



## 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, May 17, 2023**

### Agenda

1. Introductions
2. Ground Rules<sup>1</sup>
3. Announcements
  - a. In person meeting update, Kearns and West
  - b. 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
  - a. Spawning and rearing habitat restoration
  - b. Temperature management study
  - c. Yellow-bellied cuckoo survey
11. Other Discussion Items
  - a. Curtailment Updates
  - b. Items to elevate to WOMT
12. Review Action Items
13. Next Meeting: Wednesday, June 24, 2023 (10am-12pm)

<sup>1</sup> 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

# Stanislaus Watershed Team

May 17, 2023

## Members Attending

- USBR: Spencer Marshall, Claire Hsu, Zarela Guerrero, Liz Kiteck, Melissa Vignau, Brad Hubbard, Peggy Manza
- USFWS: J.D. Wikert
- CDFW: Gretchen Murphey, Crystal Rigby, Ryan Kok
- NMFS: Barb Byrne, Evan Sawyer
- DWR: Mike Ford
- SWRCB: Chris Carr, Erin Foresman, Yongxuan Gao
- Stockton East:
- PSMFC: Logan Day
- SSJID: Brandon Nakagawa
- Fishbio:
- Stockton East Water District (SEWD):
- Kearns & West: Karis Johnston

## Action Items

- N/A

## Operations Update and Forecasts/ Hydrology

### New Melones

- Total accumulated precipitation at New Melones was 46.91 inches during the previous month at 182% of average.
- Storage at New Melones is 1.62 MAF and is increasing daily.
- Accumulated inflow for WY 2023 is 1.338 MAF with another 1.6 MAF on the hill as snowpack.
- There were points in the last month in which inflows were as high as 10,000 cfs.

### Tulloch

- Releasing water as needed for downstream requirements (instream flow and irrigation districts).
- There has been some spill that could be associated with maxing out the power plant, but water is still needed downstream for agricultural diversions. During regular releases this water would move through the powerhouse.

## Goodwin

- Releases from Goodwin Dam are at 1,500 cfs, except for a few days in early May when flows were reduced to 300 cfs to allow for removal of the weir near Riverbank.
- Agricultural demands are approximately 900 cfs.

## Draft May Forecast

- The 90% and 50% forecasts (see details in handouts) are beginning to converge, but some key differences remain.
- Conditions are expected to track with the 50% forecast.

## Questions/Comments:

- NMFS reported that a SWT subgroup met to discuss optimal flow decreases to support the establishment of riparian vegetation. They asked Reclamation to consider their recommended flow decrease rates when dropping flows June to July from 1,500 cfs to 1,000 cfs. Specifically, they are hoping for a flow decrease rate that will limit water level change to no more than 1 to 1.5 cm a day. This is to allow root growth to keep up with the dropping water table. The flow change estimated to result in those water level changes is 10 cfs (for a 1 cm change) to 15 cfs (for a 1.5 cm change). This could be scheduled to be water neutral over the June-September period.
  - Reclamation responded that 10 cfs a day is not possible because they cannot control release at that rate. Additionally, Reclamation management has said they are not going to issue change orders under 50 cfs.
  - CDFW asked for Reclamation to consider whether something close to the recommendation might be feasible.
  - USFWS commented that because of attenuation as water moves downstream, a stair step modification to flow releases at Goodwin would be smoothed as water moves downstream and might provide less abrupt changes to water level at downstream locations.
  - USFWS suggested releasing 50 cfs every five days rather than 10 cfs every day.
    - Reclamation said that could be a possibility.
  - Reclamation said they would be willing to continue the conversation and they would be willing to bring in their supervisor if necessary.
  - CDFW noted that releases at Friant Dam are not at 0 cfs, even though the handout reflects that number.

## Water Temperature Updates

- Water temperatures are suitable for salmonid outmigration and rearing and are slowly increasing. Temperatures are slightly cooler than normal given the ongoing 1,500 cfs releases.

- The high flows should help buffer water temperatures at the more downstream locations such as Ripon.

## Stanislaus River Forum (SRF) Call Review

- A member of the public (from the rafting community) joined the call but did not have anything to raise to SWT.

## Fish Monitoring

- Fish Bio pulled their weir during the first week of May.
- Steelhead passage at the weir has not been observed since March. Chinook passage has not been observed since January. There were no apparent counts of spring-run Chinook this year, however, the weir was not sampling the entire season due to high flows.
- The Oakdale Rotary Screw Trap (RST) will be sampling intermittently (due to funding limitations) through mid-June or until water temperatures get too high.
- The Caswell RST has caught 2,032 unmarked Chinook, 1 unmarked Steelhead, and 165 Lamprey.
  - The current average fork length is 75 mm with a high of 90 mm.
  - The last release of Mokelumne Hatchery fish for the mark and recapture trial was May 11, 2023. The release was an average of 80 – 90 mm. Recapture rates are low at 0-1%.
  - Sampling will continue 7-days a week until Memorial Day and then will transfer to a Monday – Friday schedule.
- CDFW Carcass Survey preliminary estimates are 3,639 Chinook.
- CDFW *O mykiss* Redd survey final update: 14 Steelhead redds were observed this season.
- There are no CDFW surveys currently planned for the summer.
- Salmon catch at the Mossdale Trawl has been increasing during May. They are sampling 5 days a week through June depending on salmonid catch numbers.

## Restoration Project Updates

- Kerr Park just finished Section 106 permitting. They are still hoping to do restoration this summer.
- Mohler and Tortuga site visits are occurring on May 18. These projects will likely be funded by the Central Valley Project Improvement Act (CVPIA).
- Buffington is at the project design stage.
- Caswell is high on the list for funding, but things are moving slowly.

## Progress Update on Proposed Action Elements

- No update.

## Other Discussion Items

### Curtailments

- All curtailments have ended.

### Annual Reporting

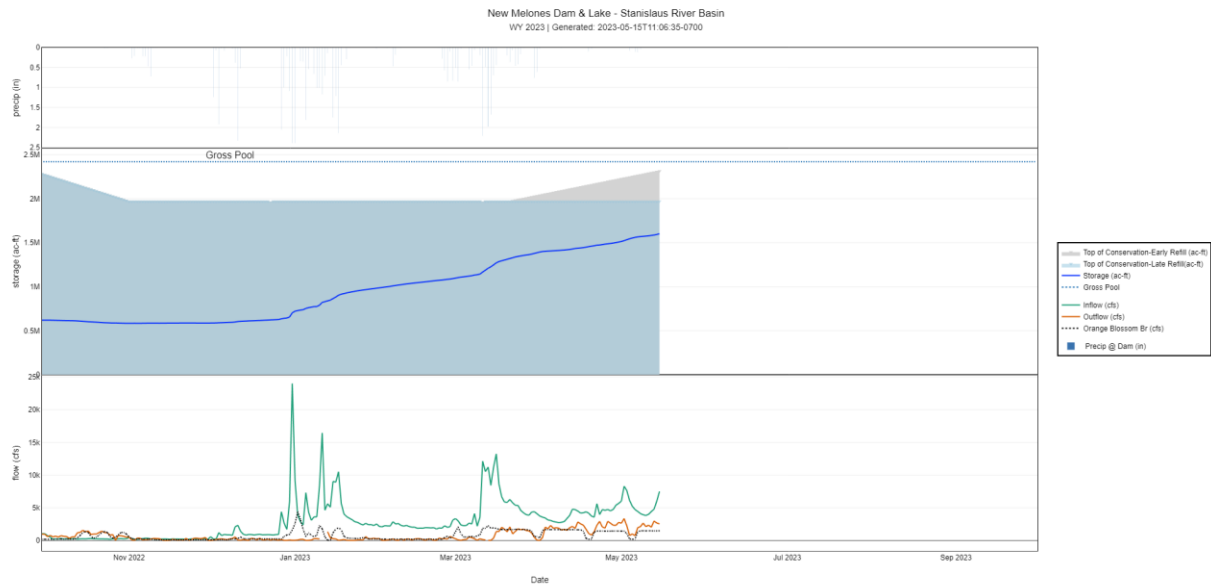
- No update.

### Items to elevate to WOMT

- No items for WOMT.

