Stanislaus Watershed Team

July 17, 2024

Members Attending

- USBR: Cat Pien, Liz Kiteck, Peggy Manza, Xelly Vivas, Zarela Guerrero
- USFWS: J.D. Wikert
- CDFW: Crystal Rigby, Gretchen Murphey, Steve Tsao, Travis Apgar
- NMFS: Barb Byrne
- DWR: Bryant Giorgi, Mike Ford
- SWRCB: Chris Carr
- PSMFC: Hunter Morris, Logan Day
- SSJID: Brandon Nakagawa
- Fishbio: N/A
- Stockton East Water District (SEWD): N/A
- WAPA: Jeffrey Trow, Vanessa Armentrout
- Herum/Crabtree/Suntag Attorneys: N/A
- Kearns & West: Karis Johnston, Bethany Taylor, Tom Fischer

Action Items

1. Kearns & West
    a. Include Restoration update received from Reclamation into the final meeting handout.
    b. Share criteria from the previous flow planning series with Gretchen Murphey, CDFW, and Zarela Guerrero, Reclamation (done).
2. Peggy Manza, Reclamation
    a. Reshare the updated Goodwin Dam page for the final packet once the database corrections have taken effect.

Announcements

a. Salmon Festival is scheduled for 11/9/2024. Anyone interested in exhibiting or helping should contact J.D. Wikert, USFWS.

b. In-person meetings will occur 1-2 times per year. The next will coincide with a celebration of J.D. Wikert's retirement from USFWS.

Operations Update and Forecasts/ Hydrology

New Melones Reservoir Update

1. The overall rainfall season was active with consistent, smaller storms.
2. The reservoir maintained its storage levels and stayed full to the flood control rule until a point in May when the flood control rule increased. By this time, inflow had decreased and spring pulse flows were being conducted.
3. Releases were elevated in June for the purpose of meeting Vernalis base flow requirements.
4. Water rights and agricultural users are currently diverting water for crop usage.
5. Storage is still in a good position as the end of WY 2024 nears.
6. Current releases from New Melones support storage at Tulloch Dam, deliveries at Goodwin, and releases to the river below Goodwin Dam.
7. Negative pricing affected power production New Melones within the previous month. As a result, releases were made through the outlet rather than the power plant to still allow for inflow into Lake Tulloch.

Daily CVP Water Supply

1. As of 7/14/2024, storage at New Melones is 1.974 MAF, or approximately 133% of the 15-year average.
2. Accumulated inflow at New Melones was 861 TAF as of 7/14/2024, or 97% of the 15-year average. Reclamation anticipates ending the water year with an inflow of 1 – 1.1 MAF, or right around average.
3. Accumulated precipitation at New Melones is 28.92 inches, or 108% of average.
4. Questions / Comments
    a. NMFS asked if the reservoir is expected to have lost storage due to heat-induced evaporation.
        i. Reclamation confirmed that yes, water has been lost to evaporation, especially during stretches of triple-digit air temperatures.
    a. CDFW shared that there was a flash flood warning for the upper Stanislaus River, resulting from a large precipitation event.
        i. Reclamation responded that hopefully this precipitation will be captured by the power reservoirs and end up in the New Melones reservoir later in the summer as inflows generally drop off.

Tulloch Dam

1. Tulloch Dam is making releases in order to supply the demands for Goodwin Dam that include agricultural needs and the instream flow below Goodwin Dam.
2. All releases at Tulloch Dam are currently going through the power plant. There were no spill or outlet releases for July to date.
3. During June, Tulloch Dam released through the power plant, outlet, and spill in order to supply the appropriate amount of water to Goodwin Dam (since the needed release exceeded the capacity of the power plant at Tulloch).

