

Stanislaus Watershed Team

June 21, 2023

Members Attending

- USBR: Claire Hsu, Zarela Guerrero, Liz Kiteck, Melissa Vignau, Peggy Manza, Amanda Snow
- USFWS: J.D. Wikert, Craig Anderson
- CDFW: Gretchen Murphey, Crystal Rigby, Ryan Kok, Steve Tsao
- NMFS: Barb Byrne
- DWR:
- SWRCB: Chris Carr
- PSMFC: Logan Day
- SSJID:
- Fishbio: Jim Inman
- Stockton East Water District (SEWD): Justin Hopkins
- WAPA: Mike Prowatzke
- Kearns & West: Karis Johnston

Action Items

- J.D. Wikert – Provide Peggy Manza the specific timing and flows for the restoration work at Stanley Wakefield.
- Peggy Manza – Send J.D. Wikert draft flow plans and draft plots that show the different operational effects.
- All - Anyone interested in joining RCD planning meetings can reach out to J.D. Wikert to get on the list.
- J.D. Wikert – Send Elissa Buttermore an email regarding the Proposed Action updates.

Operations Update and Forecasts/ Hydrology

New Melones

- There was no measurable precipitation in the last month.
- Reclamation is following the conditional flood space that ensures enough room in the reservoir for late snow melt inflows.

- Total accumulated precipitation at New Melones was 46.93 inches during the previous month at 182% of average.
- Storage at New Melones is over 2 MAF and is increasing daily.
- Accumulated inflow for WY 2023 is 1.9 MAF and will continue to increase.

Tulloch

- Releasing water as needed for downstream requirements (instream flow and irrigation districts) and storage management.
- Releases are currently high enough to max out the power plant capacity. The rest of the water is being moved through spill and the outlet starting in the middle of May. This is due to significant water demands from irrigation and for higher river releases for storage management.

Goodwin

- Releases from Goodwin Dam are at 1,500 cfs.
- Agricultural demand is approximately 1,200 cfs per day (2.4 TAF). This is typical for this time of year.

Water Temperature Updates

- Water temperatures are still below 60 degrees F at Ripon with lower water temperatures upstream. There is some seasonal warming, but the water flows are helping keep the water temperatures down.
- Vernalis conditions are cooler than usual.

Stanislaus River Forum (SRF) Call Review

- A member of the public (from the rafting community) joined the call and asked for flows in the range of 700-800cfs on the weekends for rafting trips.

Fish Monitoring

Rotary Screw Trap Updates:

- Caswell RST has been sampling Monday – Friday since Memorial Day weekend. As of 6/13/23, 2,242 unmarked Chinook salmon, 1 *O. mykiss*, and 168 lamprey have been sampled.
- The average fork length of Chinook salmon is 93 mm, with a range of 60-110 mm over the last week.
- The majority of salmon are silvery parr and smolt life stages. They are catching roughly 5 unmarked fall-run Chinook salmon a day.

- There were concerns about finishing sampling on June 23, so they have planned to postpone the end of trapping and will continue into the beginning of July.
- Oakdale RST is sampling Monday – Friday.

CDFW Fish Monitoring

- No adult salmonid monitoring is occurring.
- Mossdale trawl is operational and caught many splittail over the last month. Catch has increased recently so sampling will continue for 5-days a week for the time being.

Question/Comments

- CDFW asked Fishbio to follow up with Reclamation on the scheduling of the weir installation in conjunction with the drop in flows for restoration work.

Flow Shaping

- It is past the point of cottonwood recruitment and therefore flow considerations for recruitment of riparian vegetation is less relevant at this time. There is too much water in the system to ramp down slowly.
- USFWS would like to have flows decreased to 400 cfs for two weeks in late-September and early October to do restoration work at the Stanley Wakefield Wilderness Area.
 - NMFS asked if they could do the restoration work earlier to align with weir installation if possible.
 - USFWS responded that it is possible, but start of construction depends on completion of permitting which will determine how quickly they can be ready to make the breach to the river.
 - Reclamation commented that 400 cfs for two weeks look achievable and they encourage trying to schedule weir installation at the same time. It should not matter for New Melones storage management if this drop happens in August or September.
- Rafting companies have requested lower flows on weekends, specifically over the first weekend in July, for safe rafting conditions. Ideally, 700-800 cfs is what they have asked for.
- USFWS requested a target amount of water for the rest of the summer to shape flows in a way that would allow for drops for recreation.
 - Reclamation has drafted a plan for dropping to 750 cfs on weekends. They will share the pattern of releases with USFWS but cannot

guarantee September flows. This plan has not been approved by management yet.

- Reclamation draft plans for flows during the summer:
 - Monday – Thursday - 1,500 cfs
 - Friday - 1,000 cfs
 - Saturday - 750 cfs
 - Sunday - 850 cfs (this will be closer to 750 cfs during the day with ramping up beginning in the evening).
- For the 4th of July weekend
 - June 28th – 1,500 cfs
 - June 29th – 1,000 cfs
 - June 30 – July 4 – 750 cfs
 - June 5th – 1,000 cfs
 - June 6th – 1,500 cfs
 - Move back into the regular pattern afterwards.

Restoration Project Updates

- The Mohler and Tortuga projects are in the pre-project monitoring phase.
- Buffington is at the project design stage and working through the permitting. This would be a summer 2024 construction.
- Caswell is high on the list for funding with the CVPIA.
- Anyone interested in joining RCD planning meetings can reach out to J.D. Wikert to get on the list.

Progress Update on Proposed Action Elements

- No update.

Other Discussion Items

Curtailments

- All curtailments have ended.

Annual Reporting

- No update.

Items to elevate to WOMT

- No items for WOMT.

Next Meeting

Wednesday, July 19, 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, June 21, 2023

Agenda

1. Introductions
2. Ground Rules¹
3. Announcements
 - a. Meeting will be recorded for notetaking purposes
4. Operations Update and Forecasts/Hydrology
5. Temperature Updates
6. Flow Planning
7. Stanislaus River Forum (SRF) Call Review
8. Fish Monitoring and Studies
9. Restoration Project Updates
10. Progress Update on Proposed Action Elements

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

11. Other Discussion Items

- a. Items to elevate to WOMT

12. Review Action Items

13. Next Meeting: Wednesday, July 19, 2023 (10am-12pm)



Tables for BDO

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

June 19, 2023

Run Date: June 20, 2023

Table 4. Reservoir Releases in Cubic Feet Per Second

Reservoir	Dam	WY 2020	WY 2021	15-Year Median
Trinity	Lewiston	462	477	710
Sacramento	Keswick	3,963	8,991	9,996
Feather	Oroville (SWP)	3,500	2,500	2,750
American	Nimbus	2,260	5,104	3,358
Stanislaus	Goodwin	803	1,502	803
San Joaquin	Friant	1,645	3,008	410

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

Reservoir	Capacity	15-Yr Avg	WY 2021	WY 2021	% O 15 Yr Avg
Trinity	2,448	1,628	727	1,408	86
Shasta	4,552	3,402	1,800	4,376	129
Folsom	977	780	855	924	119
New Melones	2,420	1,461	811	1,994	136
Fed. San Luis	966	482	292	962	200
Total North CVP	11,363	7,754	4,485	9,664	125
Millerton	521	394	363	391	99
Oroville (SWP)	3,538	2,512	1,817	3,534	141

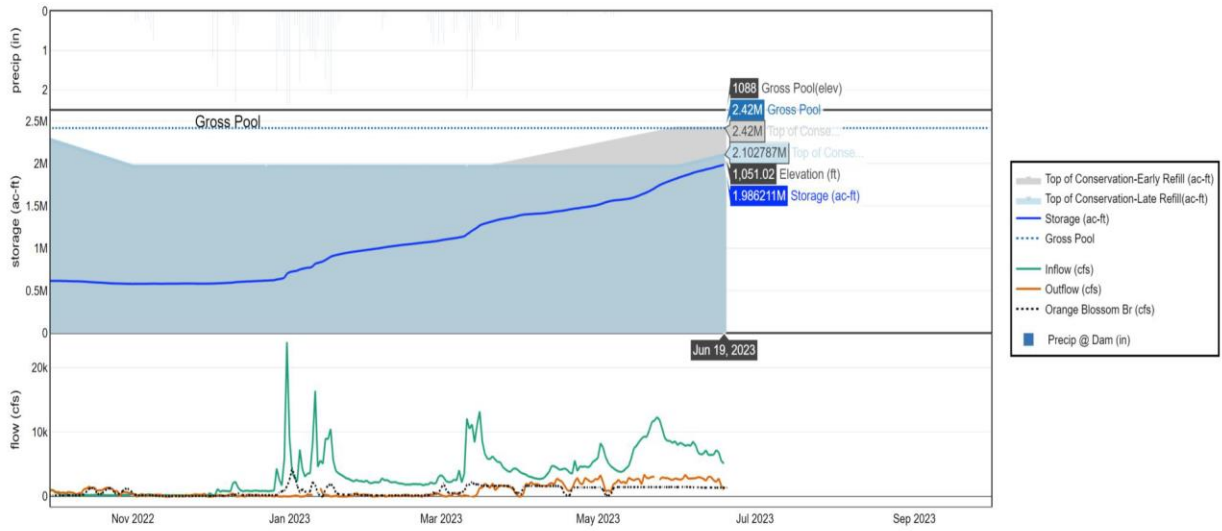
Table 6. Accumulated Inflow for water Year to Date in Thousands of Acre-Feet

