
            - For the spring pulse flow, SWT needs to understand the limitations for peak flows.
    - CDFW emailed a strawman flow schedule to select SWT members for consideration. Manza, USBR will propose discussion at USBR on 1/18/24.

- Key points for the SRP implementation:
    - SWT recommends to Reclamation to combine Jan/Feb volumes to implement combined WIF in the last two weeks of February, if possible, in conjunction with a precipitation event.
    - Shaping the flow to accommodate carcass surveys and then ramping back up on a weekly basis could provide secondary benefits to fisheries.
    - Noting that sometimes the storage management angle may take precedence over the flow shaping strategy.
    - Noting that real-time flow adjustments may be made depending on precipitation events.

Stanislaus River Forum (SRF) Call Review

- The January SRF meeting went smoothly. There were no comments received from members of the public.

Fish Monitoring

CDFW Fish Monitoring

- The Merced River carcass survey was completed the week of 1/11/24.
- The Stanislaus and Tuolumne River surveys are expected to continue another two weeks from 1/17/24.
- Stanislaus River survey crews were unable to survey the canyon during the week of 1/8/24 due to high flows.
- *O. mykiss* redd surveys started at the beginning of January. Crews were unable to survey the canyon during the week of 1/8/24.
- The Mossdale Trawl caught a juvenile salmon on 1/3/2024. This was originally incorrectly categorized as late-fall but was updated to reflect that it was tagged and likely a spring-run Chinook salmon released from the San Joaquin Restoration program.

Stanislaus Weir Update

- As of 1/11/24, 2,392 adult Chinook salmon have passed upstream of the weir.
    - 636 (27%) were adipose-clipped/of hatchery origin.
    - The most recent upstream Chinook passage was on 1/5/24.
- As of 1/11/24, 30 *O. mykiss* were observed passing the weir.
    - 23 (77%) *O. mykiss* were adipose-clipped/of hatchery origin.

- 26 *O. mykiss* were over 16 inches.

Rotary Screw Trap (RST) Updates

- PSMFC installed RSTs at Caswell Memorial State Park on 1/2/24 – 1/3/24.
- Crews have been sampling every day since installation.
- Captured fish totals as of 1/17/24 are:
    - 3 unclipped Chinook, each approximately 34 mm
    - Zero *O. mykiss*
    - 50 juvenile Pacific lamprey
- Debris in the river spiked with the flow increase to 1,000 cfs but has since tapered off.
- PSMFC expects higher catches with the WIF in February.

Restoration Project Updates

- Aerial photos of the Wakefield/Kerr Park Project were shared with SWT.

Progress Update on Proposed Action Elements

- N/A

Other Discussion Items

Curtailments

- N/A

Annual Reporting

- Reclamation is still waiting for one section of the report to be drafted.
- The existing report will be sent out this week for comments.

Items to elevate to WOMT

- No items for WOMT.

Next Meeting

Wednesday, February 21, 10:00 am –12:00 pm.

BUREAU OF RECLAMATION

Stanislaus Watershed Team

10:00 AM – 12:00 PM
Conference Line: 1 (321) 209-6143; Meeting ID: 901 988 581#
Webinar: Join Microsoft Teams Meeting

Wednesday, January 17, 2024

Agenda

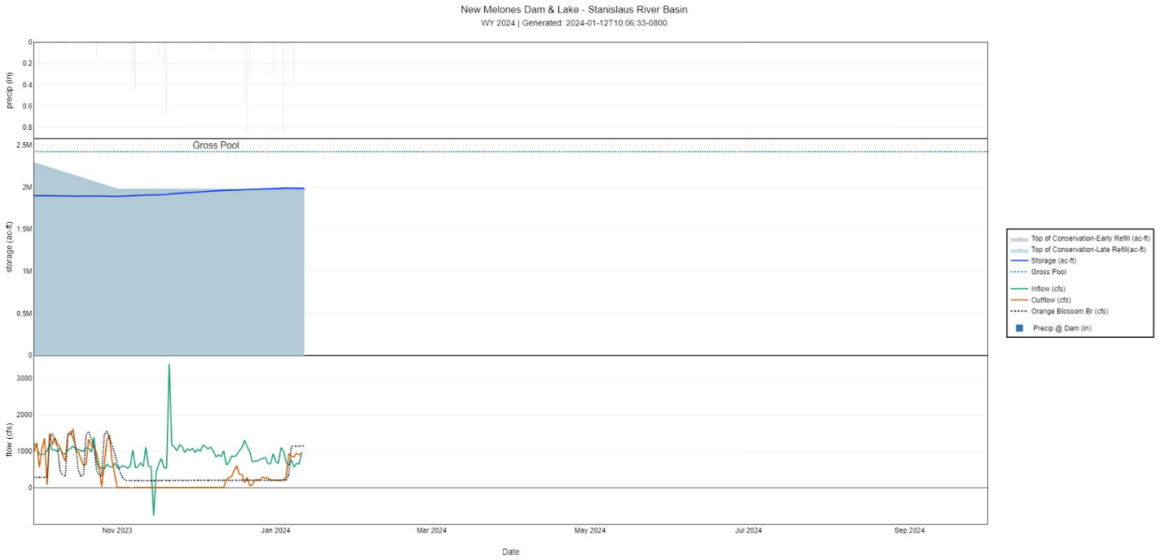
1. Introductions
2. Ground Rules[1]
3. Announcements
    a. Meeting will be recorded for notetaking purposes – Karis Johnson Kearns & West
4. Operations Update and Forecasts/Hydrology – Peggy Manza, USBR
5. Temperature Updates – Barbara Byrne, NMFS
6. Flow Planning – JD (John) Wikert, USFWS
7. Stanislaus River Forum (SRF) Call Review – Amanda Snow, USBR
8. Fish Monitoring and Studies – CDFW, FISHBIO, NMFS, PSMFC
9. Restoration Project Updates
    a. Restoration Tracker – JD (John) Wikert, USFWS

[1] The Stanislaus Watershed Team's Ground Rules are as follows:

1. Seek to understand and respect opposing views and suggestions for change (w/in the parameters of the Guidance Document).
2. Seek to leverage collective expertise (including from agencies' & stakeholders' consultants).
3. Hold questions/discussion at the discretion of the presenter.
4. Honor time limits - keep comments and discussion succinct and focused on meeting objectives as needed.
5. Make constructive proposals and suggestions to seek mutually agreeable solutions for all parties.
6. Keep a record of discussion and dialogue.
7. One speaker at a time
8. Take space/make space

b. Caterina Pien, USBR

10. Other Discussion Items
    a. WY23 Summary of Activities Report Update – Amanda Snow, USBR
    b. SWRCB Updates – Erin Foreman, Resa, Yongxuan Gao, Michael Macon, SWRCB
    c. Items to elevate to WOMT – Karis Johnson, Kearns & West
11. Review Action Items – Karis Johnson, Kearns & West
12. Next Meeting: Wednesday, February 21, 2024 (10am-12pm)



New Melones Dam & Lake – Stanislaus River Basin 2024-01-12T10:06 33-0800

BUREAU OF RECLAMATION

Daily CVP Water Supply

United States Department of the Interior
Bureau of Reclamation, Central Valley Project
Historical Archive and Report Database
Run Date: January 12, 2024
January 11, 2024

Table 4. Reservoir Releases in Cubic Feet Per Second

Reservoir	Dam	WY 2023	WY 2024	15-Year Median
Trinity	Lewiston	312	309	302
Sacramento	Keswick	4,312	5,061	4,071
Feather	Oroville (SWP)	950	1,750	1,750
American	Nimbus	18,273	1,744	1,775
Stanislaus	Goodwin	992	1,002	282
San Joaquin	Friant	6,379	427	406

Table 5. Storage in Major Reservoirs in Thousands of Acre-Feet

Reservoir	Capacity	15-Yr Avg	WY 2023	WY 2024	% O 15 Yr Avg
Trinity	2,448	1,300	653	1,319	101
Shasta	4,552	2,553	1,995	3,154	124
Folsom	977	422	408	463	110
New Melones	2,420	1,344	830	1,984	148
Fed. San Luis	966	538	346	806	150
Total North CVP	11,363	6,156	4,232	7,726	125
Millerton	521	291	431	253	87
Oroville (SWP)	3,538	1,748	1,731	2,448	140

Table 6. Accumulated Inflow for water Year to Date in Thousands of Acre-Feet

Reservoir	Current WY 2024	WY 1977	WY 1983	15-Yr Avg	% O 15 Yr Avg
Trinity	170	140	667	166	102
Shasta	846	1,009	2,945	1,079	78
Folsom	265	369	1,500	497	53
New Melones	178	N/A	329	188	94
Millerton	340	261	284	211	161

Table 7. Accumulated Precipitation for Water Year to Date in Inches

Reservoir	Current WY 2024	WY 1977	WY 1983	Avg (N Yrs)	% of Avg	Last 24 Hours
Trinity at Fish Hatchery	10.84	11.66	25.09	13.84 (64)	78	0.15
Sacramento at Shasta Dam	18.53	14.87	47.60	24.54 (69)	76	0.27
American at Blue Canyon	9.00	N/A	61.98	26.85 (50)	34	0.04
Stanislaus at New Melones	6.53	N/A	17.83	10.76 (47)	61	0.73
San Joaquin at Huntington LK	4.18	11.50	26.40	15.16 (51)	28	0.41

United States Department of the Interior
Bureau of Reclamation-Central Valley Project- California
New Melones Lake Daily Operations, January 2024, Run Date: 1/12/2024