Goodwin Dam

1. Reclamation had maintained spill releases of 400 cfs starting 7/2/2024 in an effort to keep dissolved oxygen (DO) levels stable amidst the extreme heat.
    a. Releases dropped to 350 cfs on 7/17/2024.
    b. During the 100°F+ heat, DO levels stayed at +/-8.
    c. More 100°F+ days are forecasted to resume on 7/18/2024.
2. River demands are down, allowing flow to run through Tulloch Dam without the need to bypass. However, agricultural demands remain high, ranging 1,400 cfs to 1,500 cfs at Goodwin Dam, and are not likely to vary much through July.
    a. Agricultural demands for Goodwin Dam remained high in June, ranging from 1,300 cfs to 1,400 cfs.
3. Reclamation noted an error on the 6/3/2024 river spill levels. This figure should read 950 cfs rather than the erroneous 2,422 cfs.
    a. The handout page can be reissued once the figure is corrected in the database.
4. Beginning 6/11/2024, Reclamation had to continuously increase Goodwin Dam releases to meet Vernalis requirements. Reclamation then began a gradual decrease in releases starting 6/28/2024, with the drop in releases expected to reach Vernalis on 7/01/2024.

Current Conditions

1. N/A

Questions and Comments

1. DWR asked if considerations are being made for weekend river rafting going into August.
    a. Reclamation responded that preferred release levels are 750 cfs to 800 cfs on weekends, when possible. That level should be safe for rafting; Reclamation does not have authority to make releases higher for recreation due to safety concerns.
    b. Last summer, releases were higher overall due to the water year type and the need to draw down the reservoir by October. However, releases were still lowered on weekends for recreation and increased during the week.
    c. NMFS commented about previous years when higher flows, e.g., 1,000 cfs to 1,500 cfs, for river rafting were discussed for weekends during the fall pulse

flows. A flow of 1,500 cfs works well through the canyon, but lower flows are better for less-experienced rafting participants who raft lower in the river between Knights Ferry and Orange Blossom Bridge.

Water Temperature Updates

1. When flows dropped during June, the water temperature buffering effect of the thermal mass of water decreased, causing water temperatures to spike at some of the farther downstream locations such as Ripon and Orange Blossom.
2. Salmonids are not expected to rear downstream of Orange Blossom Bridge during the summer because of the unsuitable temperatures.
3. Outmigration of juvenile Chinook salmon and *O. mykiss* is mostly completed. A few stragglers of Chinook salmon juveniles have been salvaged at the south Delta export facilities in the past few weeks.
4. Rearing fish are likely currently between the Canyon and Orange Blossom where temperatures are under 60°F, which is suitable for salmonid rearing.
5. Comments
    a. CDFW noted how closely Ripon water temperatures are tracking with flow levels in the graph.

Flow Planning

1. Reclamation and CDFW are going to coordinate a timeframe and logistics for flow planning.
2. NMFS noted that it would be nice to have a plan in place by September. Fall pulse flows typically happen in mid-October. It's possible that SWT will need a contingency plan in case there is a stretch of hot fall weather.
3. SWT will review and discuss draft flow plans in September to be implemented in October.

Stanislaus River Forum (SRF) Call Review

1. There were no comments or questions received from members of the public at the SRF July meeting.

Fish Monitoring

CDFW Fish Monitoring

1. Chinook salmon carcass surveys
    a. CDFW plans to begin the 2024 Escapement Survey in October.
2. Steelhead *O. mykiss* redd surveys

a. Surveys will start in January 2025.