Reservoir	Current WY 2021	WY 1977	WY 1983	15-Yr Avg	% O 15 Yr Avg
Trinity	1,422	633	1,869	980	145
Shasta	4,892	2,848	8,128	4,122	119
Folsom	4,130	923	5,463	2,282	181
New Melones	1,917	N/A	1,880	871	220
Millerton	3,062	572	2,213	1,201	255

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

Reservoir	Current WY 2021	WY 1977	WY 1983	Avg (N Yrs)	% of Avg	Last 24 Hours
Trinity at Fish Hatchery	36.28	21.79	38.73	29.65 (63)	122	0.00
Sacramento at Shasta Dam	72.21	32.94	83.71	58.07 (68)	124	0.00
American at Blue Canyon	77.92	N/A	112.31	63.68 (49)	122	0.00
Stanislaus at New Melones	46.93	N/A	36.55	26.59 (46)	176	0.00
San Joaquin at Huntington LK	65.94	11.50	65.40	39.61 (50)	166	0.00

New Melones Dam & Lake - Stanislaus River Basin
 WY 2023 | Generated: 2023-06-20T06:06:30-0700



New Melones Dam & Lake – Stanislaus River Basin 2023-02-14T08:06:21-0800

Oakdale Irrigation District
 South San Joaquin Irrigation
 District Tri Dams Project-California
 Goodwin Reservoir Daily Operations, June 2023, Run Date: 06/20/2023

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	576	N/A	N/A	N/A	N/A	N/A	N/A
1	360.55	576	0	2,801	0	1,504	700	394
2	360.55	576	0	2,943	0	1,513	828	394
3	360.55	576	0	2,933	0	1,504	844	382
4	360.55	576	0	2,894	0	1,504	818	341
5	360.54	575	-1	2,893	0	1,501	814	340
6	360.55	576	1	2,926	0	1,503	795	381
7	360.55	576	0	2,909	0	1,504	792	396
8	360.54	575	-1	2,939	0	1,503	753	396
9	360.54	575	0	2,939	0	1,500	783	388
10	360.54	575	0	2,746	0	1,513	736	283
11	360.54	575	0	2,692	0	1,501	675	291
12	360.55	576	1	2,699	0	1,505	710	279
13	360.55	576	0	2,867	0	1,507	771	390
14	360.55	576	0	2,922	0	1,504	797	431
15	360.55	576	0	2,982	0	1,500	840	441
16	360.55	576	0	3,032	0	1,502	870	440
17	360.55	576	0	2,901	0	1,504	814	381
18	360.55	576	0	2,765	0	1,500	723	350
19	360.55	576	0	2,828	0	1,502	761	363
Totals	N/A	N/A	0	54,611	0	28,574	14,824	7,061
Acre-Feet	N/A	N/A	0	108,321	0	56,677	29,403	14,005

Joint Main Operated by SSJID and OID.

Summary: Release (acre-feet)

Joint Main Canal	29,403
South Main Canal	14,005
Outlet	0
Spill	56,677
Total	100085.4265

Oakdale Irrigation District
 South San Joaquin Irrigation
 District Tri Dams Project-California
 Goodwin Reservoir Daily Operations, May 2023, Run Date: 06/15/2023

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	576	N/A	N/A	N/A	N/A	N/A	N/A
1	360.55	576	0	2,267	0	1,503	460	204
2	359.92	531	-45	1,659	0	881	441	245
3	359.86	527	-4	993	0	310	382	211
4	359.86	527	0	893	0	304	305	221
5	360.45	569	42	1,157	0	483	433	159
6	360.54	575	6	2,184	0	1,506	475	152
7	360.55	576	1	2,176	0	1,502	477	142
8	360.55	576	0	2,324	0	1,505	547	215
9	360.55	576	0	2,349	0	1,502	468	305
10	360.55	576	0	2,370	0	1,505	496	275
11	360.55	576	0	2,486	0	1,504	549	303
12	360.55	576	0	2,566	0	1,502	669	324
13	360.55	576	0	2,530	0	1,503	667	286
14	360.55	576	0	2,446	0	1,506	637	230
15	360.54	575	-1	2,502	0	1,502	640	282
16	360.55	576	1	2,443	0	1,506	599	246
17	360.55	576	0	2,551	0	1,500	602	321
18	360.55	576	0	2,568	0	1,507	645	260
19	360.55	576	0	2,752	0	1,504	741	334
20	360.55	576	0	2,789	0	1,500	761	346
21	360.55	576	0	2,789	0	1,500	785	322
22	360.55	576	0	2,822	0	1,505	795	325
23	360.55	576	0	2,852	0	1,506	820	364
24	360.55	576	0	2,905	0	1,501	836	401
25	360.55	576	0	2,636	0	1,503	762	380
26	360.55	576	0	2,775	0	1,503	696	396
27	360.55	576	0	2,735	0	1,504	684	361
28	360.55	576	0	2,576	0	1,506	642	245
29	360.55	576	0	2,546	0	1,505	636	212
30	360.55	576	0	2,666	0	1,507	625	342

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
31	360.55	576	0	2,712	0	1,508	678	343
Totals	N/A	N/A	0	74,019	0	42,583	18,953	8,752
Acre-Feet	N/A	N/A	0	146,817	0	84,463	37,593	17,360

Joint Main Operated by SSJID and OID.

Summary: Release (acre-feet)

Joint Main Canal	37,593
South Main Canal	17,360
Outlet	0
Spill	84,463
Total	139416.248

United States Department of the Interior
 Bureau of Reclamation-Central Valley Project- California
 New Melones Lake Daily Operations, June 2023, Run Date: 06/20/2023

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	1,829.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	1,037.53	1,840.9	11.2	8,387	11.2	0	0	89	0.26	0.00
2	1,038.53	1,851.5	10.5	8,189	10.5	0	0	103	0.30	0.00
3	1,039.34	1,860.0	8.6	7,868	8.6	0	0	110	0.32	0.00
4	1,040.30	1,870.2	10.2	8,073	10.2	0	0	113	0.33	0.00
5	1,041.22	1,880.0	9.8	7,872	9.8	0	0	117	0.34	0.00
6	1,042.26	1,891.1	11.1	8,563	11.1	0	0	97	0.28	0.00
7	1,043.19	1,901.1	10.0	7,954	10.0	0	0	69	0.20	0.00
8	1,043.88	1,908.5	7.4	6,843	7.4	0	0	59	0.17	0.02
9	1,044.52	1,915.4	6.9	6,548	6.9	0	0	87	0.25	0.00
10	1,045.21	1,922.8	7.4	6,664	7.4	0	0	112	0.32	0.00
11	1,046.07	1,932.1	9.3	7,223	9.3	0	0	70	0.20	0.00
12	1,046.67	1,938.6	6.5	6,470	6.5	0	0	60	0.17	0.00
13	1,047.28	1,945.3	6.6	6,506	6.6	0	0	84	0.24	0.00
14	1,048.00	1,953.1	7.8	6,505	7.8	0	0	0	0.00	0.00
15	1,048.90	1,962.9	9.8	7,237	9.8	0	0	0	0.00	0.00
16	1,049.63	1,970.9	8.0	6,883	8.0	0	0	0	0.00	0.00
17	1,050.31	1,970.4	7.5	5,556	7.5	0	0	121	0.34	0.00
18	1,051.02	1,986.2	7.8	5,158	7.8	0	0	103	0.29	0.00
19	1,051.77	1,994.5	8.3	7,193	8.3	0	0	125	0.35	0.00
Totals	N/A	N/A	164.7	135,697	164.7	0	0	1,519	4.36	0.02
Acre- Feet	N/A	N/A	164,700	269,155	164,700	0	0	3,013	N/A	N/A

Comments:

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

Summary Precipitation

This Month 0.02
 July 1, 2021 to Date N/A
 October 1, 2021 to Date 46.93

Summary: Release (acre-
feet)