Day	Elev	Storage 1000-Acre-Feet in Lake	Storage 1000-Acre-Feet Change	Computed Inflow C.F.S.	Release C.F.S. Power	Release C.F.S. Spill	Release C.F.S. Outlet	Evap. C.F.S.	Evap. Inches	Precip Inches
N/A	N/A	1,982.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	1,050.74	1,983.1	0.9	664	202	0	0	18	0.05	0.00
2	1,050.90	1,984.9	1.8	1,100	206	0	0	7	0.02	0.00
3	1,051.04	1,986.4	1.5	999	208	0	0	14	0.04	0.86
4	1,051.11	1,987.2	0.8	698	294	0	0	14	0.04	0.03
5	1,051.05	1,986.5	-0.7	612	939	0	0	7	0.02	0.01
6	1,051.03	1,986.3	-0.2	762	859	0	0	14	0.04	0.00
7	1,050.98	1,985.8	-0.6	563	841	0	0	0	0.00	0.37
8	1,050.93	1,985.2	-0.6	670	947	0	0	0	0.00	0.00
9	1,050.88	1,984.7	-0.6	648	907	0	0	18	0.05	0.00
10	1,050.89	1,984.8	0.1	986	924	0	0	7	0.02	0.04
11	1,050.81	1,1,983.9	-0.9	541	978	0	0	7	0.02	0.73
Totals	N/A	N/A	1.5	8,243	7,305	0	0	106	0.30	2.04
Acre-Feet	N/A	N/A	1,500	16,350	14,489	0	0	210	N/A	N/A

Comments:* Computed inflow is the sum of change in storage, releases, and evaporation.

Summary Precipitation

This Month	2.04
October 1, 2023 to Date	6.53

Summary: Release (acre- feet)

Power	14,489
Spill	0
Outlet	0
Total	**14,489**

United States Department of the Interior
Bureau of Reclamation-Central Valley Project- California
New Melones Lake Daily Operations, December 2023, Run Date: 1/10/2024

Day	Elev	Storage 1000-Acre-Feet in Lake	Storage 1000-Acre-Feet Change	Computed Inflow C.F.S.	Release C.F.S. Power	Release C.F.S. Spill	Release C.F.S. Outlet	Evap. C.F.S.	Evap. Inches	Precip. Inches
N/A	N/A	1,937.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	1,046.79	1,939.9	2.1	1,058	4	0	0	14	0.04	0.00
2	1,046.97	1,941.9	2.0	999	3	0	0	11	0.03	0.00
3	1,047.18	1,944.2	2.3	1,176	2	0	0	21	0.06	0.03
4	1,047.38	1,946.4	2.2	1,116	4	0	0	14	0.04	0.00
5	1,047.57	1,948.4	2.1	1,064	3	0	0	18	0.05	0.01
6	1,047.77	1,950.6	2.2	1,119	3	0	0	18	0.05	0.00
7	1,047.95	1,952.6	2.0	1,002	3	0	0	11	0.03	0.06
8	1,048.10	1,954.2	1.6	843	4	0	0	14	0.04	0.00
9	1,048.26	1,955.9	1.7	898	6	0	0	11	0.03	0.06
10	1,048.41	1,957.6	1.6	852	5	0	0	21	0.06	0.00
11	1,048.59	1,959.5	2.0	1,013	9	0	2	11	0.03	0.00
12	1,048.66	1,960.3	0.8	626	10	0	212	18	0.05	0.00
13	1,048.73	1,961.1	0.8	683	4	0	282	11	0.03	0.00
14	1,048.83	1,962.2	1.1	875	3	0	296	25	0.07	0.00
15	1,048.89	1,962.8	0.7	849	480	0	0	39	0.11	0.00
16	1,048.94	1,963.4	0.5	904	604	0	0	25	0.07	0.00
17	1,049.05	1,964.6	1.2	1,014	365	0	0	42	0.12	0.00
18	1,049.18	1,966.0	1.4	1,111	372	0	0	21	0.06	0.09
19	1,049.39	1,968.3	2.3	1,306	138	0	0	7	0.02	0.54
20	1,049.54	1,969.9	1.6	1,123	287	0	0	7	0.02	0.84
21	1,049.71	1,971.8	1.9	996	49	0	0	7	0.02	0.31
22	1,049.82	1,973.0	1.2	704	85	0	0	11	0.03	0.00
23	1,049.91	1,974.0	1.0	736	218	0	0	21	0.06	0.00
24	1,050.00	1,975.0	1.0	727	211	0	0	18	0.05	0.00
25	1,050.10	1,976.1	1.1	781	215	0	0	11	0.03	0.00
26	1,050.19	1,977.1	1.0	805	292	0	0	14	0.04	0.00
27	1,050.29	1,978.2	1.1	835	266	0	0	14	0.04	0.00
28	1,050.36	1,979.0	0.8	665	270	0	0	7	0.02	0.02
29	1,050.44	1,979.8	0.9	657	202	0	0	11	0.03	0.00
30	1,050.57	1,981.3	1.4	937	205	0	0	11	0.03	0.3
31	1,050.66	1,982.3	1.0	725	208	0	0	18	0.05	0.01
Totals	N/A	N/A	44.6	28,199	4,530	0	792	502	1.41	2.21

Day	Elev	Storage 1000-Acre-Feet in Lake	Storage 1000-Acre-Feet Change	Computed Inflow C.F.S.	Release C.F.S. Power	Release C.F.S. Spill	Release C.F.S. Outlet	Evap. C.F.S.	Evap. Inches	Precip. Inches
Acre-Feet	N/A	N/A	44,600	55,933	8,985	0	1,571	996	N/A	N/A

Comments:
* Computed inflow is the sum of change in storage, releases, and evaporation.

Summary Precipitation

This Month	2.21
October 1, 2023 to Date	4.49

Summary: Release (acre-feet)

Power	8,985
Spill	0
Outlet	1,571
Total	**10,556**

United States Department of the Interior
Bureau of Reclamation-Central Valley Project- California
Tulloch Reservoir Daily Operations, January 2024, Run Date: 1/12/2024

Day	Elev	Storage (Acre Feet) Reservoir	Storage (Acre-Feet) Change	Computed Inflow C.F.S.	New Melones Release	Release C.F.S. Power	Release C.F.S. Spill	Release C.F.S. Outlet	Evap. C.F.S. (1)
N/A	N/A	33,941	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	476.16	33,918	-23	201	202	212	N/A	N/A	1
2	476.19	33,941	23	224	206	212	N/A	N/A	0
3	476.25	33,985	44	235	208	212	N/A	N/A	1
4	476.48	34,155	170	299	294	212	N/A	N/A	1
5	477.54	34,946	791	967	939	568	N/A	N/A	0
6	477.20	34,690	-256	867	859	995	N/A	N/A	1
7	476.78	34,377	-313	837	841	995	N/A	N/A	0
8	476.67	34,296	-81	955	947	996	N/A	N/A	0
9	476.38	34,081	-215	888	907	995	N/A	N/A	1
10	476.22	33,963	-118	936	924	995	N/A	N/A	0
11	476.19	33,941	-22	983	978	994	N/A	N/A	0
Totals	N/A	N/A	0	7,392	7,305	7,386	N/A	N/A	5
Acre-Feet	N/A	N/A	0	14,662	14,489	14,650	N/A	N/A	10

Comments:
* Computed inflow is the sum of change in storage, releases, and evaporation.
(1) Evaporation records taken from New Melones Pan.

Summary: Release (acre-feet)

Power	14,650
Spill	0
Outlet	0
Total	14,650

United States Department of the Interior
Bureau of Reclamation-Central Valley Project- California
Tulloch Reservoir Daily Operations, December 2023, Run Date: 1/10/2024

Day	Elev	Storage (Acre Feet) Res.	Storage (Acre-Feet) Change	Computed Inflow C.F.S.	New Melones Release	Release C.F.S. Power	Release C.F.S. Spill	Release C.F.S. Outlet	Evap. C.F.S. (1)
N/A	N/A	35,667	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	477.91	35,224	-443	-11	4	211	0	0	1
2	477.32	34,781	-443	-11	3	211	0	0	1
3	476.74	34,348	-433	-7	2	210	0	0	1
4	476.11	33,881	-467	-23	4	211	0	0	1
5	475.51	33,443	-438	-9	3	211	0	0	1
6	474.90	33,001	-442	-10	3	212	0	0	1
7	474.28	32,557	-444	-11	3	212	0	0	1
8	473.66	32,118	-439	-9	4	211	0	0	1
9	473.03	31,675	-443	-12	6	210	0	0	1
10	472.39	31,232	-443	-12	5	210	0	0	1
11	475.75	33,618	2,386	1,415	11	211	0	0	1
12	472.35	31,204	-2,414	-1,005	222	211	0	0	1
13	472.98	31,640	436	432	286	211	0	0	1
14	473.49	31,998	358	393	299	211	0	0	2
15	474.45	32,679	681	558	480	212	0	0	3
16	475.53	33,458	779	606	604	211	0	0	2
17	475.95	33,764	306	369	365	212	0	0	3
18	476.41	34,103	339	383	372	211	0	0	1
19	476.27	34,000	-103	159	138	211	0	0	0
20	476.54	34,200	200	312	287	211	0	0	0
21	476.08	33,859	-341	40	49	212	0	0	0
22	475.73	33,603	-256	84	85	212	0	0	1
23	475.73	33,603	0	213	218	212	0	0	1
24	475.73	33,611	8	217	211	212	0	0	1
25	475.72	33,596	-15	205	215	212	0	0	1
26	475.94	33,756	160	294	292	212	0	0	1
27	476.07	33,852	96	261	266	212	0	0	1
28	476.23	33,970	118	271	270	212	0	0	0
29	476.19	33,941	-29	198	202	212	0	0	1
30	476.22	33,963	22	224	205	212	0	0	1
31	476.19	33,941	-22	202	208	212	0	0	1

Day	Elev	Storage (Acre Feet) Res.	Storage (Acre-Feet) Change	Computed Inflow C.F.S.	New Melones Release	Release C.F.S. Power	Release C.F.S. Spill	Release C.F.S. Outlet	Evap. C.F.S. (1)
Totals	NA	NA	-1,726	5,716	5,322	6,553	0	0	33
Acre-Feet	NA	NA	-1,726	11,338	10,5569	12,998	0	0	65

Comments:
* Computed inflow is the sum of change in storage, releases, and evaporation.
(1) Evaporation records taken from New Melones Pan.

