

Stanislaus Watershed Team

April 17, 2024

Members Attending

- USBR: Amanda Snow, Bradley Hubbard, Cat Pien, Chase Ehlo, Liz Kiteck, Melissa Vignau, Spencer Marshall
- USFWS: J.D. Wikert
- CDFW: Crystal Rigby, Gretchen Murphey Travis Apgar
- NMFS: Sam Pyros
- DWR: N/A
- SWRCB: Chris Carr
- PSMFC: Hunter Morris, Logan Day
- SSJID: Brandon Nakagawa, Peter Rietkerk
- Fishbio: N/A
- Stockton East Water District (SEWD): N/A
- WAPA: Jeffrey Trow
- Herum/Crabtree/Suntag Attorneys: N/A
- Kearns & West: Karis Johnston, Bethany Taylor

Action Items

- Kearns & West
 - Remove undeliverable addresses from roster [Complete]
 - Remove Michael Macon from standing agenda
 - Set up monthly packet materials reminder [Complete]
 - Send location and details for May hybrid meeting to SWT members to get a head count
 - Send out updated packet
- Amanda Snow, USBR – Check on the appropriate action for the missing section for the Annual Activities Report.

- Gretchen Murphey, CDFW – Check on efficiency release notifications and reply back to Crystal Rigby, CDFW.
- Liz Kiteck, USBR – Update Peggy Manza, USBR, that the alternate flow plan for May that FISHBIO originally requested is no longer necessary.

Announcements

- Hybrid meeting planning for May
 - Sacramento is far for some SWT members to travel. Generally, responses were tentative, and members will respond with more certainty once the exact location is shared closer to the meeting date.
- JD Wikert, USFWS, will provide a presentation today on the Stanley Wakefield Wilderness Area Restoration Project.

Operations Update and Forecasts/ Hydrology

New Melones Reservoir Update

- As of 4/17/2024, storage at New Melones is 2.034 MAF, or 85% of total capacity.
- Storage is no longer encroached.
- New Melones has seen moderate inflows and some additional snow in the past few weeks.
- There may be a minor increase in storage with the pulse flows.
- The irrigation districts have been taking water since March.
- New Melones daily releases for April have ranged from approximately 700 cfs to 2,100 cfs.

Daily CVP Water Supply

- N/A

Tulloch Dam

- Tulloch Dam daily releases for April have ranged from approximately 1,000 cfs to 1,900 cfs.

Goodwin Dam

- Releases from Goodwin Dam are approximately 800 cfs as of 4/14/2024.
- The Joint Main and South Main canals are taking water.

Other

- At the 75% exceedance level for the San Joaquin River, the 4/1/2024 forecasts Above Normal conditions. At the 90% exceedance level, conditions are Below Normal.

- Snowpack is currently 106% of average for the central Sierra Nevada mountains. An expected increase in air temperatures over the coming weeks will lead to some additional inflow. USBR projects that peak snowmelt for the Stanislaus River will occur in May.

Questions

- CDFW asked if USBR expects to have to change releases to meet the D1641 requirements.
 - USBR responded that changes are not expected at this point. The Bay-Delta flow at Vernalis goes through June, so we'll have to monitor Vernalis. The Tuolumne River has scheduled a pulse flow, but they're making higher releases to manage their storage. Their base flow is listed as 300 cfs, but they are making higher releases for flood control.
 - CDFW added that the Tuolumne River has 98 TAF of water scheduled for their pulse flow. TID Water & Power wishes to conduct in-river work in May and hopes to be at baseflow by then.

Water Temperature Updates

- NMFS noted that water temperatures below 65°F are most suitable for rearing and migration.
- Temperatures down through Ripon are currently below 65°F, however, air temperatures are rising, causing Ripon to nearly reach 65°F when flows are low.

Flow Planning

- After agreeing on a plan in March, FISHBIO requested to change those plans to allow for weir removal. CDFW sent a flow proposal to USBR that would accommodate this request in May but never got a response. FISHBIO has removed the weir, this week so the alternate plan does not seem to be needed.
- Liz Kiteck, USBR, will update Peggy Manza, USBR, that the alternate flow plan is no longer necessary.

Stanislaus River Forum (SRF) Call Review

- There were no comments received from members of the public at the SRF April meeting.
- It was shared at the SRF call that FISHBIO planned to remove the weir on 4/17/2024.

Fish Monitoring

CDFW Fish Monitoring

- Chinook salmon carcass surveys
 - CDFW plans to begin the 2024 Escapement Survey in October.

- Steelhead *O. mykiss* redd surveys
 - Survey crews were able to survey the entire river during the previous two weeks due to safe access to the canyon.
 - 13 larger *O. mykiss* and 170 smaller *O. mykiss* were observed.
 - No redds were observed, but 1 carcass was found.
 - 1,243 Sacramento Sucker nests was observed.

Mossdale Trawl

- Mossdale Trawl has been operating year-round. CDFW took over operations in early April, increasing the trawl's frequency from 3 days per week to 5 days.
- Both marked, unmarked and tagged Chinook salmon were caught. Tagged (adipose clipped) Chinook are assumed to be from the San Joaquin Restoration Program but tags have not been analyzed yet.
- Unmarked and adipose-clipped *O. mykiss* have been caught and some with stitches suggesting the presence of an acoustic. Crews have also found PIT tags in some fish.
- Questions / Comments
 - CDFW asked: The Mossdale Trawl efficiency trials are using Merced Hatchery fish that are dyed pink. Do you know if release notifications are being distributed?
 - CDFW responded that only one release has been conducted so far. Unsure if notifications are being sent out. Gretchen Murphey, CDFW, will check on this and respond to Crystal Rigby, CDFW.
 - PSMFC added that the Stanislaus River rotary screw traps (RSTs) are also conducting efficiency trials. To date, approximately 3,000 Merced Hatchery Chinook salmon have been released and are tagged just above the nose with green, orange, pink, and red VIE tags. PSMFC does not send out release notifications but will occasionally get a notice from those pulling trawls downstream from them.

FISHBIO Monitoring

- Stanislaus Weir Update
 - *O. mykiss*
 - 55 *O. mykiss* have passed upstream of the weir.
 - 29 of these (53%) were adipose-clipped.
 - 37 of the adults were classified as steelhead.
 - Chinook salmon

- None have been observed passing the weir since 2/04/2024.
- The season total remains at 2,403 fish.

PSMFC Monitoring

- Rotary Screw Trap (RST) Updates
 - As of 4/14/2024, PSMFC has captured 5,605 unmarked Chinook salmon.
 - Peak catch occurred on 2/20/2024 with 668 Chinook salmon caught.
 - PSMFC has observed an increase in fish size, generally between 70-90 mm. Average fork lengths (FL) are 65 mm.
 - Five screw trap efficiency trials were completed using Merced River Hatchery fish. Trap efficiency was approximately 4% for the two February trials, and 2% for the later three trials occurring in March and April.
 - PSMFC anticipates conducting two more efficiency trials before the end of the sampling season.

Restoration Project Updates

Stanley Wakefield Wilderness Area Restoration Project

- J.D. Wikert, USFWS, presented updates on the Stanley Wakefield Project. Highlights from the presentation included the following:
 - Overview
 - The project's intention was juvenile salmonid restoration. The project goals included: restoring ecosystem processes, improving seasonally inundated fish habitat, and improving the outdoor space for the landowner and surrounding community.
 - The span of time from the initial project idea to completion was 12 years.
 - CDFW funded the design phase through the Fish Restoration Grant Program (FRGP). USFWS funded permitting and construction. DWR provided post-project funding.
 - Project partners included: City of Oakdale (landowner), Cramer Fish Sciences (design assistance), Ford Construction (earthwork), and East Stanislaus Resource Conservation District (ESRCD) (revegetation work).
 - Project design and construction
 - The project design took into account features that are both desired and not. This list included landowner needs in addition to the basic project needs.
 - Conceptual designs ranged in complexity. Landowners expressed preference for simpler designs overall. Project staff were unable to

implement the channel gravel augmentation that had been planned for the site.

- A few adjustments needed to be made to the design. The cut volume was originally overestimated by 10,000 cubic yards due to LiDAR miscalculations when dense vegetation is present.
- Nearly 8.5 acres of floodplain habitat and 23 acres of riparian habitat were created.
- Other benefits from the restoration include: increased access for the public and fire and law enforcement; reduced fire risk; reduced levels of invasive plants; improved flood attenuation; high public visibility of restoration; and an increased number of pollinator-friendly plants.
- USFWS shared several photos of the site and mid-construction process and noted that the Wilderness Area is open to the public.
- Questions / Comments
 - SSJID commented on the impressiveness of the project as seen when they toured the site during fall of 2023. It was a good opportunity for collaboration that led to a grant opportunity with NOFO. They hope to help implement more projects on the Stanislaus River.
 - USBR shared that they also enjoyed the site visit and are impressed by the project results.

Goodwin Canyon Gravel Injection Projects

- USBR is still working on acquiring funding for this project.

Mohler and Tortuga Rearing Habitat Projects

- Pre-project monitoring is being conducted as well as additional project planning.
- Project crews anticipate starting construction in 2025.

Progress Update on Proposed Action Elements

- N/A

Other Discussion Items

Curtailments

- N/A

Annual Reporting

- USBR is still waiting for a final section from NMFS to compile the Annual Report. Considering omitting that section altogether.

Items to elevate to WOMT

- USBR to check if the missing section for the Annual Activities Report is something that could be elevated to WOMT.