Release (acre-feet)	N/A
Power	101,319
Spill	0
Outlet	0
Total	101,319

United States Department of the Interior
 Bureau of Reclamation-Central Valley Project- California
 New Melones Lake Daily Operations, May 2023, Run Date: 06/15/2023

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	1,513.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	1,005.60	1,523.2	9.6	8,308	3,364	0	0	82	0.27	0.00
2	1,006.72	1,533.7	10.5	7,639	2,249	0	0	82	0.27	0.00
3	1,007.84	1,544.3	10.6	6,140	776	0	0	34	0.11	0.08
4	1,008.72	1,552.6	8.3	5,258	1,022	0	0	31	0.10	0.01
5	1,009.55	1,560.5	7.9	4,746	742	0	0	25	0.08	0.11
6	1,010.06	1,565.3	4.9	4,449	1,969	0	0	31	0.10	0.12
7	1,010.47	1,569.3	3.9	4,128	2,131	0	0	22	0.07	0.04
8	1,010.72	1,571.7	2.4	3,939	2,667	0	0	68	0.22	0.00
9	1,011.06	1,571.9	3.3	3,832	2,128	0	0	65	0.21	0.00
10	1,011.39	1,578.1	3.2	4,013	2,355	0	0	62	0.20	0.00
11	1,011.87	1,582.7	4.6	4,429	2,040	0	0	68	0.22	0.00
12	1,012.23	1,586.1	3.5	4,796	2,983	0	0	68	0.22	0.00
13	1,012.90	1,592.6	6.4	6,008	2,687	0	0	69	0.22	0.00
14	1,013.90	1,602.2	9.7	7,502	2,547	0	0	85	0.27	0.00
15	1,014.93	1,612.2	10.0	7,896	2,752	0	0	110	0.35	0.00
16	1,016.08	1,623.4	11.2	8,516	2,765	0	0	107	0.34	0.00
17	1,017.50	1,637.3	13.9	9,039	1,909	0	0	127	0.40	0.00
18	1,018.67	1,648.8	11.5	9,358	3,448	0	0	115	0.36	0.00
19	1,019.93	1,661.2	12.4	9,266	2,882	0	0	115	0.36	0.00
20	1,021.40	1,675.8	14.6	10,337	2,885	0	0	100	0.31	0.00
21	1,023.07	1,692.5	16.7	11,599	3,106	0	0	97	0.30	0.00
22	1,024.77	1,709.5	17.1	11,827	3,114	0	0	111	0.34	0.00
23	1,026.68	1,728.8	19.3	12,357	2,533	0	0	98	0.30	0.00
24	1,028.47	1,747.0	18.2	11,910	2,643	0	0	92	0.28	0.00
25	1,029.91	1,761.7	14.7	10,562	3,035	0	0	106	0.32	0.00
26	1,031.10	1,774.0	12.2	9,137	2,894	0	0	80	0.24	0.00
27	1,032.19	1,785.2	11.2	8,666	2,912	0	0	87	0.26	0.00
28	1,033.31	1,796.8	11.6	8,668	2,727	0	0	94	0.28	0.00
29	1,034.40	1,808.1	11.3	8,343	2,578	0	0	54	0.16	0.00
30	1,035.48	1,819.4	11.3	8,624	2,856	0	0	88	0.26	0.00
31	1,036.46	1,829.7	10.3	8,008	2,743	0	0	92	0.27	0.00
Totals	N/A	N/A	316.3	239,300	77,442	0	0	2,465	7.69	0.36

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	316,300	474,652	153,606	0	0	4,889	N/A	N/A

Comments:

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

Summary Precipitation

This Month	0.36
July 1, 2021 to Date	N/A
October 1, 2021 to Date	46.91

Summary: Release (acre-feet)

Release (acre-feet)	N/A
Power	153,606
Spill	0
Outlet	0
Total	153,606

United States Department of the Interior
 Bureau of Reclamation-Central Valley Project- California
 Tulloch Reservoir Daily Operations, June 2023, Run Date: 06/20/2023

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	65,178	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	508.24	64,784	-394	2,612	2,630	2,478	0	323	10
2	507.87	64,331	-453	2,727	2,770	2,476	147	320	12
3	508.65	65,289	958	3,429	3,439	2,480	200	253	13
4	508.45	65,043	-246	2,783	2,831	2,477	199	218	13
5	508.26	64,809	-234	2,788	2,819	2,476	199	218	13
6	508.33	64,895	86	2,980	2,866	2,478	199	249	11
7	508.29	64,846	-49	2,892	2,862	2,478	267	232	8
8	508.29	64,846	0	2,946	3,047	2,480	267	192	7
9	508.29	64,846	0	2,949	2,985	2,480	259	192	10
10	508.41	64,994	148	2,834	2,799	2,458	118	29	13
11	508.08	64,987	-407	2,495	2,462	2,475	100	99	8
12	508.81	65,486	899	3,159	3,127	2,478	244	121	7
13	509.14	65,895	409	3,083	3,079	2,482	140	141	10
14	508.89	65,585	-310	2,766	2,552	2,479	301	303	0
15	508.22	64,760	-825	2,566	2,280	2,482	301	199	0
16	508.40	64,981	221	3,143	2,850	2,479	300	252	0
17	508.21	65,215	234	3,033	1,671	2,479	229	121	14
18	508.21	64,748	-467	2,541	1,117	2,465	300	0	11
19	508.48	65,080	332	3,009	2,895	2,479	229	120	14
Totals	N/A	N/A	-98	54,735	51,081	47,059	3,970	3,582	174
Acre-Feet	N/A	N/A	-98	108,567	101,319	93,342	7,874	7,105	345

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)

Release (acre-feet)	N/A
Power	93,342
Spill	0
Outlet	7,105
Total	108,321

United States Department of the Interior
 Bureau of Reclamation-Central Valley Project- California
 Tulloch Reservoir Daily Operations, May 2023, Run Date: 06/15/2023

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	59,682	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	505.77	61,813	2,131	3,351	3,364	2,267	0	0	10
2	506.79	63,026	1,213	2,281	2,249	1,659	0	0	10
3	506.54	62,728	-298	2,281	2,249	993	0	0	4
4	506.54	62,728	298	1,047	1,022	893	0	0	4
5	506.13	62,238	-788	763	742	1,157	0	0	3
6	505.81	61,860	-378	1,997	1,969	2,184	0	0	4
7	505.72	61,754	-106	2,126	2,131	2,176	0	0	3
8	506.29	62,429	675	2,672	2,667	2,324	0	0	8
9	505.96	62,036	-393	2,159	2,128	2,349	0	0	8
10	505.94	62,012	-24	2,366	2,355	2,367	0	0	8
11	505.09	61,013	-999	1,990	2,040	2,451	0	35	8
12	505.82	61,871	858	3,007	2,983	2,458	0	108	8
13	506.03	62,119	248	2,663	2,687	2,458	0	72	8
14	506.25	62,382	263	2,589	2,547	2,446	0	0	10
15	506.60	62,799	417	2,726	2,752	2,460	0	42	14
16	507.11	63,410	611	2,764	2,765	2,336	0	107	13
17	505.95	62,024	-1,386	1,867	1,909	2,319	0	232	15
18	507.42	63,786	1,762	3,470	3,448	2,463	0	105	14
19	507.58	63,980	194	2,864	2,882	2,371	70	311	14
20	507.69	64,113	133	2,868	2,885	2,370	98	321	12
21	508.11	64,624	511	3,059	3,106	2,372	98	319	12
22	508.60	65,228	604	3,141	3,114	2,374	99	349	14
23	508.00	64,489	-739	2,491	2,533	2,478	170	204	12
24	507.51	63,895	-594	2,617	2,643	2,305	197	403	11
25	507.72	64,150	255	2,778	3,035	2,372	16	248	13
26	507.81	64,259	109	2,839	2,894	1,342	198	1,235	9
27	508.10	64,612	353	2,923	2,912	2,375	198	162	10
28	508.26	64,809	197	2,686	2,727	2,378	198	0	11
29	508.29	64,846	37	2,571	2,578	2,441	50	55	6
30	508.53	65,141	295	2,825	2,856	2,479	0	187	10

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)
31	508.56	65,178	37	2,742	2,743	2,480	0	232	11
Totals	NA	NA	5,496	77,089	77,442	67,897	1,392	4,730	297
Acre-Feet	NA	NA	5,496	152,906	153,606	134,674	2,761	9,382	589

Comments:

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

(1) Evaporation records taken from New Melones Pan.