Summary: Release (acre-feet)

Power	12,998
Spill	0
Outlet	0
Total	12,998

Oakdale Irrigation District
South San Joaquin Irrigation
District Tri Dams Project-California
Goodwin Reservoir Daily Operations, January 2024, Run Date: 1/12/2024

Day	Elev	Storage (1000 Acre-Feet) in Lake	Storage (1000 Acre-Feet) Change	Tulloch Release	Release C.F.S. - River Outlet	Release C.F.S. – Spill	Canals-Joint Main	Canals-South Main
N/A	N/A	523	N/A	N/A	N/A	N/A	N/A	N/A
1	359.79	522	-1	212	0	204	0	0
2	359.80	523	1	212	0	206	0	0
3	359.77	521	-2	212	0	206	0	0
4	360.27	521	0	212	0	205	0	0
5	360.27	556	35	568	0	549	0	0
6	360.27	556	0	995	0	1,003	0	0
7	360.27	556	0	995	0	1,001	0	0
8	360.27	556	0	996	0	1,002	0	0
9	360.27	556	0	995	0	1,003	0	0
10	360.27	556	0	995	0	1,004	0	0
11	360.27	556	0	994	0	1,002	0	0
Totals	N/A	N/A	**33**	**7,386**	**0**	**7,385**	**0**	**0**
Acre-Feet	N/A	N/A	**33**	**14,650**	**0**	**14,648**	**0**	**0**

Joint Main Operated by SSJID and OID.

Summary: Release (acre-feet)

Joint Main Canal	0
South Main Canal	0
Outlet	0
Spill	14,648
Total	**14,648.1475**

Oakdale Irrigation District
South San Joaquin Irrigation
District Tri Dams Project-California
Goodwin Reservoir Daily Operations, December 2023, Run Date: 1/10/2024

Day	Elev	Storage (1000 Acre-Feet) in Lake	Storage (1000 Acre-Feet) Change	Tulloch Release	Release C.F.S. - River Outlet	Release C.F.S. – Spill	Canals - Joint Main	Canals - South Main
N/A	N/A	523	N/A	N/A	N/A	N/A	N/A	N/A
1	359.80	523	0	211	0	203	0	0
2	359.80	523	0	211	0	202	0	0
3	359.80	523	0	210	0	202	0	0
4	359.80	523	0	211	0	203	0	0
5	359.80	523	0	211	0	202	0	0
6	359.80	523	0	212	0	203	0	0
7	359.80	523	0	212	0	204	0	0
8	359.79	522	-1	211	0	202	0	0
9	359.79	522	0	210	0	202	0	0
10	359.79	522	0	210	0	202	0	0
11	359.79	522	0	211	0	204	0	0
12	359.79	522	0	211	0	203	0	0
13	359.79	522	0	211	0	203	0	0
14	359.79	522	0	211	0	202	0	0
15	359.79	522	0	212	0	203	0	0
16	359.79	522	0	211	0	203	0	0
17	359.79	522	0	212	0	204	0	0
18	359.79	522	0	211	0	205	0	0
19	359.79	522	0	211	0	205	0	0
20	359.79	522	0	211	0	205	0	0
21	359.79	522	0	212	0	205	0	0
22	359.77	521	-1	212	0	202	0	0
23	359.79	522	1	212	0	202	0	0
24	359.79	522	0	212	0	202	0	0
25	359.79	522	0	212	0	202	0	0
26	359.80	523	1	212	0	202	0	0
27	359.80	523	0	212	0	203	0	0
28	359.79	522	-1	212	0	203	0	0
29	359.80	523	1	212	0	204	0	0
30	359.79	522	-1	212	0	206	0	0
31	359.80	523	1	212	0	205	0	0

Day	Elev	Storage (1000 Acre-Feet) in Lake	Storage (1000 Acre-Feet) Change	Tulloch Release	Release C.F.S. - River Outlet	Release C.F.S. – Spill	Canals - Joint Main	Canals - South Main
Totals	N/A	N/A	0	6,553	0	6,298	0	0
Acre-Feet	N/A	N/A	0	12,998	0	12,492	0	0

Joint Main Operated by SSJID and OID.

Summary: Release (acre-feet)

Joint Main Canal	0
South Main Canal	0
Outlet	0
Spill	12,492
Total	**12,492.083**

January 2024 Water Temperature Update

Year-to-Date Flows

Goodwin releases since October 1, 2023, are shown in Figure 1.

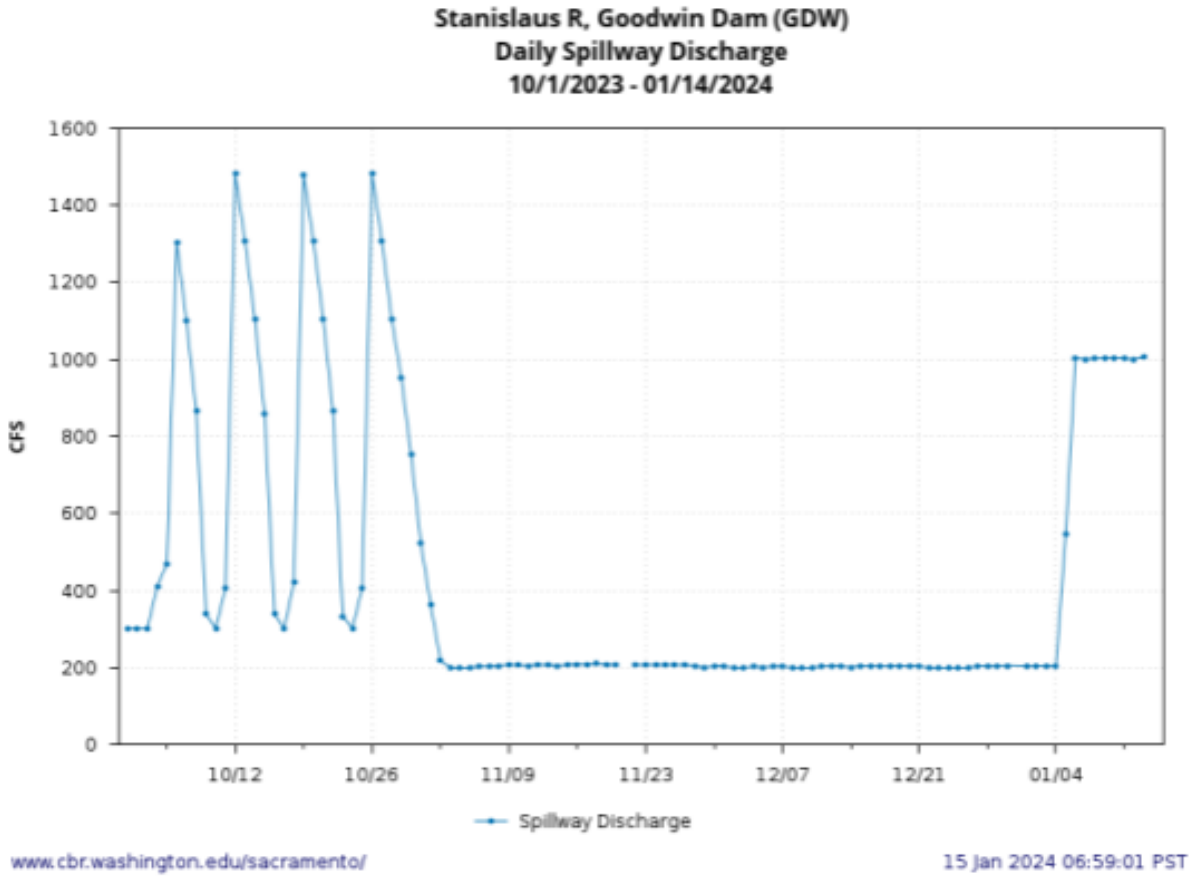


Figure 1. Goodwin (daily) releases to the Stanislaus River since October 1, 2023. Data from GDW station on CDEC.

Figure 1 is a line graph showing Goodwin Dam daily spillway discharge. The graph shows a sustained 1,000 cfs discharge starting in January 2024,, and several peaks of 1,200-1,500 cfs discharge in October 2023.

Water Temperature

The temperature thresholds included in Figures 2-9, below, are the thresholds used in the 2019 NMFS LTO BiOp (see Incidental Take Statement on p. 807) to define the extent of take anticipated from water temperature effects in the Stanislaus River. It is important to note that many of the temperature figures provide subdaily information or information at locations other than Orange Blossom Bridge and thus don't reflect the specific metrics for take in the 2019 NMFS LTO BiOp. Temperature thresholds have been added to these figures at the request of Stanislaus Watershed Team members to provide a general reference of water temperature suitability.