Next Meeting

Wednesday, May 15, 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, April 17, 2024

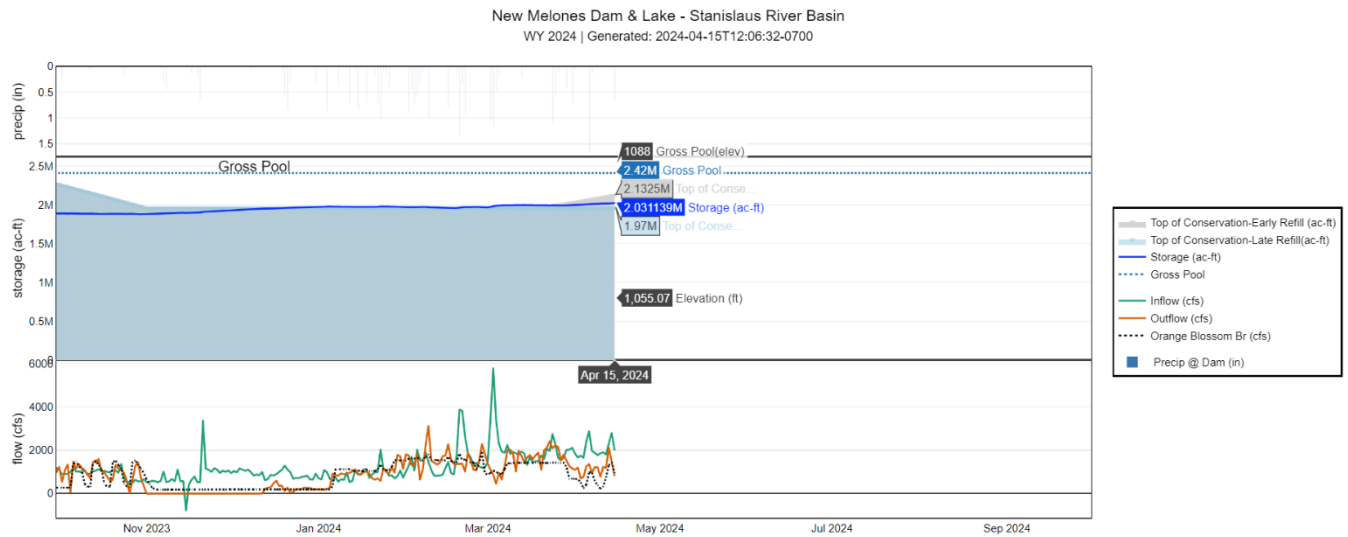
Agenda

1. Introductions
2. Ground Rules¹
3. Announcements
 - a. Meeting will be recorded for notetaking purposes – Karis Johnson, Kearns & West
 - b. May hybrid meeting at Central Valley Operations Office
 - Address: 3310 El Camino Avenue, Sacramento, CA 95821
 - Parking: available and free
 - Security: allow about 15 minutes
 - Capacity: around 20 people
4. Operations Update and Forecasts/Hydrology - Peggy Manza, USBR
5. Temperature Updates – Barbara Byrne, NMFS

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

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. Presentation on the Stanley Wakefield Wilderness Area, – JD (John) Wikert, USFWS
 - b. Restoration Tracker – JD (John) Wikert, USFWS
 - c. 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 Johnston, Kearns & West
11. Review Action Items - Karis Johnston, Kearns & West
12. Next Meeting: Wednesday, May 15, 2024 (10am-12pm)



Flow (cfs), storage (ac-ft) and precipitation (in) for New Melones Dam and Lake at Stanislaus River Basin from November 2023 to April 2024.

The Figure is a line graph showing the flow, storage, and precipitation for New Melones Dam and Lake from November 2023 to April 2024. The graph shows storage around 2M ac-ft from November to April, with flow staying at 2000 cfs, except for peaks in early December at approximately 4000 cfs and in March at approximately 6000 cfs.



Tables for BDO

United States Department of the Interior
Bureau of Reclamation, Central Valley Project-
California Daily CVP Water Supply Report

April 14, 2024

Run Date: April 15, 2024

Table 4. Reservoir Releases in Cubic Feet Per Second

Reservoir	Dam	WY 2023	WY 2024	15-Year Median
Trinity	Lewiston	3,587	307	313
Sacramento	Keswick	3,341	8,049	4,645
Feather	Oroville (SWP)	10,500	7,000	1,750
American	Nimbus	7,032	4,020	2,033
Stanislaus	Goodwin	1,503	795	1,304
San Joaquin	Friant	9,010	547	460

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	1,683	925	2,056	122
Shasta	4,552	3,623	4,152	4,345	120
Folsom	977	668	708	777	116
New Melones	2,420	1,510	1,437	2,031	135
Fed. San Luis	966	720	964	950	132
Total North CVP	11,363	8,204	8,186	10,159	124
Millerton	521	300	198	456	152
Oroville (SWP)	3,538	2,541	3,108	3,198	126

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	957	347	1,306	646	148
Shasta	4,043	2,210	6,527	3,312	122
Folsom	1,344	757	3,947	1,596	84
New Melones	494	---	1,114	538	92

Reservoir	Current WY 2024	WY 1977	WY 1983	15-Yr Avg	% O 15 Yr Avg
Millerton	744	453	1,050	607	123

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	34.82	21.65	37.91	27.01 (64)	129	0.49
Sacramento at Shasta Dam	62.46	32.83	83.60	53.18 (69)	117	1.19
American at Blue Canyon	46.10		110.98	57.34 (50)	80	0.25
Stanislaus at New Melones	26.98	---	36.55	24.47 (47)	110	0.68
San Joaquin at Huntington LK	29.52	11.50	65.00	35.73 (51)	83	0.20

United States Department of the Interior
 Bureau of Reclamation-Central Valley Project- California
 New Melones Lake Daily Operations, April 2024, Run Date: 04/15/2024

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	2,007.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	1,053.06	2,008.8	0.9	1,682	1,212	0	0	22	0.06	0.02
2	1,053.24	2,010.8	2.0	1,769	718	0	0	43	0.12	0.00
3	1,053.39	2,012.4	1.7	1,671	784	0	0	47	0.13	0.00
4	1,053.58	2,014.5	2.1	2,425	1,268	0	0	93	0.26	0.00
5	1,053.85	2,017.5	3.0	2,895	1,379	0	0	4	0.01	1.66
6	1,054.03	2,019.5	2.0	1,987	972	0	0	7	0.02	0.12
7	1,054.14	2,020.8	1.2	1,905	1,236	0	0	50	0.14	0.00
8	1,054.23	2,021.8	1.0	1,786	1,230	0	0	50	0.14	0.00
9	1,054.41	2,023.8	2.0	1,877	790	0	0	76	0.21	0.00
10	1,054.52	2,025.0	1.2	1,924	1,245	0	0	61	0.17	0.00
11	1,054.62	2,026.1	1.1	1,821	1,201	0	0	58	0.16	0.00
12	1,054.64	2,026.3	0.2	2,338	2,132	0	0	94	0.26	0.00
13	1,054.86	2,028.8	2.5	2,812	1,500	0	0	76	0.21	0.00
14	1,055.07	2,031.1	2.3	2,041	855	0	0	4	0.01	0.68
Totals	N/A	N/A	23.2	28,933	16,522	0	0	685	1.90	2.48
Acre- Feet	N/A	N/A	23,200	57,389	32,771	0	0	1,359	N/A	N/A

Comments:

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

Summary Precipitation

This Month 2.48
 October 1, 2023 to Date 26.98

Summary: Release (acre- feet)

Power	32,771
Spill	0
Outlet	0
Total	32,771

United States Department of the Interior
 Bureau of Reclamation-Central Valley Project- California
 New Melones Lake Daily Operations, March 2024, Run Date: 04/15/2024

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	1,977.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	1,050.64	1,982.0	4.6	3,460	1,117	0	0	14	0.04	1.06
2	1,051.52	1,991.7	9.7	5,816	883	0	0	43	0.12	1.19
3	1,052.04	1,997.5	5.7	3,398	468	0	0	36	0.10	0.46
4	1,052.28	2,000.1	2.7	2,321	974	0	0	7	0.02	0.18
5	1,052.51	2,002.7	2.5	1,956	654	0	0	18	0.05	0.00
6	1,052.62	2,003.9	1.2	1,902	1,260	3	0	25	0.07	0.00
7	1,052.66	2,004.3	0.4	2,258	1,999	0	0	36	0.10	0.00
8	1,052.62	2,003.9	-0.4	1,849	2,050	0	0	22	0.06	0.00
9	1,052.63	2,004.0	0.1	1,936	1,858	0	0	22	0.06	0.00
10	1,052.77	2,005.6	1.6	1,871	1,040	0	0	50	0.14	0.00
11	1,052.73	2,005.1	-0.4	1,815	1,999	0	0	39	0.11	0.00
12	1,052.76	2,005.4	0.3	1,956	1,753	0	0	36	0.10	0.21
13	1,052.83	2,006.2	0.8	1,869	1,464	0	0	14	0.04	0.01
14	1,052.76	2,005.4	-0.8	1,348	1,689	0	0	50	0.14	0.00
15	1,052.73	2,005.1	-0.3	1,693	1,795	0	0	65	0.18	0.00
16	1,052.69	2,004.7	-0.4	1,454	1,602	0	0	75	0.21	0.00
17	1,052.63	2,004.0	-0.7	1,510	1,780	0	0	65	0.18	0.00
18	1,052.55	2,003.1	-0.9	1,508	1,905	0	0	50	0.14	0.00
19	1,052.66	2,004.3	1.2	1,776	1,112	0	0	50	0.14	0.00
20	1,052.58	2,003.4	-0.9	1,610	14	0	1,996	47	0.13	0.00
21	1,052.56	2,003.2	-0.2	2,092	673	0	1,466	64	0.18	0.00
22	1,052.47	2,002.2	-1.0	1,980	2,429	0	0	54	0.15	0.00
23	1,052.58	2,003.4	1.2	2,769	2,105	0	0	50	0.14	1.10
24	1,052.59	2,003.6	0.1	2,311	2,248	0	0	7	0.02	0.59
25	1,052.50	2,002.6	-1.0	1,679	2,170	0	0	11	0.03	0.11
26	1,052.49	2,002.5	-0.1	1,539	1,556	0	0	39	0.11	0.00
27	1,052.46	2,002.1	-0.3	1,689	1,817	0	0	39	0.11	0.00
28	1,052.55	2,003.1	1.0	2,038	1,525	0	0	11	0.03	0.42
29	1,052.68	2,004.6	1.4	2,044	1,271	0	0	47	0.13	0.01
30	1,052.85	2,006.4	1.9	2,132	1,179	0	0	4	0.01	0.70
31	1,052.98	2,007.9	1.4	1,864	1,113	0	0	25	0.07	0.06
Totals	N/A	N/A	30.4	65,443	45,502	3	3,462	1,115	3.11	6.10

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	30,400	129,806	90,253	6	6,867	2,212	N/A	N/A

Comments:

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

Summary Precipitation

This Month 6.10
October 1, 2023 to Date 24.50

Summary: Release (acre-feet)

Power 90,253
Spill 6
Outlet 6,867
Total 97,126

United States Department of the Interior
 Bureau of Reclamation-Central Valley Project- California
 Tulloch Reservoir Daily Operations, April 2024, Run Date: 04/15/2024

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	57,792	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	502.62	58,184	392	1,449	1,212	1,249	0	0	2
2	502.39	57,927	-257	900	718	1,026	0	0	4
3	502.16	57,669	-258	944	784	1,069	0	0	5
4	502.27	57,792	123	1,522	1,268	1,451	0	0	9
5	502.78	58,364	572	2,105	1,379	1,817	0	0	0
6	502.15	57,658	-706	1,294	972	1,649	0	0	1
7	502.35	57,882	224	1,524	1,236	1,406	0	0	5
8	502.77	58,352	470	1,506	1,230	1,264	0	0	5
9	502.44	57,983	-369	1,006	790	1,184	0	0	8
10	502.65	58,218	235	1,462	1,245	1,338	0	0	6
11	502.46	58,005	-213	1,481	1,201	1,582	0	0	6
12	503.46	59,134	1,129	2,506	2,132	1,927	0	0	10
13	503.76	59,476	342	1,835	1,500	1,655	0	0	8
14	503.52	59,203	-273	1,093	855	1,231	0	0	0
Totals	N/A	N/A	1,411	20,627	16,522	19,848	0	0	69
Acre-Feet	N/A	N/A	1,411	40,914	32,771	39,369	0	0	137