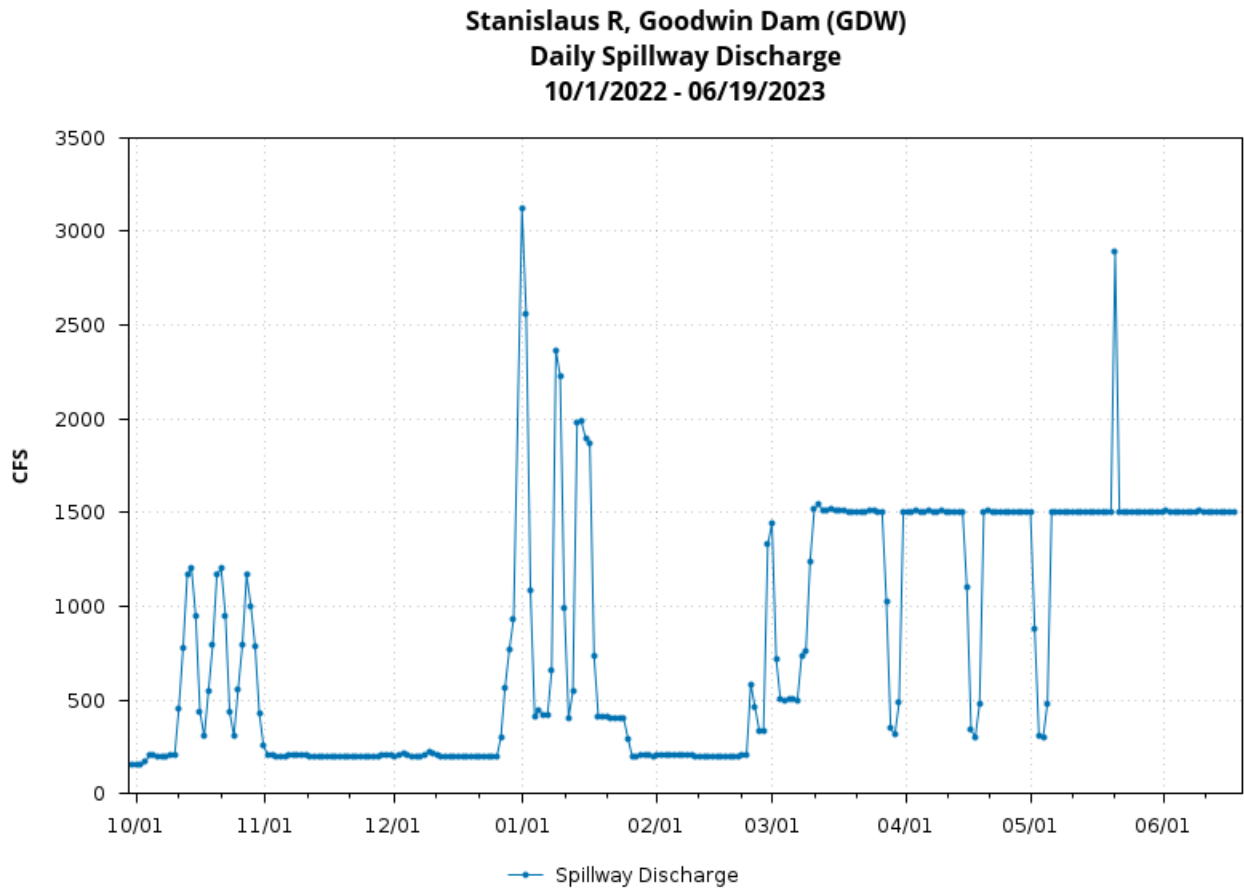
Summary: Release (acre-feet)

Release (acre-feet)	N/A
Power	134,674
Spill	0
Outlet	9,382
Total	146,817

June 2023 Water Temperature and Fish Monitoring Update

Year-to-Date Flows

Goodwin releases since October 1, 2022, are shown in Figure 1. The releases greater than 200 cfs that occurred in December and early January were for storage management at Tulloch Reservoir due to side flows from storm events.



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Figure 1. Goodwin (daily) releases to the Stanislaus River since October 1, 2022. Data from GDW station on CDEC.

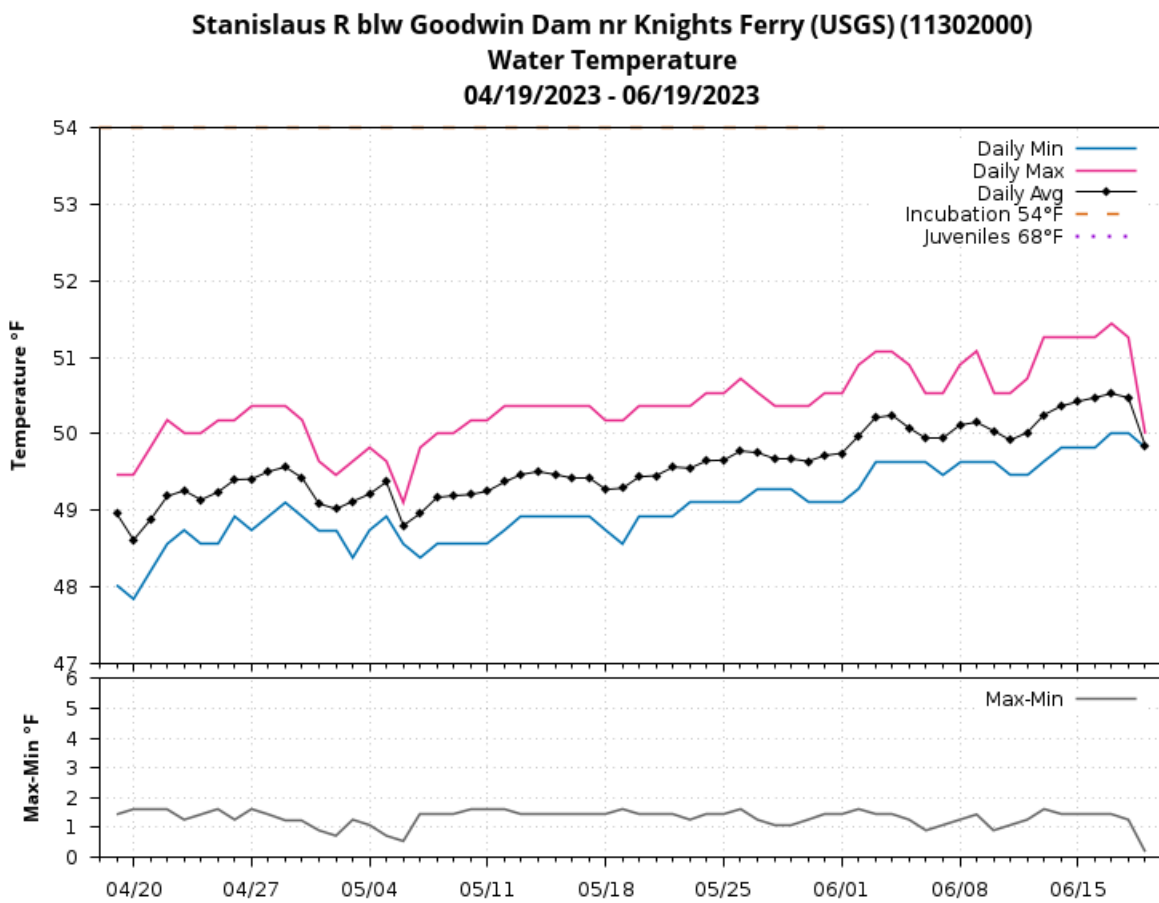
Water Temperature

The temperature thresholds included in Figures 2-9, 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

¹ The 2019 NMFS LTO BiOp is available online at: <https://www.fisheries.noaa.gov/resource/document/biological-opinion-reinitiation-consultation-long-term-operation-central-valley>

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 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 February 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 calendar year 2022 is provided in Figure 9.