## Next Meeting

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



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



## Tables for BDO

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

Run Date:

Table 4. Reservoir Releases in Cubic Feet Per Second

Reservoir	Dam	WY 2020	WY 2021	15-Year Median
Trinity	Lewiston	858	1,705	2,399
Sacramento	Keswick	3,517	13,005	8,634
Feather	Oroville (SWP)	2,200	15,000	2,300
American	Nimbus	1,508	8,645	3,739
Stanislaus	Goodwin	501	1,502	1,331
San Joaquin	Friant	1,500	0	562

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	1,648	749	1,017	62
Shasta	4,552	3,601	1,824	4,452	124
Folsom	977	778	834	862	111
New Melones	2,420	1,446	903	1,612	111
Fed. San Luis	966	620	353	953	154
Total North CVP	11,363	8,093	4,663	8,896	110
Millerton	521	345	373	0	0
Oroville (SWP)	3,538	2,595	1,941	3,388	151

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	961	534	1,604	812	118
Shasta	4,349	2,579	7,587	3,739	116
Folsom	3,285	863	4,813	1,950	168
New Melones	1,338	N/A	1,499	684	196
Millerton	1,957	506	1,594	841	233

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	35.84	21.75	37.91	28.45 (63)	126	0.00
Sacramento at Shasta Dam	71.17	32.91	83.60	55.96 (68)	127	0.00
American at Blue Canyon	77.92	N/A	112.31	61.40 (49)	127	0.00
Stanislaus at New Melones	46.91	N/A	36.55	25.81 (46)	182	0.00
San Joaquin at Huntington LK	65.85	11.50	65.40	38.36 (50)	172	0.00

Oakdale Irrigation District  
South San Joaquin Irrigation  
District Tri Dams Project-California

Goodwin Reservoir Daily Operations, May 2023, Run Date: May 16, 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	576	-45	1,659	0	881	441	245
3	359.86	531	-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	360.55	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	0	2,502	0	1,502	640	282
<b>Totals</b>	N/A	N/A	<b>-1</b>	<b>30,902</b>	<b>0</b>	<b>18,518</b>	<b>7,646</b>	<b>3,554</b>
<b>Acre-Feet</b>	N/A	N/A	<b>-1</b>	<b>61,294</b>	<b>0</b>	<b>36,730</b>	<b>15,166</b>	<b>7,049</b>

Joint Main Operated by SSJID and OID.

**Summary: Release (acre-feet)**

Joint Main Canal      15,166  
South Main Canal      0  
Outlet                      0  
Spill                        36,730

**Total                      58945.653**

Oakdale Irrigation District  
South San Joaquin Irrigation  
District Tri Dams Project-California

Goodwin Reservoir Daily Operations, April 2023, Run Date: May 01, 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	566	N/A	N/A	N/A	N/A	N/A	N/A
1	360.55	576	10	1,658	0	1,502	158	0
2	360.55	576	0	1,692	0	1,501	158	0
3	360.55	576	0	1,752	0	1,508	178	0
4	360.55	576	0	1,778	0	1,509	202	0
5	360.55	576	0	1,785	0	1,508	213	0
6	360.55	576	0	1,776	0	1,503	204	0
7	360.55	576	0	1,793	0	1,510	196	0
8	360.55	576	0	1,793	0	1,503	196	0
9	360.55	576	0	1,785	0	1,502	196	0
10	360.55	576	0	2,006	0	1,509	363	0
11	360.55	576	0	2,184	0	1,505	517	0
12	360.55	576	0	2,238	0	1,506	546	0
13	360.55	576	0	2,212	0	1,503	549	0
14	360.55	576	0	2,237	0	1,503	550	0
15	360.55	576	0	2,275	0	1,500	552	0
16	360.01	538	-38	1,680	0	1,100	485	0
17	359.86	527	-11	946	0	341	475	0
18	359.86	527	0	921	0	306	496	0
19	360.42	566	39	2,141	0	482	478	0
20	360.55	576	10	2,247	0	1,503	561	0
21	360.55	576	0	2,339	0	1,510	635	0
22	360.55	576	0	2,396	0	1,506	655	0
23	360.54	575	-1	2,438	0	1,501	692	0
24	360.55	576	1	2,520	0	1,503	733	0
25	360.54	575	-1	2,426	0	1,500	615	0
26	360.54	575	0	2,384	0	1,502	538	0
27	360.54	575	0	2,512	0	1,507	634	0
28	360.54	575	0	2,602	0	1,504	762	0
29	360.54	575	0	2,628	0	1,505	795	0
30	360.55	576	1	2,469	0	1,501	664	0
<b>Totals</b>	N/A	N/A	<b>10</b>	<b>61,613</b>	<b>0</b>	<b>41,343</b>	<b>13,996</b>	<b>0</b>
<b>Acre-Feet</b>	N/A	N/A	<b>10</b>	<b>122,209</b>	<b>0</b>	<b>82,004</b>	<b>27,761</b>	<b>0</b>

Joint Main Operated by SSJID and OID.

**Summary: Release (acre-feet)**

Joint Main Canal	27,761
South Main Canal	0
Outlet	0
Spill	82,004
<b>Total</b>	<b>117792.131</b>

United States Department of the Interior  
Bureau of Reclamation-Central Valley Project-  
California

New Melones Lake Daily Operations, May 2023, Run Date: May 16, 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	.00
2	1,006.72	1,533.7	10.5	7,639	2,249	0	0	82	0.27	.00
3	1,007.84	1,544.3	10.6	6,140	776	0	0	34	0.11	.00
4	1,008.72	1,552.6	8.3	5,258	1,022	0	0	31	0.10	.00
5	1,009.55	1,560.5	7.9	4,746	742	0	0	25	0.08	.00
6	1,010.06	1,565.3	4.9	4,449	1,969	0	0	31	0.10	.00
7	1,010.47	1,569.3	3.9	4,128	2,131	0	0	22	0.07	.00
8	1,010.72	1,571.7	2.4	3,939	2,667	0	0	68	0.22	.00
9	1,011.06	1,574.9	3.3	3,832	2,128	0	0	65	0.21	.00
10	1,011.39	1,578.1	3.2	4,013	2,355	0	0	62	0.20	.00
11	1,011.87	1,582.7	4.6	4,429	2,040	0	0	68	0.22	.00
12	1,012.23	1,586.1	3.5	4,796	2,983	0	0	68	0.22	.00
13	1,012.90	1,592.6	6.4	6,008	2,687	0	0	69	0.22	.00
14	1,013.90	1,602.2	9.7	7,502	2,547	0	0	85	0.27	.00
15	1,014.93	1,612.2	10.0	7,896	2,752	0	0	110	0.35	.00
<b>Totals</b>	N/A	N/A	98.8	83,083	32,412	0	0	902	2.91	.00
<b>Acre- Feet</b>	N/A	N/A	<b>98,800</b>	<b>164,795</b>	<b>64,289</b>	<b>0</b>	<b>0</b>	<b>1,789</b>	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                              64,289  
Spill                                0  
Outlet                               0  
Total                                64,289

United States Department of the Interior  
Bureau of Reclamation-Central Valley Project-  
California

New Melones Lake Daily Operations, April 2023, Run Date: May, 01 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	1,393.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	992.08	1,399.5	6.1	3,576	447	0	0	37	0.13	0.00
2	992.38	1,402.2	2.7	3,450	2,061	0	0	40	0.14	0.00
3	992.67	1,404.8	2.6	3,143	1,801	0	0	38	0.13	0.00
4	992.83	1,406.2	1.4	3,076	2,311	0	0	46	0.16	0.00
5	993.05	1,408.2	2.0	2,905	1,875	0	0	40	0.14	0.00
6	993.23	1,409.8	1.6	2,826	1,971	0	0	43	0.15	0.00
7	993.41	1,411.4	1.6	2,746	1,892	0	0	41	0.14	0.00
8	993.67	1,413.7	2.3	2,799	1,602	0	0	23	0.08	0.01
9	993.92	1,416.0	2.2	2,905	1,735	0	0	41	0.14	0.00
10	994.31	1,419.5	3.5	3,374	1,559	0	0	49	0.17	0.00
11	994.71	1,423.1	3.6	3,848	1,975	0	0	61	0.21	0.00
12	995.28	1,428.2	5.1	4,799	2,164	0	0	47	0.16	0.00
13	995.90	1,433.8	5.6	4,728	1,860	0	0	47	0.16	0.00
14	996.25	1,437.0	3.2	4,495	2,851	0	0	47	0.16	0.00
15	996.60	1,440.2	3.2	4,196	2,548	0	0	50	0.17	0.00
16	997.00	1,443.8	3.6	4,241	2,358	0	0	56	0.19	0.00
17	997.57	1,449.0	5.2	4,400	1,733	0	0	53	0.18	0.00
18	998.24	1,455.1	6.1	4,178	1,067	0	0	35	0.12	0.10
19	998.86	1,460.7	5.7	3,742	847	0	0	41	0.14	0.03
20	999.33	1,465.0	4.3	3,568	1,346	0	0	53	0.18	0.00
21	1,000.03	1,471.4	6.4	5,636	2,339	0	0	62	0.21	0.00
22	1,000.24	1,473.4	1.9	3,969	2,936	0	0	59	0.20	0.00
23	1,000.80	1,478.5	5.2	4,739	2,078	0	0	63	0.21	0.00
24	1,001.37	1,483.8	5.3	4,621	1,908	0	0	63	0.21	0.00
25	1,001.37	1,487.2	3.4	4,741	2,943	0	0	75	0.25	0.00
26	1,001.74	1,490.8	3.6	4,547	2,645	0	0	84	0.28	0.00
27	1,002.63	1,495.4	4.6	4,762	2,341	0	0	84	0.28	0.00
28	1,003.27	1,501.4	5.9	5,409	2,323	0	0	90	0.30	0.00
29	1,003.87	1,507.0	5.6	5,678	2,782	0	0	81	0.27	0.00
30	1,004.57	1,512.5	6.5	6,023	2,646	0	0	82	0.27	0.00
<b>Totals</b>	N/A	N/A	<b>120.0</b>	<b>123,120</b>	<b>60,944</b>	<b>0</b>	<b>0</b>	<b>1,631</b>	<b>5.53</b>	<b>0.14</b>
<b>Acre-Feet</b>	N/A	N/A	<b>120,000</b>	<b>244,209</b>	<b>120,882</b>	<b>0</b>	<b>0</b>	<b>3,235</b>	<b>N/A</b>	<b>N/A</b>

