

Stanislaus Watershed Team

June 12, 2024

Members Attending

- USBR: Amanda Snow, Cat Pien, Chase Ehlo, Liz Kiteck, Peggy Manza, Spencer Marshall, Zarela Guerrero
- USFWS: Craig Anderson, J.D. Wikert
- CDFW: Crystal Rigby, Gretchen Murphey, Ryan Kok, Steve Tsao, Travis Apgar
- NMFS: Sam Pyros
- DWR: N/A
- SWRCB: Chris Carr, Yongxuan Gao
- PSMFC: Logan Day
- SSJID: N/A
- Fishbio: N/A
- Stockton East Water District (SEWD): N/A
- WAPA: N/A
- Herum/Crabtree/Suntag Attorneys: N/A
- Kearns & West: Rafi Silberblatt, Bethany Taylor, Tom Fischer

Action Items

- Zarela Guerrero, USBR, and Gretchen Mur to coordinate on presenting flow planning updates going forward.

Announcements

- The July 17 meeting will be hybrid.
- The address to attend in person is:
 - Central Valley Operations Office, 3310 El Camino Avenue, Room 302, Sacramento, CA 95821
 - There is parking available, but you will need to pass through security, so please plan to arrive a little early.
- Reclamation Staffing Updates

- Zarela Guerrero has returned as our lead contact for Reclamation.
- Reclamation shared that Melissa Vignau and Brad Hubbard took positions at Regent
- Amanda Snow has accepted a new position.
- Please keep the limited staffing in mind when making requests from Reclamation.

Operations Update and Forecasts/ Hydrology

New Melones Reservoir Update

- No precipitation has accumulated during the past month.
- Storage at New Melones peaked at 2.1 MAF.
 - Water Year 2023 peaked at 2.2 MAF.
- The vast majority of the snowpack has melted. Peak melt occurred in late May.
- Spring pulse flows have completed.
- May data for New Melones shows some occasional releases during periods of negative power pricing and to meet demands at Goodwin Dam.
- As of 6/9/2024, storage at New Melones is 2.103 MAF, or approximately 139% of the 15-year average.

Daily CVP Water Supply

- Accumulated inflow at New Melones was 806 TAF as of 6/9/2024, or 97% of the 15-year average.
- More inflow is expected into New Melones over the summer with upstream reservoirs scheduled to make releases for power generation.
- Accumulated precipitation at New Melones is 28.92 inches, or 109 % of average.

Tulloch Dam

- Tulloch Dam had two days in June where a low level of releases came through the outlet.
- Reclamation noted days in late May and early June where demands at Goodwin were higher than capacity at Tulloch, forcing outlet releases.
 - Water was sent through both the spillway and outlet to ensure sufficient supply at Goodwin to meet increased agriculture demands.

Goodwin Dam

- Releases were 858 cfs at Goodwin as of 6/9/2024.
- The joint main and south main canals peaked at 900 cfs and 400 cfs and have ramped back down slightly. This will continue to vary throughout the summer due to changing irrigation demands and anticipated heat waves.

- From 6/1 – 6/9/2024, river spill has gradually dropped from 1,000 cfs to approximately 850 cfs.
- Reclamation noted an error for 6/3/2024 river spill level.
- During May, canal diversions nearly doubled through the month due to the increase in agricultural water needs.
- There were 8 pulse flows conducted in April and May.

Current Conditions

- Reclamation is currently operating to meet the Vernalis base flow requirements under SWB Decision 1641, which calculated to be 2,990 cfs for June.
- The need to meet those base flows has overridden the previously planned slow ramp down that was intended to help with riparian habitat recruitment during June. Reclamation canceled the remainder of the flow cuts and had to increase flows back to 1,500 cfs as of 6/11/2024.
 - This increase in flows should be seen beginning on 6/13/2024, with the full 1,500 cfs in effect by 6/15/2024.
- Reclamation shared concern about meeting the base flow of 1,500 cfs from New Melones for the entire month of June. 1,500 cfs is the allowable release while under flood control conditions, but those conditions do not apply during the driest time of the year. Reclamation has escalated this issue to management, but no feedback has been received as of 6/12/2024.
- The Merced and Tuolumne rivers have begun ramping down to summer base flows, which could affect the Stanislaus River flows.

Questions and Comments

- CDFW requested that Reclamation update the SWT once management responds to this concern.
- SWRCB expressed appreciation for keeping the SWT informed of the base flow changes.
- USFWS shared the Stanislaus River is currently at 38.6% of full natural flow for the February-to-present time frame. For comparison, the Tuolumne River is at 54.5%, and the Merced River is at 35.4%.

Water Temperature Updates

- NMFS shared that water temperatures in the canyon down to Orange Blossom Bridge remain in the 50s F.
- Water temperatures at Ripon have exceeded 60°F.
- The increased releases of 1,500 cfs should help to buffer water temperatures as the weather starts to become hotter.

Flow Planning

- Note: This update will transfer from USFWS to both Reclamation (flow timing and coordination) and CDFW (fisheries portion).
- Fall pulse flow planning will happen in September.
 - SWT will plan to view pulse flow proposals in August.
- The next winter instability flow (WIF) will hopefully be shaped by an updated BiOp.

Stanislaus River Forum (SRF) Call Review

- There were no comments received from members of the public at the SRF June meeting.

Fish Monitoring

CDFW Fish Monitoring

- Chinook salmon carcass surveys
 - CDFW plans to begin the 2024 Escapement Survey in October.
- Steelhead *O. mykiss* redd surveys
 - Surveys will start in January 2025.

Mossdale Trawl

- CDFW is operating the trawl 5 days per week but will drop to 3 days in the near future.
 - In early July, CDFW and USFWS will return to cooperative trawl operation through October.
- Chinook salmon catch counts have been decreasing the past few days.
- Several *O. mykiss* have been caught, with many of them marked.
- Questions / Comments
 - CDFW asked about warmer temperatures in the Delta and if the fall-run are estimated to have moved out of the system by this point in the year.
 - CDFW responded that catch has decreased which has coincided with higher temperatures, so any fish that have not yet moved through will likely experience survival difficulties with the warmer water temperatures.

FISHBIO Monitoring

- N/A

PSMFC Monitoring

- Rotary Screw Trap (RST) Updates
 - As of 6/10/2024, PSMFC has captured 6,071 unmarked Chinook salmon. All about 80-90 mm.
 - Catch average is 3 fish per day.
 - PSMFC completed the last of their RST efficiency trials that began in April. The last two trials used fish measuring between 70-90 mm. Efficiency ratings resulted in 1-2% efficiency. No additional trials are expected for this water year.
 - Sampling will continue 5 days a week through the remainder of the sampling season, which is expected to last through the end of June with the possibility of going into July. Sampling will conclude once Chinook catch decreases to 0-1 daily, or if daily river temperatures reach 21°C (69.8°F) at the RST site.

Restoration Project Updates

- N/A

Progress Update on Proposed Action Elements

- N/A

Other Discussion Items

Curtailments

- N/A

SWRCB Updates

- N/A

Items to elevate to WOMT

- N/A

Next Meeting

Wednesday, July 17, 10:00 am –12:00 pm. The meeting will be hybrid.



— 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, June 12, 2024

Agenda

1. Introductions
2. Ground Rules¹
3. Announcements
 - a. Meeting will be recorded for notetaking purposes – Rafael Silberblatt, Kearns & West
 - b. July 17th meeting is confirmed to be a hybrid meeting at Central Valley Operations Office
 - c. Tom Fischer, Kearns & West, is joining for Kearns & West staffing purposes
 - d. A reminder for those who may have missed the last meeting, Amanda Snow was promoted to a new position and Zarela Guerrero is back as our Reclamation lead.
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 – Zarela Guerrero, USBR
8. Fish Monitoring and Studies - CDFW, FISHBIO, NMFS, PSMFC
9. Restoration Project Updates
 - a. Restoration Tracker – JD (John) Wikert, USFWS
 - b. Caterina Pien, USBR
10. Other Discussion Items
 - a. SWRCB Updates
 - b. Items to elevate to WOMT
11. Review Action Items – Rafael Silberblatt, Kearns & West
12. Next Meeting: TBD