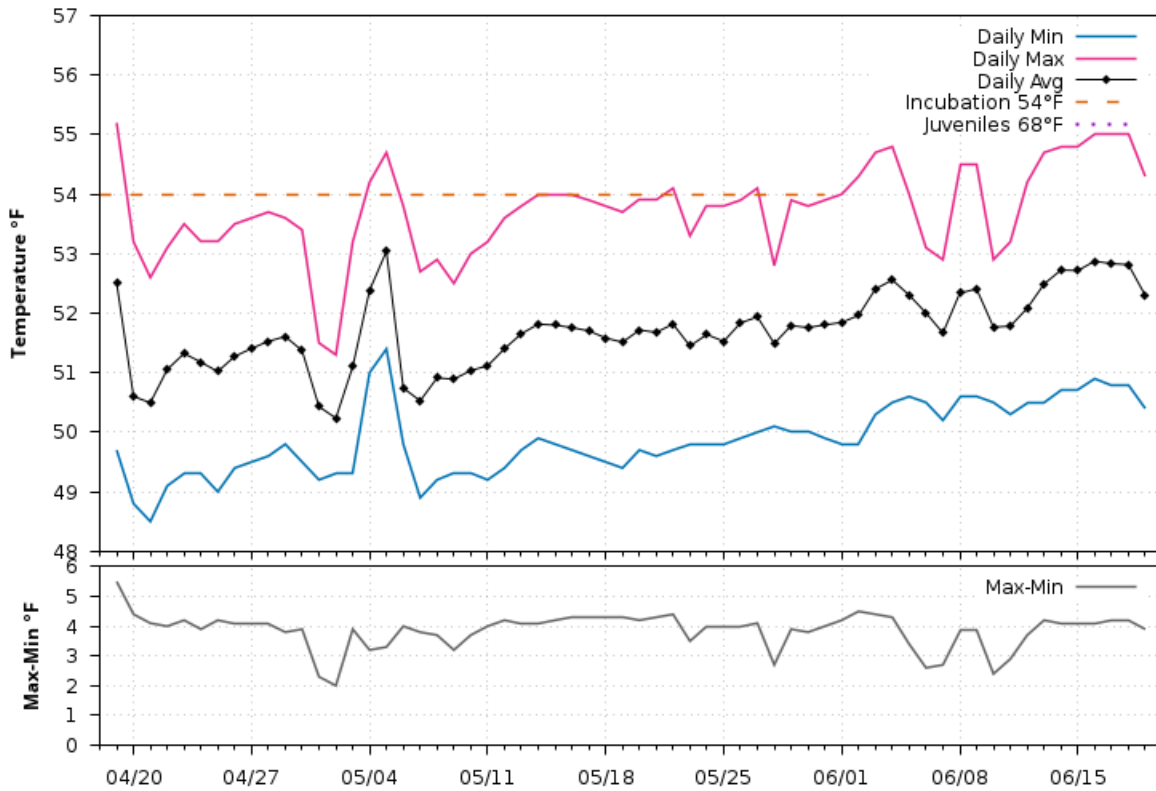


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Figure 2. Daily water temperatures on the Stanislaus River upstream of Knights Ferry since February 2023. Data from USGS gage 11302000 on NWIS; temperature threshold reference line added by SWT.

**Stanislaus R at Orange Blossom Bridge (OBB)
Water Temperature
04/19/2023 - 06/19/2023**



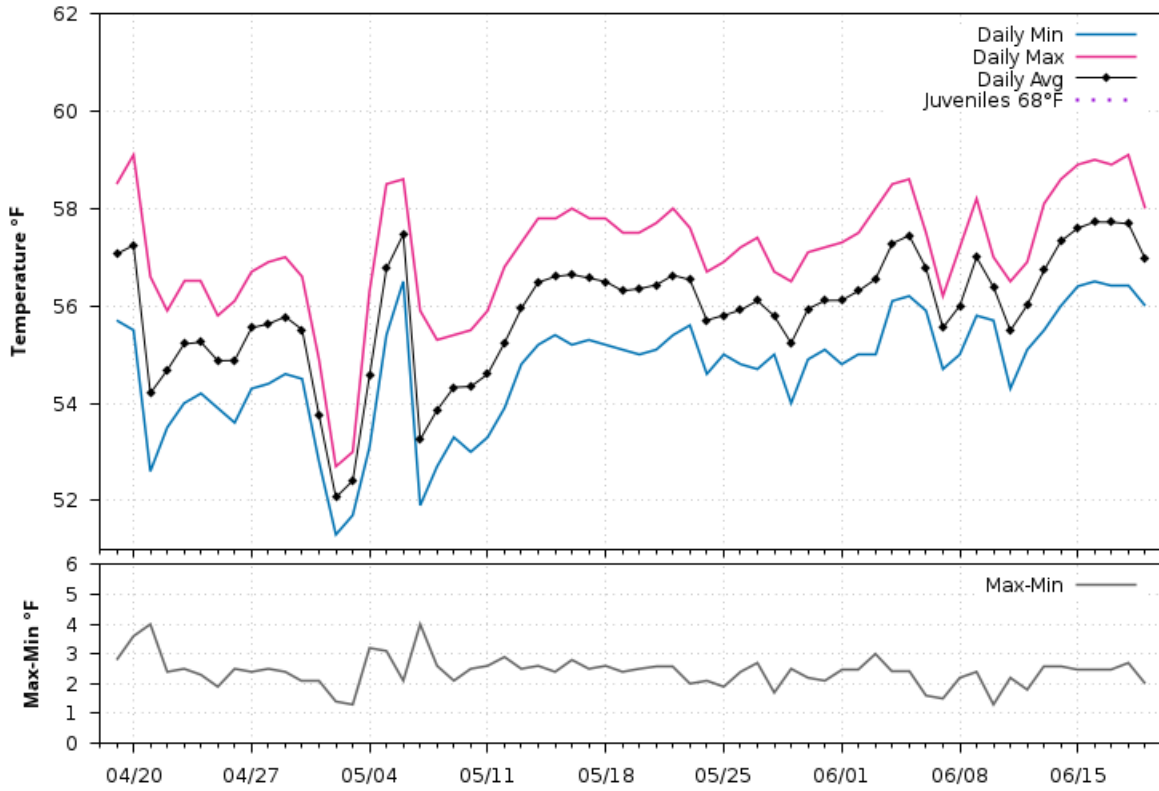
www.cbr.washington.edu/sacramento/

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Figure 3. Stanislaus (hourly) water temperatures at Orange Blossom Bridge since February 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.

Stanislaus R at Ripon (USGS) (RIP)
Water Temperature
04/19/2023 - 06/19/2023

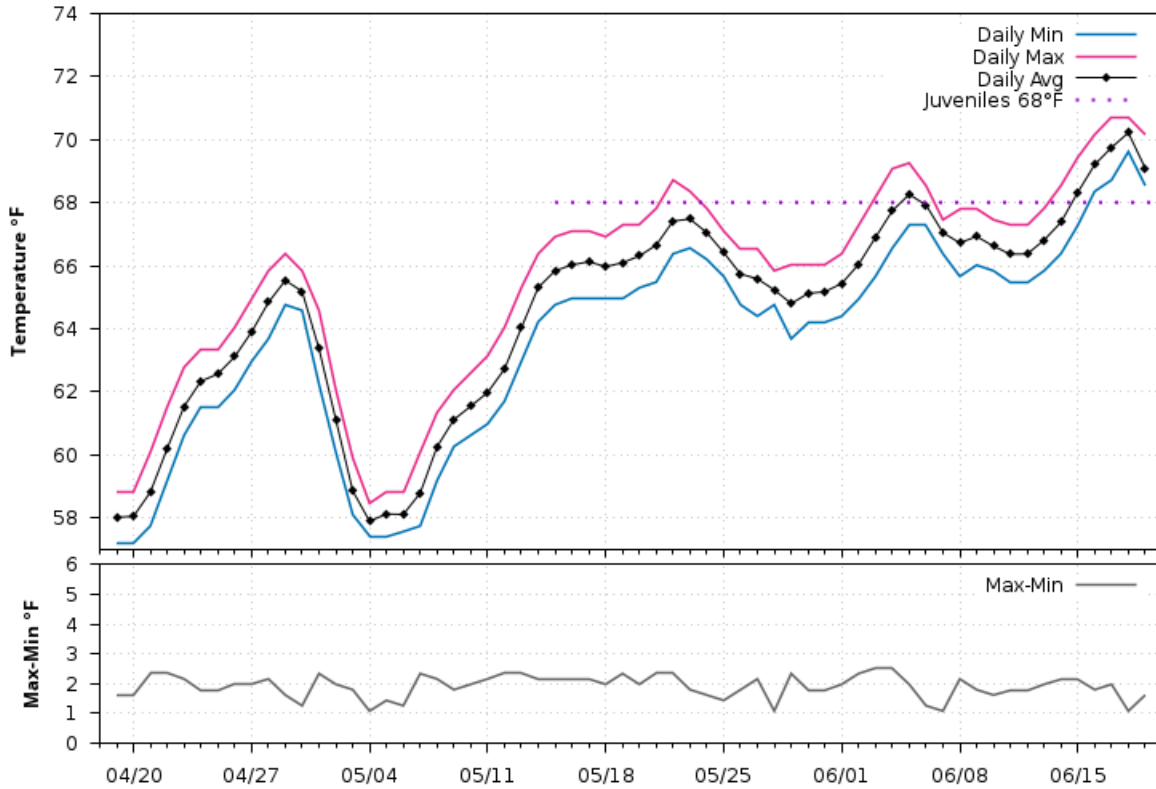


www.cbr.washington.edu/sacramento/

20 Jun 2023 06:59:02 PDT

Figure 4. Stanislaus water temperatures at Ripon since April 19, 2023. Data from RIP station on CDEC.