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	39,369
Spill	0
Outlet	0
Total	39,369

United States Department of the Interior
 Bureau of Reclamation-Central Valley Project- California
 Tulloch Reservoir Daily Operations, March 2024, Run Date: 04/10/2024

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	52,273	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	497.87	53,050	777	1,360	1,117	967	0	0	1
2	499.17	54,417	1,367	1,693	883	1,000	0	0	4
3	498.86	54,089	-328	805	468	967	0	0	3
4	499.23	54,481	392	1,165	974	966	0	0	1
5	498.88	54,110	-371	781	654	966	0	0	2
6	498.93	54,162	52	1,358	1,263	1,330	0	0	2
7	499.76	55,047	885	2,095	1,999	1,646	0	0	3
8	500.36	55,693	646	2,092	2,050	1,764	0	0	2
9	500.64	55,997	304	1,918	1,858	1,763	0	0	2
10	499.46	54,727	-1,270	1,127	1,040	1,762	0	0	5
11	499.96	55,260	533	2,037	1,999	1,764	0	0	4
12	499.94	55,239	-21	1,940	1,753	1,948	0	0	3
13	499.31	54,567	-672	1,728	1,464	2,066	0	0	1
14	499.08	54,321	-246	1,977	1,689	2,086	0	10	5
15	499.08	54,321	0	2,109	1,795	2,103	0	0	6
16	498.44	53,647	-674	1,880	1,602	2,213	0	0	7
17	498.21	53,406	-241	2,087	1,780	2,203	0	0	6
18	498.23	53,427	21	2,229	1,905	2,213	0	0	5
19	496.71	51,853	-1,574	1,361	1,112	2,150	0	0	5
20	497.00	52,149	296	2,349	2,010	2,196	0	0	4
21	497.01	52,159	10	2,136	2,139	2,125	0	0	6
22	497.66	52,833	674	2,506	2,429	2,161	0	0	5
23	498.54	53,753	920	2,563	2,105	2,094	0	0	5
24	499.80	55,090	1,337	2,713	2,248	2,038	0	0	1
25	500.79	56,159	1,069	2,562	2,170	2,022	0	0	1
26	500.51	55,856	-303	1,858	1,556	2,007	0	0	4
27	500.75	56,116	260	2,122	1,817	1,987	0	0	4
28	501.25	56,663	547	1,874	1,525	1,597	0	0	1
29	501.72	57,181	518	1,551	1,271	1,285	0	0	5
30	502.08	57,580	399	1,462	1,179	1,261	0	0	0
31	502.27	57,792	212	1,357	1,113	1,247	0	0	3

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	5,519	56,795	48,967	53,897	0	10	106
Acre-Feet	NA	NA	5,519	112,653	97,126	106,905	0	20	210

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	106,905
Spill	0
Outlet	20
Total	106,925

Oakdale Irrigation District
 South San Joaquin Irrigation
 District Tri Dams Project-California
 Goodwin Reservoir Daily Operations, April 2024, Run Date: 04/15/2024

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	551	N/A	N/A	N/A	N/A	N/A	N/A
1	360.55	551	0	1,249	0	180	396	22
2	360.55	532	-19	1,026	0	564	403	51
3	360.55	532	0	1,069	0	405	564	51
4	360.55	549	17	1,451	0	671	664	74
5	360.54	564	15	1,817	0	1,092	659	50
6	360.54	549	-15	1,649	0	942	643	50
7	360.55	541	-8	1,406	0	655	664	61
8	360.54	531	-10	1,264	0	477	663	100
9	360.54	527	-4	1,184	0	330	700	126
10	360.54	536	9	1,338	0	441	740	121
11	360.54	557	21	1,582	0	846	569	146
12	360.55	573	16	1,927	0	1,347	466	119
13	360.58	556	-17	1,655	0	1,491	421	65
14	360.55	545	-11	1,231	0	795	404	39
Totals	N/A	N/A	-6	19,848	0	10,236	7,956	1,075
Acre-Feet	N/A	N/A	-6	39,369	0	20,303	15,781	2,132

Joint Main Operated by SSJID and OID.

Summary: Release (acre-feet)

Joint Main Canal	15,781
South Main Canal	2,132
Outlet	0
Spill	20,303
Total	38216.0945

Oakdale Irrigation District
 South San Joaquin Irrigation
 District Tri Dams Project-California
 Goodwin Reservoir Daily Operations, March 2024, Run Date: 04/10/2024

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	556	N/A	N/A	N/A	N/A	N/A	N/A
1	360.30	558	2	967	0	1,004	0	0
2	360.29	557	-1	1,000	0	1,004	0	0
3	360.29	557	0	967	0	1,005	0	0
4	360.29	557	0	966	0	1,002	0	0
5	360.29	557	0	966	0	1,002	0	0
6	360.54	575	18	1,330	0	1,355	0	0
7	360.54	575	0	1,646	0	1,506	167	0
8	360.54	575	0	1,764	0	1,503	295	0
9	360.54	575	0	1,763	0	1,502	298	0
10	360.54	575	0	1,762	0	1,502	300	0
11	360.54	575	0	1,764	0	1,501	300	0
12	360.54	575	0	1,948	0	1,507	439	0
13	360.54	575	0	2,066	0	1,504	530	123
14	360.54	575	0	2,096	0	1,502	554	31
15	360.54	575	0	2,103	0	1,502	565	31
16	360.54	575	0	2,213	0	1,505	614	97
17	360.54	575	0	2,203	0	1,503	602	110
18	360.54	575	0	2,213	0	1,504	603	120
19	360.54	575	0	2,150	0	1,503	570	86
20	360.54	575	0	2,196	0	1,500	480	110
21	360.54	575	0	2,125	0	1,504	488	140
22	360.54	575	0	2,161	0	1,502	478	172
23	360.54	575	0	2,094	0	1,503	461	113
24	360.54	575	0	2,038	0	1,503	431	91
25	360.54	575	0	2,022	0	1,504	425	78
26	360.54	575	0	2,007	0	1,501	426	57
27	360.55	576	1	1,987	0	1,506	407	42
28	360.18	550	-26	1,597	0	1,141	408	42
29	360.18	550	0	1,285	0	812	400	16
30	360.20	551	1	1,261	0	807	394	42
31	360.20	551	0	1,247	0	805	396	26

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	-5	53,907	0	41,504	11,031	1,527
Acre-Feet	N/A	N/A	-5	106,925	0	82,323	21,880	3,029

Joint Main Operated by SSJID and OID.

Summary: Release (acre-feet)

Joint Main Canal	21,880
South Main Canal	3,029
Outlet	0
Spill	82,323
Total	107231.977

April 2024 Water Temperature and Fish Monitoring Update

Year-to-Date Flows

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

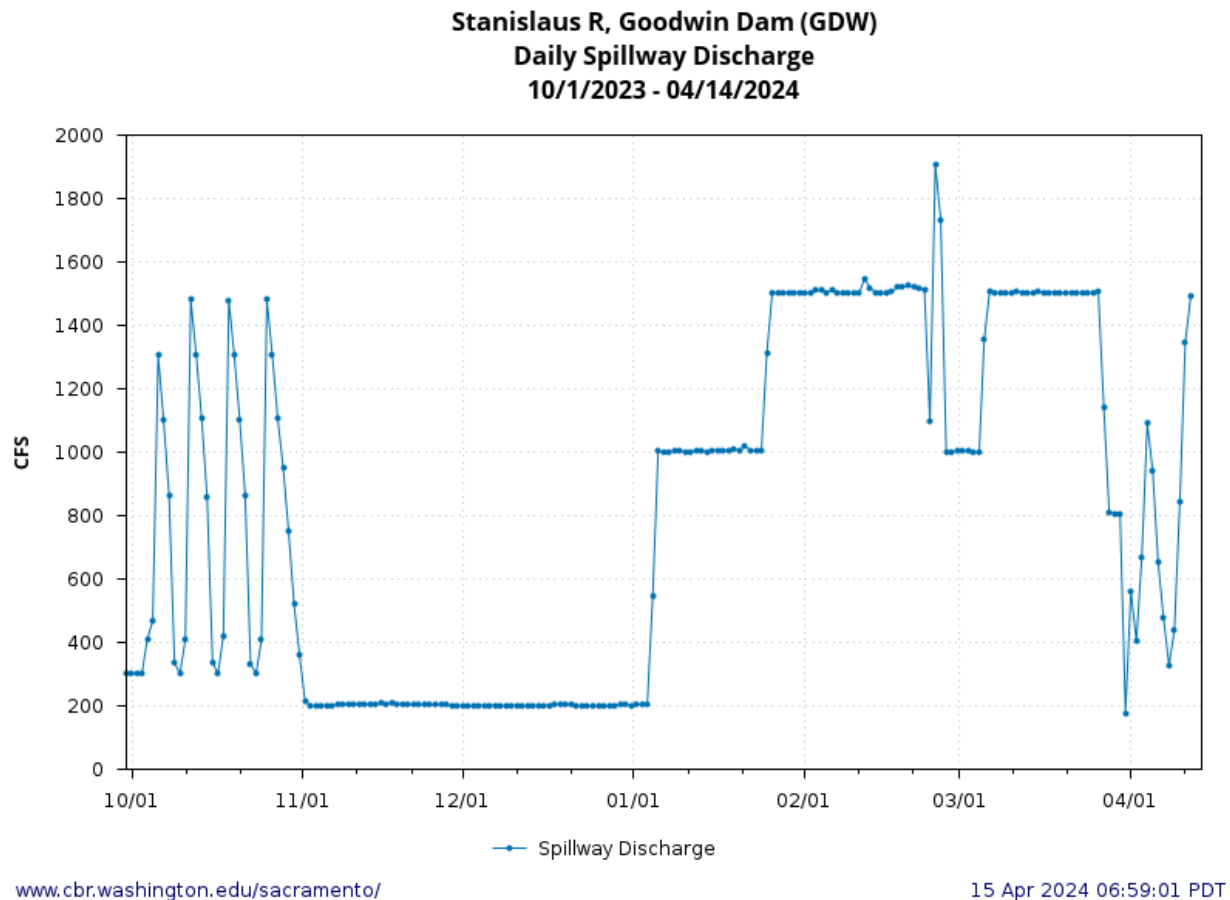


Figure 1. Goodwin (daily) releases to the Stanislaus River since October 1, 2023. Data from GDW station on CDEC.