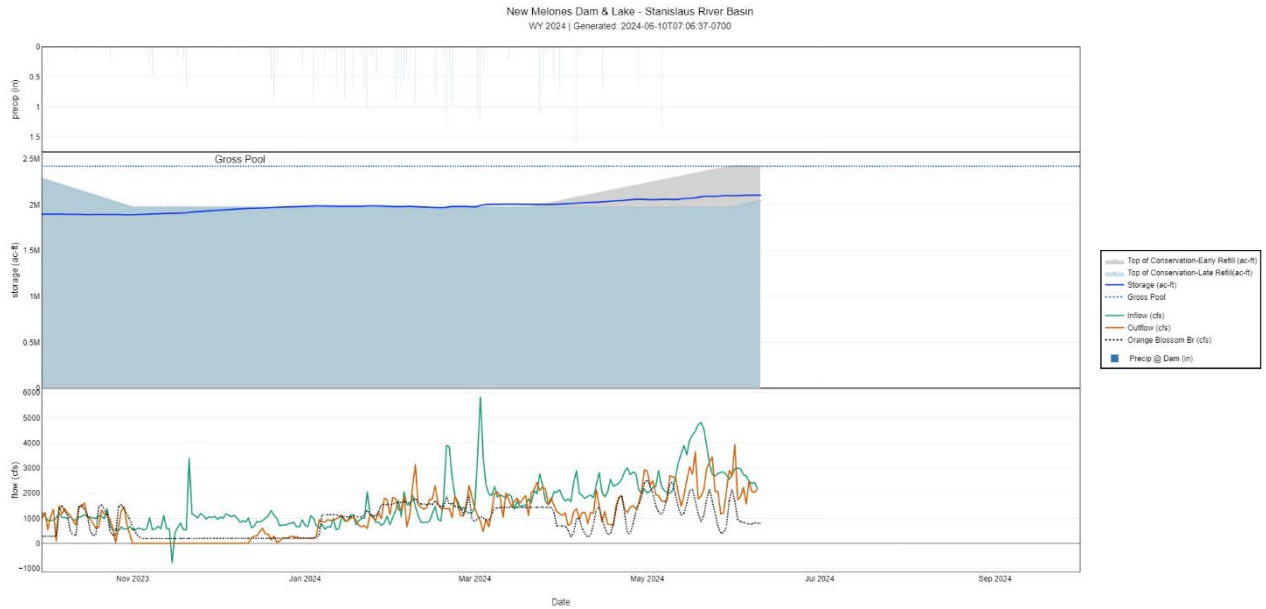


Figure 1. Flow (cfs), storage (ac-ft) and precipitation (in) for New Melones Dam and Lake at Stanislaus River Basin from November 2023 to September 2024.

The Figure is a line graph showing the flow, storage, and precipitation for New Melones Dam and Lake from November 2023 to September 2024. The graph shows storage around 2M ac-ft from November to June, with flow staying at 1000 cfs, except for peaks in early December at approximately 3000 cfs and in March at approximately 6000 cfs. After March, there is a gradual increase over 2000 cfs up until June.



Tables for BDO

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

June 9, 2024

Run Date: June 10, 2024

Table 4. Reservoir Releases in Cubic Feet Per Second

Reservoir	Dam	WY 2023	WY 2024	15-Year Median
Trinity	Lewiston	688	2,132	1,064
Sacramento	Keswick	9,036	8,408	9,581
Feather	Oroville (SWP)	8,000	3,800	3,000
American	Nimbus	8,951	2,431	3,000
Stanislaus	Goodwin	1,500	858	858
San Joaquin	Friant	7,463	0	385

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	1,698	1,356	2,116	125
Shasta	4,552	3,555	4,432	4,243	119
Folsom	977	800	916	945	118
New Melones	2,420	1,509	1,915	2,103	139
Fed. San Luis	966	565	965	741	131
Total North CVP	11,363	8,128	9,584	10,148	125
Millerton	521	358	285	0	0
Oroville (SWP)	3,538	2,638	3,526	3,524	134

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	1,449	613	1,808	992	146
Shasta	4,914	2,775	8,006	4,105	120
Folsom	1,965	906	5,332	2,228	88
New Melones	806	---	1,787	830	97
Millerton	1,388	548	2,032	1,120	124

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	35.27	21.79	38.02	29.51 (64)	120	0.00
Sacramento at Shasta Dam	63.62	32.94	83.71	57.91 (69)	110	0.00
American at Blue Canyon	50.55		112.31	63.25 (50)	80	0.00
Stanislaus at New Melones	28.92	---	36.55	26.58 (47)	109	0.00
San Joaquin at Huntington LK	32.16	11.50	65.40	39.37 (51)	82	0.00

United States Department of the Interior
 Bureau of Reclamation-Central Valley Project- California
 New Melones Lake Daily Operations, June 2024, Run Date: 06/10/2024

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	2,096.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	1,061.05	2,098.6	2.3	3,002	1,730	0	0	125	0.34	0.00
2	1,061.22	2,100.5	1.9	2,967	1,860	0	0	129	0.35	0.00
3	1,061.29	2,101.3	0.8	2,739	2,230	0	0	107	0.29	0.00
4	1,061.47	2,103.4	2.1	2,681	1,575	0	0	70	0.19	0.00
5	1,061.45	2,103.2	-0.2	2,476	2,473	0	0	118	0.32	0.00
6	1,061.48	2,103.5	0.3	2,376	2,060	0	0	144	0.39	0.00
7	1,061.52	2,104.0	0.5	2,431	2,035	0	0	166	0.45	0.00
8	1,061.50	2,103.7	-0.2	2,164	2,154	0	0	125	0.34	0.00
9	1,061.48	2,103.5	-0.2	2,122	2,119	0	0	118	0.32	0.00
Totals	N/A	N/A	7.3	22,958	18,236	0	0	1,102	2.99	0.00
Acre- Feet	N/A	N/A	7,300	45,537	36,171	0	0	2,186	N/A	N/A

Comments:

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

Summary Precipitation

This Month 0.0
 October 1, 2023 to Date 28.92

Summary: Release (acre- feet)

Power	36,171
Spill	0
Outlet	893
Total	36,171

United States Department of the Interior
 Bureau of Reclamation-Central Valley Project- California
 New Melones Lake Daily Operations, May 2024, Run Date: 06/5/2024

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	2,056.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	1,057.23	2,055.4	-0.7	2,076	2,318	0	0	98	0.27	0.00
2	1,057.17	2,054.7	-0.7	2,239	2,493	0	0	87	0.24	0.00
3	1,057.21	2,055.1	0.4	2,262	1,944	0	0	91	0.25	0.00
4	1,057.37	2,056.9	1.8	2,891	1,907	0	0	76	0.21	0.00
5	1,057.47	2,058.1	1.1	2,287	1,694	0	0	25	0.07	1.32
6	1,057.54	2,058.8	0.8	2,100	1,667	0	0	36	0.10	0.00
7	1,057.59	2,059.4	0.6	2,042	1,692	0	0	66	0.18	0.00
8	1,057.45	2,057.8	-1.6	1,996	2,250	0	450	91	0.25	0.00
9	1,057.34	2,056.6	-1.2	2,109	2,639	0	0	95	0.26	0.00
10	1,057.33	2,056.5	-0.1	2,649	2,633	0	0	73	0.20	0.00
11	1,057.52	2,058.6	2.1	3,211	2,012	0	0	120	0.33	0.00
12	1,057.87	2,062.6	3.9	3,572	1,473	0	0	113	0.31	0.00
13	1,058.20	2,066.3	3.7	3,898	1,911	0	0	110	0.30	0.00
14	1,058.36	2,068.1	1.8	3,530	2,520	0	0	99	0.27	0.00
15	1,058.53	2,070.0	1.9	4,108	3,045	0	0	95	0.26	0.00
16	1,058.79	2,072.9	2.9	4,318	2,753	0	0	84	0.23	0.00
17	1,058.92	2,074.4	1.5	4,465	2,546	0	1,098	81	0.22	0.00
18	1,059.42	2,080.1	5.7	4,727	1,761	0	0	110	0.30	0.00
19	1,059.92	2,085.7	5.7	4,809	1,875	0	0	77	0.21	0.00
20	1,060.33	2,090.4	4.7	4,567	2,133	0	0	85	0.23	0.00
21	1,060.47	2,092.0	1.6	3,903	1,804	0	1,171	125	0.34	0.00
22	1,060.44	2,091.7	-0.3	3,176	2,386	0	844	118	0.32	0.00
23	1,060.30	2,090.1	-1.6	2,832	2,573	0	966	96	0.26	0.00
24	1,060.39	2,091.1	1.0	2,679	2,064	0	0	99	0.27	0.00
25	1,060.50	2,092.3	1.3	2,789	2,066	0	0	92	0.25	0.00
26	1,060.77	2,095.4	3.1	2,830	1,172	0	0	110	0.30	0.00
27	1,061.04	2,098.5	3.1	2,841	1,212	0	0	81	0.22	0.00
28	1,061.13	2,099.5	1.0	2,730	2,083	0	0	129	0.35	0.00
29	1,061.05	2,098.6	-0.9	2,552	2,571	0	334	107	0.29	0.00
30	1,061.04	2,098.5	-0.1	2,731	2,685	0	0	103	0.28	0.00
31	1,060.85	2,096.3	-2.2	2,970	2,844	0	1,082	133	0.36	0.00
Totals	N/A	N/A	40.3	95,889	66,726	0	5,945	2,905	7.93	1.32

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	40,300	190,196	132,351	0	11,792	5,762	N/A	N/A

Comments:

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

Summary Precipitation

This Month 1.32
October 1, 2023 to Date 28.92

Summary: Release (acre-feet)

Power 132,351
Spill 0
Outlet 11,792
Total 144,143

United States Department of the Interior
 Bureau of Reclamation-Central Valley Project- California
 Tulloch Reservoir Daily Operations, June 2024, Run Date: 06/10/2024