Mossdale Trawl

1. CDFW and USFWS are cooperatively operating the trawl through October.
2. No new *O. mykiss* were caught during the previous month.
3. Salmonid catch dropped off during the last week of June and has remained very low since.
4. Questions / Comments
    a. CDFW recommended to the group a recent study available that discusses steelhead showing up from the San Joaquin River side: from the Tuolumne and Stanislaus Rivers from January to March.
    b. CDFW added an interesting observation on wild steelhead (i.e. not of hatchery origin) being found at the water pumps when possibly only one *O. mykiss* was caught in the Caswell RST. *O. mykiss* tend to be larger and more able to avoid the traps so RSTs are not a highly efficient way to sample *O. mykiss*.
        i. DWR asked how this issue is being approached in terms of the consultations happening with the new BiOp and ITP. It was an operational issue last year. There's a lot of post-processing results to review and consider. Curious as to how that's being taken into account or adjusted, within the boundaries of what information can be shared at this time.
        ii. CDFW responded that they are not [all] fully involved in that process and therefore cannot share in great detail. However, regarding the fish take being adjusted regardless of their origin: the more appropriate term is "Central Valley steelhead", rather than "Sacramento steelhead" or "San Joaquin steelhead". They should all be included in the take total.
        iii. NMFS noted that Nimbus Hatchery stock is not part of the evolutionarily-significant unit (ESU). The Mokelumne Hatchery is part of the ESU; they've made changes to their brood stock. The Coleman and Feather hatcheries are also part of the ESU. If you catch an adipose-clipped steelhead, it's unclear from which hatchery it originated. It could be from the Nimbus non-ESU strain. So our take, in our different triggers that affect exports, are based only on unclipped, natural-origin steelhead because we know that those are part of the Central Valley steelhead ESU. The issue during the past year was that there was a concern that some hatchery steelhead, which should be 100% ad-clipped, were not clipped. It is difficult to distinguish between a wild steelhead and a hatchery steelhead that didn't receive an adipose clip.

FISHBIO Monitoring

1. N/A

PSMFC Monitoring

1. Rotary Screw Trap (RST) Updates
    a. As of 6/28/2024, PSMFC has captured 6,080 unmarked Chinook salmon. The approximate fork length for all salmon was 80-100 mm.
    b. Sampling concluded 6/28/2024.
    c. Traps were uninstalled during the first week of July.
    d. Sampling will recommence in January 2025.
    e. PSMFC is working on their hatchery request for the WY 2025 sampling season. This will be submitted by the end of July.
2. Questions / Comments
    a. NMFS asked if PSMFC does genetic subsampling.
    b. PSMFC confirmed that they have 133 fin clips to be sent to Abernathy for genetic run assignment. PSMFC did clip any length-at-date (LAD) spring run Chinook salmon.

Restoration Project Updates

1. The Goodwin gravel project planned for summer 2024 is no longer occurring due to issues and delays while scoping the project. The project will be rescheduled for 2025 with a doubled amount of gravel.
2. The CVPIA has the Year 3 Notice of Funding Opportunity (NOFO) in process. The proposals have been evaluated. Reclamation and USFWS are in the process of choosing where to allocate funding.
    a. USFWS estimates that it's likely that the Stanislaus will receive funding. RCD would be the lead; Cramer Fish Sciences, FISHBIO, cbec, and South San Joaquin Irrigation District would act as subcontractors on that project.
    b. The three parts to the proposal are:
        i. Revisit the Buttonbush project and expand that footprint from the existing 4 acres to 12 acres;
        ii. Revisit Honolulu Bar and fix the flow split dewatering issue with additional gravel; Work across the river at Honolulu Bar, Phase II.
3. Funding to complete construction at the Buffington project. The Tuolumne River Trust, in collaboration with Cramer Fish Sciences, has put in a project called Willow Terrace, which is a floodplain project near the Jacob Meyer Park area on an Army Corps property.
4. The Mohler Track, Tortuga, and Caswell projects are currently in process.
5. Anyone interested in participating in any of the planning-team work can reach out to J.D. Wikert, USFWS.

Progress Update on Proposed Action Elements

1. N/A

Other Discussion Items

Curtailments

1. N/A

SWRCB Updates

2. N/A

Items to elevate to WOMT

1. N/A

Next Meeting

1. Wednesday, August 21, 10:00 am –12:00 pm. The meeting will be virtual.
2. Bryan Matthias, USFWS, will present on steelhead tagging.

— 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, July 17, 2024

Agenda

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

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

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

10. Other Discussion Items
    a. SWRCB Updates
    b. Items to elevate to WOMT
11. Review Action Items – Karis Johnson, Kearns & West
12. Next Meeting: August 21, 2024
    a. Bryan Matthias, USFWS, to present on steelhead tagging.