Comments:

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

### **Summary Precipitation**

This Month	0.14
July 1, 2021 to Date	
October 1, 2021 to Date	46.55

### **Summary: Release (acre-feet)**

Release (acre-feet)	N/A
Power	120,882
Spill	0
Outlet	0
Total	120,882

United States Department of the Interior  
Bureau of Reclamation-Central Valley Project-  
California

Tulloch Reservoir Daily Operations, May 2023, Run Date: May 16, 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	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	847	776	993	0	0	4
4	506.79	63,026	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	3	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
<b>Totals</b>	N/A	N/A	<b>3,117</b>	<b>32,584</b>	<b>32,412</b>	<b>30,642</b>	<b>0</b>	<b>260</b>	<b>110</b>
<b>Acre- Feet</b>	N/A	N/A	<b>3,117</b>	<b>64,630</b>	<b>64,289</b>	<b>60,778</b>	<b>0</b>	<b>516</b>	<b>218</b>

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	60,778
Spill	0
Outlet	516
Total	61,294

United States Department of the Interior  
Bureau of Reclamation-Central Valley Project-  
California

Tulloch Reservoir Daily Operations, April 2023, Run Date: May 01, 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	56,420	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	499.07	54,311	-2,109	599	447	1,658	0	0	4
2	500.00	55,303	992	2,197	2,061	1,692	0	0	5
3	500.31	55,639	336	1,926	1,801	1,752	0	0	5
4	501.42	56,850	1,211	2,395	2,311	1,778	0	0	6
5	501.77	57,236	386	1,985	1,875	1,785	0	0	5
6	502.28	57,804	568	2,067	1,971	1,776	0	0	5
7	502.62	58,184	380	1,990	1,892	1,793	0	0	5
8	502.40	57,938	-246	1,672	1,602	1,793	0	0	3
9	502.42	57,960	22	1,801	1,735	1,785	0	0	5
10	501.69	57,148	-812	1,603	1,559	2,006	0	0	6
11	501.42	56,850	-298	2,041	1,975	2,184	0	0	7
12	501.33	56,751	-99	2,194	2,164	2,238	0	0	6
13	500.79	56,159	-592	1,920	1,860	2,212	0	0	6
14	501.93	57,413	1,254	2,875	2,851	2,237	0	0	6
15	501.43	57,972	559	2,563	2,548	2,275	0	0	6
16	503.72	59,431	1,459	2,423	2,358	1,680	0	0	7
17	505.13	61,060	1,629	1,774	1,733	946	0	0	7
18	505.42	61,401	341	1,098	1,067	921	0	0	5
19	505.02	60,931	-470	1,909	847	2,141	0	0	5
20	503.46	59,134	-1,797	1,348	1,346	2,247	0	0	7
21	503.41	59,077	-57	2,318	2,339	2,339	0	0	8
22	504.39	60,201	1,124	2,970	1,936	1,396	0	0	7
23	503.84	59,568	-633	2,127	1,078	2,432	0	6	8
24	502.80	58,386	-1,182	1,932	1,908	2,437	0	83	8
25	503.67	59,374	988	2,933	2,943	2,401	0	25	9
26	504.12	59,889	515	2,654	2,645	2,384	0	0	10
27	503.82	59,545	-344	2,349	2,341	2,429	0	83	10
28	503.41	59,077	-4681		2,323	2,440	0	162	11
29	503.67	59,374	297	2,788	2,782	2,444	0	184	10
30	503.94	59,682	308	2,634	2,646	2,381	0	88	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)
<b>Totals</b>	NA	NA	<b>32,262</b>	<b>63,462</b>	<b>60,944</b>	<b>60,982</b>	<b>0</b>	<b>631</b>	<b>202</b>
<b>Acre-Feet</b>	NA	NA	<b>3,262</b>	<b>125,877</b>	<b>120,882</b>	<b>120,958</b>	<b>0</b>	<b>1,252</b>	<b>401</b>

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	120,958
Spill	0
Outlet	1,252
Total	122,209



— BUREAU OF —  
RECLAMATION

## May DRAFT Forecast Stanislaus River Operations

DRAFT subject to revision

### May 2023

90% Forecast, Federal End of the Month Storage/Elevation (TAF/Feet)

Facility	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
New Melones (TAF)	1722	1930	1958	1937	1939	1901	1914	1928	N/A
Elevation (feet)	1026	1046	1048	1047	1047	1043	1044	1046	N/A

Monthly River Releases (TAF/Feet)

Facility	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
Stanislaus (TAF)	96	56	18	18	18	48	12	12	N/A
cfs	1555	940	300	300	300	774	200	200	N/A

50% Forecast, Federal End of the Month Storage/Elevation (TAF/Feet)

Facility	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
New Melones (TAF)	1756	1981	2065	2014	1978	1937	1958	1963	N/A
Elevation (feet)	1029	1051	1058	1054	1050	1046	1048	1049	N/A

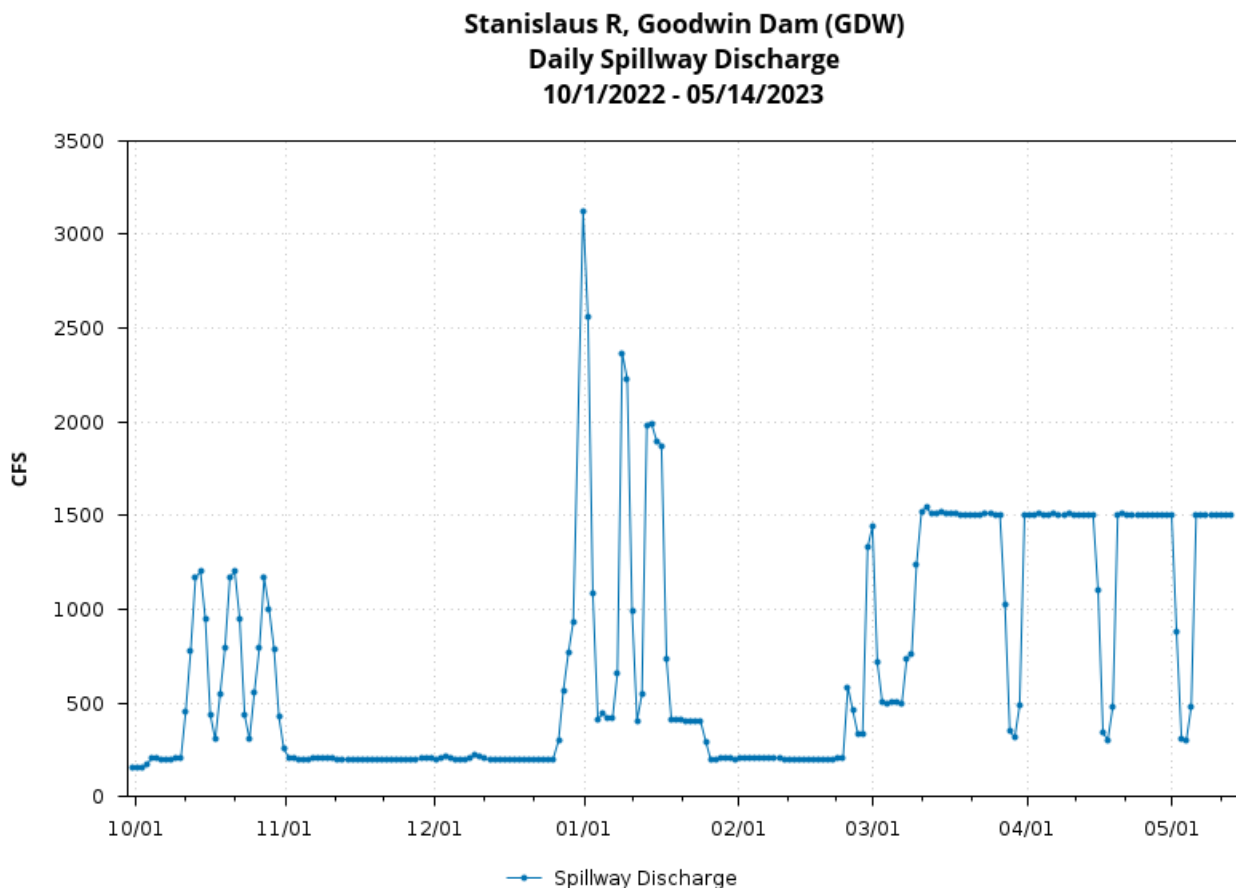
Monthly River Releases (TAF/cfs)

Facility	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
Stanislaus (TAF)	96	89	61	61	59	49	12	31	N/A
cfs	1555	1500	1000	1000	1000	797	200	500	N/A

# May 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.



[www.cbr.washington.edu/sacramento/](http://www.cbr.washington.edu/sacramento/)

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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 BiOp<sup>1</sup> (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

<sup>1</sup> 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>

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.