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	65,252	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	507.56	63,956	-1,296	1,932	1,730	2,479	0	93	13
2	507.01	63,289	-667	2,123	1,860	2,445	0	0	14
3	507.45	63,822	533	2,581	2,230	2,301	0	0	11
4	506.54	62,728	-1,094	1,787	1,575	2,332	0	0	7
5	507.30	63,641	913	2,854	2,473	2,381	0	0	13
6	507.10	63,398	-243	2,383	2,060	2,476	0	15	15
7	506.91	63,170	-228	2,314	2,035	2,412	0	0	17
8	506.98	63,253	83	2,477	2,154	2,422	0	0	13
9	507.32	63,665	412	2,465	2,119	2,244	0	0	13
Totals	N/A	N/A	-1,587	20,916	18,236	21,492	0	108	116
Acre-Feet	N/A	N/A	-1,587	41,487	36,171	42,629	0	214	230

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	42,629
Spill	0
Outlet	214
Total	42,844

United States Department of the Interior
 Bureau of Reclamation-Central Valley Project- California
 Tulloch Reservoir Daily Operations, May 2024, Run Date: 06/05/2024

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	59,831	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	503.91	59,647	-184	2,775	2,318	2,447	276	135	10
2	505.04	60,954	1,307	3,128	2,493	2,363	46	51	9
3	505.29	61,248	294	2,328	1,944	2,171	0	0	9
4	506.19	62,310	1,062	2,303	1,907	1,760	0	0	8
5	506.79	63,026	716	1,975	1,694	1,611	0	0	3
6	506.70	62,919	-107	1,944	1,667	1,994	0	0	4
7	505.71	61,742	-1,177	1,940	1,692	2,392	0	134	7
8	505.78	61,824	82	3,135	2,700	2,465	428	191	10
9	505.76	61,801	-23	3,026	2,639	2,466	286	276	10
10	506.31	62,453	652	3,037	2,633	2,468	48	184	8
11	506.46	62,632	179	2,312	2,012	2,198	0	11	13
12	506.20	62,322	-310	1,720	1,473	1,864	0	0	12
13	506.11	62,214	-108	2,190	1,911	2,232	0	0	12
14	506.35	62,501	287	2,909	2,520	2,454	256	44	10
15	506.38	62,537	36	3,535	3,045	2,466	844	197	10
16	505.89	61,954	-583	3,181	2,753	2,465	762	239	9
17	507.53	63,919	1,965	4,075	3,644	2,472	215	388	9
18	506.68	62,895	-1,024	2,023	1,761	2,412	0	115	12
19	506.49	62,668	-227	2,146	1,875	2,252	0	0	8
20	506.27	62,405	-263	2,453	2,133	2,410	0	167	9
21	505.95	62,024	-381	3,318	2,975	2,466	771	260	13
22	506.24	62,370	346	3,665	3,230	2,464	899	116	12
23	508.17	64,698	2,328	4,101	3,539	2,477	200	240	10
24	508.04	64,538	-160	2,419	2,064	2,396	0	93	11
25	508.65	65,289	751	2,369	2,066	1,980	0	0	10
26	508.05	64,551	-738	1,351	1,172	1,711	0	0	12
27	507.30	63,641	-910	1,370	1,212	1,820	0	0	9
28	507.48	63,859	218	2,404	2,083	2,189	0	91	14
29	507.50	63,883	24	3,665	2,905	2,477	931	234	11
30	506.58	62,776	-1,107	3,215	2,685	2,472	951	339	11
31	508.62	65,252	2,476	4,444	3,926	2,479	342	361	14

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	5,421	84,456	72,671	70,293	7,255	3,866	309
Acre-Feet	NA	NA	5,421	167,518	144,143	139,426	14,390	7,668	613

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	139,426
Spill	14,390
Outlet	7,668
Total	161,485

Oakdale Irrigation District
 South San Joaquin Irrigation
 District Tri Dams Project-California
 Goodwin Reservoir Daily Operations, June 2024, Run Date: 06/10/2024

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	564	N/A	N/A	N/A	N/A	N/A	N/A
1	360.30	558	-6	2,572	0	1,011	918	426
2	360.30	558	0	2,445	0	1,004	856	370
3	360.27	556	-2	2,301	0	2,422	837	281
4	360.27	556	0	2,332	0	956	856	305
5	360.24	554	-2	2,381	0	918	884	352
6	360.24	554	0	2,491	0	902	886	448
7	360.23	553	-1	2,412	0	868	896	407
8	360.23	553	0	2,422	0	853	872	485
9	360.23	553	0	2,244	0	858	533	371
Totals	N/A	N/A	-11	21,600	0	9,792	7,538	3,445
Acre-Feet	N/A	N/A	-11	42,844	0	19,422	14,952	6,833

Joint Main Operated by SSJID and OID.

Summary: Release (acre-feet)

Joint Main Canal	14,952
South Main Canal	6,833
Outlet	0
Spill	19,422
Total	41,207

Oakdale Irrigation District
 South San Joaquin Irrigation
 District Tri Dams Project-California
 Goodwin Reservoir Daily Operations, May 2024, Run Date: 06/05/2024

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	597	N/A	N/A	N/A	N/A	N/A	N/A
1	360.76	590	-7	2,858	0	2,067	488	221
2	360.52	573	-17	2,460	0	1,704	461	222
3	360.39	564	-9	2,171	0	1,302	494	281
4	360.29	557	-7	1,760	0	1,058	463	173
5	360.29	557	0	1,611	0	1,003	425	140
6	360.54	575	18	1,994	0	1,352	445	162
7	360.74	589	14	2,526	0	1,856	476	171
8	360.95	604	15	3,084	0	2,380	494	172
9	360.74	589	-15	3,028	0	2,199	503	246
10	360.54	575	-14	2,700	0	1,689	538	306
11	360.29	557	-18	2,209	0	1,198	519	304
12	360.30	558	1	1,864	0	1,002	479	194
13	360.54	575	17	2,232	0	1,351	447	257
14	360.76	590	15	2,754	0	1,861	510	216
15	360.95	604	14	3,507	0	2,372	680	298
16	360.76	590	-14	3,466	0	2,198	759	361
17	360.54	575	-15	3,075	0	1,703	794	419
18	360.30	558	-17	2,527	0	1,198	787	391
19	360.30	558	0	2,252	0	1,003	805	283
20	360.54	575	17	2,577	0	1,348	754	312
21	360.95	604	29	3,497	0	2,132	780	411
22	360.76	590	-14	3,479	0	2,211	755	365
23	360.54	575	-15	2,917	0	1,705	710	355
24	360.30	558	-17	2,489	0	1,200	708	405
25	360.07	542	-16	1,980	0	741	719	319
26	360.07	542	0	1,711	0	601	680	215
27	360.07	542	0	1,820	0	602	696	296
28	360.36	562	20	2,280	0	945	750	356
29	360.95	604	42	3,642	0	2,171	804	441
30	360.76	590	-14	3,762	0	2,195	923	451
31	360.39	564	-26	3,182	0	1,608	931	451

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	-33	81,414	0	47,955	19,777	9,194
Acre-Feet	N/A	N/A	-33	161,485	0	95,119	39,228	18,236

Joint Main Operated by SSJID and OID.

Summary: Release (acre-feet)

Joint Main Canal	39,228
South Main Canal	18,236
Outlet	0
Spill	95,119
Total	152582.721

May 2024 Water Temperature and Fish Monitoring Update

Year-to-Date Flows

Goodwin releases since October 1, 2023, are shown in Figure 2.