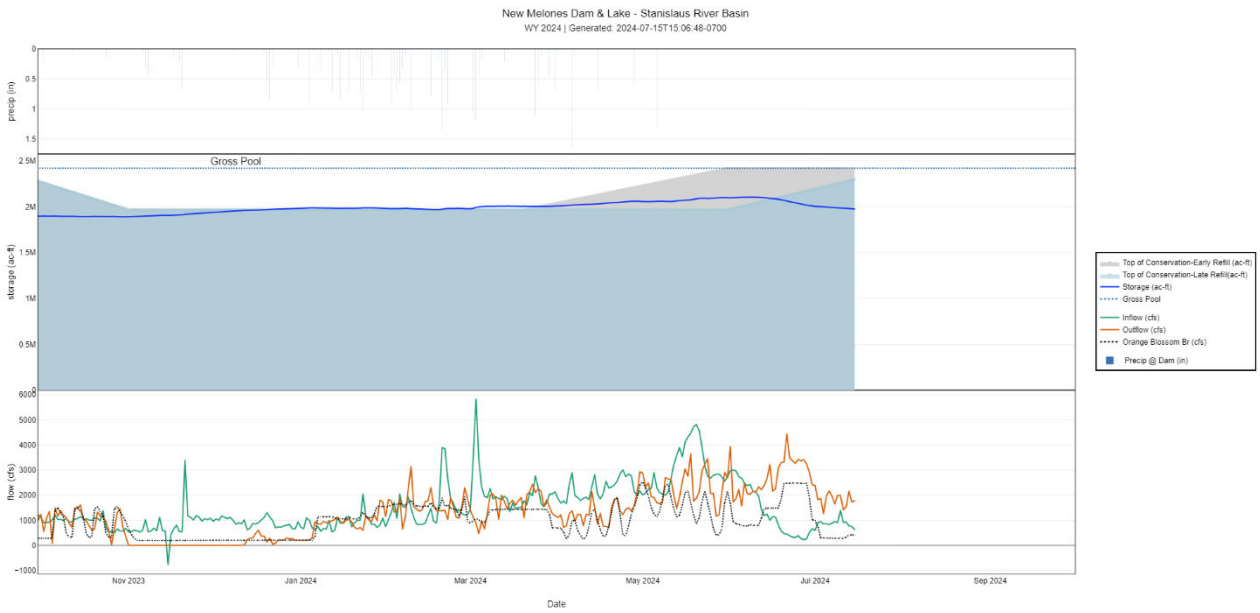

Figure 1. Flow (csf), storage (ac-ft) and precipitation (in) for New Melones Dam and Lake at Stanislaus River Basin from November 2023 to September 2024.

Figure 1 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 of around 2M ac-ft from December 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 to over 2000 cfs up until July.

BUREAU OF RECLAMATION

Tables for BDO

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

July 14, 2024
Run Date: July 15, 2024

Table 1. Reservoir Releases in Cubic Feet Per Second

Reservoir	Dam	WY 2023	WY 2024	15-Year Median
Trinity	Lewiston	448	493	466
Sacramento	Keswick	10,996	13,481	10,996
Feather	Oroville (SWP)	5,000	8,000	4,500
American	Nimbus	3,980	4,957	3,966
Stanislaus	Goodwin	1,272	403	356
San Joaquin	Friant	2,021	418	443

Table 2. 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	1,605	1,425	2,005	125
Shasta	4,552	3,208	4,112	3,748	117
Folsom	977	694	906	755	109
New Melones	2,420	1,479	2,068	1,974	133
Fed. San Luis	966	414	943	592	143
Total North CVP	11,363	7,400	9,454	9,074	123
Millerton	521	393	524	384	98
Oroville (SWP)	3,538	2,379	3,441	3,033	128

Table 3. 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	1,510	656	1,950	1,076	140
Shasta	5,168	3,020	8,392	4,377	118
Folsom	2,093	964	5,706	2,436	86
New Melones	861	N/A	2,030	967	89
Millerton	1,617	619	2,563	1,451	111

Table 4. 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	21.82	40.07	29.97 (64)	118	0.00
Sacramento at Shasta Dam	63.62	32.94	86.50	58.58 (69)	109	0.00
American at Blue Canyon	50.55	N/A	113.32	63.68 (50)	79	0.00
Stanislaus at New Melones	28.92	N/A	36.75	26.72 (47)	108	0.00
San Joaquin at Huntington LK	32.28	11.50	67.00	39.71 (51)	81	0.00