**San Joaquin R nr Vernalis (VNS)
Water Temperature
04/19/2023 - 06/19/2023**



www.cbr.washington.edu/sacramento/

20 Jun 2023 06:59:02 PDT

Figure 5. San Joaquin River (15-minute) water temperatures at Vernalis since April 19, 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.

**Stanislaus R at Orange Blossom Bridge (OBB)
2001-2023 Daily Average Water Temperature
Observed Range 36.3-73.1
04/21 - 08/19**

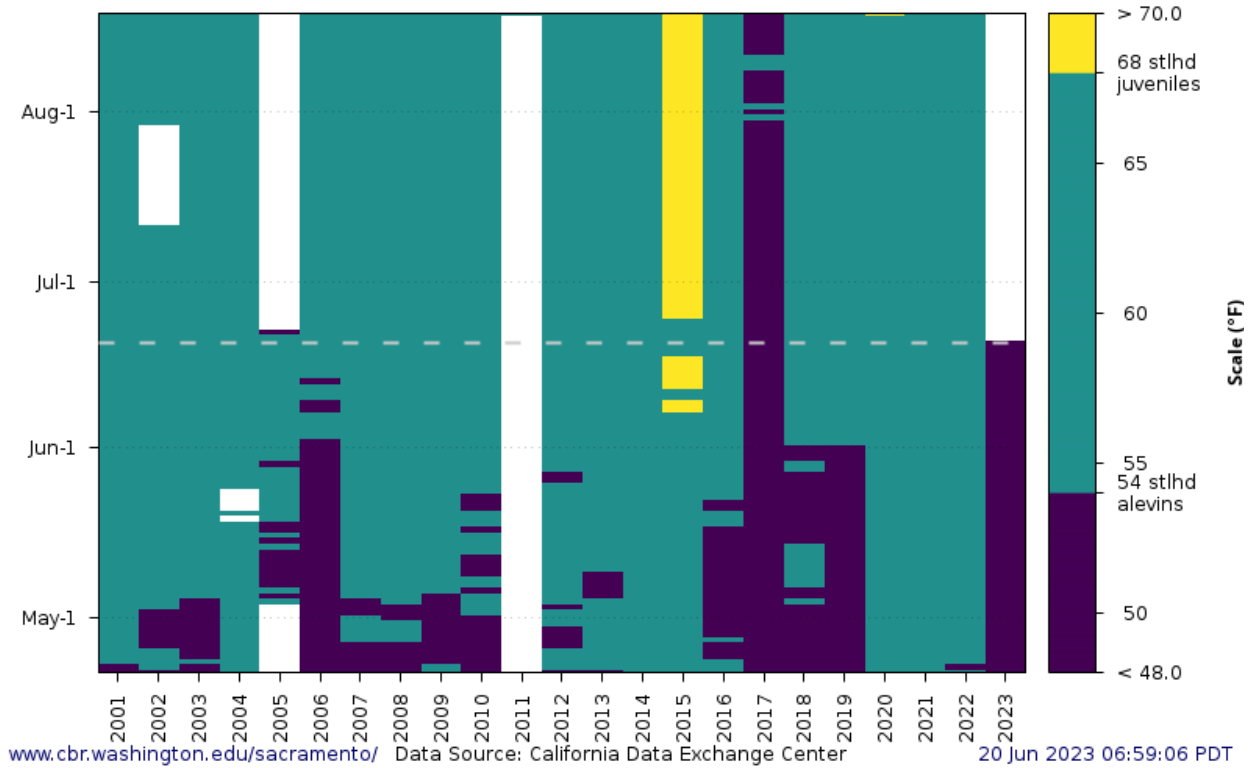


Figure 6. Stanislaus River water temperatures at Orange Blossom Bridge for WY 2000 to present. Data from SacPAS; temperature threshold reference lines added by SWT.

http://www.cbr.washington.edu/sacramento/data/query_river_allyears.html

Stanislaus R at Ripon (USGS) (RIP)
2012-2023 Daily Average Water Temperature
Observed Range 50.9-82.4
04/21 - 08/19



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

**San Joaquin R nr Vernalis (VNS)
2015-2023 Daily Average Water Temperature
Observed Range 56.2-84.8
04/21 - 08/19**

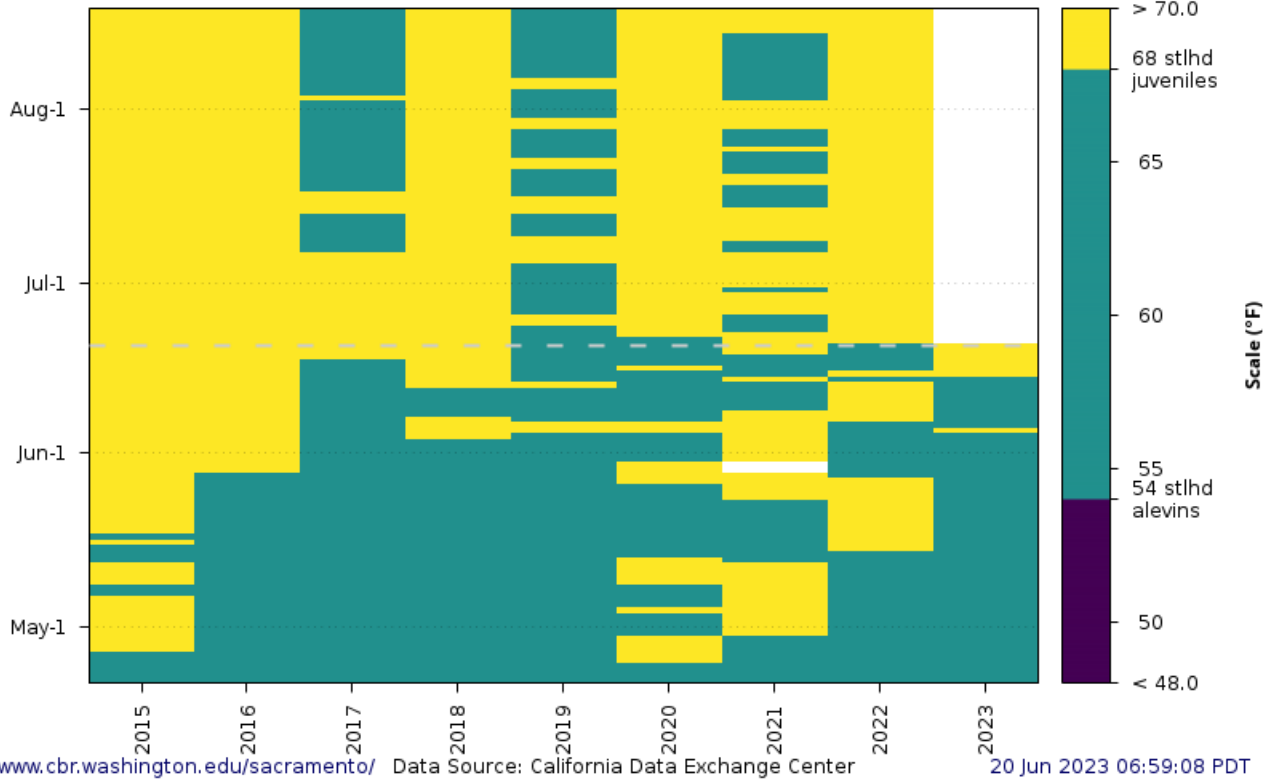


Figure 8. San Joaquin River water temperatures at Vernalis for WY 2014 to present. Figure from SacPAS using VNS station data from CDEC; temperature threshold reference line added by SWT.
http://www.cbr.washington.edu/sacramento/data/query_river_allyears.html