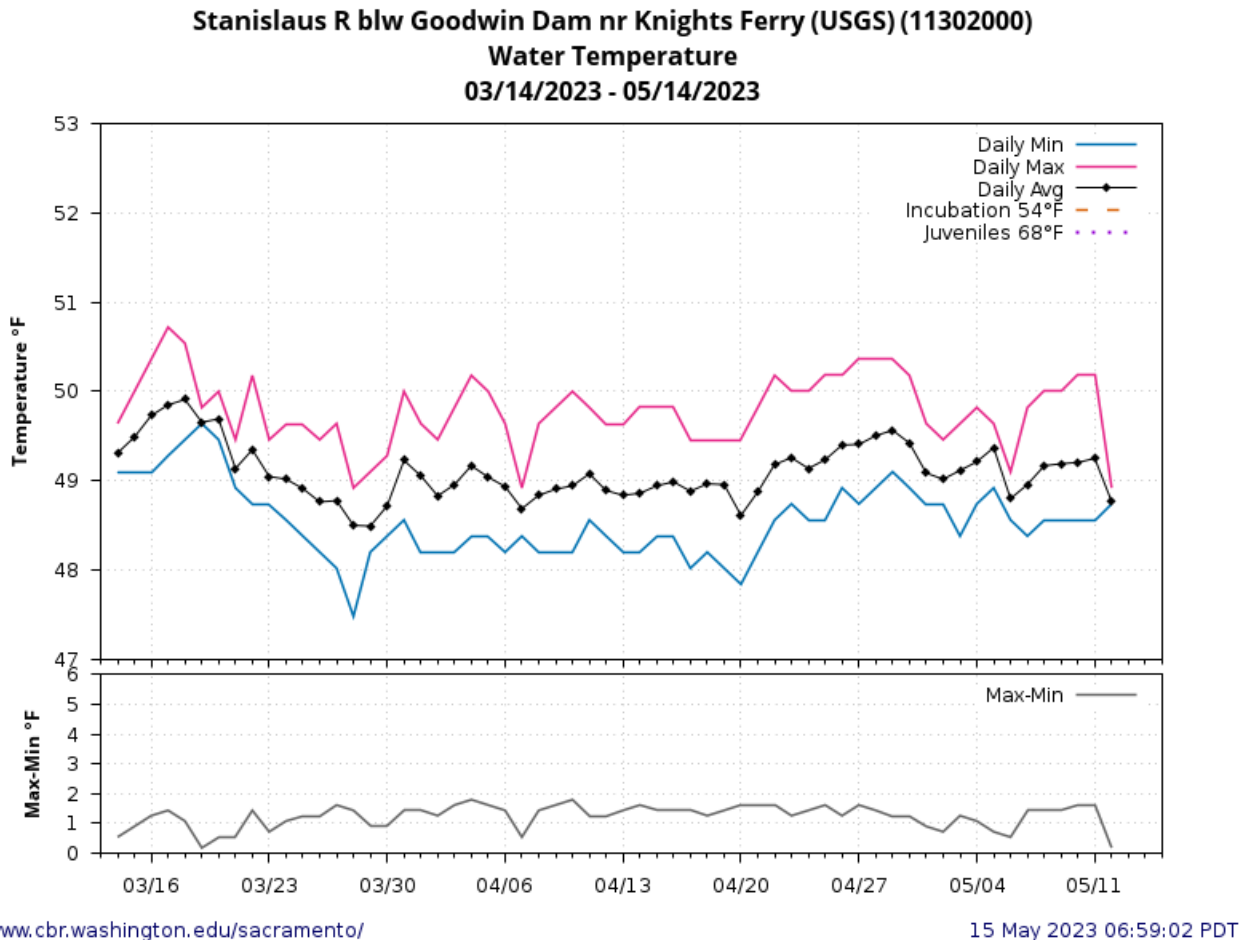
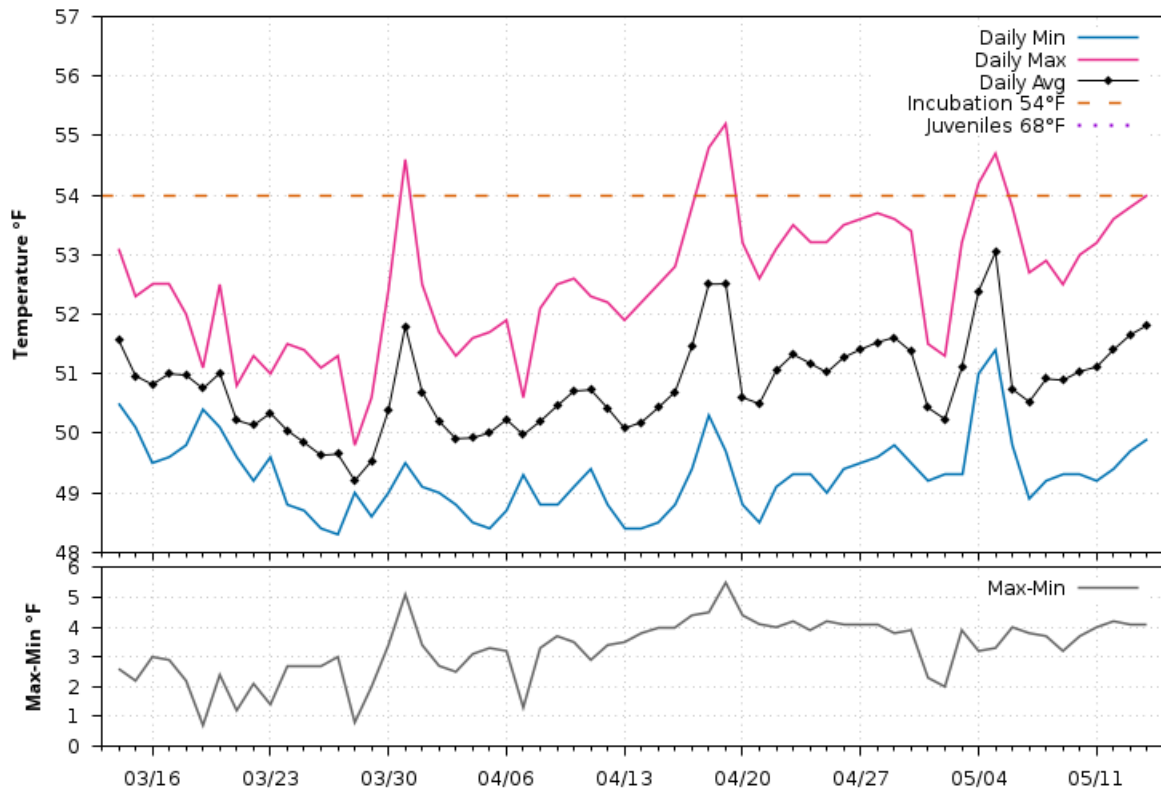


Figure 2. Daily water temperatures on the Stanislaus River upstream of Knights Ferry since February 2023. Data from USGS gage 11302000 on NWIS; temperature threshold reference line added by SWT.