United States Department of the Interior
Bureau of Reclamation-Central Valley Project- California
New Melones Lake Daily Operations, July 2024, Run Date: 07/15/2024

Day	Elev	Storage 1000-Acre-Feet in Lake	Storage 1000-Acre-Feet Change	Computed Inflow C.F.S.	Release C.F.S. Power	Release C.F.S. Spill	Release C.F.S. Outlet	Evap. C.F.S.	Evap. Inches	Precip Inches
N/A	N/A	2,004.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	1,052.47	2,002.2	-2.1	903	1,821	0	0	143	0.40	0.00
2	1,052.28	2,000.1	-2.1	947	1,868	0	0	140	0.39	0.00
3	1,052.18	1,999.0	-1.1	856	1,264	0	0	150	0.42	0.00
4	1,051.95	1,996.5	-2.5	862	1,966	0	0	179	0.50	0.00
5	1,051.68	1,993.5	-3.0	834	2,165	0	0	171	0.48	0.00
6	1,051.46	1,991.1	-2.4	888	1,955	0	0	157	0.44	0.00
7	1,051.30	1,989.3	-1.8	949	1,653	0	0	186	0.52	0.00
8	1,051.07	1,986.8	-2.5	910	1,997	0	0	193	0.54	0.00
9	1,050.93	1,985.2	-1.5	1,395	1,991	0	0	182	0.51	0.00
10	1,050.81	1,983.9	-1.3	916	1,417	0	0	164	0.46	0.00
11	1,050.67	1,982.4	-1.5	932	1,537	0	0	171	0.48	0.00
12	1,050.39	1,979.3	-3.1	774	2,153	0	0	174	0.49	0.00
13	1,050.18	1,977.0	-2.3	747	1,734	0	0	178	0.50	0.00
14	1,049.95	1,974.4	-2.5	628	1,772	0	0	131	0.37	0.00
Totals	N/A	N/A	-29.7	12,541	25,293	0	0	2,319	6.50	0.00
Acre-Feet	N/A	N/A	-29,700	24,875	50,169	0	0	4,600	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	50,169
Spill	0
Outlet	0
Total	**50,169**

United States Department of the Interior
Bureau of Reclamation-Central Valley Project- California
New Melones Lake Daily Operations, June 2024, Run Date: 07/10/2024

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
10	1,061.40	2,102.6	-0.9	1,971	2,331	0	0	100	0.27	0.00
11	1,061.25	2,100.9	-1.7	1,433	2,219	0	0	77	0.21	0.00
12	1,061.02	2,098.2	-2.6	1,185	2,386	0	0	122	0.33	0.00
13	1,060.75	2,095.2	-3.1	1,251	2,663	0	0	136	0.37	0.00
14	1,060.34	2,090.5	-4.7	1,003	2,795	0	418	140	0.38	0.00
15	1,060.14	2,088.2	-2.3	1,143	2,160	0	0	129	0.35	0.00
16	1,059.92	2,085.7	-2.5	1,130	2,258	0	0	132	0.36	0.00
17	1,059.50	2,081.0	-4.8	811	2,419	0	656	136	0.37	0.00
18	1,059.00	2,075.3	-5.7	577	3,295	0	0	139	0.38	0.00
19	1,058.48	2,069.4	-5.9	466	3,317	0	0	110	0.30	0.00
20	1,057.76	2,061.3	-8.1	453	3,396	0	1,036	117	0.32	0.00
21	1,057.19	2,054.9	-6.4	383	3,492	0	0	127	0.35	0.00
22	1,056.63	2,048.6	-6.3	331	3,369	0	0	134	0.37	0.00
23	1,056.08	2,042.4	-6.2	309	3,268	0	0	152	0.42	0.00
24	1,055.52	2,036.2	-6.3	393	3,425	0	0	127	0.35	0.00
25	1,054.95	2,029.8	-6.4	272	3,362	0	0	123	0.34	0.00
26	1,054.36	2,023.2	-6.6	229	3,415	0	0	130	0.36	0.00
27	1,053.80	2,017.0	-6.2	262	3,250	0	0	155	0.43	0.00
28	1,053.35	2,012.0	-5.0	523	2,899	0	0	144	0.40	0.00
29	1,053.01	2,008.2	-3.8	661	2,412	0	0	154	0.43	0.00
30	1,052.66	2,004.3	-3.9	601	2,387	0	0	168	0.47	0.00
Totals	N/A	N/A	-92.1	38,345	78,754	0	2,110	3,854	10.55	0.00
Acre-Feet	N/A	N/A	-92,100	76,057	156,209	0	4,185	7,644	N/A	N/A