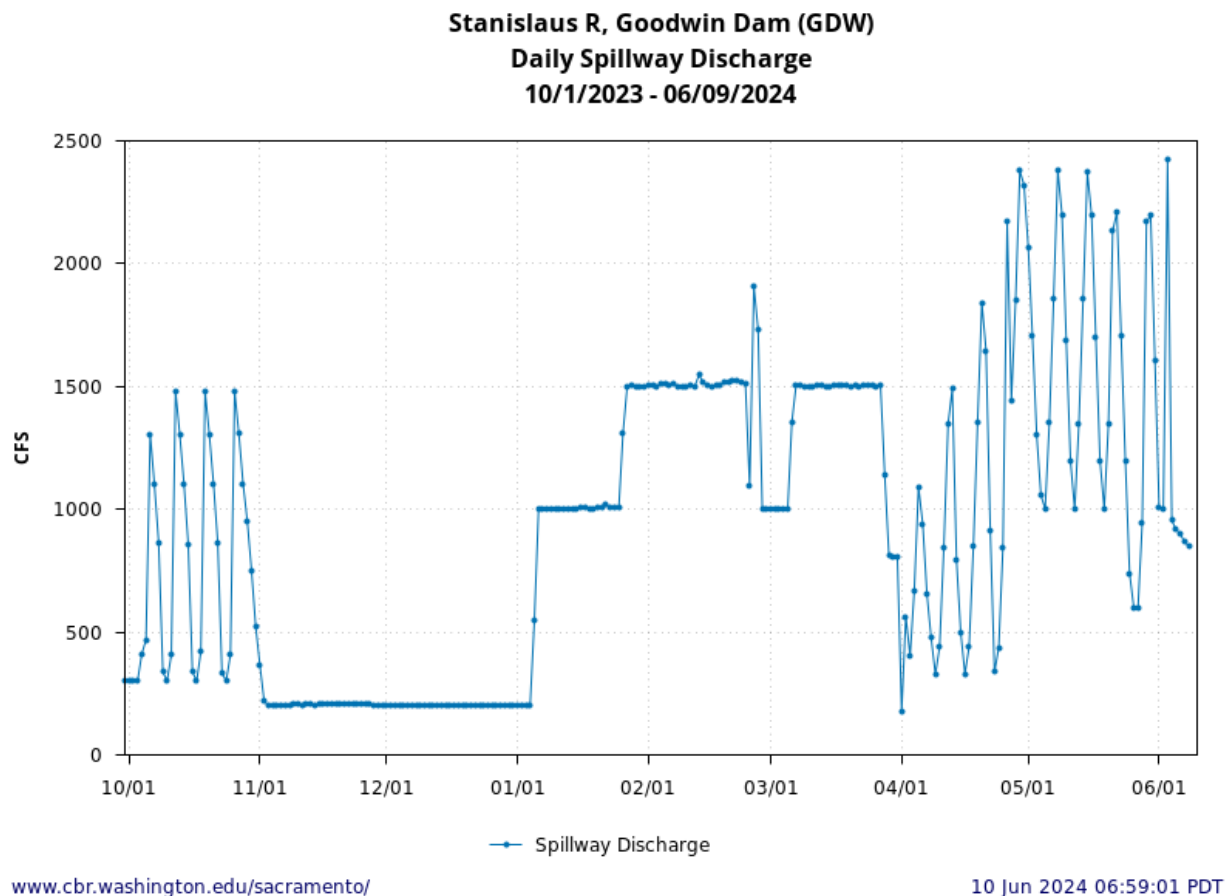


Figure 2. Goodwin (daily) releases to the Stanislaus River since October 1, 2023. Data from GDW station on CDEC.

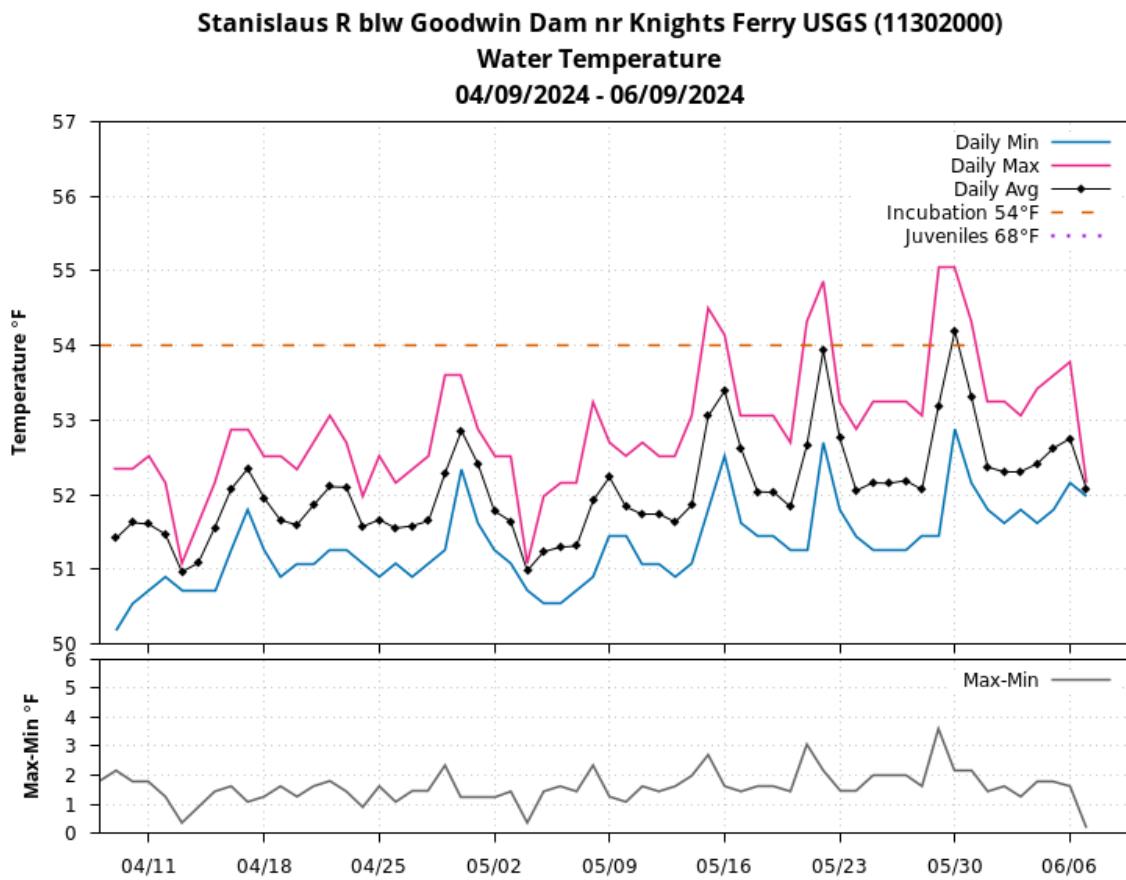
Figure 2 is a line graph showing Goodwin Dam daily spillway discharge. The graph shows weekly peaks of releases 1,300 – 1,500 cfs starting October 6th with discharges staying at 200 cfs November 1st – January 2nd. Irregular increases occur between January 2nd and April 1st with irregular peaks over 2,000 cfs happening between April 1st and June 1st.

Water Temperature

The temperature thresholds included in Figures 3-11, 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 April 2024 are shown below at Goodwin Canyon (Figure 3), Orange Blossom Bridge (Figure 4), and at Ripon (Figure 5). Water temperatures in the San Joaquin River since April 2024 are shown below at Vernalis (Figure 6). Current-year water temperatures are plotted along with historical temperatures for upstream of Orange Blossom Bridge (Figure 7), Ripon (Figure 8), and Vernalis (Figure 9). A compilation of Stanislaus River water temperatures and Goodwin releases for water year 2024 is provided in Figure 10.



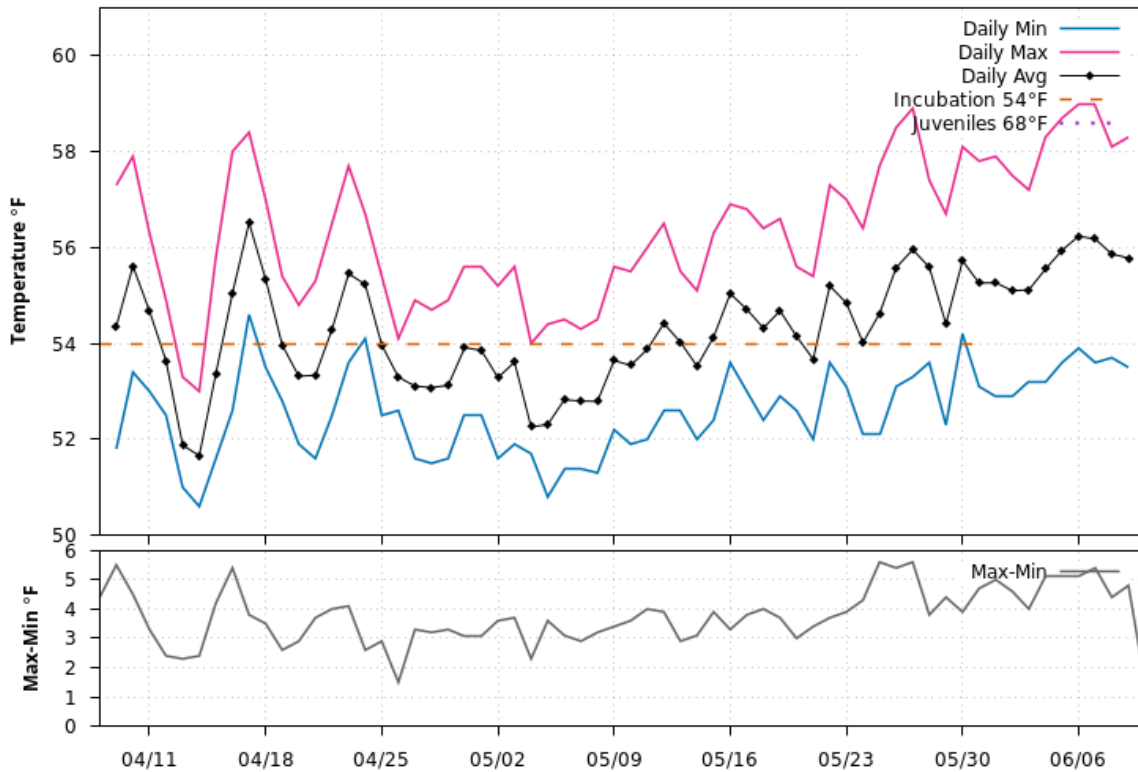
www.cbr.washington.edu/sacramento/

10 Jun 2024 06:59:02 PDT

Figure 3. Daily water temperatures on the Stanislaus River upstream of Knights Ferry since April 9, 2024. Data from USGS gage 11302000 on NWIS; temperature threshold reference line added by SWT.

Figure 3 is a line graph showing Goodwin Dam daily minimum, maximum and average water temperature. The graph shows a daily average between 51° and 55° Fahrenheit with peaks over 54° Fahrenheit on May 16th, 23rd and 30th.