**Stanislaus R at Orange Blossom Bridge (OBB)**  
**Water Temperature**  
**03/14/2023 - 05/14/2023**

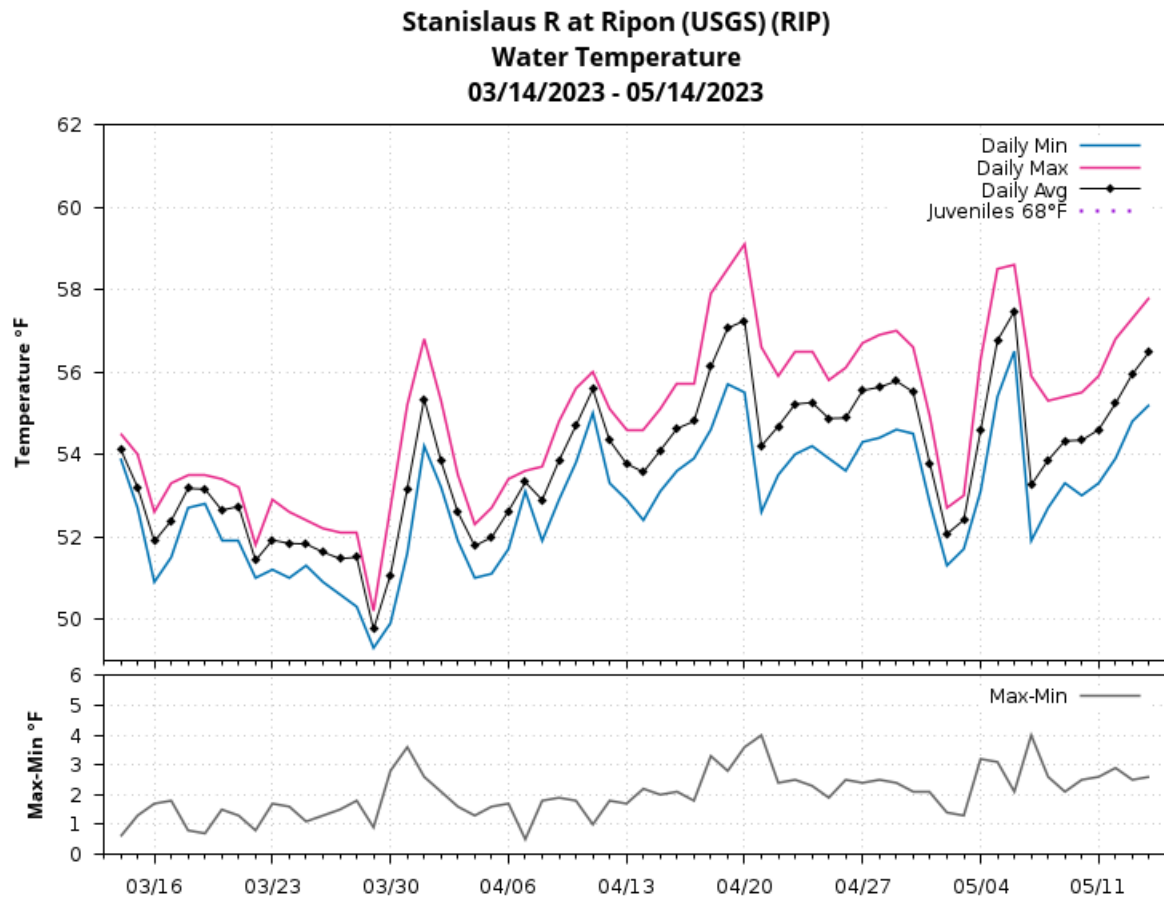


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Chart: Vertical axis shows hourly water temperature (in Fahrenheit degrees) at Orange Blossom Bridge on the Stanislaus River. The horizontal axis shows date from 02-14-23 through 04-16-23. Hourly water temperatures since 02-14-23 have ranged between approximately >48 and 59.4 degrees Fahrenheit. For more information, please call (916) 414-2400.

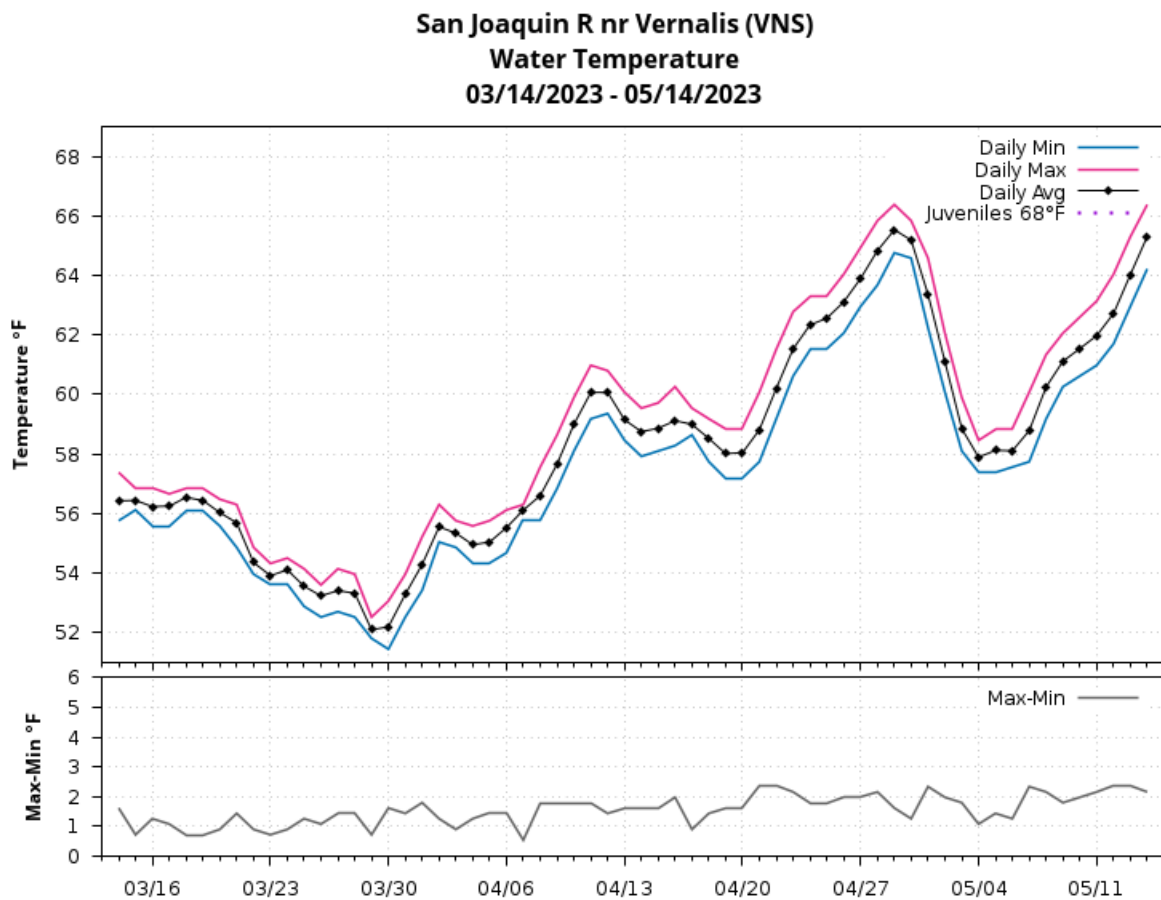
Figure 3. Stanislaus (hourly) water temperatures at Orange Blossom Bridge since February 14, 2023. Data from OBB station on CDEC.



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Figure 4. Stanislaus (15-minute) water temperatures at Ripon since February 14, 2023. Data from RIP station on CDEC.



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15 May 2023 06:59:02 PDT

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

**Stanislaus R at Orange Blossom Bridge (OBB)**  
**2001-2023 Daily Average Water Temperature**  
**Observed Range 36.3-71.4**  
**03/16 - 07/14**