Water temperatures in the Stanislaus River since November 2023 are shown below at Goodwin Canyon (Figure 2), Orange Blossom Bridge (Figure 3), and at Ripon (Figure 4). Water temperatures in the San Joaquin River since November 2023 are shown below at Vernalis (Figure 5). Current-year water temperatures are plotted along with historical temperatures for Orange Blossom Bridge (Figure 6), Ripon (Figure 7), and Vernalis (Figure 8). A compilation of Stanislaus River water temperatures and Goodwin releases for water year 2024 is provided in Figure 9.

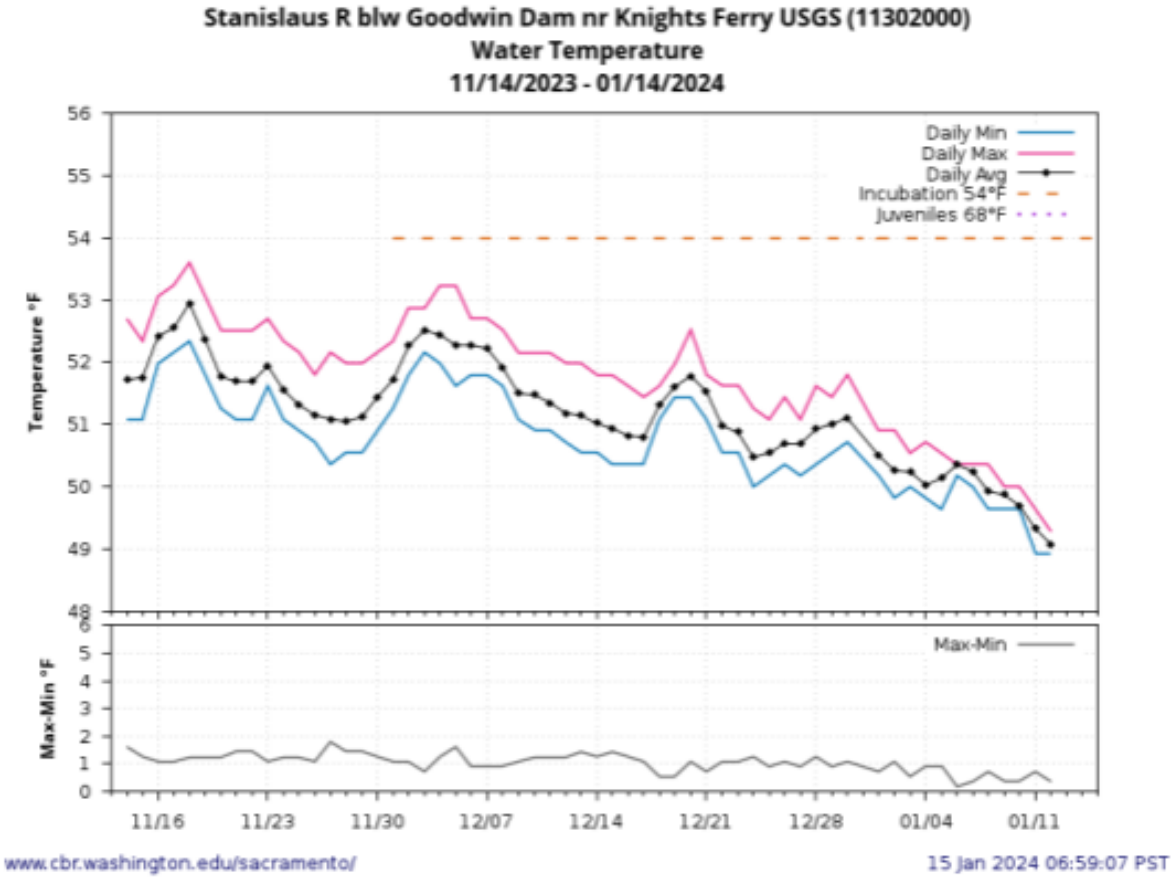


Figure 2. Daily water temperatures on the Stanislaus River upstream of Knights Ferry since November 14, 2023. Data from USGS gage 11302000 on NWIS; temperature threshold reference line added by SWT.

Chart: Stacked chart for daily water temperatures Stanislaus River upstream of Knights Ferry for current 60 days period. Top chart: Daily Min, Max and average water temperatures (in degrees Fahrenheit). Bottom chart: Daily difference between Max and Min measured water temperature in degrees Fahrenheit. Data from OBB station retrieved from CDEC; figure generated by SacPAS (including date-based water temperature threshold reference lines). For more information, please call (916) 414-2400

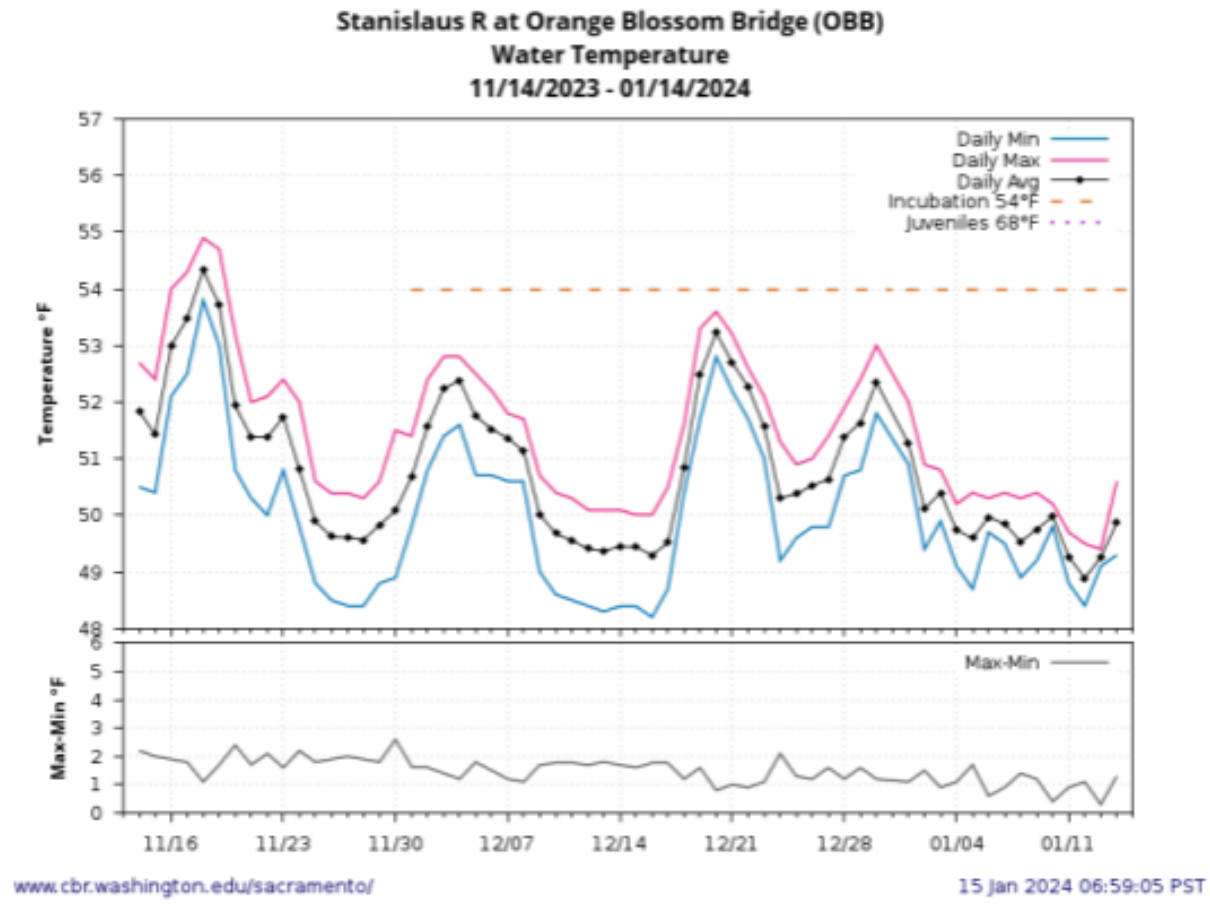


Figure 3. Stanislaus (hourly) water temperatures at Orange Blossom Bridge since November 14, 2023. Data from OBB station on CDEC.

Figure 3. Stanislaus (hourly) water temperatures at Orange Blossom Bridge since November 14, 2023. Data from OBB station on CDEC.

Chart: Stacked chart for daily water temperatures Stanislaus River at Orange Blossom Bridge for current 60 days period. Top chart: Daily Min, Max and average water temperatures (in degrees Fahrenheit). Bottom chart: Daily difference between Max and Min measured water temperature in degrees Fahrenheit. Data from OBB station retrieved from CDEC; figure generated by SacPAS (including date-based water temperature threshold reference lines). For more information, please call (916) 414-2400.