**Stanislaus R at Orange Blossom Bridge (OBB)
Water Temperature
04/09/2024 - 06/09/2024**



www.cbr.washington.edu/sacramento/

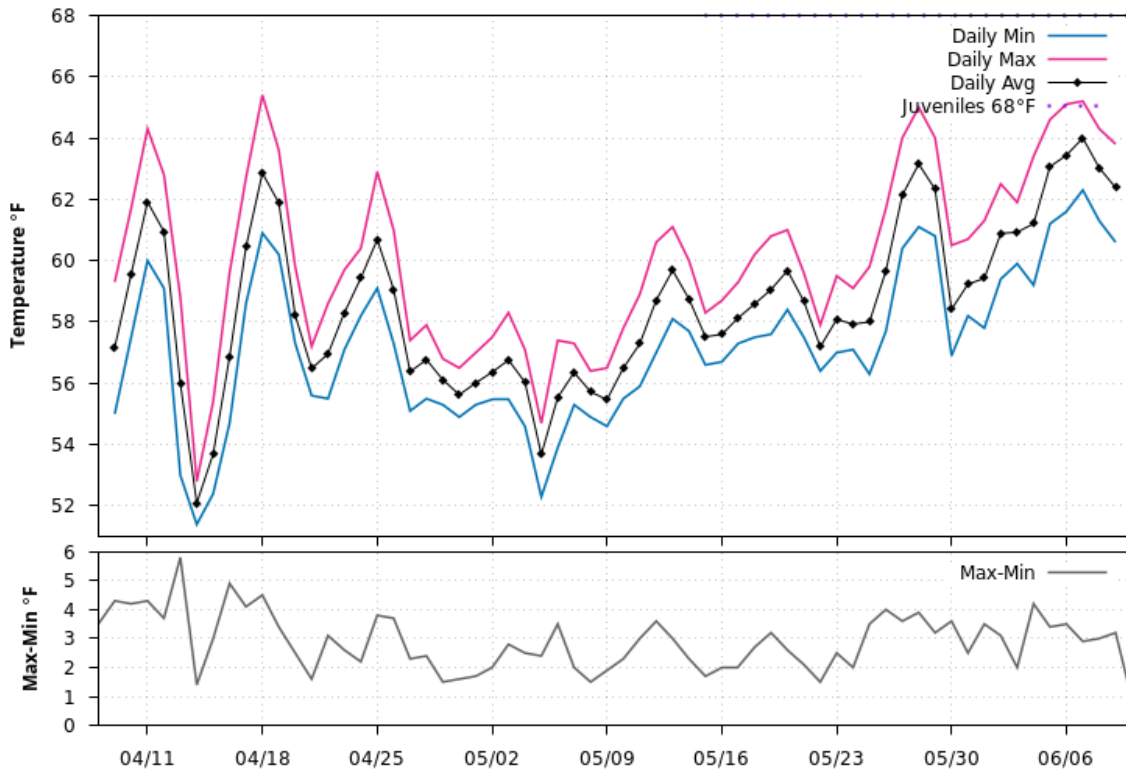
10 Jun 2024 06:59:02 PDT

Figure 4. Stanislaus (hourly) water temperatures at Orange Blossom Bridge since April 9, 2024. Data from OBB station on CDEC.

Figure 4 is a line graph showing Orange Blossom Bridge daily minimum, maximum and average water temperature. The graph shows average temperature peaks over 54° Fahrenheit in mid-April and gradual irregular peaks over 55° Fahrenheit throughout May up to June 6th.

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
04/09/2024 - 06/09/2024



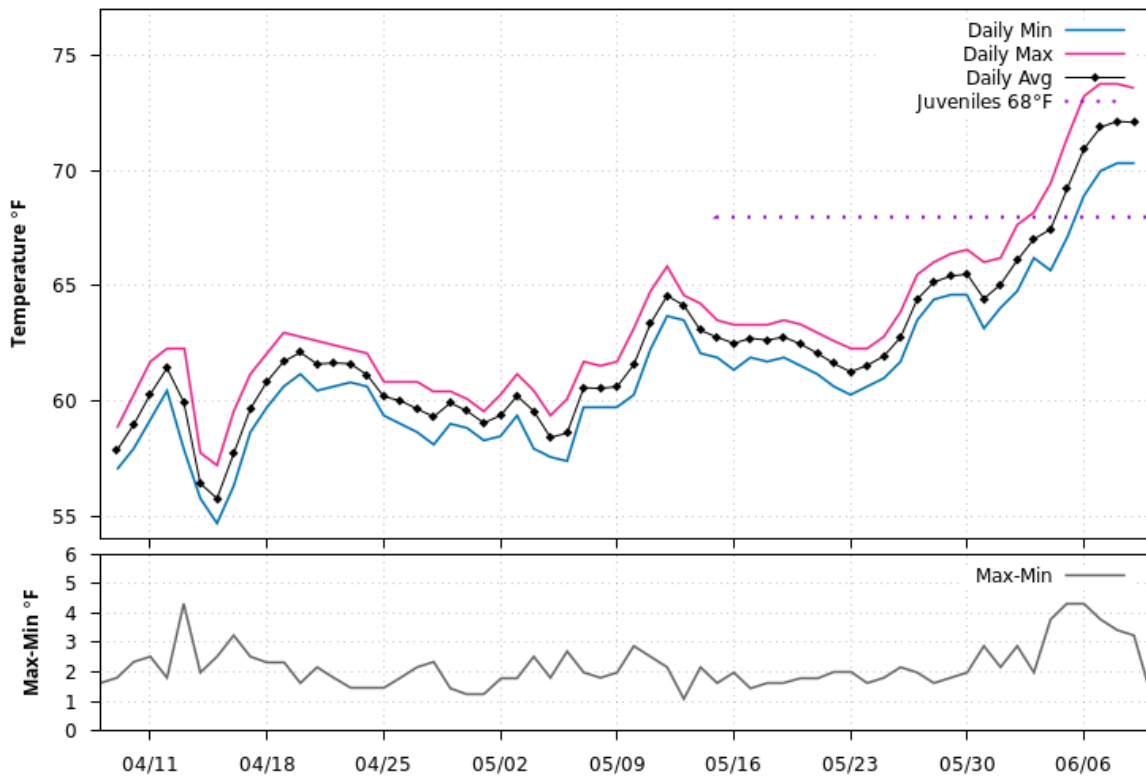
www.cbr.washington.edu/sacramento/

10 Jun 2024 06:59:02 PDT

Figure 5. Stanislaus water temperatures at Ripon since April 9, 2024. Data from RIP station on CDEC.

Figure 5 is a line graph showing Ripon daily minimum, maximum and average water temperature. The graph shows average temperature below 64° Fahrenheit with peaks over 64° Fahrenheit in early April, and a gradual increase from May 5th to June 6th.

**San Joaquin R nr Vernalis (VNS)
Water Temperature
04/09/2024 - 06/09/2024**



www.cbr.washington.edu/sacramento/

10 Jun 2024 06:59:02 PDT

Figure 6. San Joaquin River (15-minute) water temperatures at Vernalis since April 9, 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 6 is a line graph showing Vernalis daily minimum, maximum and average water temperature. The graph shows a steady increase over 70° Fahrenheit from early April to June 6th.

**Stanislaus R at Orange Blossom Bridge (OBB)
2001-2024 Daily Average Water Temperature
Observed Range 36.3-73.1
04/11 - 08/09**

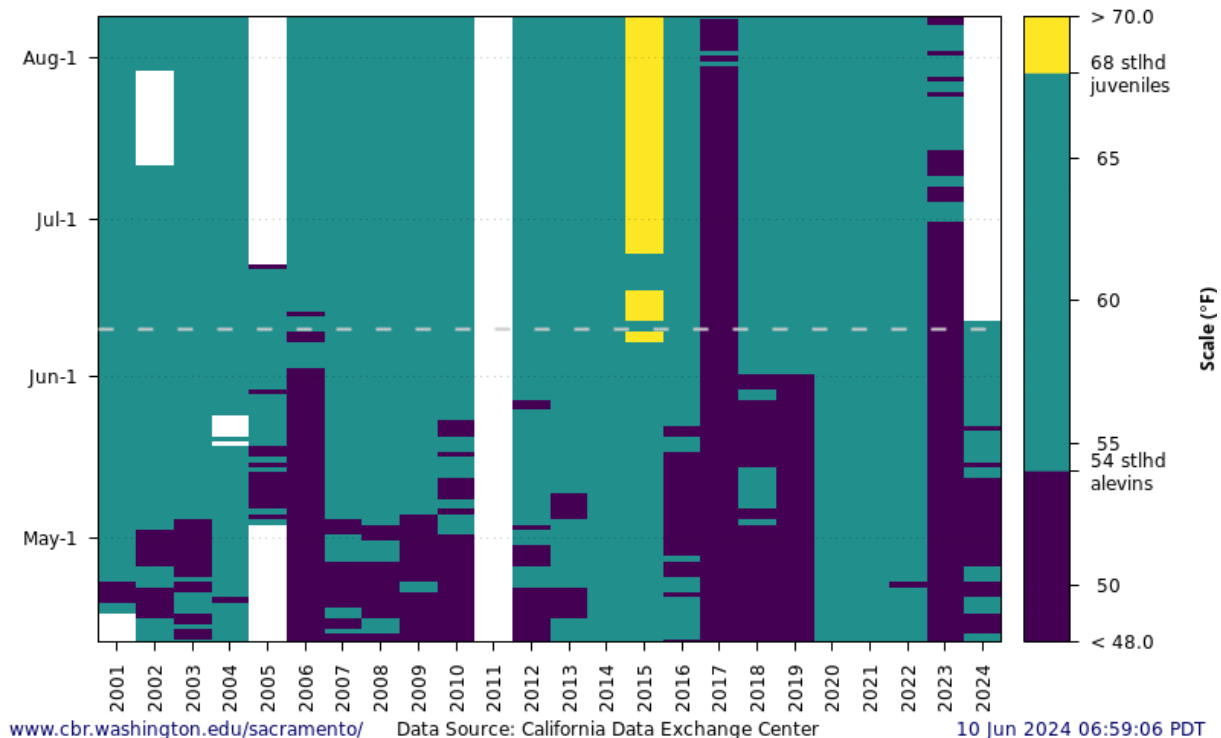


Figure 7. Stanislaus River water temperatures at Orange Blossom Bridge for WY 2001 to present. Data from SacPAS; temperature threshold reference lines added by SWT.
http://www.cbr.washington.edu/sacramento/data/query_river_allyears.html