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

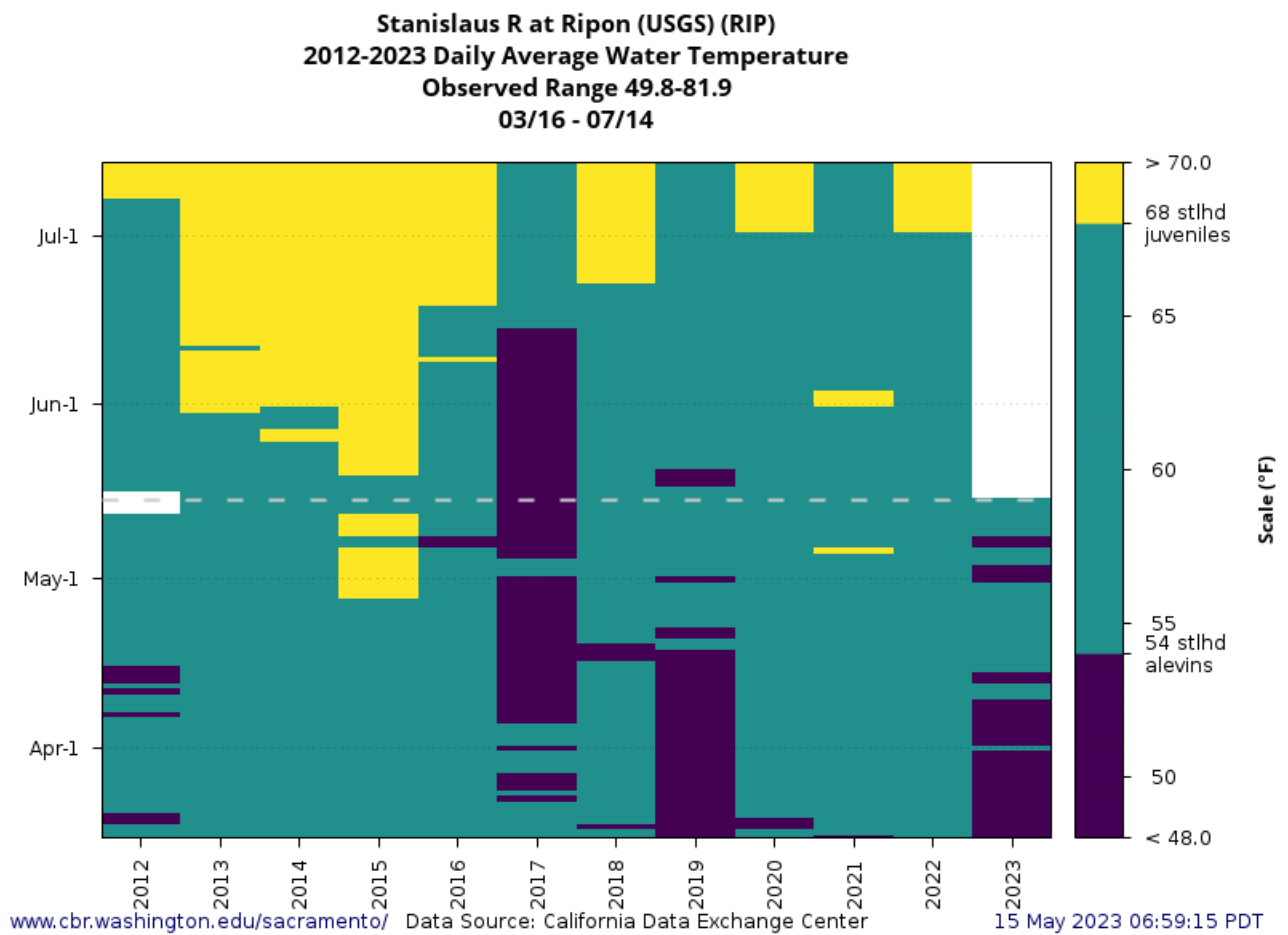


Figure 7. Stanislaus River water temperatures at Ripon for WY 2011 to present. Figure from SacPAS using RIP station data from CDEC; temperature threshold reference line added by SWT. [http://www.cbr.washington.edu/sacramento/data/query\\_river\\_allyears.html](http://www.cbr.washington.edu/sacramento/data/query_river_allyears.html)

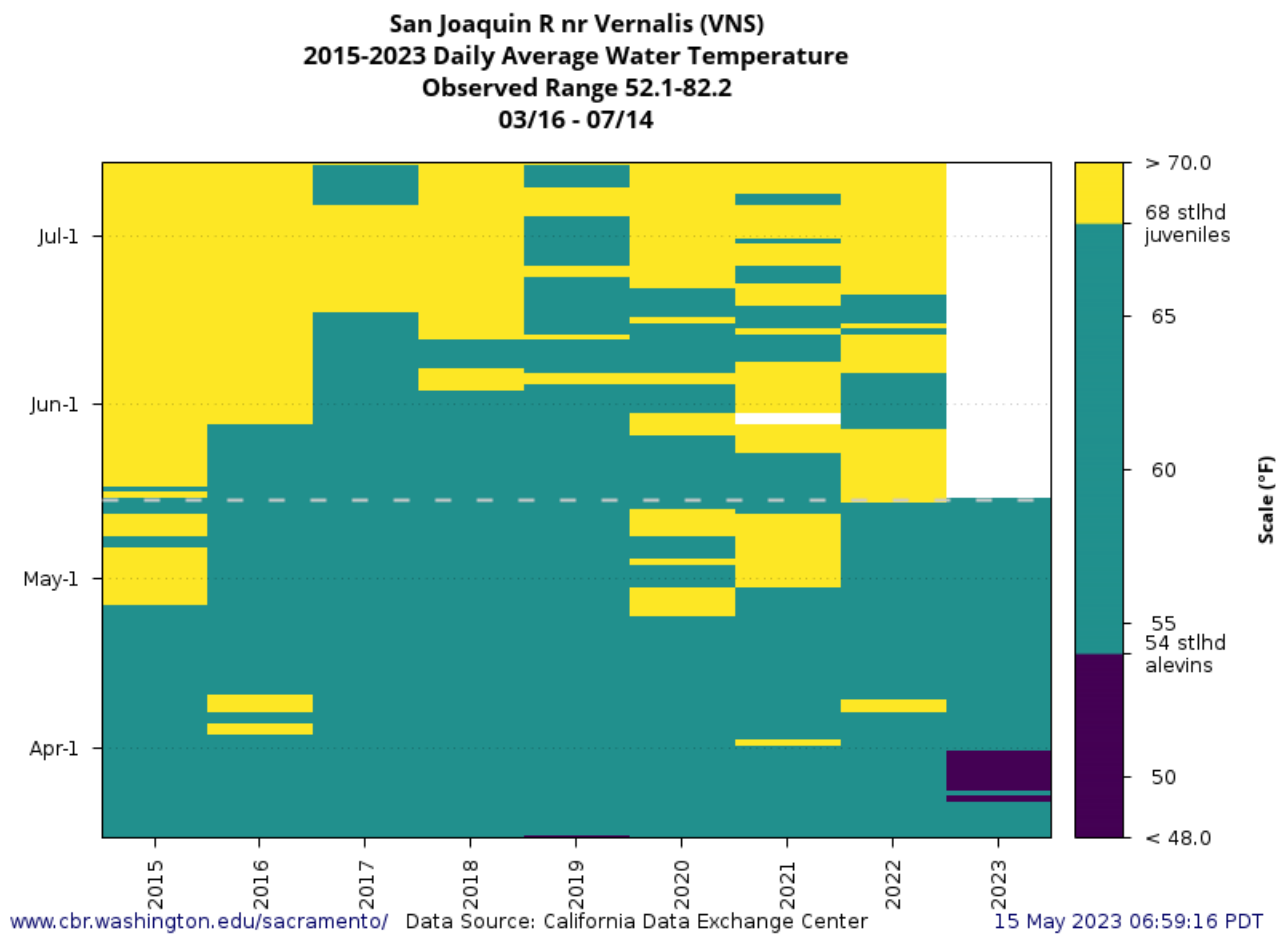


Figure 8. San Joaquin River water temperatures at Vernalis for WY 2014 to present. Figure from SacPAS using VNS station data from CDEC; temperature threshold reference line added by SWT.

[http://www.cbr.washington.edu/sacramento/data/query\\_river\\_allyears.html](http://www.cbr.washington.edu/sacramento/data/query_river_allyears.html)