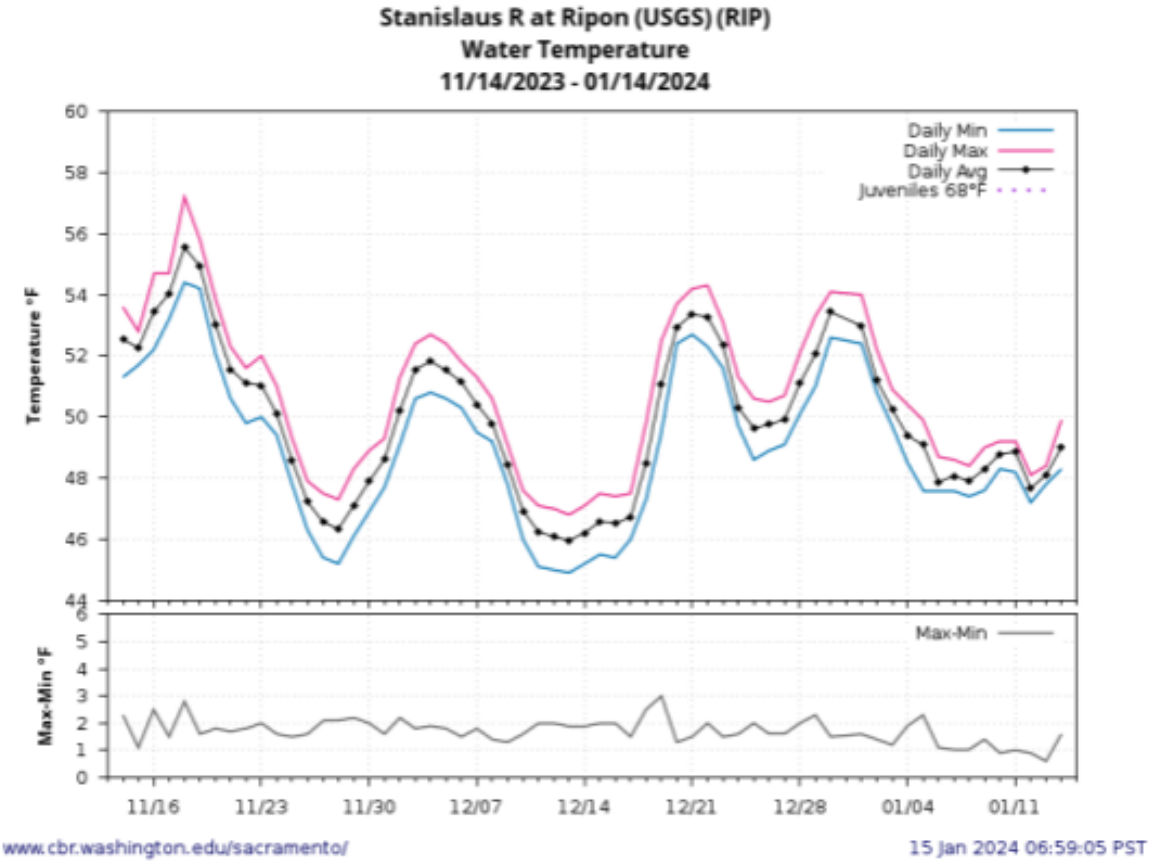


Figure 4. Stanislaus water temperatures at Ripon since November 14, 2023. Data from RIP station on CDEC.

Figure 4. Stanislaus water temperatures at Ripon since November 14, 2023. Data from RIP station on CDEC.

Chart: Stacked chart for daily water temperatures Stanislaus River at Ripon for current 60 days period. Top chart: Daily Min, Max and average water temperatures (in degrees Fahrenheit). Bottom chart: Daily difference between Max and Min measured water temperature in degrees Fahrenheit. Data from OBB station retrieved from CDEC; figure generated by SacPAS (including date-based water temperature threshold reference lines). For more information, please call (916) 414-2400

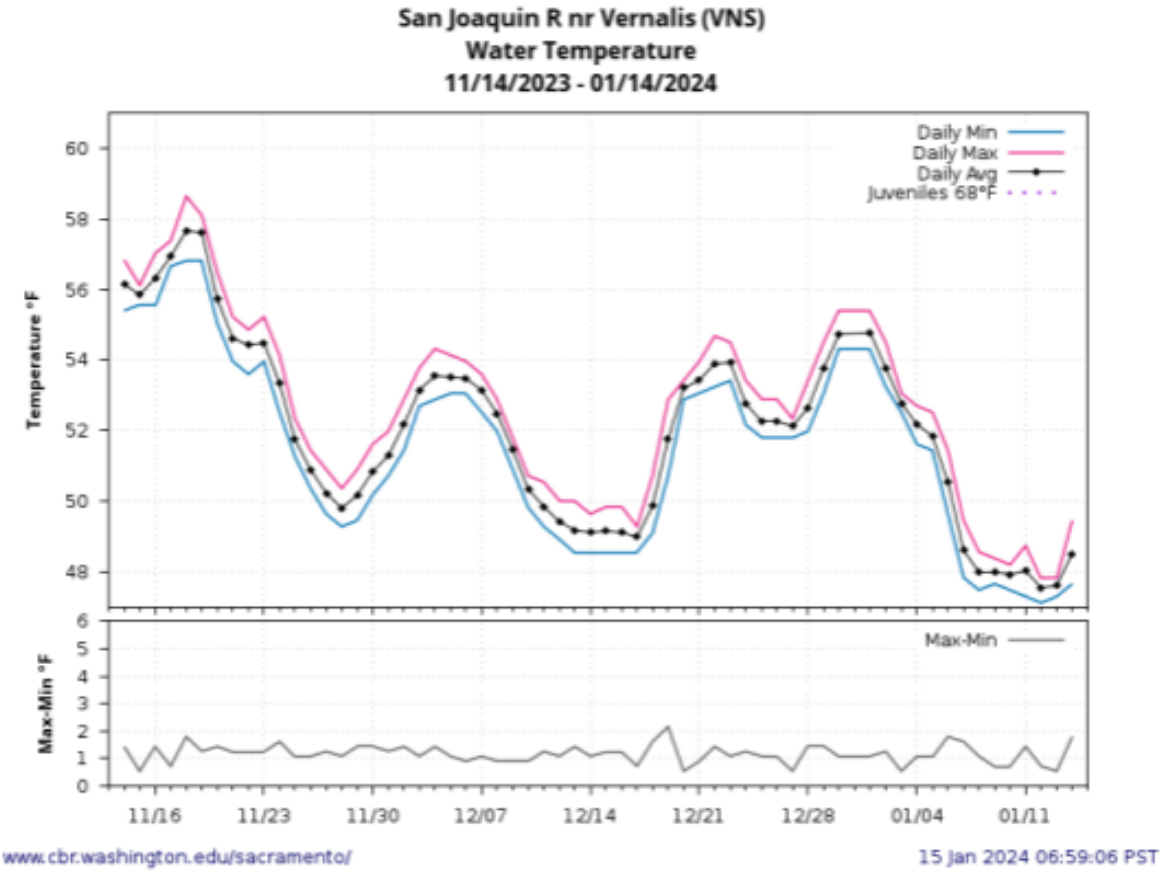


Figure 5. San Joaquin River (15-minute) water temperatures at Vernalis since November 14, 2023. Data from VNS station on CDEC. Note that, unlike in the previous figures, temperature is reported in degrees Celsius. 8°C=46.4°F; 10°C=50°F; 12°C=53.6°F; 14°C=57.2°F; 16°C=60.8°F; 18°C=64.4°F; 20°C=68.0°F; 22°C=71.6°F; 24°C=75.2°F; 26°C=78.8°F; 28°C=82.4°F.

Figure 5. San Joaquin River (15-minute) water temperatures at Vernalis since November 14, 2023. Data from VNS station on CDEC. Note that, unlike in the previous figures, temperature is reported in degrees Celsius. 8°C=46.4°F; 10°C=50°F; 12°C=53.6°F; 14°C=57.2°F; 16°C=60.8°F; 18°C=64.4°F; 20°C=68.0°F; 22°C=71.6°F; 24°C=75.2°F; 26°C=78.8°F; 28°C=82.4°F.

Chart: Stacked chart for daily water temperatures Stanislaus River at Vernalis for current 60 days period. Top chart: Daily Min, Max and average water temperatures (in degrees Fahrenheit). Bottom chart: Daily difference between Max and Min measured water temperature in degrees Fahrenheit. Data from OBB station retrieved from CDEC; figure generated by SacPAS (including date-based water temperature threshold reference lines). For more information, please call (916) 414-2400