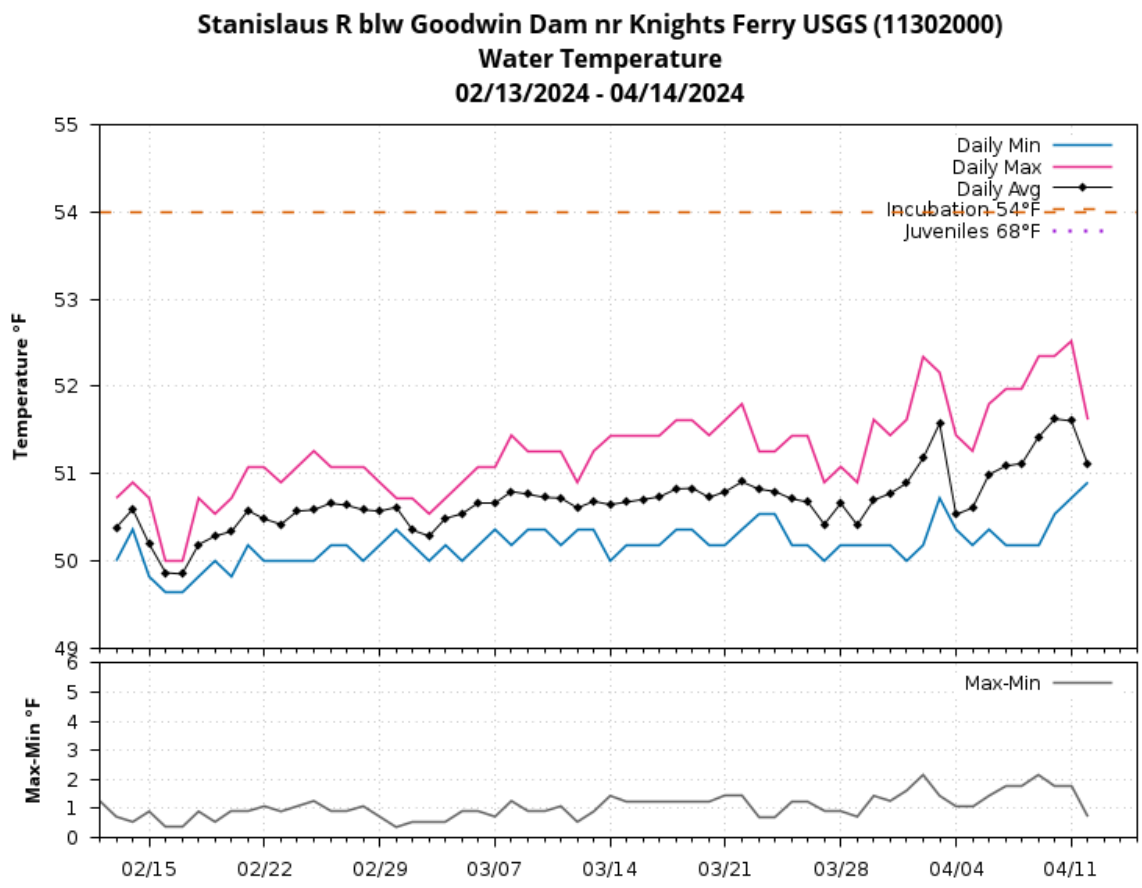
Figure 1 is a line graph showing Goodwin Dam daily spillway discharge. The graph shows weekly peaks of releases 1,300 – 1,500 cfs starting October 6th with discharges staying at 200 cfs November 1st – January 2nd. Irregular increases occur between January 2nd and April 1st with a peak over 1,800 cfs happening on February 28th.

Water Temperature

The temperature thresholds included in Figures 2-10, below, are the thresholds used in the 2019 NMFS LTO BiOp1 (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 February 2024 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 February 2024 are shown below at Vernalis (Figure 5). Current-year water temperatures are plotted along with historical temperatures for upstream of 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.



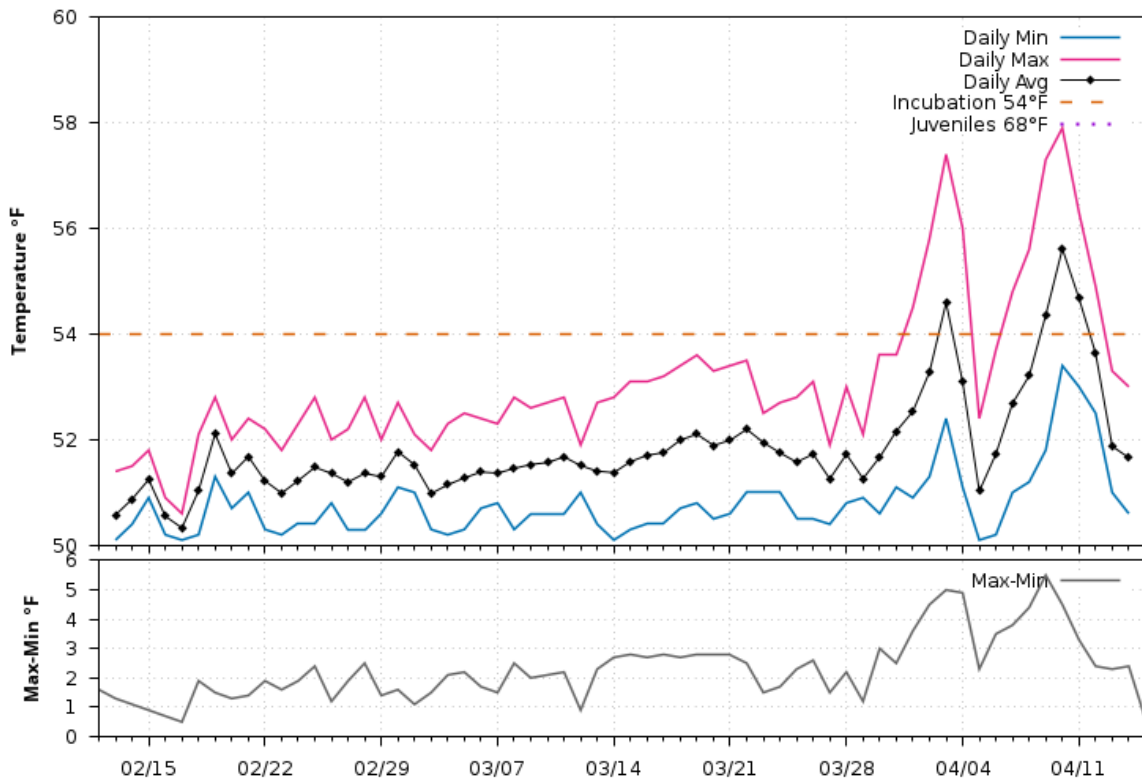
www.cbr.washington.edu/sacramento/

15 Apr 2024 06:59:03 PDT

Figure 2. Daily water temperatures on the Stanislaus River upstream of Knights Ferry since February 13, 2024. Data from USGS gage 11302000 on NWIS; temperature threshold reference line added by SWT.

Figure 2 is a line graph showing Goodwin Dam daily minimum, maximum and average water temperature. The graph shows an average between 50° and 51° Fahrenheit with a steady increase to 52° Fahrenheit on April 3rd and April 11th.

**Stanislaus R at Orange Blossom Bridge (OBB)
Water Temperature
02/13/2024 - 04/14/2024**



www.cbr.washington.edu/sacramento/

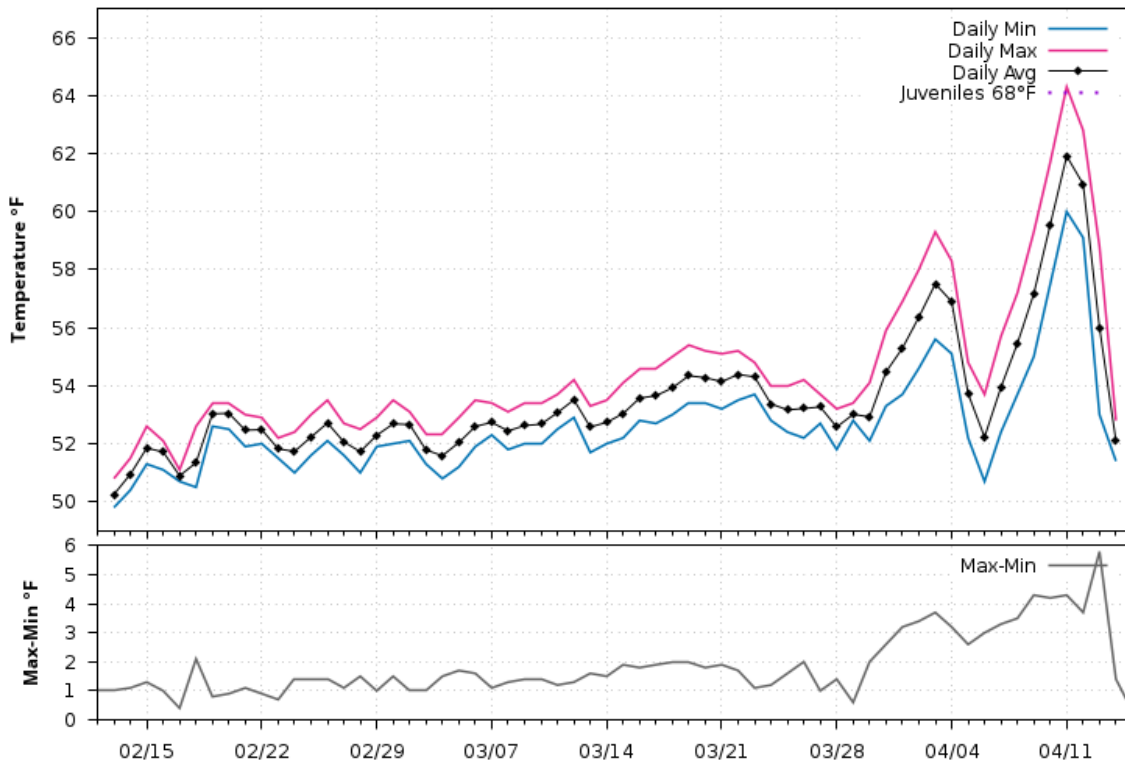
15 Apr 2024 06:59:03 PDT

Figure 3. Stanislaus (hourly) water temperatures at Orange Blossom Bridge since February 13, 2024. Data from OBB station on CDEC.

Figure 3 is a line graph showing Orange Blossom Bridge daily minimum, maximum and average water temperature. The graph shows average temperatures below 54° Fahrenheit with a peaks over 55° Fahrenheit on April 3rd and to April 9th.

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.