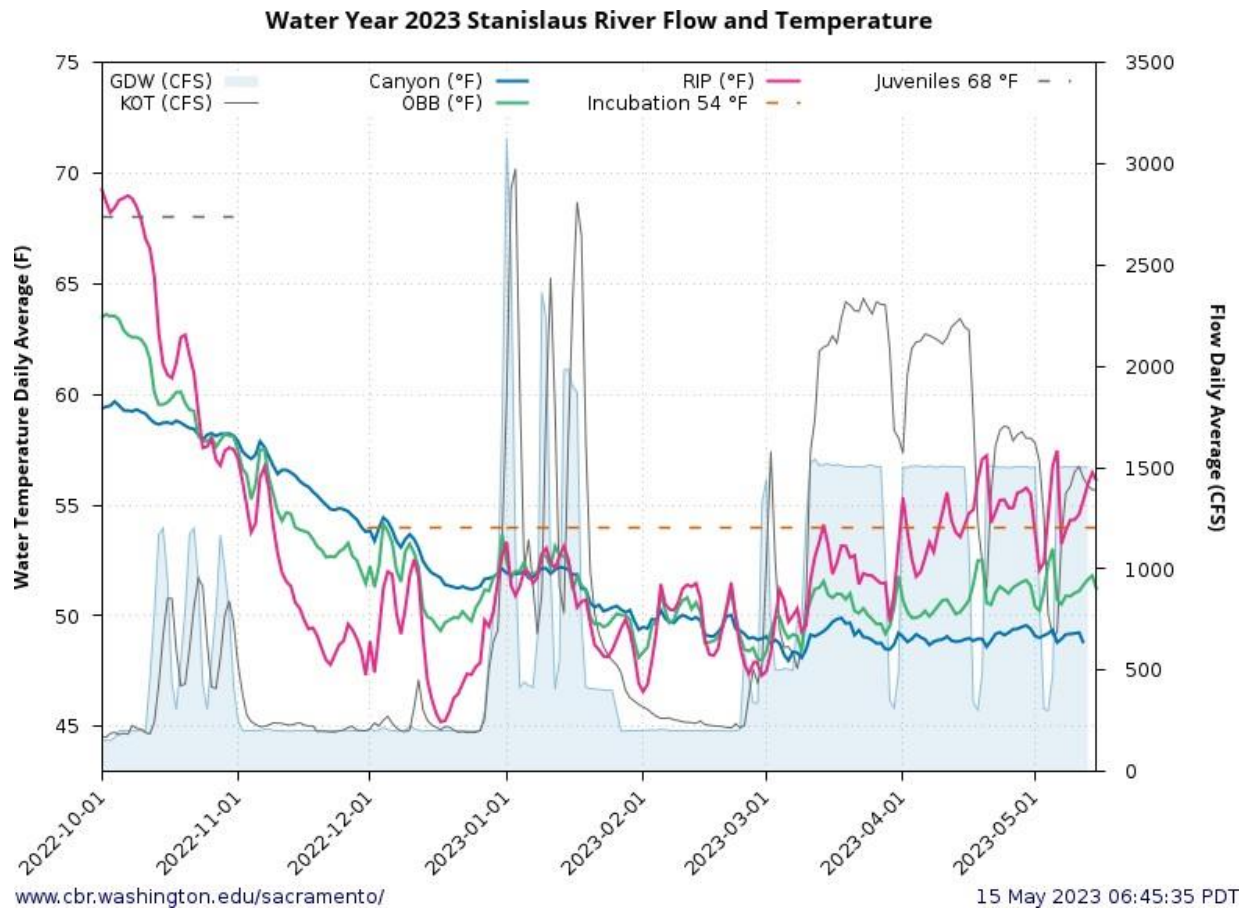


Figure 9. Stanislaus River flow and water temperatures from October 1, 2022 to May 15, 2023. Data (including temperature threshold reference lines) from SacPAS: [http://www.cbr.washington.edu/sacramento/data/tc\\_stanislaus.html](http://www.cbr.washington.edu/sacramento/data/tc_stanislaus.html)

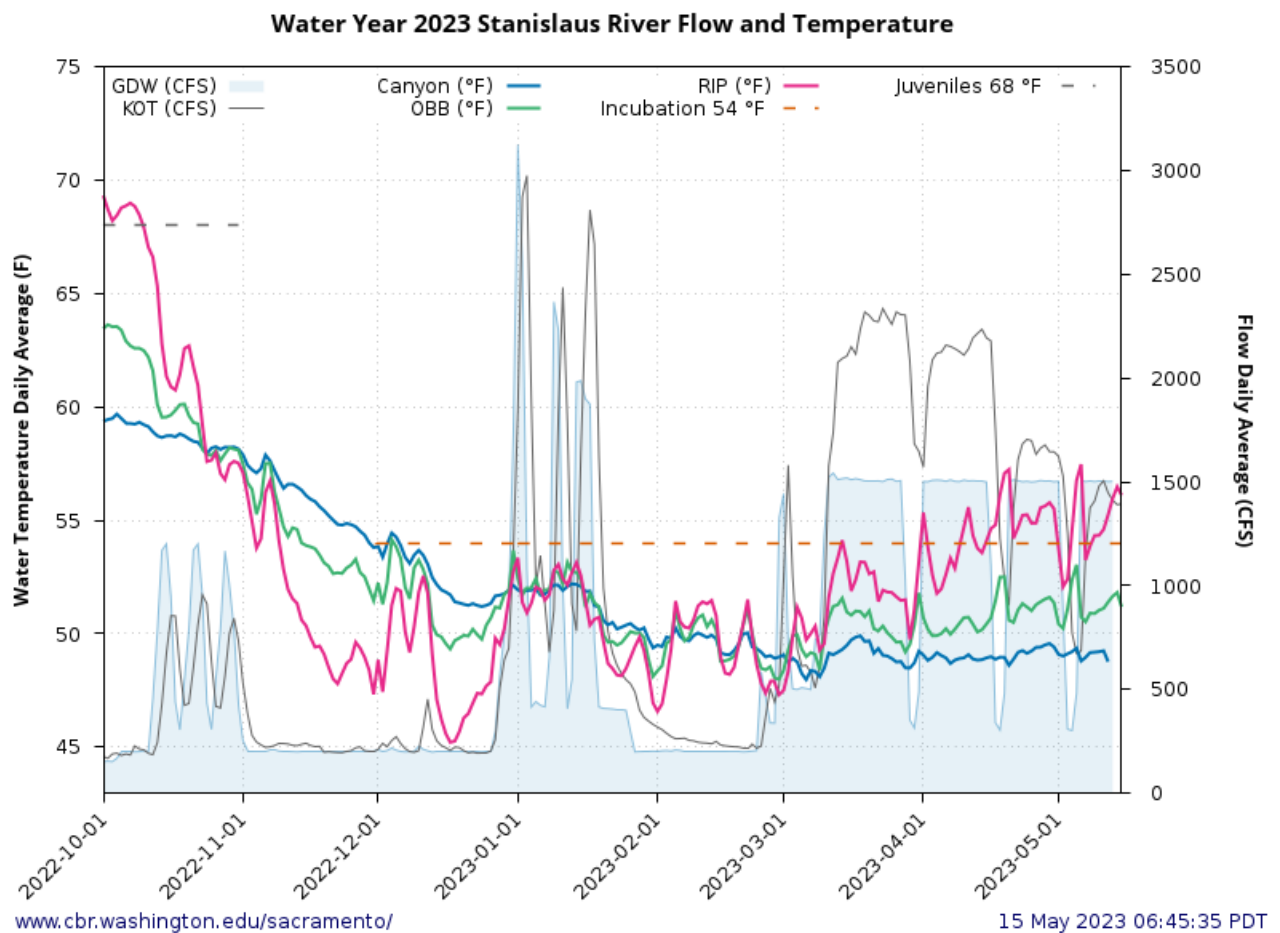


Figure 9. Stanislaus River flow and water temperatures from October 1, 2022 to April 17, 2023. Data (including temperature threshold reference lines) from SacPAS: [http://www.cbr.washington.edu/sacramento/data/tc\\_stanislaus.html](http://www.cbr.washington.edu/sacramento/data/tc_stanislaus.html)

## NMFS updates:

### Weir near Riverbank:

Fishbio installed the weir near Riverbank and began monitoring for upstream passage of adult salmonids on September 15, 2022. The weir did not sample between March 10 and March 29, 2023 due to high flows in the Stanislaus River. FISHBIO resumed trapping at the weir on the Stanislaus River on March 30, 2023 through May 3, 2023, when the weir was removed for the season. The cumulative net upstream passage through April 12, 2023 was 3,625 Chinook salmon (the last Chinook was observed on January 31, 2023). Twenty-three percent of the observed Chinook were ad-clipped, indicating a hatchery origin. Six *Oncorhynchus mykiss* were observed (one each on October 20, December 5, January 22, and February 2; two on March 5). All *O. mykiss* observed were greater than 16" (indicating possible anadromy) and ad-clipped (indicating a hatchery origin).

### 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 May 9, 2023, the trap at Caswell has captured a total of 2,032 unmarked Chinook Salmon, 1 unmarked O. mykiss, and 165 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>

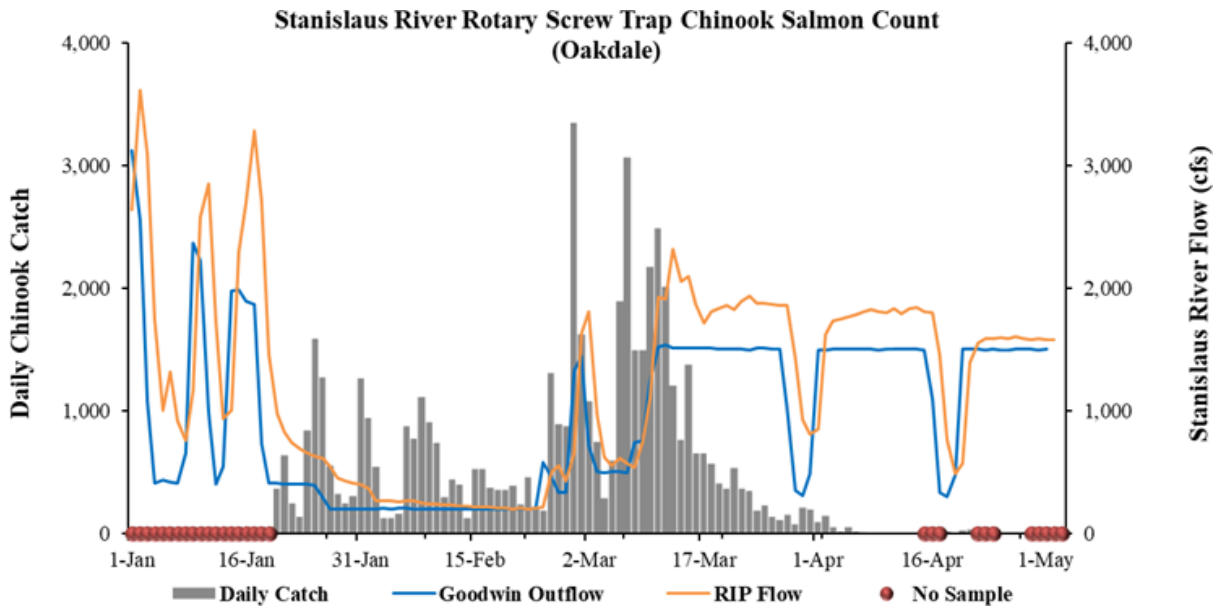


Figure 10. Daily juvenile Chinook catch through May 2, 2023, at the rotary screw trap near Oakdale. Figure courtesy of Fishbio.