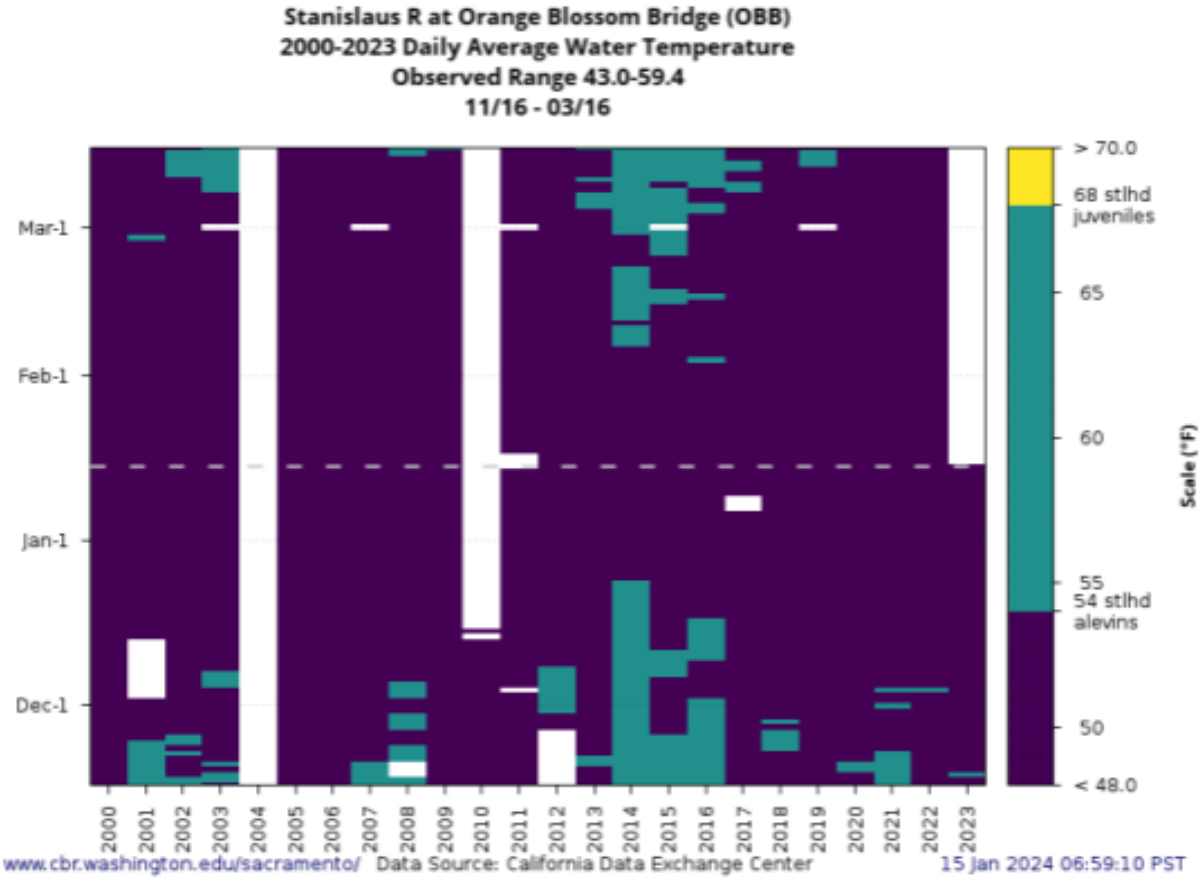


Figure 6. Stanislaus River water temperatures at Orange Blossom Bridge for WY 2000 to present. Data from SacPAS; temperature threshold reference lines added by SWT. http://www.cbr.washington.edu/sacramento/data/query_river_allyears.html

Figure 6. Stanislaus River water temperatures at Orange Blossom Bridge for WY 2000 to present. Data from SacPAS; temperature threshold reference lines added by SWT. http://www.cbr.washington.edu/sacramento/data/query_river_allyears.html

Figure 6 is a bar chart showing water temperatures at Orange Blossom Bridge for WY 200- to present for November 16 to March 16. The chart shows that during this time, the daily average water temperature was mostly below 68 degrees Fahrenheit.

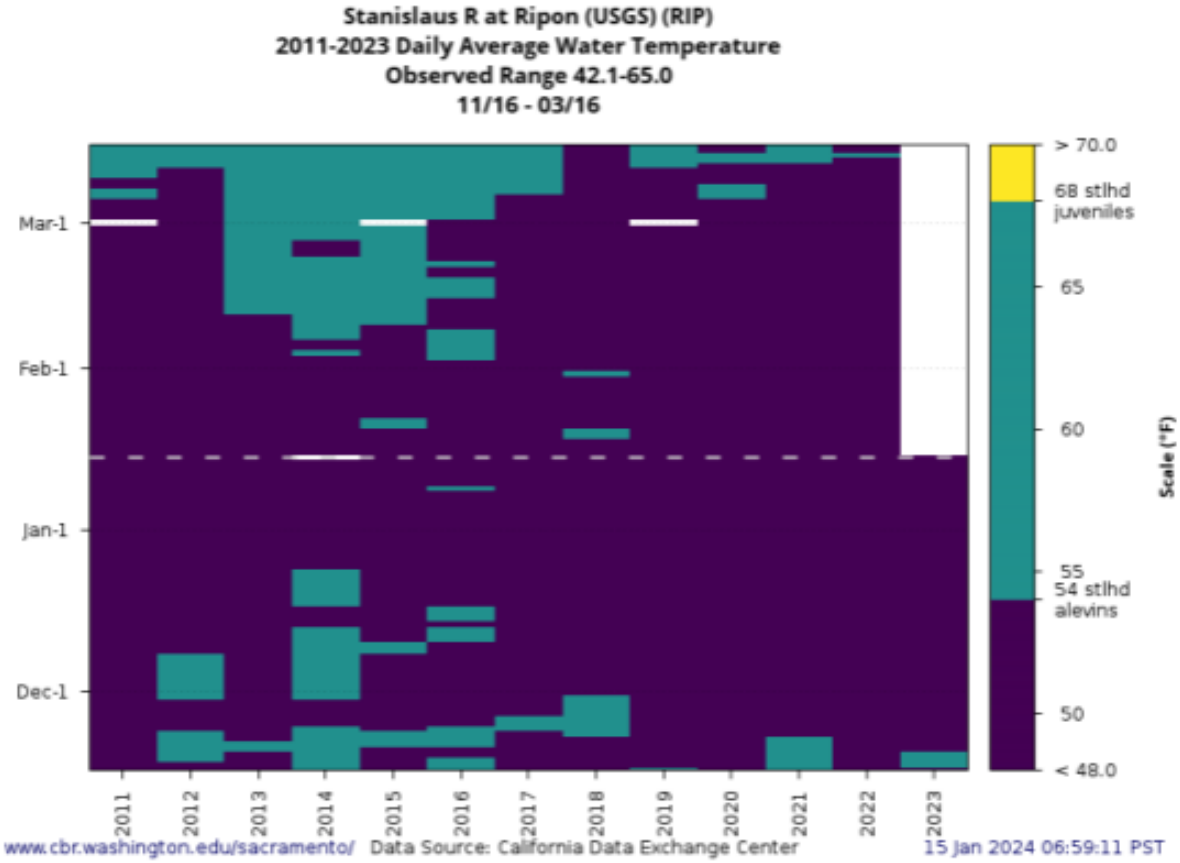


Figure 7. Stanislaus River water temperatures at Ripon for WY 2011 to present. Figure from SacPAS using RIP station data from CDEC; temperature threshold reference line added by SWT. http://www.cbr.washington.edu/sacramento/data/query_river_allyears.html

Figure 7. Stanislaus River water temperatures at Ripon for WY 2011 to present. Figure from SacPAS using RIP station data from CDEC; temperature threshold reference line added by SWT. http://www.cbr.washington.edu/sacramento/data/query_river_allyears.html

Figure 7 is a bar chart showing water temperatures at Ripon for WY 2011 to present for November 16 to March 16. The chart shows that during this time, the daily average water temperature was below 68 degrees Fahrenheit.

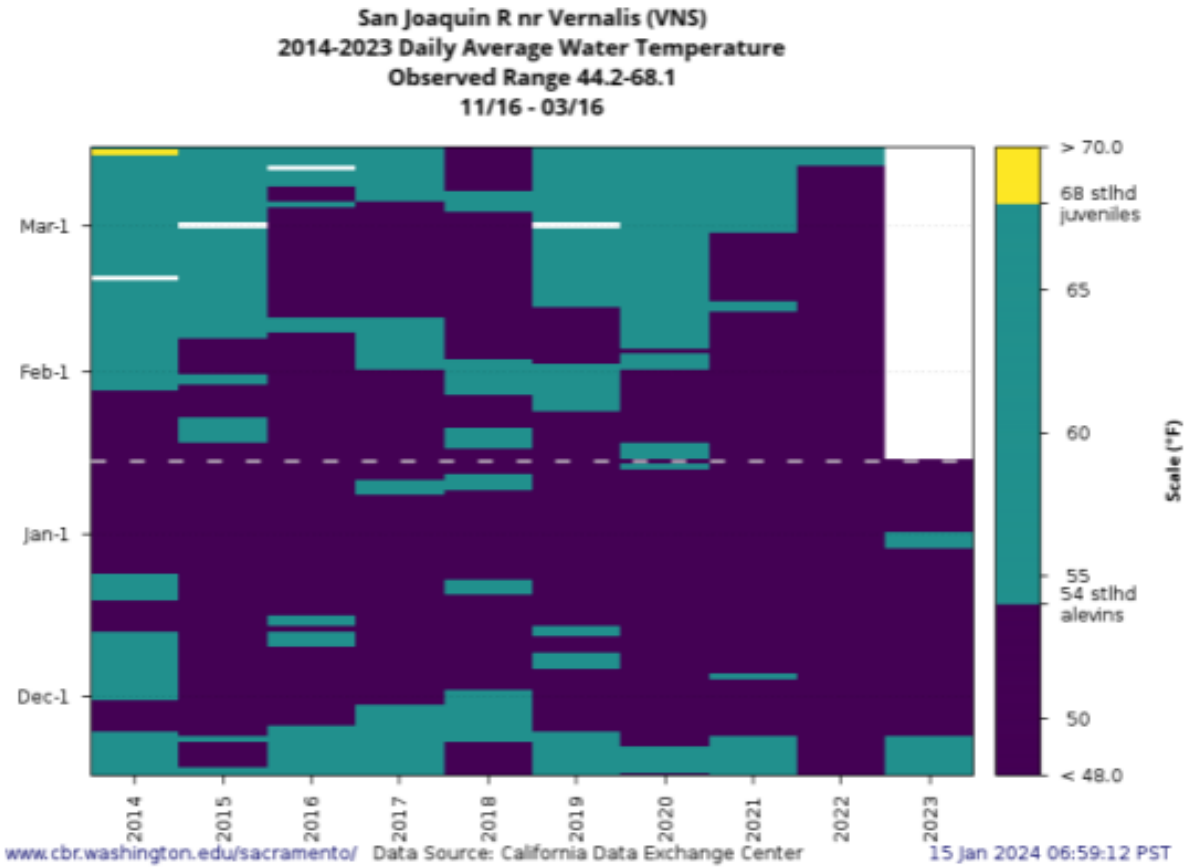


Figure 8. San Joaquin River water temperatures at Vernalis for WY 2014 to present. Figure from SacPAS using VNS station data from CDEC; temperature threshold reference line added by SWT. http://www.cbr.washington.edu/sacramento/data/query_river_allyears.html

Figure 8 is a bar chart showing water temperatures at Vernalis for WY 2014 to present for November 16 to March 16. The chart shows that during this time, the daily average water temperature was below 68 degrees Fahrenheit.