**Stanislaus R at Ripon (USGS) (RIP)
Water Temperature
02/13/2024 - 04/14/2024**



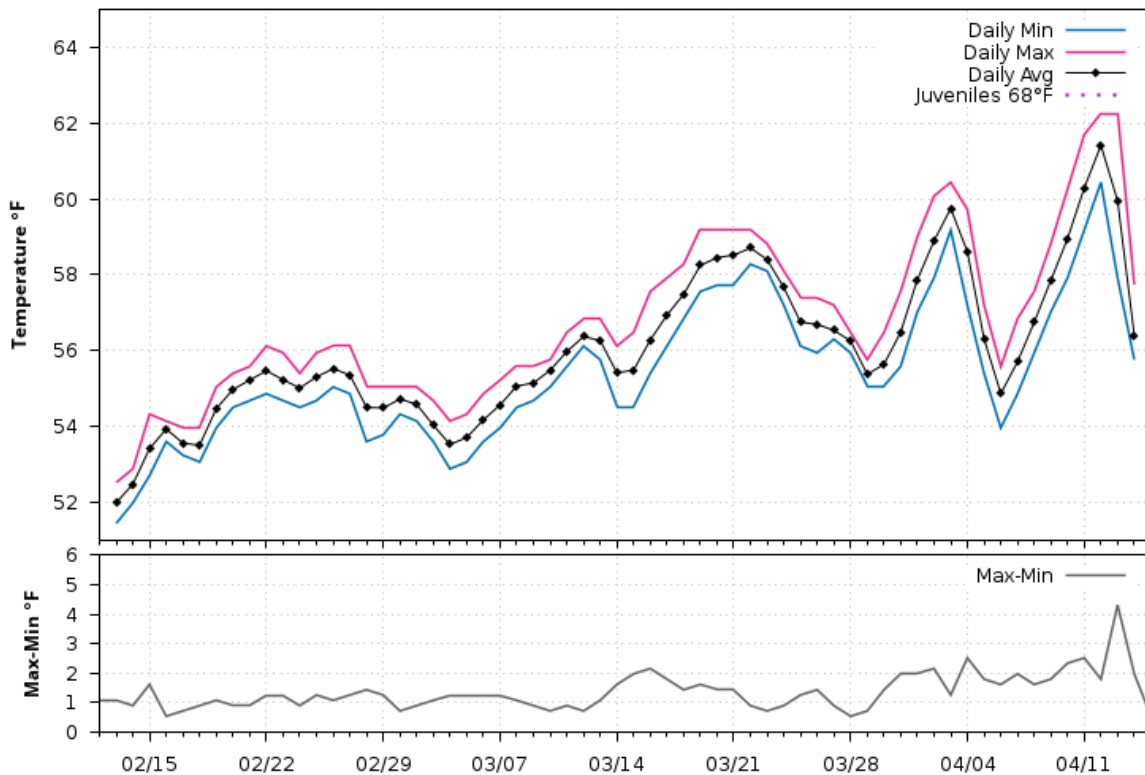
www.cbr.washington.edu/sacramento/

15 Apr 2024 06:59:03 PDT

Figure 4. Stanislaus water temperatures at Ripon since February 13, 2024. Data from RIP station on CDEC.

Figure 4 is a line graph showing Ripon daily minimum, maximum and average water temperature. The graph shows average temperature below 56° Fahrenheit with peaks of 59° Fahrenheit on April 2nd and 64° Fahrenheit on April 11th.

**San Joaquin R nr Vernalis (VNS)
Water Temperature
02/13/2024 - 04/14/2024**



www.cbr.washington.edu/sacramento/

15 Apr 2024 06:59:03 PDT

Figure 5. San Joaquin River (15-minute) water temperatures at Vernalis since February 13, 2024. 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 is a line graph showing Vernalis daily minimum, maximum and average water temperature. The graph shows a steady increase to peaks of 59° Fahrenheit on April 2nd and a maximum peak in temperature of 62° Fahrenheit on April 11th.

Stanislaus R at Orange Blossom Bridge (OBB)
2001-2024 Daily Average Water Temperature
Observed Range 48.0-70.4
02/14 - 06/14

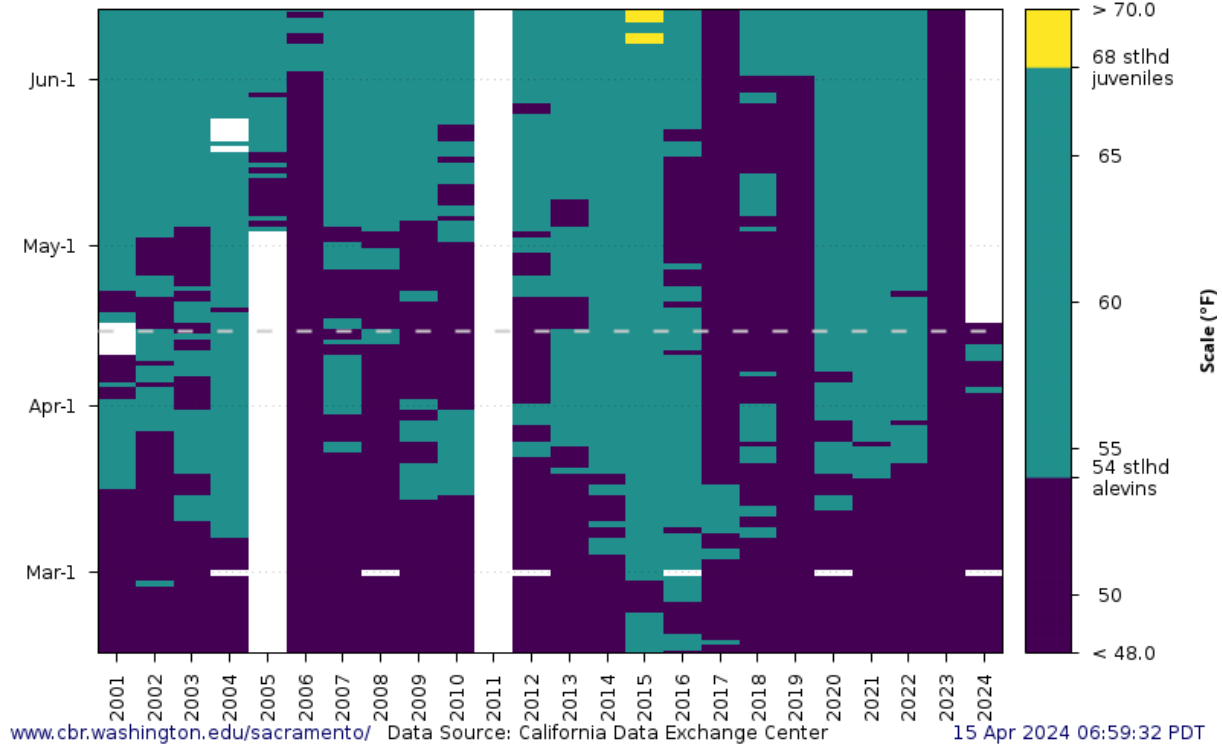


Figure 6. Stanislaus River water temperatures at Orange Blossom Bridge for WY 2001 to present. Data from SacPAS; temperature threshold reference lines added by SWT. http://www.cbr.washington.edu/sacramento/data/query_river_allyears.html

Figure 6 is a bar chart showing water temperatures at Orange Blossom Bridge for WY 2001 to present for February to June. The chart shows during this time, temperature remained above 60° Fahrenheit with late February having temperatures below 55° Fahrenheit outside from 2015 and 2016.

Stanislaus R at Ripon (USGS) (RIP)
2012-2024 Daily Average Water Temperature
Observed Range 47.3-81.6
02/14 - 06/14



Figure 7. Stanislaus River water temperatures at Ripon for WY 2012 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 2012 to present for March to June. The chart shows that during this time, the daily average water temperature was mostly below 68° Fahrenheit except for temperatures in May and June being above 68° Fahrenheit during 2013 to 2015.

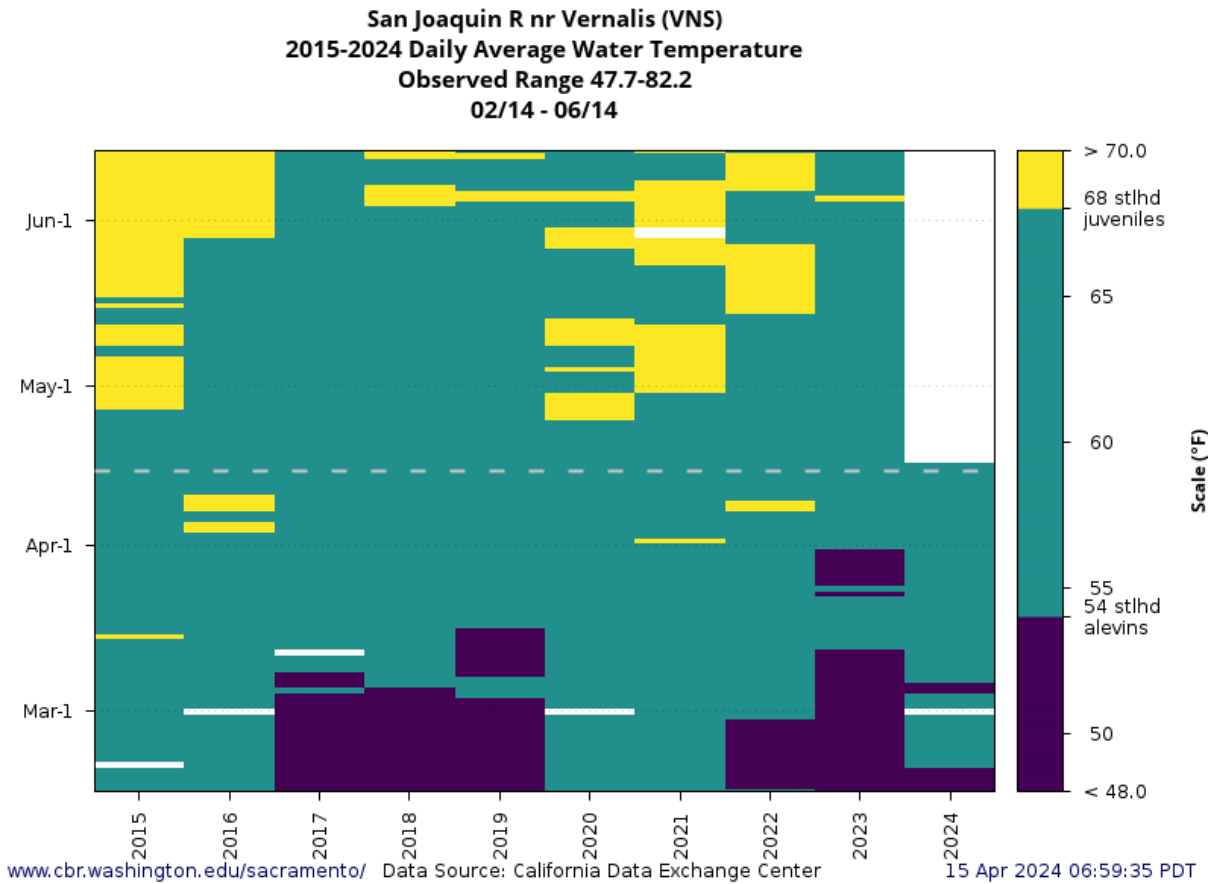


Figure 8. San Joaquin River water temperatures at Vernalis for WY 2015 to present. Figure from SacPAS using VNS station data from CDEC; temperature threshold reference line added by SWT. http://www.cbr.washington.edu/sacramento/data/query_river_allyears.html

Figure 8 is a bar chart showing water temperatures at Vernalis for WY 2015 to present. The chart shows that during this time, the daily average water temperature was mostly below 68° Fahrenheit from March to late April. Temperatures go above 68° Fahrenheit early May to June during 2015, 2016 and 2020-2022.