Figure 7 is a bar chart showing water temperatures at Orange Blossom Bridge for WY 2001 to present for April to August. The chart shows during this time, temperature remained above 60° Fahrenheit with temperatures being under 54° Fahrenheit between May and August in 2017 and May to June from most of 2018 to 2019.

Stanislaus R at Ripon (USGS) (RIP)
2012-2024 Daily Average Water Temperature
Observed Range 50.4-82.4
04/11 - 08/09

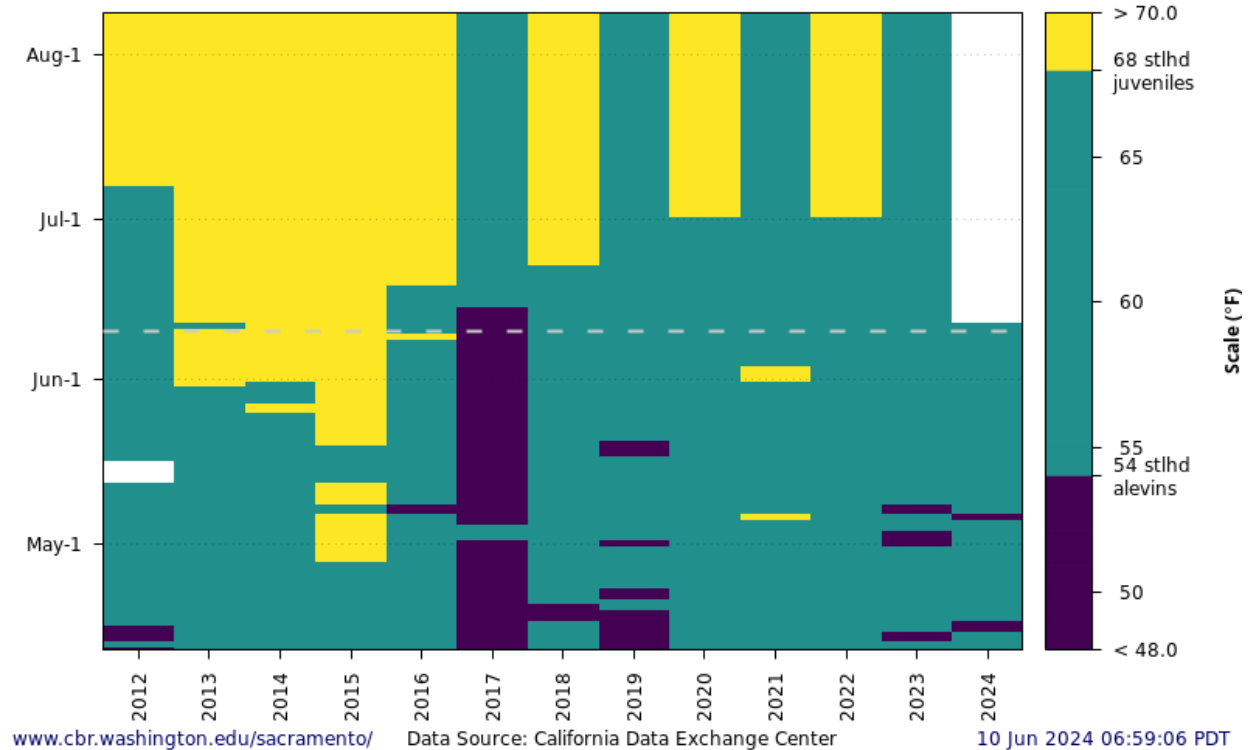


Figure 8. Stanislaus River water temperatures at Ripon for WY 2012 to present. Figure from SacPAS using RIP station data from CDEC; temperature threshold reference line added by SWT. http://www.cbr.washington.edu/sacramento/data/query_river_allyears.html

Figure 8 is a bar chart showing water temperatures at Ripon for WY 2012 to present for April to August. The chart shows that during this time, the daily average water temperature was mostly below 68° Fahrenheit except for temperatures in June through August being above 68° Fahrenheit during 2012 to 2016, 2018, 2020, and 2022.

**San Joaquin R nr Vernalis (VNS)
2015-2024 Daily Average Water Temperature
Observed Range 55.6-82.2
04/11 - 08/09**

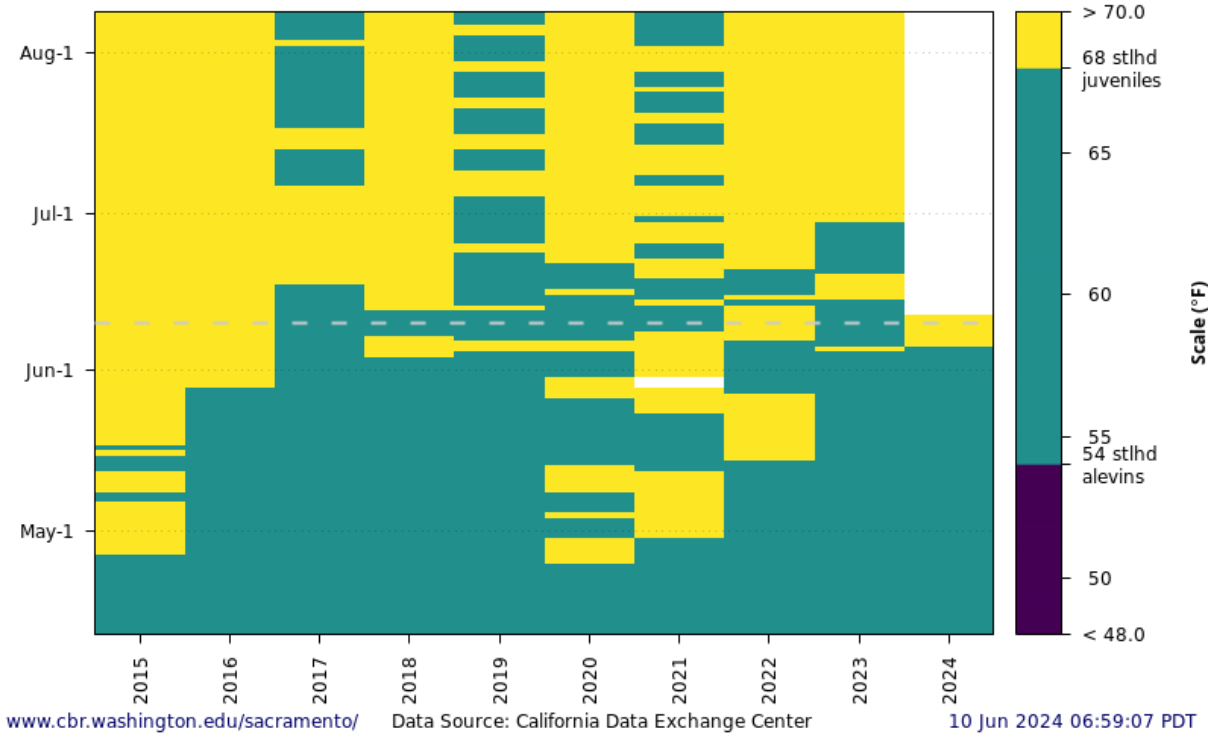


Figure 9. San Joaquin River water temperatures at Vernalis for WY 2015 to present. Figure from SacPAS using VNS station data from CDEC; temperature threshold reference line added by SWT. http://www.cbr.washington.edu/sacramento/data/query_river_allyears.html

Figure 9 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 above 68° Fahrenheit from early May to August. Temperatures continue above 68° Fahrenheit from mid-June to August during 2016 to 2024 with several periods below 68° Fahrenheit in 2017, 2019, and 2021.