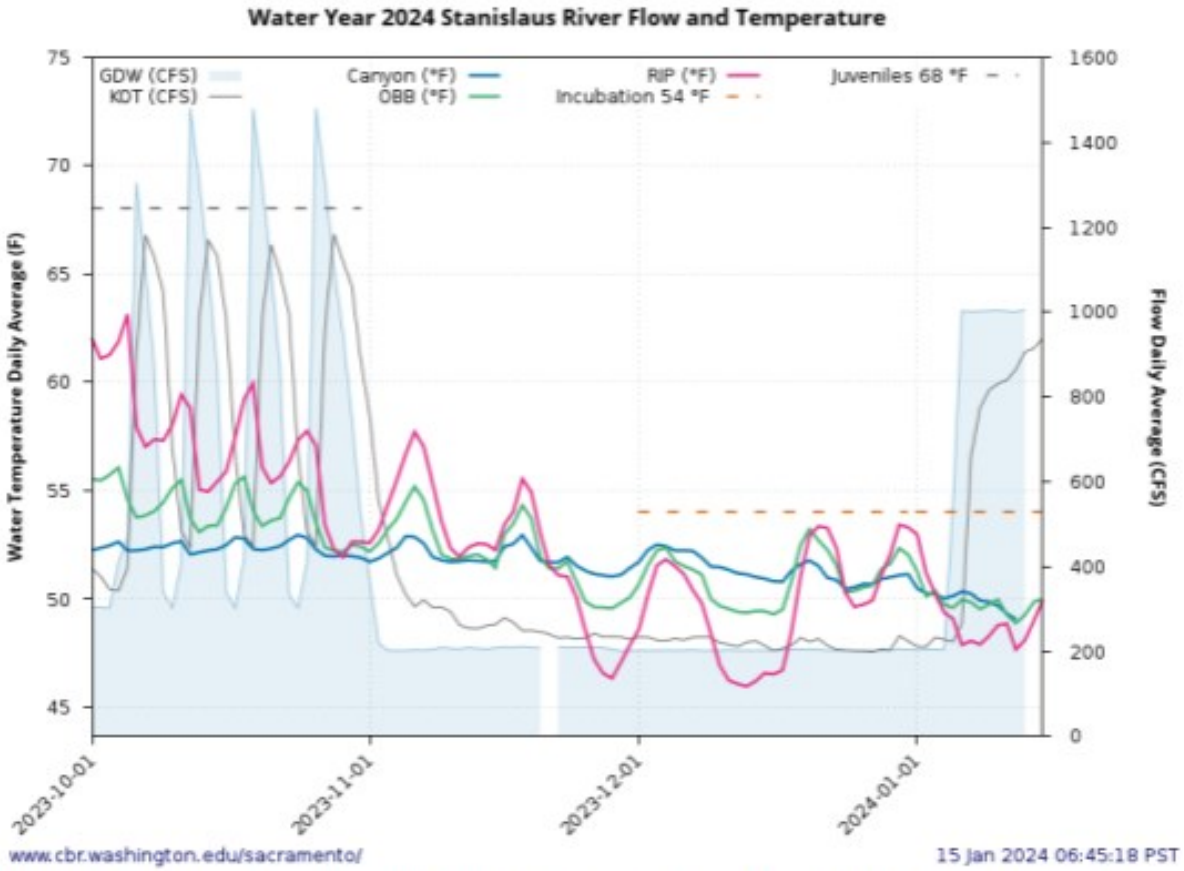


Figure 9. Stanislaus River flow and water temperatures from October 1, 2023 to January 15, 2023. Data (including temperature threshold reference lines) from SacPAS: http://www.cbr.washington.edu/sacramento/data/tc_stanislaus.html

Figure 9. Stanislaus River flow and water temperatures from October 1, 2023 to January 15, 2023. Data (including temperature threshold reference lines) from SacPAS: http://www.cbr.washington.edu/sacramento/data/tc_stanislaus.html

Figure 9 is a line chart showing river flow and water temperatures on the Stanislaus River. The graph shows decreasing temperatures and flow October 2023 – December 2023 with periodic spikes within that time period.

Flow Planning

USFWS Update

To be discussed at the 1/17/24 meeting.

Stanislaus River Forum (SRF) Call Review

USBR Update

Received live update from Amanda Snow on the 1/17/24 call.

Fish Monitoring and Studies

CDFW Update

Update on Fish Monitoring (Adults)
Chinook carcass and redd surveys: The California Department of Fish & Wildlife (CDFW) began conducting fall-run Chinook salmon carcass and redd surveys the week of October 2, 2023 for the Stanislaus River and Merced River. The Tuolumne carcass survey started on September 18. Carcass survey data for all three San Joaquin River tributaries through the week of January 8, 2023 are reported in Table 1. The Merced River carcass survey was completed on 1/11/2024.

Table 1. Data from the fall 2023 CDFW carcass survey for the San Joaquin tributaries.

River	Wk	Date	# Live	# Redds	# Skeletons	# Tagged	#Ad-Clipped	# Scale Sam-ples	# Re-cove-red	Aver-age Flow (cfs)
Stanislaus	1	10/2/2023	1	0	0	0	0	0	0	695
Stanislaus	2	10/9/2023	0	0	0	0	0	0	0	763
Stanislaus	3	10/16/2023	4	0	0	0	0	0	0	320
Stanislaus	4	10/23/2023	39	2	0	0	0	0	0	320
Stanislaus	5	10/30/2023	185	64	2	0	0	0	0	367
Stanislaus	6	11/6/2023	314	177	9	16	1	16	0	200
Stanislaus	7	11/13/2023	387	362	24	52	14	52	2	200
Stanislaus	8	11/20/2023	433	477	39	84	22	83	22	200
Stanislaus	9	11/27/2023	423	459	59	95	28	95	37	203
Stanislaus	10	12/4/2023	254	369	73	96	28	96	38	200
Stanislaus	11	12/11/2023	114	187	34	36	12	36	33	200
Stanislaus	12	12/18/2023	94	223	52	28	11	28	46	203
Stanislaus	13	12/25/2023	80	145	28	15	1	15	27	200
Stanislaus	14	1/1/2024	51	149	22	14	3	14	9	200
Stanislaus*	15	1/8/2024	1	22	1	1	0	1	0	1150
Tuolumne	1	9/18/2023	0	0	1	0	0	0	0	550
Tuolumne	2	9/25/2023	0	0	0	0	0	0	0	560
Tuolumne	3	10/2/2023	2	0	0	1	0	0	0	550
Tuolumne	4	10/9/2023	4	2	0	2	1	2	0	350
Tuolumne	5	10/16/2023	5	1	1	3	3	3	0	350
Tuolumne	6	10/23/2023	20	8	1	0	0	0	1	347.5
Tuolumne	7	10/30/2023	31	10	2	4	2	4	2	352.5
Tuolumne	8	11/6/2023	75	42	2	6	4	6	0	345
Tuolumne	9	11/13/2023	122	80	0	18	4	18	0	350
Tuolumne	10	11/20/2023	238	212	10	38	8	38	5	354

River	Wk	Date	# Live	# Redds	# Skeletons	# Tagged	#Ad-Clipped	# Scale Sam-ples	# Re-cove-red	Aver-age Flow (cfs)
Tuolumne	11	11/27/2023	297	272	27	61	23	61	17	350
Tuolumne	12	12/4/2023	250	453	46	122	32	122	24	350
Tuolumne	13	12/11/2023	160	331	52	93	34	93	67	356
Tuolumne	14	12/18/2023	96	309	42	70	23	70	49	350
Tuolumne	15	12/25/2023	86	282	31	35	12	35	43	342.5
Tuolumne	16	1/1/2024	36	197	29	36	9	36	35	344
Tuolumne	17	1/8/2024	6	257	13	14	6	14	30	353.5
Merced	1	10/2/2023	3	1	0	0	0	0	0	262
Merced	2	10/9/2023	5	0	0	0	0	0	0	324.5
Merced	3	10/16/2023	28	0	0	1	1	1	0	244.5
Merced	4	10/23/2023	57	6	0	0	0	0	0	250
Merced	5	10/30/2023	253	96	3	1	0	1	0	185
Merced	6	11/6/2023	473	292	17	33	6	33	0	136
Merced	7	11/13/2023	527	567	81	118	39	118	8	178.25
Merced	8	11/20/2023	555	584	83	106	29	106	47	182.75
Merced*	9	11/27/2023	442	597	226	221	57	221	61	196
Merced**	10	12/4/2023	331	472	146	135	44	135	112	180
Merced	11	12/11/2023	151	463	78	62	16	62	112	159
Merced	12	12/18/2023	51	182	47	29	9	29	58	176
Merced	13	12/25/2023	29	40	19	4	4	4	19	175
Merced	14	1/1/2024	6	9	11	0	0	0	5	177.5
Merced	15	1/8/2024	5	1	9	0	0	0	3	164.7

* Section 3 and 4 not surveyed

** Section 4 not surveyed

** Section 1 not surveyed

Table 2. Data from the Steelhead redd surveys Steelhead redd surveys: CDFW began steelhead redd surveys in January 2024.