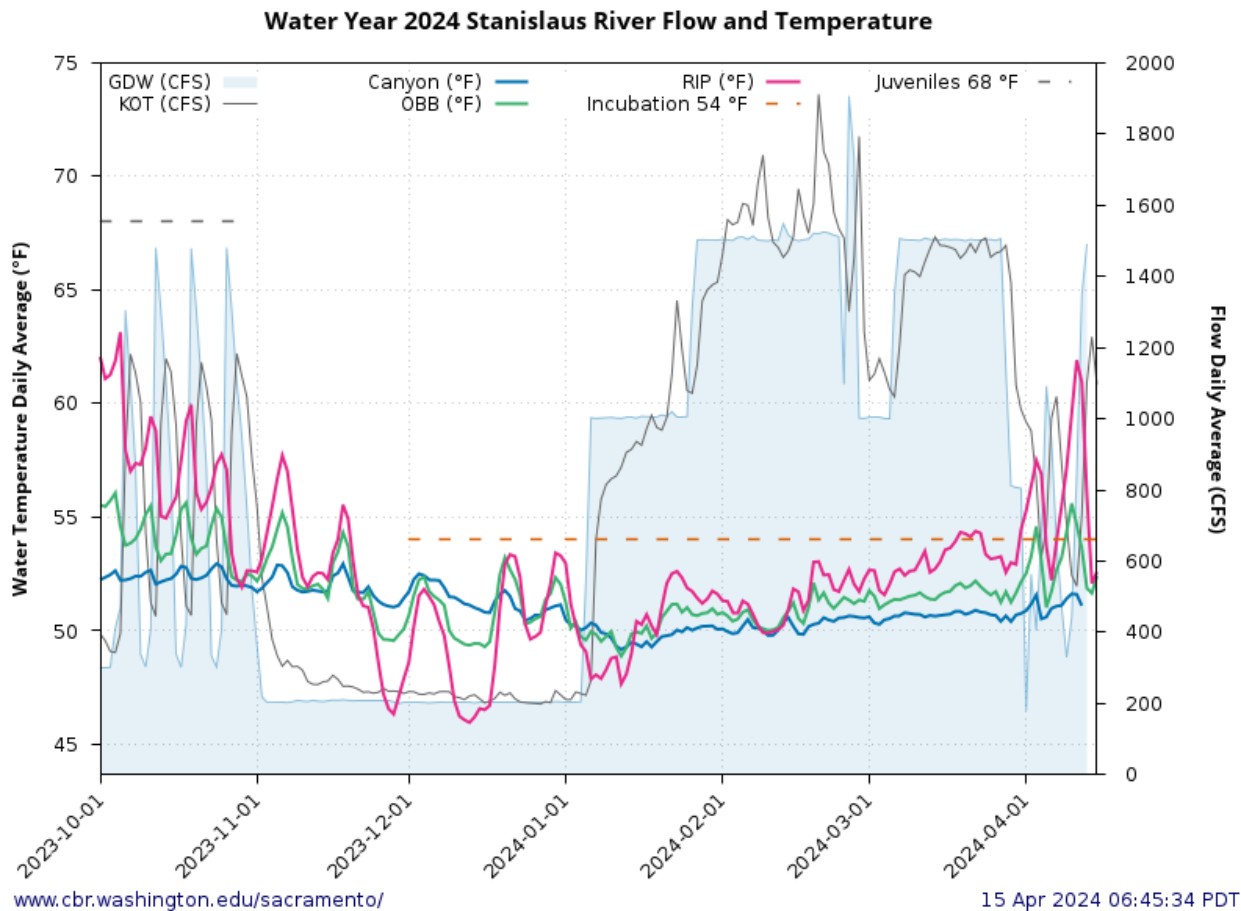


Figure 9. Stanislaus River flow and water temperatures from October 1, 2023 to April 15, 2024. Data (including temperature threshold reference lines) from SacPAS: http://www.cbr.washington.edu/sacramento/data/tc_stanislaus.html

Figure 9 is a line chart showing river flow and water temperatures on the Stanislaus River. The graph shows oscillating peaks of daily flow and water temperature.

Flow Planning

USFWS Updates: None provided in advance of the 4/17/24 meeting.

Forum (SRF) Call Review

USBR Updates: Receive live update from USBR staff on the 4/16/24 call.

Fish Monitoring and Studies

CDFW Update on Fish Monitoring

Adults:

Chinook Carcass and redd surveys: CDFW plans to start the 2024 Escapement Survey in October.

Steelhead reed surveys: CDFW began steelhead reed surveys in January 2024. The surveys conducted up to April 8th, 2024 are shown in Table 1.

Table 1: Steelhead reed surveys, CDFW began steelhead reed surveys in January 2024.

Week	Date	# RBT Live >40	# RBT Live <40	# RBT Redds	# RBT Carcass	# CHN Live	# CHN Redds	# CHN Car-cass	# PL Live	# PL Redds	# PL Car-cass	# SASU Redds	Average Flow (cfs)
1	1/1/2024	1	23	0	1	51	149	36	0	0	0	0	200
2*	1/8/2024	0	0	0	0	1	22	2	0	0	0	0	1150
3*	1/15/2024	1	1	0	0	1	3	1	0	0	0	0	1100
4*	1/22/2024	0	1	0	0	1	0	0	0	0	0	0	1100
5*	1/29/2024	0	0	0	0	0	0	0	0	0	0	0	1575
6**	2/5/2024	0	0	0	0	0	0	0	0	0	0	0	1625
7**	2/12/2024	0	0	0	0	0	0	0	0	0	0	0	1550
8*	2/19/2024	0	3	0	0	0	0	0	0	0	0	0	1562.5
9*	2/26/2024	0	3	0	0	0	0	0	0	0	0	0	1125
10*	3/4/2024	0	8	0	0	0	0	0	0	0	0	0	1250
11*	3/11/2024	1	7	0	0	0	0	0	0	0	0	0	1500
12*	3/18/2024	2	12	0	0	0	0	0	0	0	0	0	1500
13*	3/25/2024	1	9	0	0	0	0	0	0	0	0	17	1500
14	4/1/2024	0	32	1	0	0	0	0	1	0	0	159	567
15	4/8/2024	13	170	0	1	0	0	0	0	1	0	1243	400

* Section 1 not surveyed

** Section 1 (flow) and N1-N2 not surveyed (turbidity)

RBT – O. mykiss CHN – Chinook Salmon PL- Pacific Lamprey SASU – Sacramento Sucker

Juveniles:

Mossdale Trawl: CDFW began independent operations on April 2 and will continue through June.

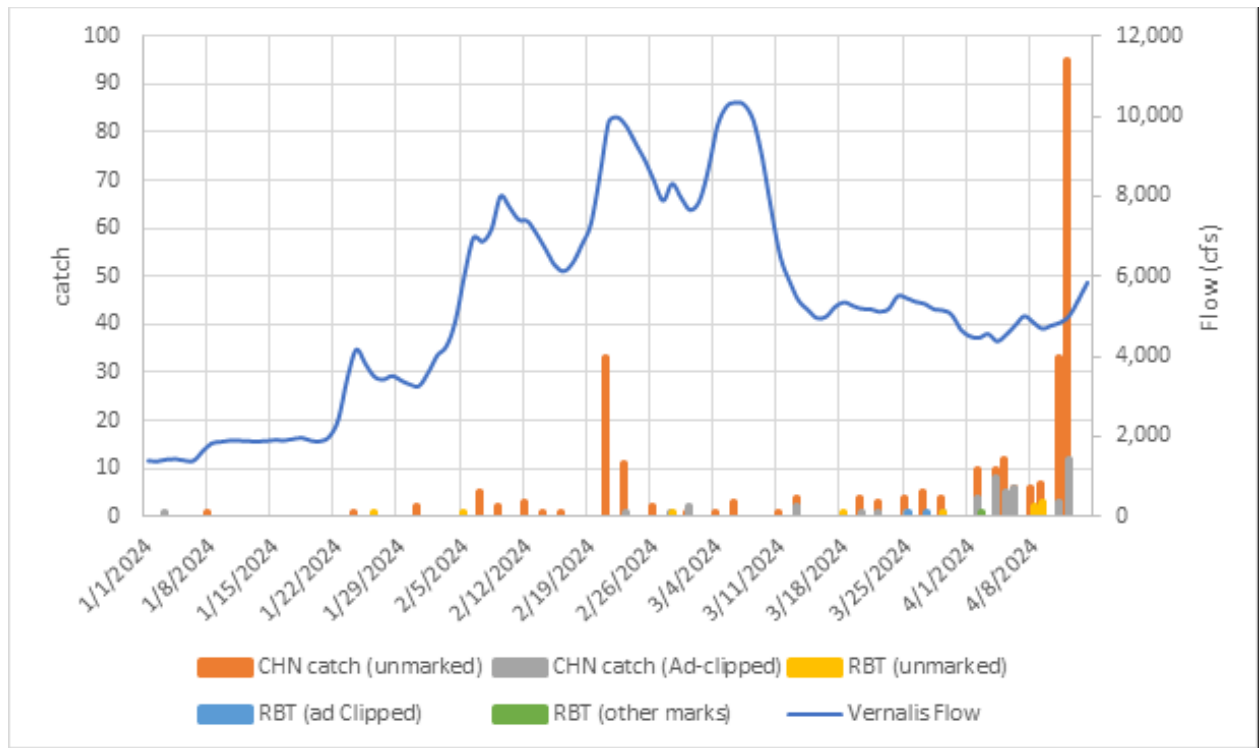


Figure 10. Salmonid catch at Mossdale and flow at Vernalis since January 1, 2014.

Figure 10 is a line chart showing the Vernalis flow with peaks up to 10,000 cfs in February and March and a bar chart showing the Salmonid catch at Mossdale with a peak of over 90 in mid-April.