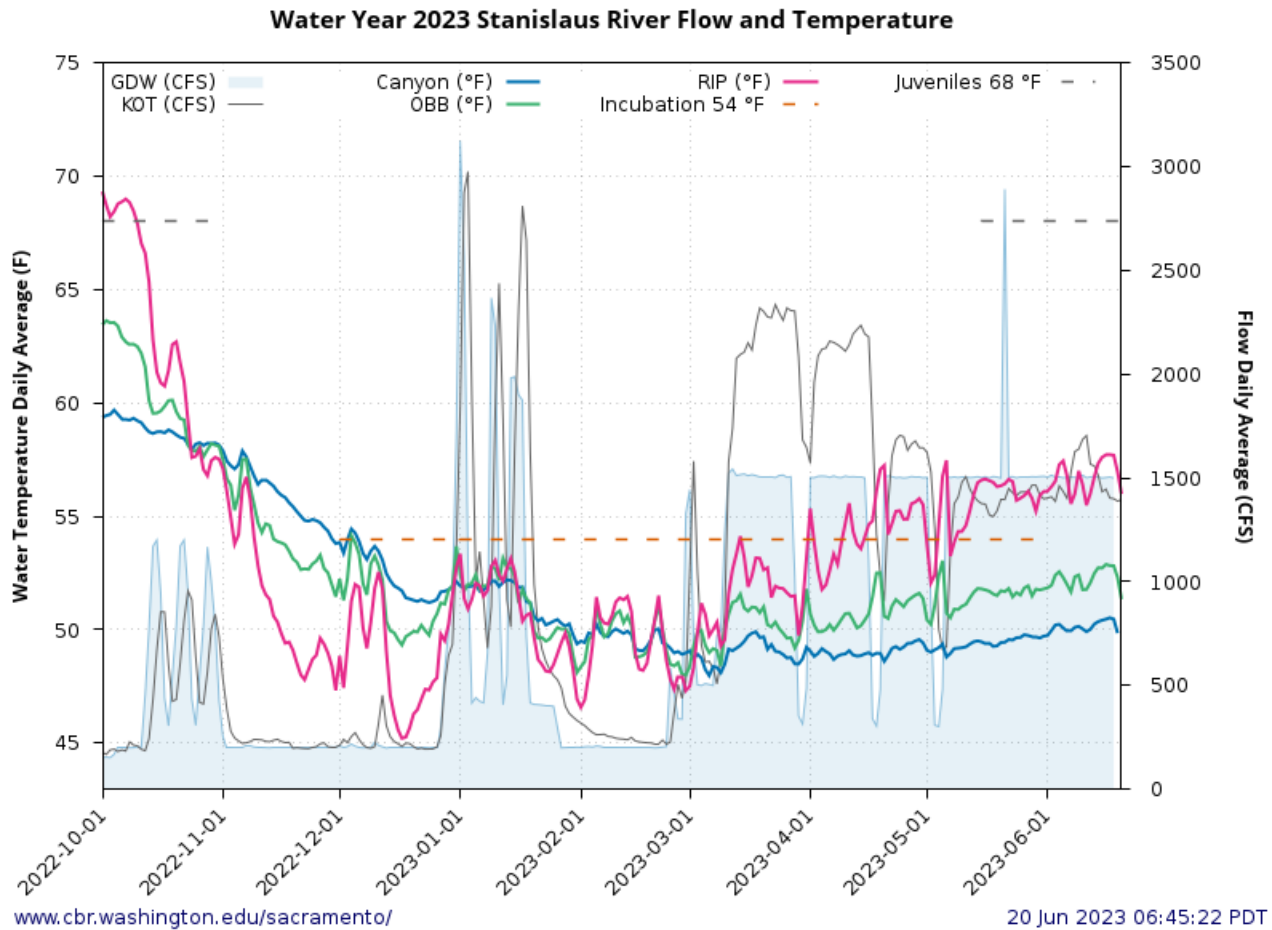


Figure 9. Stanislaus River flow and water temperatures from October 1, 2022 to June 20, 2023. Data (including temperature threshold reference lines) from SacPAS: http://www.cbr.washington.edu/sacramento/data/tc_stanislaus.html

NMFS updates:

Weir near Riverbank:

The weir was removed for the season on May 3, 2023.

Rotary Screw Traps

Rotary screw trapping is conducted at Oakdale (by FISHBIO) and Caswell [by the Pacific States Marine Fisheries Commission (PSMFC)] for monitoring of outmigrating juvenile salmonids). For the 2023 outmigration season, sampling began at Oakdale on January 20, 2023 and at Caswell on January 21, 2023. Sampling will likely end in early June. Chinook catch at each location is summarized in Figure F-1 (Oakdale) and Figure F-2 (Caswell); fish lengths and life stages are provided in Figure F-3 for the Chinook catch at Caswell. Through June 13, 2023, the trap at Caswell has captured a total of 2,242 unmarked Chinook Salmon, 1

unmarked *O. mykiss*, and 168 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/SacramentoValleyTributaryMonitoring/StanislausRiver-RSTMonitoring.aspx>

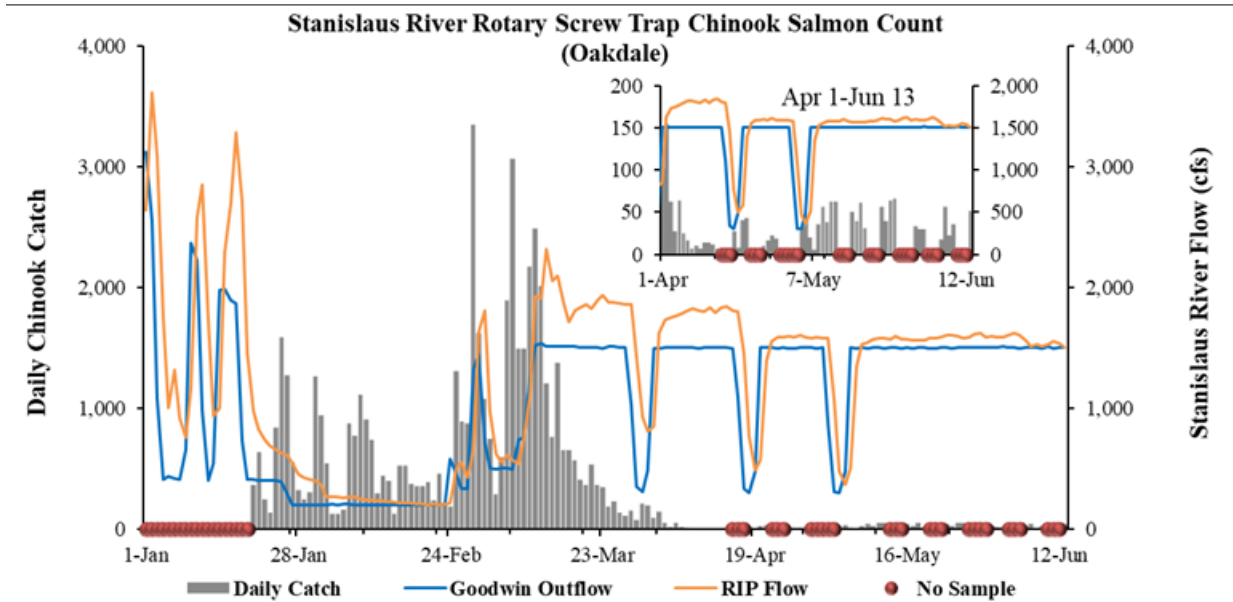


Figure 10. Daily juvenile Chinook catch through June 13, 2023, at the rotary screw trap near Oakdale. Figure courtesy of Fishbio.

Update on Fish Monitoring (Adults)

Chinook carcass and redd surveys

No current adult monitoring.

Table F-1. Results from the CDFW's O mykiss redd surveys, SH- O mykiss, CHN- Chinook, PL-Pacific Lamprey.

Date	Week	# SH Live >40	# SH Live <40	# SH Redds	# CHN Live	# CHN Redds	# PL Live	# PL Redds	Comments
1-2-23	1	0	0	0	1	2	0	0	None
1-9-23	2	0	0	0	0	0	0	0	**No Canyon Survey
1-16-23	3	NA	NA	NA	NA	NA	NA	NA	**No Survey – too turbid
1-23-23	4	NA	NA	NA	NA	NA	NA	NA	**No Survey – too turbid
1-30-23	5	1	1	1	1	0	0	0	SH Redd with 1 fish on (>40 cm)
2-6-23	6	3	2	1	0	0	0	0	SH redd with 2 fish on (1 >40, 1 <40). 2 >40 fish at redd from week 5
2-13-23	7	0	3	5	0	0	0	0	None
2-20-23	8	0	3	6	0	0	0	1	None
2-27-23	9	NA	NA	NA	NA	NA	NA	NA	**No Survey – high flows/turbidity
3-6-23	10	NA	NA	NA	NA	NA	NA	NA	**No Survey – too turbid
3-13-23	11	NA	NA	NA	NA	NA	NA	NA	**No Survey – high flows/turbidity
3-20-23	12	NA	NA	NA	NA	NA	NA	NA	**No Survey – high flows/turbidity
3-27-23	13	0	0	0	0	0	0	0	**Partial Survey due to higher than expected runoff/turbidity
4-3-23	14	NA	NA	NA	NA	NA	NA	NA	**No Survey – high flows/turbidity
4-10-23	15	0	0	0	0	0	0	0	High flows, may have missed fish/redds
4-17-23	16	0	5	1	0	0	0	0	NA
4-24-23	17	0	1	0	0	0	0	0	High flows, may have missed fish/redds, no canyon survey

Update on Fish Monitoring (Juveniles)

Mossdale Trawl:

In addition to Chinook catch, the Mossdale Trawl has been catching large numbers (50+) of Splittail since 5/18 (range 66- ~13,276)

Table F-2. Counts of Chinook catch from Mossdale trawl.