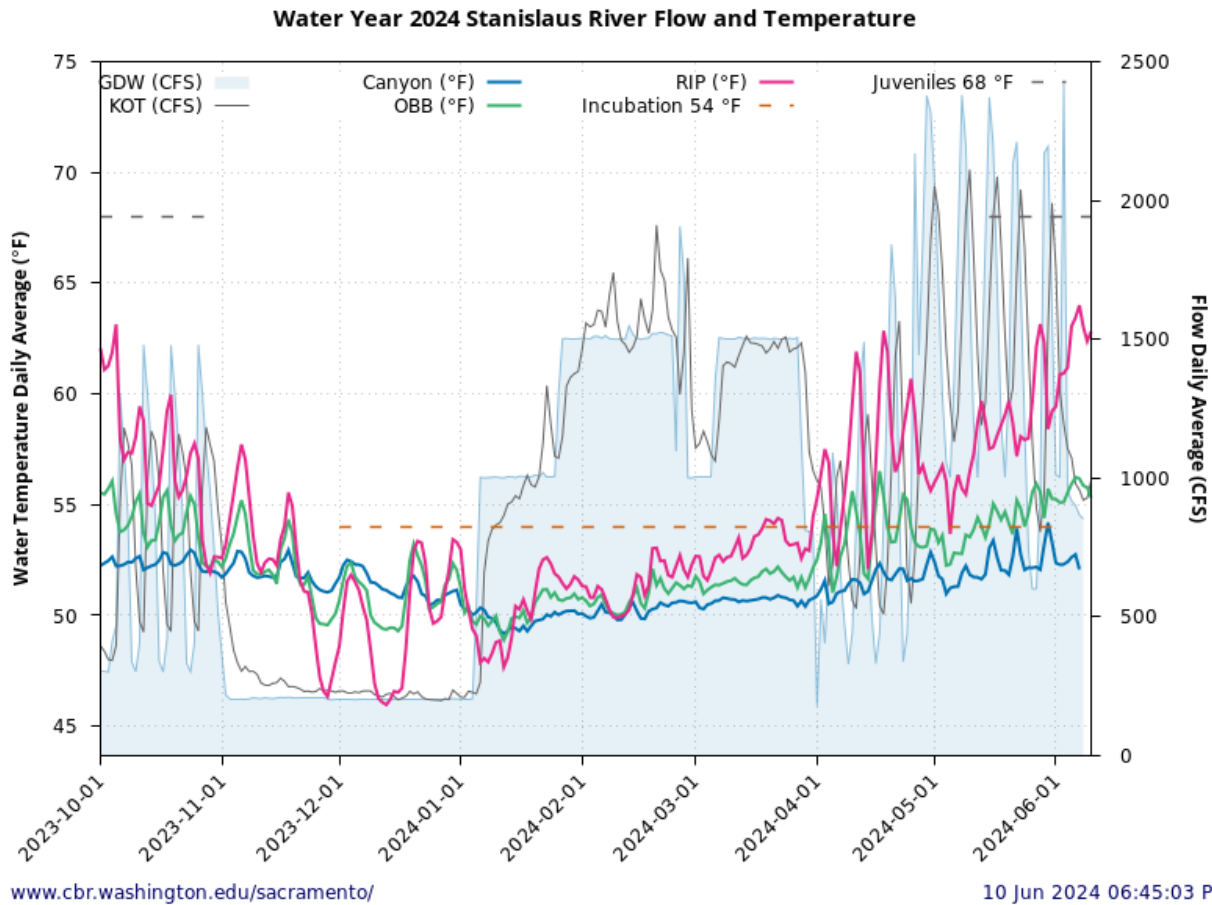


Figure 10. Stanislaus River flow and water temperatures from October 1, 2023 to June 10, 2024. Data (including temperature threshold reference lines) from SacPAS: http://www.cbr.washington.edu/sacramento/data/tc_stanislaus.html

Figure 10 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: No advance updates provided for the 6/12/24 meeting.

Forum (SRF) Call Review

USBR Updates: Receive live update from USBR staff on the 6/11/24 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 plans to start the 2025 survey in January.

Juveniles:

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

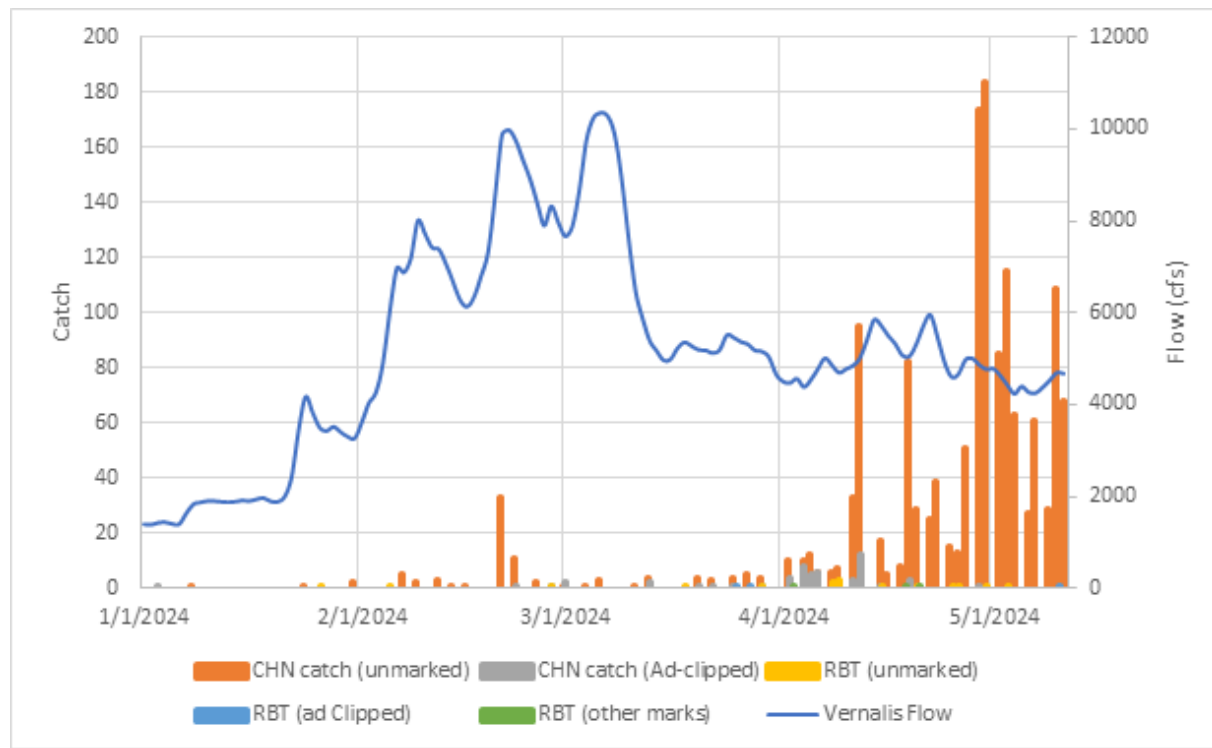


Figure 11. Salmonid catch at Mossdale and flow at Vernalis since January 1, 2024.

Figure 11 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 various peaks of over 90 in mid-April to May, with a maximum of 180 in May.

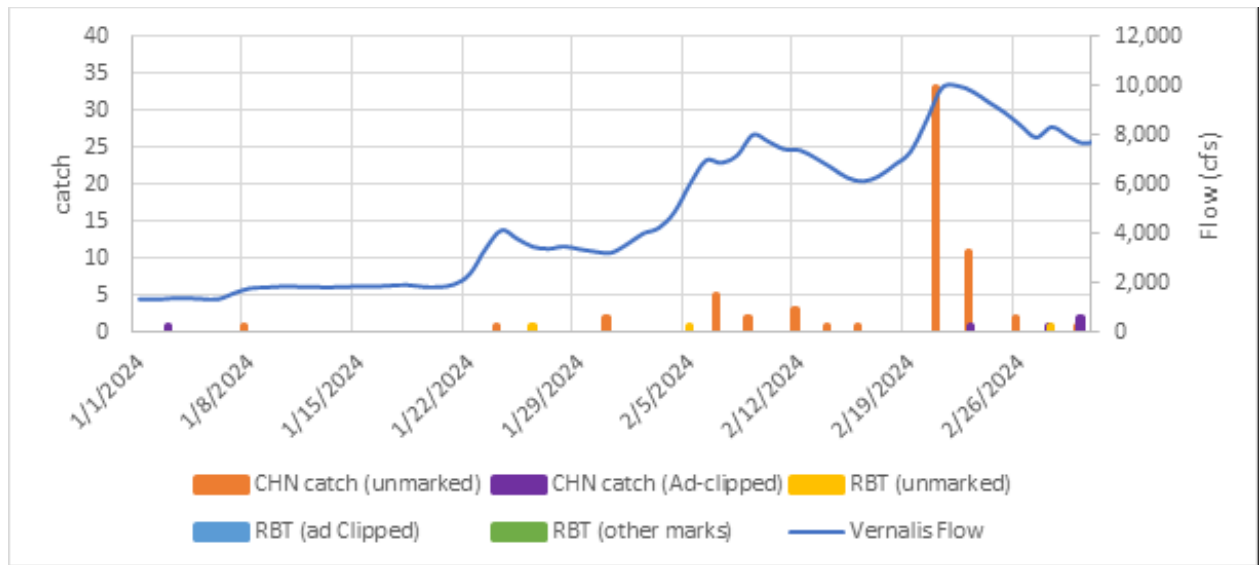


Figure 12. Salmonid catch at Mossdale and flow at Vernalis for January and February 2024.

Figure 12 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 1: Salmonid catch at Mossdale Trawl with length information.