**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.

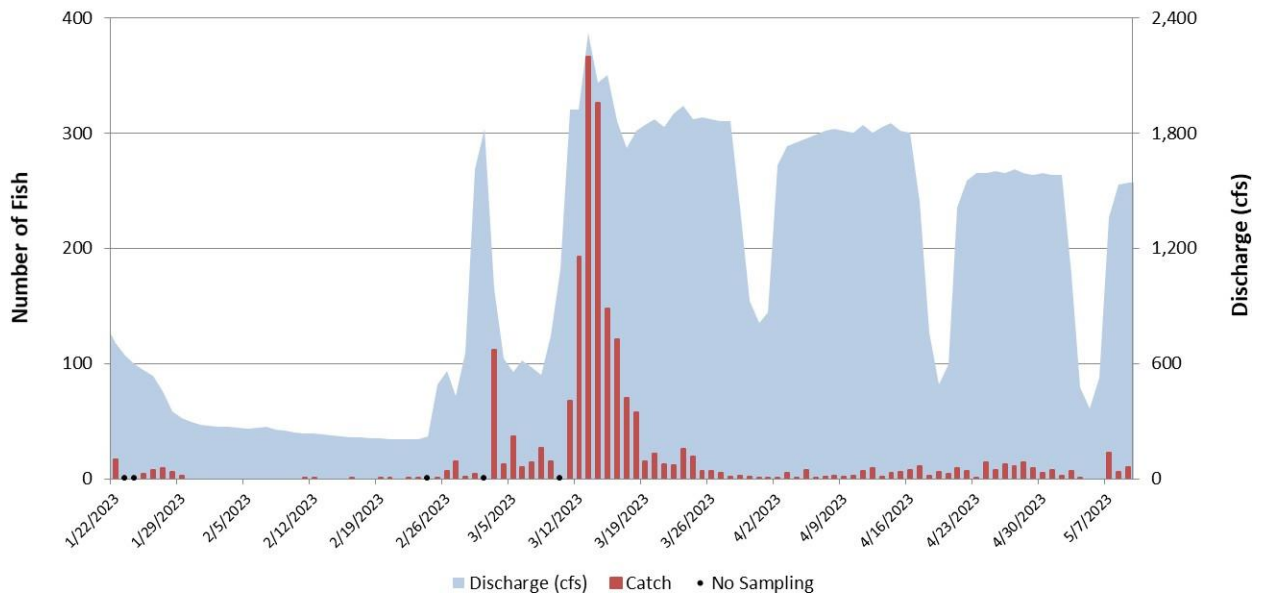


Figure 11. Daily juvenile Chinook catch through May 9, 2023, at the rotary screw trap near Caswell State Park. Discharge data is at Ripon. Figure courtesy of Pacific States Marine Fisheries Commission.

**Stanislaus River at Caswell Memorial State Park (RSTs):**

Daily catch of unmarked Chinook Salmon and daily average discharge at Ripon during the 2023 Stanislaus River rotary screw trap survey season.

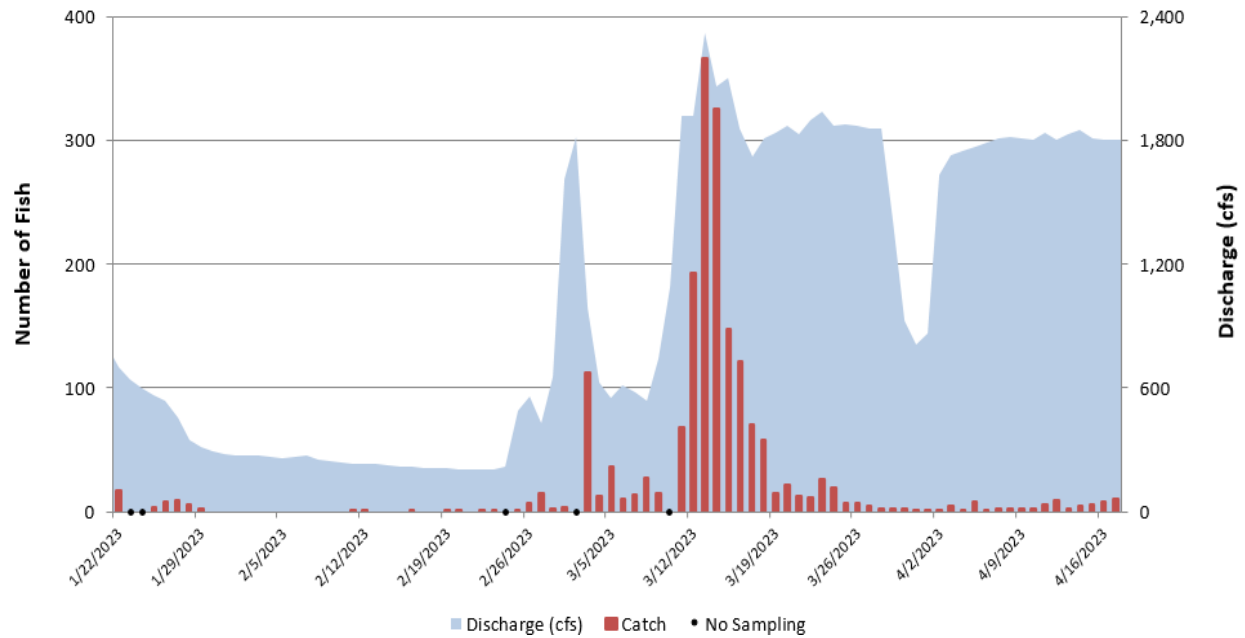


Figure 12. Daily juvenile Chinook catch through April 17, 2023, at the rotary screw trap near Caswell State Park. Discharge data is at Ripon. Figure courtesy of Pacific States Marine Fisheries Commission.

## Update on Fish Monitoring (Adults)

### Chinook carcass and redd surveys

Annual Escapement Surveys complete, estimates are in progress.

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:

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

**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.

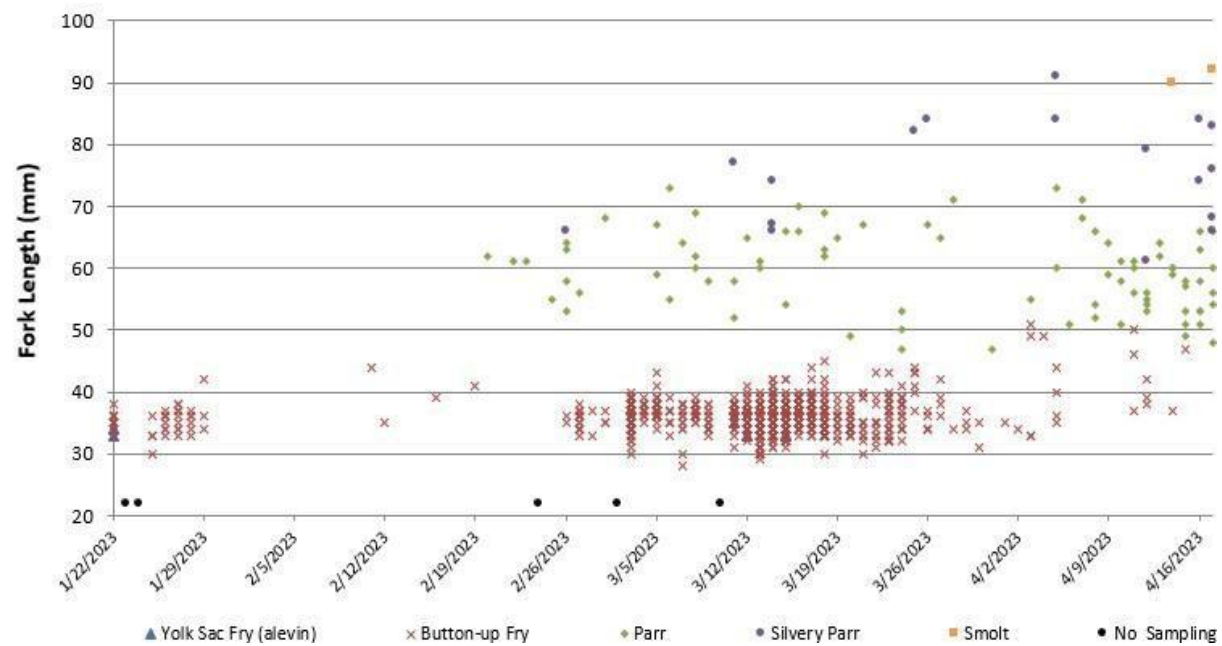


Figure 13. Daily juvenile Chinook catch (plotted by fork length and life stage) through April 17, 2023, at the rotary screw trap near Caswell State Park. Figure courtesy of Pacific States Marine Fisheries Commission.