Date	Catch	Comments
1-3-2023	2	fry
1-3-2023	1 (190 FL PIT tagged, ad-clipped)	Spring Run from SJRRP
1-4-2023	1	fry
1-6-2023	1	fry
1-11-2023	2	fry
1-17-2023	1	fry
1-18-2023	3	2 fry, 1 sac fry
1-20-2023	1	1 sac fry
2-3-2023	1	1 fry
2-10-2023	1	parr
3-13-2023	1	parr
4-24-23	1 – ad clipped	Retained for CWT decoding
4-24-23	1	NA
4-27-23	1 – ad clipped	Retained for CWT decoding
5-2-23	1	NA
5-4-23	2 (1 ad clipped)	Ad clip – retained for CWT decoding
5-5-23	4	NA
5-6-23	6	NA
5-8-23	4	NA
5-9-23	1	NA
5-11-23	1	NA
5-12-23	2	NA
5-13-23	3	NA
5-15-23	4	NA

Date	Catch	Comments
5-16-23	2	NA
5-18-23	7	NA
5-19-23	2	NA
5-20-23	11	NA
5-22-23	14	1 with dye mark – Red line on head
5-23-23	2 (1 ad clipped)	Ad clip-retained for CWT decoding
5-25-23	3	NA
5-26-23	24	NA
5-27-23	1	NA
5-30-23	13	NA
6-1-23	4	NA
6-2-23	6	NA
6-3-23	5	NA
6-5-23	2	NA
6-6-23	6	NA
6-9-23	3	NA
6-10-23	16	1 O. mykiss
6-12-23	18	NA
6-13-23	10	NA
6-15-23	15	NA
6-16-23	20	NA
6-17-23	19 (1 ad-clipped)	Ad clip-retained for CWT decoding

Stanislaus River at Caswell Memorial State Park (RSTs):
 Daily catch of unmarked Chinook Salmon and daily average discharge at Ripon during the 2023 Stanislaus River rotary screw trap survey season.

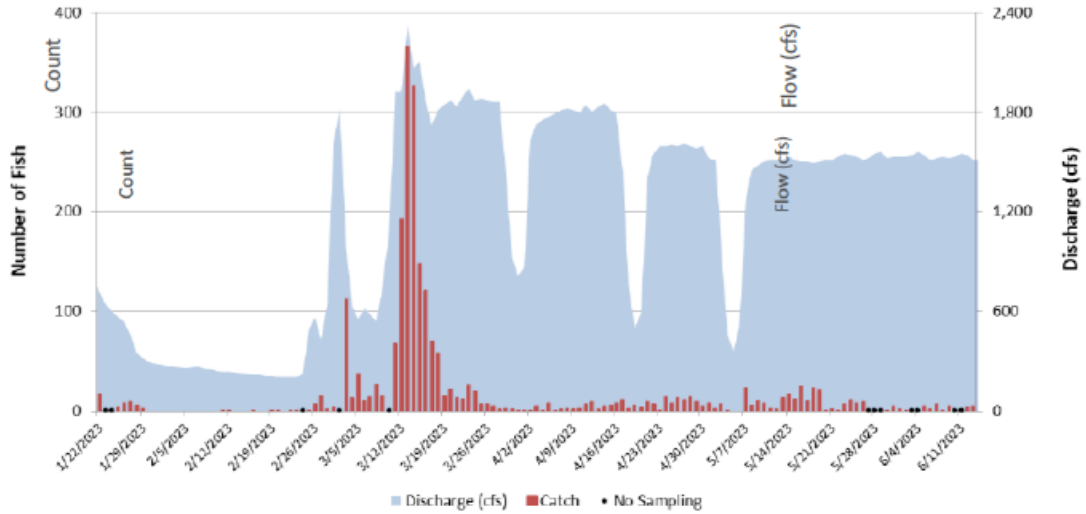


Figure 11. Daily juvenile Chinook catch through June 13, 2023, at the rotary screw trap near Caswell State Park. Discharge data is at Ripon. Figure courtesy of Pacific States Marine Fisheries Commission.

Stanislaus River at Caswell Memorial State Park (RSTs):

Daily fork length distribution by life stage of unmarked Chinook Salmon measured during the 2023 Stanislaus River rotary screw trap survey season.

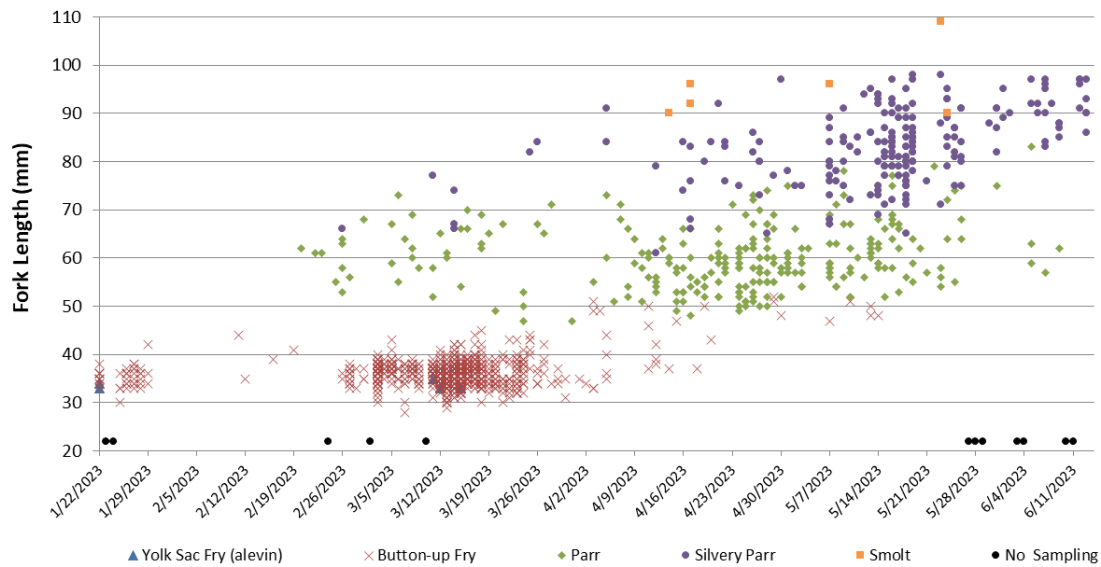


Figure 12. Daily juvenile Chinook catch (plotted by fork length and life stage) through June 13, 2023, at the rotary screw trap near Caswell State Park. Figure courtesy of Pacific States Marine Fisheries Commission.

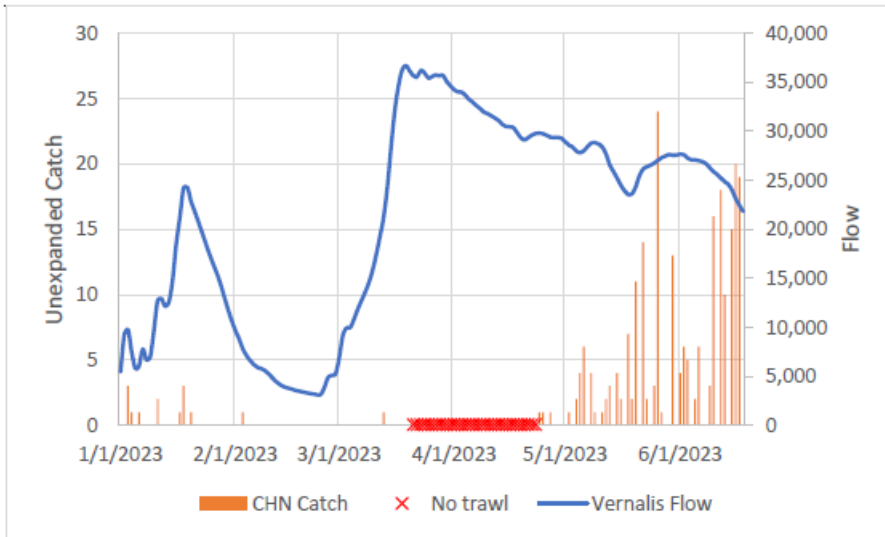


Figure 13. Graph of Chinook catch at Mossdale and flow at Vernalis. No trawl identifies days trawl was suspended due to river stage (does not denote scheduled “off” days).