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

Summary Precipitation

This Month	0.00
October 1, 2023 to Date	28.92

Summary: Release (acre-feet)

Power	156,209
Spill	0
Outlet	4,185
Total	**160,394**

United States Department of the Interior
Bureau of Reclamation-Central Valley Project- California
Tulloch Reservoir Daily Operations, July 2024, Run Date: 07/15/2024

Day	Elev	Storage (Acre Feet) Reservoir	Storage (Acre-Feet) Change	Computed Inflow C.F.S.	New Melones Release	Release C.F.S. Power	Release C.F.S. Spill	Release C.F.S. Outlet	Evap. C.F.S. (1)
N/A	N/A	65,265	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	508.59	65,215	-50	2,067	1,821	2,076	0	0	16
2	508.80	65,474	259	2,155	1,868	2,008	0	0	16
3	507.66	64,077	-1,397	1,436	1,264	2,123	0	0	17
4	507.76	64,198	121	2,248	1,966	2,167	0	0	20
5	508.20	64,735	537	2,468	2,165	2,178	0	0	19
6	508.41	64,994	259	2,268	1,955	2,120	0	0	17
7	508.05	64,551	-443	1,893	1,653	2,095	0	0	21
8	508.52	65,129	578	2,307	1,997	1,994	0	0	22
9	508.86	65,548	419	2,295	1,991	2,064	0	0	20
10	508.21	64,748	-800	1,616	1,417	2,001	0	0	18
11	507.62	64,028	-720	1,731	1,537	2,075	0	0	19
12	508.27	64,821	793	2,482	2,153	2,063	0	0	19
13	508.20	64,735	-86	1,999	1,734	2,022	0	0	20
14	508.29	64,846	111	2,045	1,772	1,974	0	0	15
Totals	N/A	N/A	-419	29,010	25,293	28,960	0	0	259
Acre-Feet	N/A	N/A	-419	57,541	50,169	57,442	0	0	514

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	57,442
Spill	0
Outlet	0
Total	57,442

United States Department of the Interior
Bureau of Reclamation-Central Valley Project- California
Tulloch Reservoir Daily Operations, June 2024, Run Date: 07/10/2024

Day	Elev	Storage (Acre Feet) Res.	Storage (Acre-Feet) Change	Computed Inflow C.F.S.	New Melones Release	Release C.F.S. Power	Release C.F.S. Spill	Release C.F.S. Outlet	Evap. C.F.S. (1)
N/A	N/A	62,252	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
10	507.83	64,283	618	2,677	2,331	2,354	0	0	11
11	507.43	63,798	-485	2,538	2,219	2,446	172	157	8
12	506.89	63,146	-652	2,708	2,386	2,470	390	164	13
13	506.73	62,955	-191	3,042	2,663	2,471	453	200	14
14	507.72	64,150	1,195	3,715	3,213	2,472	424	202	15
15	506.76	62,990	-1,160	2,472	2,160	2,472	393	178	14
16	506.24	62,370	-620	2,564	2,258	2,464	386	13	14
17	506.97	63,241	871	3,411	3,075	2,474	386	98	14
18	507.30	63,641	400	3,846	3,295	2,472	983	174	15
19	506.99	63,265	-376	3,855	3,317	2,470	1,365	198	12
20	508.58	65,203	1,938	5,077	4,432	2,483	1,441	163	13
21	508.54	65,154	-49	4,150	3,492	2,479	1,499	183	14
22	508.55	65,166	12	4,104	3,369	2,481	1,502	100	15
23	508.32	64,883	-283	3,937	3,268	2,478	1,496	89	17
24	508.44	65,031	148	4,122	3,425	2,478	1,454	101	14
25	508.20	64,735	-296	4,007	3,362	2,477	1,459	207	13
26	508.08	64,587	-148	4,083	3,415	2,476	1,490	178	14
27	507.63	64,041	-546	3,886	3,250	2,471	1,316	357	17
28	507.85	64,307	266	3,385	2,899	2,473	533	229	16
29	508.11	64,624	317	2,792	2,412	2,478	0	137	17
30	508.63	65,265	641	2,750	2,387	2,408	0	0	19
Totals	NA	NA	13	94,037	80,864	73,239	17,142	3,236	415