Date	# CHN catch	# FL (mm)	# Comments
1/3/2024	1 ad-clipped	195	N/A
1/26/2024	1	200	N/A
2/5/2024	1	224	N/A
2/28/2024	1	73	N/A
3/18/2024	1	212	N/A
3/25/2024	1	251	N/A
3/27/2024	1	213	N/A
3/29/2024	1	97	N/A
4/2/2024*	1 sutures	245	N/A
4/8/2024*	2	220,245	N/A
4/9/2024*	3	245,266,207	N/A
4/15/2024*	1	215	N/A
4/16/2024*	1	248	N/A
4/18/2024*	1 sutures	N/A	PIT tag present
4/20/2024	1 unmarked, 1 sutures	260,N/A	PIT tag present

Date	# CHN catch	# FL (mm)	# Comments
4/25/2024*	1	240	N/A
4/26/2024*	1	220	N/A
4/30/2024*	1	208	N/A
5/3/2024*	1	235	N/A
5/11/2024*	1 ad-clipped	N/A	PIT tag present
5/24/2024*	1	229	N/A
5/31/2024*	1	270	N/A

*denotes CDFW operation.

FishBio Updates: No updates or field work for June 2014.

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 6/10/2024, we have captured a total of 6,071 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 captured in May are of the silvery parr and smolt life stages with fork lengths currently averaging about 80-90 mm.

Seven 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%. Five trials/releases occurred on 3/20, 4/3, and 4/10, 4/17, and 4/24 using hatchery origin (Merced) Chinook salmon parr at approximately 50-90 mm resulting in trap efficiencies of approximately 2%.

Stanislaus River RSTs at Caswell Memorial State Park:

Daily catch of unmarked Chinook Salmon and daily average discharge at Ripon during the 2024 Stanislaus River rotary screw trap sampling season.

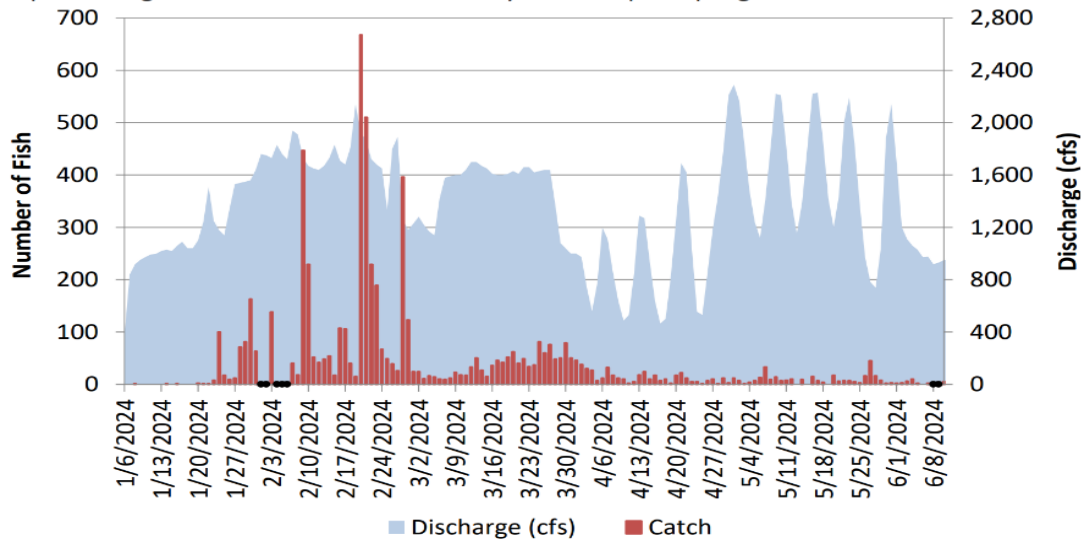


Figure 13. Daily catch of unmarked Chinook salmon and daily average at Ripon during the 2024 Stanislaus River RST sampling season.

Figure 13 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 a steady discharge of around 1,600 cfs during mid-January to late March, and peaks of over 2,000 cfs in late April through early June. It also shows catch happening in February 2024, with the highest over 600 number of fish.

Stanislaus River RSTs at Caswell Memorial State Park:

Daily catch of unmarked Chinook Salmon and daily average discharge at Ripon from April 1st to June 10th during the 2024 Stanislaus River rotary screw trap sampling season.

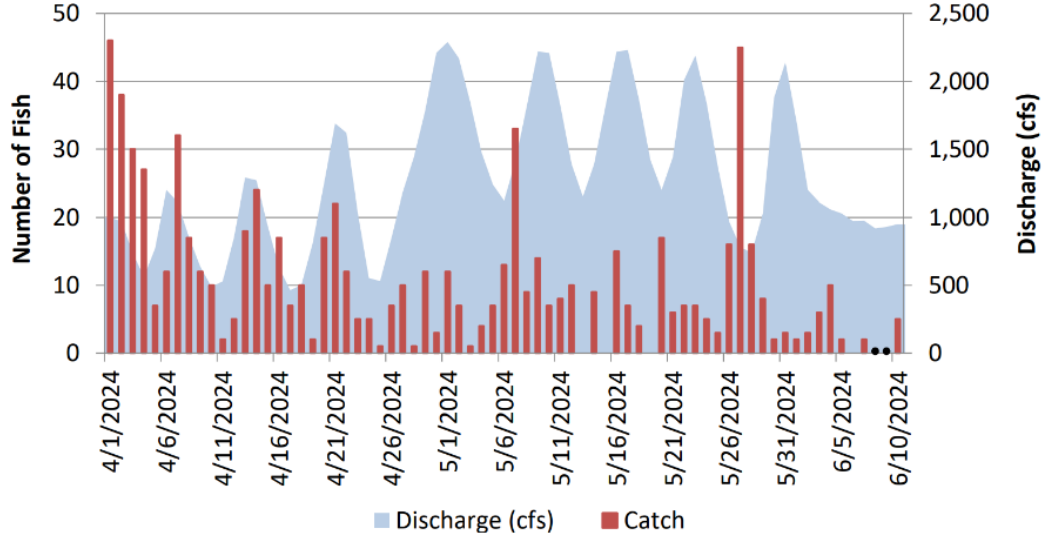


Figure 14. Daily catch of unmarked Chinook salmon and daily average discharge at Ripon from April 1 to June 10 during the 2024 Stanislaus River RST sampling season.

Figure 14 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 April and late May.

Stanislaus River RSTs at Caswell Memorial State Park:

Daily fork length distribution by life stage of unmarked Chinook Salmon measured during the 2024 Stanislaus River rotary screw trap sampling season.

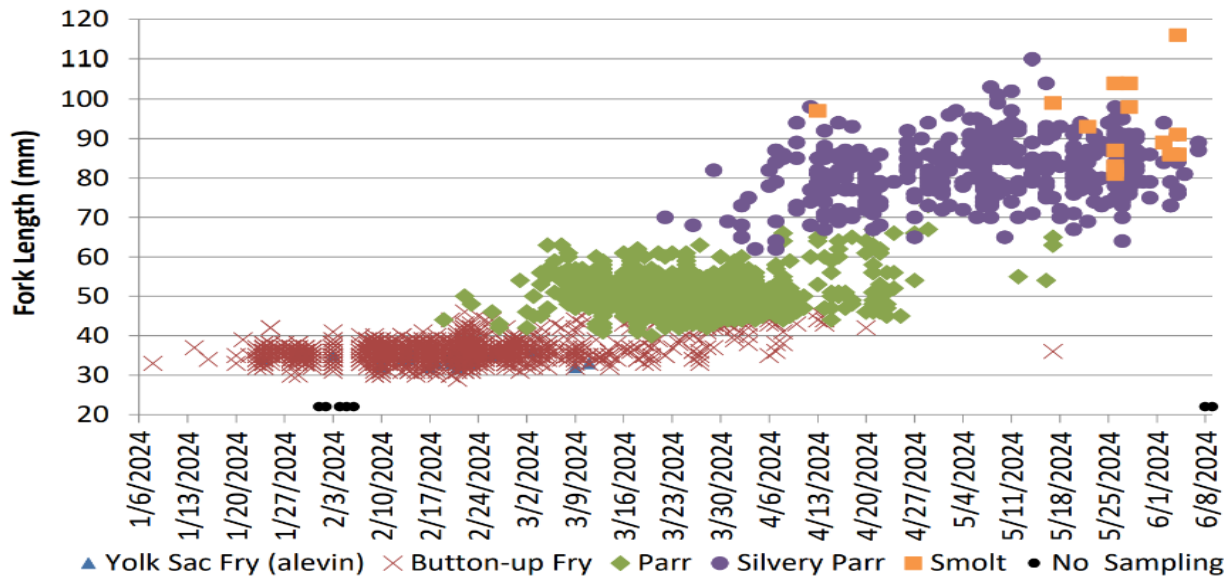


Figure 15. Daily fork length distribution by life stage of unmarked Chinook salmon measured during the 2024 Stanislaus River RST sampling season.

Figure 15 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 June.

More detailed information can be found at the [Caswell RST CalFish webpage](#), which includes catch spreadsheets, annual reports, and other project information.

Restoration Project Updates

USBR: *(No new updates)*