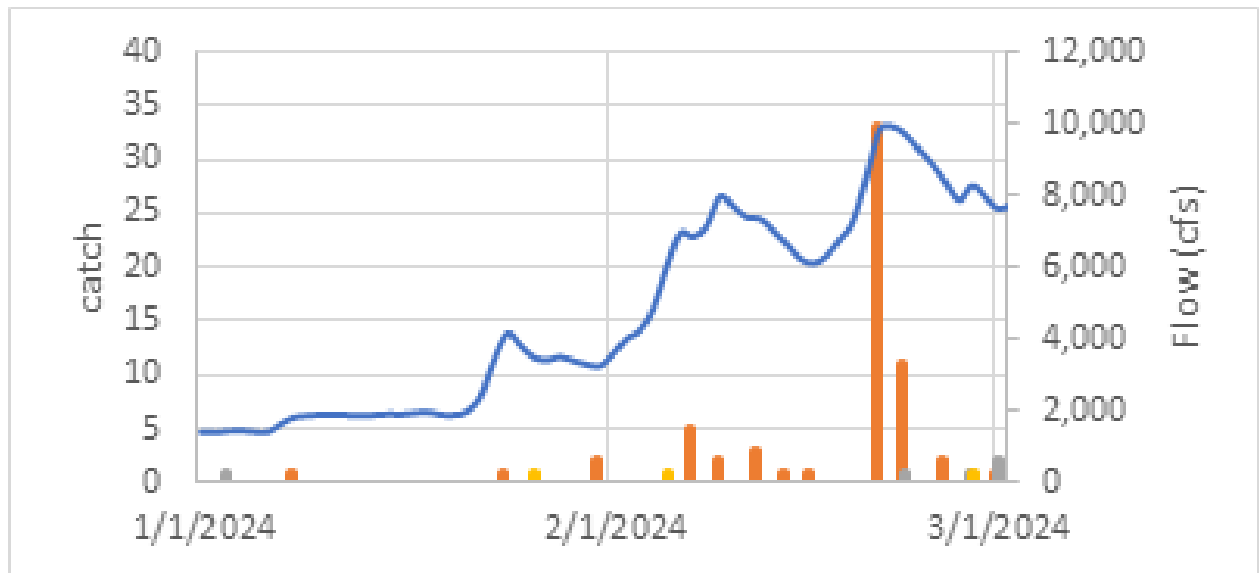


Figure 11. Salmonid catch at Mossdale and flow at Vernalis for January and February 2014.

Figure 11 is a line chart showing the Vernalis flow in January and February with a peak over 10,000 cfs in late February 2024, and a bar chart showing the Salmonid catch in January and February 2024 with a peak over 30 Salmonid happening in late February 2024.

Table 2: Salmonid catch at Mossdale Trawl with length information.

Date	# CHN catch	# Comments
1/3/2024	1	FL 195
1/8/2024	1	FL 158
1/24/2024	1	FL 36
1/26/2024	0	1 RBT FL 200
1/31/2024	2	FL 34 (both)
2/5/2024	0	1 RBT FL 224
2/7/2024	5	FL 33,35,35,36,133
2/9/2024	2	FL 37,41
2/12/2024	3	FL 41,34,37
2/14/2024	1	FL 37
2/16/2024	1	FL 37
2/21/2024*	33	FL 36,39,29,34,37, 40,37,38,36,37,43,44, 35,35,35,35,35,38,40 36,38,62,38,26,40,36 37,38,39,36,80,37,36
2/23/2024*	11 1 ad- clipped	FL 37,37,37,33,110, 38,99,37,38,37,34 Ad-clipped FL 74
2/26/2024	2	FL 36,41
2/28/2024	1	Ad-clipped FL 73
2/28/2024	0	1 RBT FL 222
3/1/2024	1, 2 ad-clipped	FL 36 Ad- clipped FL 82,82
3/4/2024	1	FL 35
3/6/2024	3	FL 35,53,47
3/11/2024	1	FL 39
3/13/2024	4 2 ad-clipped	FL 37,49,82,89 Ad-clipped FL 90,103
3/18/2024	0	1 RBT FI 212
3/20/2024	4 1 ad-clipped	FL 47,47,51,47 Ad-Clipped FL 77

Date	# CHN catch	# Comments
3/22/2024*	3 1 ad-clipped	FL 48,59,50 Ad-Clipped FL 79
3/25/2024	4 1 ad-clipped 0	FL 62,57,48,65 Ad-Clipped FL 81 1RBT ad-clipped 251
3/27/2024	5 1 orange caudal 0	FL 50,76,64,75,49 FL 80 1RBT ad-clipped 213
3/29/2024	4 1 ad-clipped 0	FL 49,98,68,60 FL 97 1 RBT FL 97
4/2/2024*	10 4 ad-clipped -	Ave FL 59.1 1 RBT sutures
4/4/2024*	10 8 ad-clipped	Ave FL 71.4
4/5/2024*	12 5 ad-clipped	Ave FL 72.8
4/6/2024*	6 3 ad-clipped	Ave FL 81.8
4/8/2024*	6 0	Ave FL 92 2 RBT FL 220,245
4/9/2024*	7 0	Ave FL 51 3 RBT FL 245,266,207

FishBio Updates

Weir Updates

Stanislaus River Weir: As of 4/16/2024, a total of 55 *O. mykiss* have passed upstream of the Stanislaus River weir (Table 3). Thirty-seven of the adults were greater than 16 inches, classifying them as steelhead. Twenty-nine out of 555 (53%) of the *O. mykiss* were adipose fin clipped.

No adult Chinook were observed passing the Stanislaus River weir since February 4. The season total remains at 2,403.

Table 3. *O. mykiss* passage at the Stanislaus River Weir as of April 16 of each year and the season totals.

Year	Monitoring Start Date	Net Passage to Date	Season Total
2023	9/6/23	55	55
2022	9/15/22	6	6
2021	9/8/21	35	35

Year	Monitoring Start Date	Net Passage to Date	Season Total
2020	9/10/20	8	8
2019	8/29/19	31	31
2018	9/5/18	25	25
2017	9/15/17	11	11
2016	9/8/16	26	26
2015	9/15/15	5	5
2014	9/5/14	8	8
2013	9/3/13	38	39
2012	9/11/12	101	101
2011	11/8/11	79	85
2010	9/7/10	6	6
2009	9/9/09	8	9
2008	9/9/08	15	15
2007	9/22/07	2	2
2006	9/8/06	12	12
2005	9/8/05	1	1
2004	9/10/04	1	1
2003	9/5/03	0	0

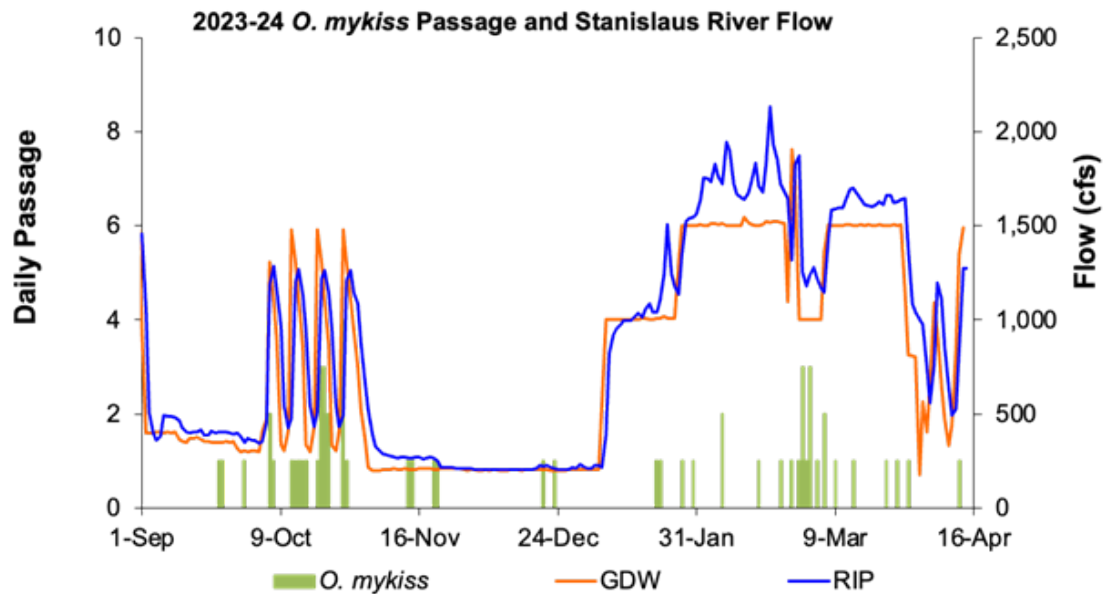


Figure 12. Daily *O. mykiss* passage at the Stanislaus River weir and river flow at Goodwin (GDW) and Ripon (RIP), 2023-24.

Figure 12 is a line graph depicting daily passage and flow (cfs) on the Stanislaus River at Goodwin and Ripon. The graph shows receding flows in late September, holding near 500 cfs September 5 to October 5. Flow October 5 to October 29 shows 4 peaks over 1,000 cfs. Passage on the graph begins in late September and mimics the peaks of flow in October. The flow increases early January and remains over 1,500cfs until late March. Passage mimics the flow during January to March.

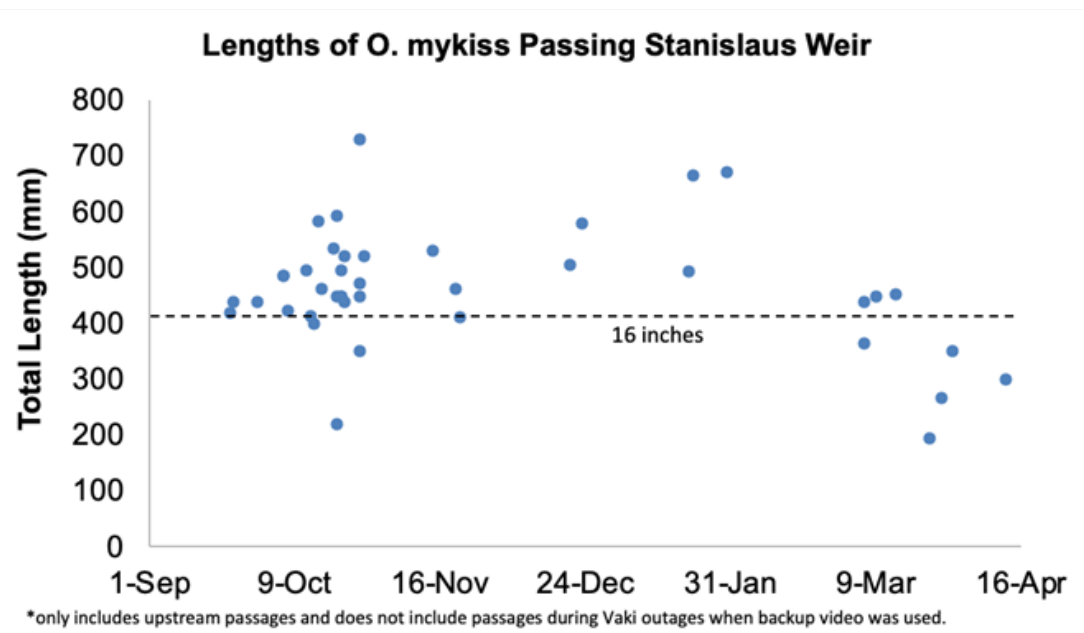


Figure 13. Fork lengths of *O. mykiss* passing the Stanislaus River weir during 2023-24.