Wk	Date	# RBT Live >40	# RBT Live <40	# RBT Redds	# RBT Carcass	#CHN Live	# CHN Redds	# CHN Carcass	# PL Live	# PL Carcass	# SASU Redds	Avg Flow (cfs)
1	1/1/2024	1	23	0	1	51	149	36	0	0	0	200
2*	1/8/2024	0	0	0	0	1	22	2	0	0	0	1,150

* Section 1 not surveyed

RBT – O. mykiss CHN – Chinook salmon PL – Pacific Lamprey

SASU – Sacramento Sucker

Update on Fish Monitoring (Juveniles)

Mossdale Trawl: CDFW and USFWS began cooperative trawl operations on January 3, which will continue until April, when CDFW will operate it independently for 3 months.

Table 3. Data from Mossdale Trawl Catches

Date	CHN Catch	Comments
01/03/2024	1	FL 195

Data from week of 1/8/2024 not included

FISHBIO Update

Weir Updates:

Stanislaus River Weir: As of January 11, 2024 a total of 2,392 adult Chinook salmon have passed upstream of the Stanislaus River weir (Table 4). Six hundred thirty-six (27%) of the adults were adipose fin clipped (indicating hatchery origin). The last upstream Chinook passage was on January 5. We will be trapping at the weir (as flows allow) through the spring targeting O. mykiss. A total of 30 O. mykiss have been observed passing the Stanislaus River weir as of January 11, with all except four being over 16 inches. Twenty-three out of 30 (77%) of the O. mykiss were adipose fin clipped.

Table 4: Chinook passage at the Stanislaus River Weir as of January 11 of each year and the season totals. Updated through 1/11/2024.

Year	Monitoring Start Date	Net Passage to Date	Season Total
2023	9/6/23	2,392	2,392
2022	9/15/22	3,692	3,798
2021	9/8/21	5,937	6,032
2020	9/10/20	1,873	1,906
2019	8/29/19	2,594	2,594
2018	9/5/18	4,729	4,777
2017	9/15/17	8,333	8,500
2016	9/8/16	14,045	14,399
2015	9/15/15	11,764	12,707
2014	9/5/14	5,427	5,527
2013	9/3/13	5,389	5,452
2012	9/11/12	7,109	7,248
2011	11/8/11	714	776
2010	9/7/10	1,334	1,364
2009	9/9/09	1,243	1,303
2008	9/9/08	880	928
2007	9/22/07	429	439
2006	9/8/06	2,902	3,074
2005	9/8/05	4,066	4,124
2004	9/10/04	4,424	4,448
2003	9/5/03	4,720	4,848

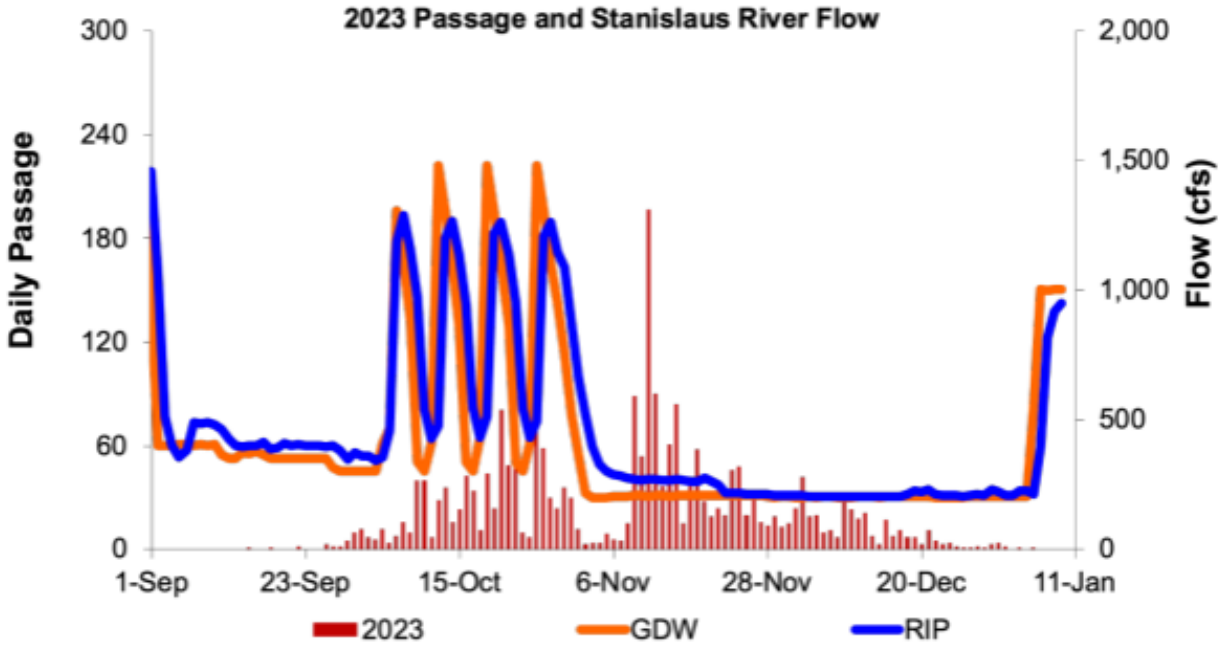


Figure 10. Daily Chinook passage at the Stanislaus River weir and river flow at Goodwin (GDW) and Ripon (RIP), 2023.

Figure 10 is a line chart showing river flow water temperature, and unexpanded catch of Chinook salmon September 1 2023 to January 11 2024. The graph shows periodic spikes in flow October 1 to November 6 with catch occurring from the end of September 2023 to early January 2024.

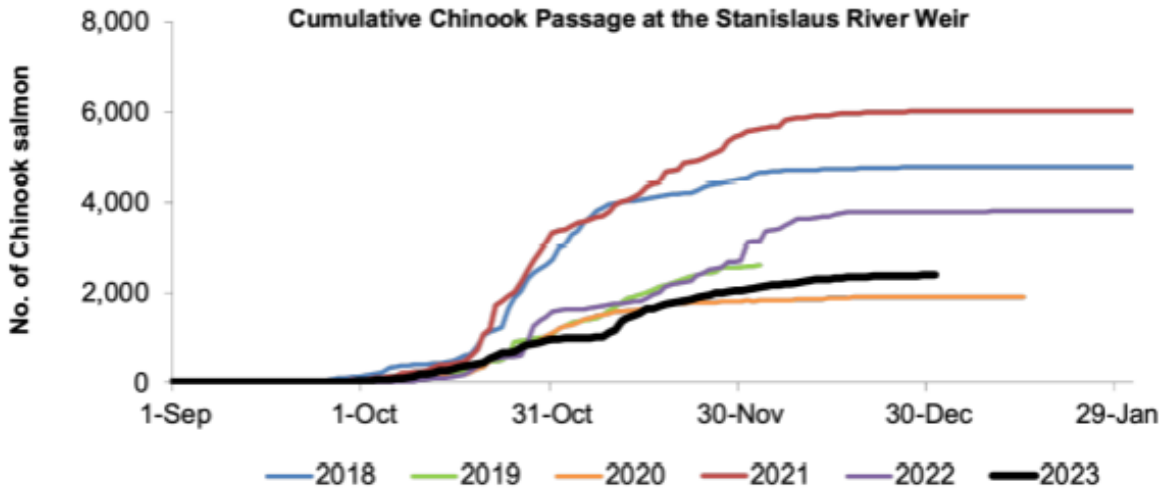


Figure 11. Cumulative Chinook passage at the Stanislaus River weir during 2018-2023.

Figure 11 is a line graph showing the cumulative Chinook passage at the Stanislaus weir between September 1 to January 29 for the calendar years 2018-2023. The graph shows passage for all years begins in October with large increases through November. The highest passage occurred in 2021 with over 6,000 Chinook passing the Stanislaus River Weir.

PSMFC Update

Rotary Screw Traps Updates:

Stanislaus River Weir: Caswell Rotary Screw Trap: Rotary screw trapping is conducted at Caswell Memorial State Park by Pacific States Marine Fisheries Commission (PSMFC) for monitoring of out migrating juvenile salmonids. The Caswell rotary screw traps (RSTs) were installed on January 2 and January 3 with daily sampling beginning on January 5. The RSTs will continuously sample seven days a week for the foreseeable future.

Through January 11, the RSTs at Caswell have captured 1 unmarked Chinook salmon (button-up fry measured at 33 mm), zero unmarked O. mykiss, and 35 juvenile lamprey.

More detailed information can be found at the Caswell RST CalFish webpage, which includes catch spreadsheets, annual reports, and other project information:

https://www.calfish.org/ProgramsData/ConservationandManagement/CentralValleyMonitoring/StanislausRiver-RSTMonitoring.aspx

Restoration Project Updates

USBR

(No new updates) We are still ahead of schedule in meeting our goals for spawning habitat restoration targets. We are interested in continuing gravel injection projects in Goodwin Canyon and planning for a project in 2024. We are getting behind schedule for meeting the rearing habitat goals. The Mohler and Tortuga rearing habitat restoration projects are conducting pre-project monitoring. Implementation of the construction phase is anticipated to begin in 2025.