Figure 13 is a dot plot of fork length of *O. mykiss* passage at the Stanislaus River Weir September –

April 2023-2024. The dot plot shows average length being 16 inches and concentrated during October and March.

Rotary Screw Traps Update:

Caswell Rotary Screw Trap: Rotary screw trapping is conducted at Caswell Memorial State Park by Pacific States Marine Fisheries Commission (PSMFC) for monitoring of outmigrating juvenile salmonids. The Caswell rotary screw traps (RSTs) were installed on January 2 and January 3 with daily sampling beginning on January 5.

As of 4/14/2024, we have captured a total of 5,605 unmarked Chinook salmon. The current peak in daily unmarked Chinook salmon catch occurred on 2/20/2024 with a total of 668 captured. The majority of salmon have been fry, though there has been a steady increase in parr-sized fish and fork lengths have averaged approximately 65 mm over the past seven days..

Five RST efficiency trials have been conducted at the Caswell RST site. Two trials/releases occurred on 2/10 and 2/29 using unmarked, natural origin Chinook salmon fry at approximately 35-40 mm resulting in trap efficiencies of approximately 4%. Three trials/releases occurred on 3/20, 4/3, and 4/10 using hatchery origin (Merced) Chinook salmon parr at approximately 50-80 mm resulting in trap efficiencies of approximately 2%.

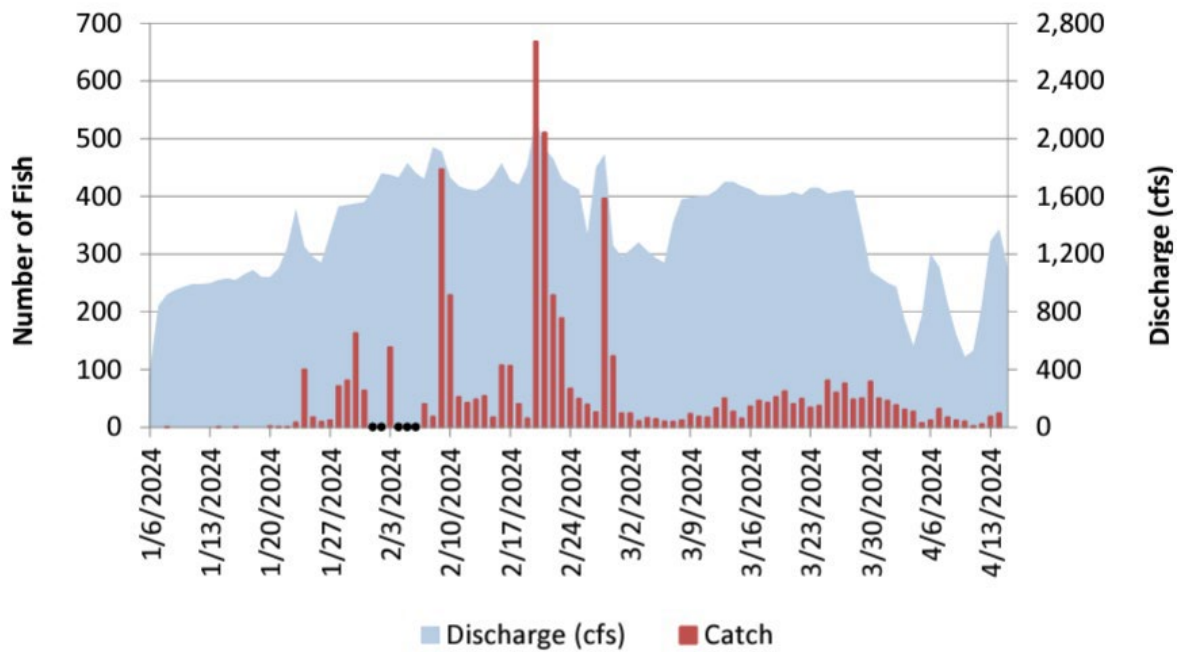


Figure 12. Daily catch of unmarked Chinook salmon and daily average at Ripon during the 2024 Stanislaus River RST sampling season.

Figure 12 is a bar graph of the daily catch of unmarked Chinook salmon and daily average discharge at Ripon during the 2024 sampling season. The graph shows the highest peaks of discharge and catch happening in February 2024, with the highest being over 2,400 cfs and 600 number of fish.

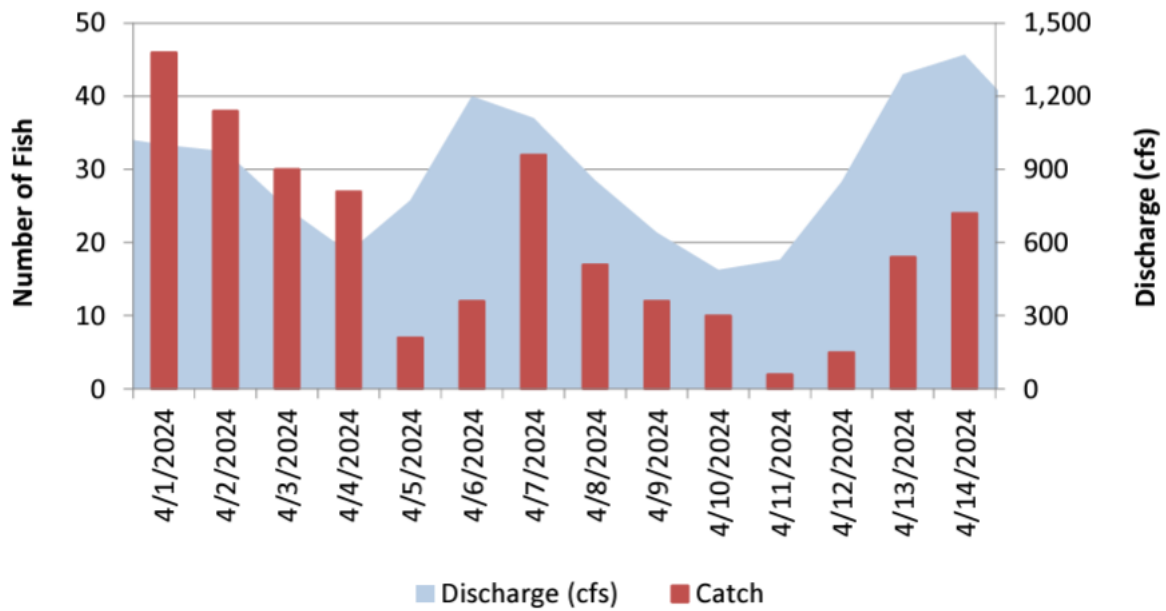


Figure 13. Daily catch of unmarked Chinook salmon and daily average discharge at Ripon from April 1 to April 14 during the 2024 Stanislaus River RST sampling season.

Figure 13 is a graph of the daily catch of unmarked Chinook salmon and daily average discharge at Ripon during the 2024 Stanislaus River RST sampling season. The catch mimics the peak discharge in early and mid-April.

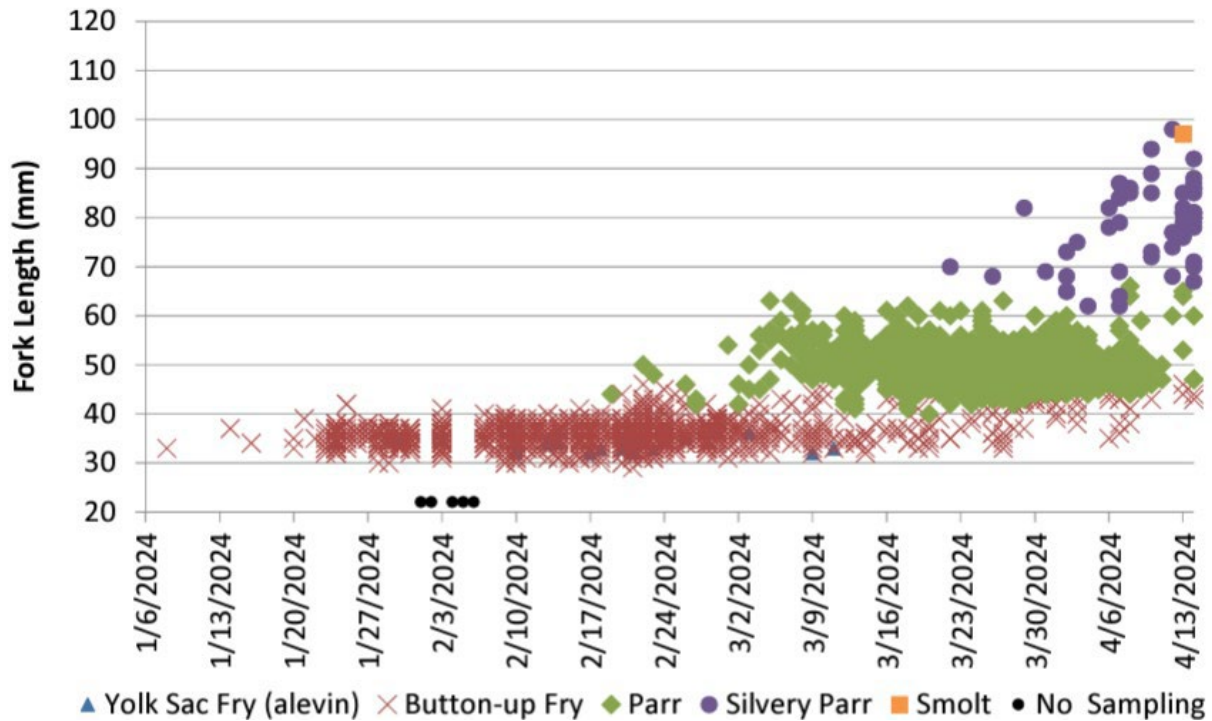


Figure 14. Daily fork length distribution by life stage of unmarked Chinook salmon measured during the 2024 Stanislaus River RST sampling season.

Figure 14 is a graph of the daily fork length distribution by life stage of unmarked Chinook salmon during the 2024 Stanislaus RST sampling season. The graph shows fork length gradually increasing from January to April.

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)* Previous update: 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.