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)
Acre-Feet	NA	NA	13	186,522	160,394	145,270	34,001	6,419	823

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	145,270
Spill	34,001
Outlet	6,419
Total	185,689

Oakdale Irrigation District
South San Joaquin Irrigation
District Tri Dams Project-California
Goodwin Reservoir Daily Operations, July 2024, Run Date: 07/15/2024

Day	Elev	Storage (1000 Acre-Feet) in Lake	Storage (1000 Acre-Feet) Change	Tulloch Release	Release C.F.S. - River Outlet	Release C.F.S. – Spill	Canals-Joint Main	Canals-South Main
N/A	N/A	559	N/A	N/A	N/A	N/A	N/A	N/A
1	359.95	534	-25	2,076	0	653	878	370
2	359.96	534	0	2,008	0	401	959	442
3	359.95	534	0	2,123	0	401	1,001	492
4	359.96	534	0	2,167	0	401	996	501
5	359.98	536	2	2,178	0	404	996	502
6	359.96	534	-2	2,120	0	403	995	455
7	359.98	536	2	2,095	0	403	996	446
8	359.98	536	0	1,994	0	404	965	397
9	359.98	536	0	2,064	0	400	963	490
10	359.98	536	0	2,001	0	400	963	413
11	359.98	536	0	2,075	0	401	962	452
12	359.99	536	0	2,063	0	401	958	453
13	359.98	536	0	2,022	0	406	958	438
14	359.96	534	-2	1,974	0	403	952	393
Totals	N/A	N/A	-25	28,960	0	5,881	13,542	6,244
Acre-Feet	N/A	N/A	-25	57,442	0	11,665	26,861	12,385

Joint Main Operated by SSJID and OID.

Summary: Release (acre-feet)

Joint Main Canal	26,861
South Main Canal	12,385
Outlet	0
Spill	11,665
Total	**50,910**

Oakdale Irrigation District
South San Joaquin Irrigation
District Tri Dams Project-California
Goodwin Reservoir Daily Operations, June 2024, Run Date: 07/10/2024

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
10	360.23	553	0	2,354	0	855	875	442
11	360.55	576	23	2,775	0	1,289	922	386
12	360.55	576	0	3,024	0	1,505	923	439
13	360.55	576	0	3,124	0	1,502	971	471
14	360.57	577	1	3,098	0	1,502	946	441
15	360.55	576	-1	3,043	0	1,502	910	411
16	360.55	576	0	2,863	0	1,501	869	274
17	360.57	577	1	2,958	0	1,506	908	331
18	360.95	604	27	3,629	0	2,117	876	432
19	360.96	604	0	4,033	0	2,503	872	442
20	360.95	604	0	4,087	0	2,507	934	408
21	360.96	604	0	4,161	0	2,502	928	502
22	360.96	604	0	4,083	0	2,513	928	427
23	360.95	604	0	4,063	0	2,504	910	443
24	360.96	604	0	4,033	0	2,511	931	391
25	360.96	604	0	4,143	0	2,501	975	475
26	360.95	604	0	4,144	0	2,505	976	453
27	360.96	604	0	4,144	0	2,506	978	453
28	360.32	559	-45	3,235	0	1,579	978	477
29	360.33	560	1	2,615	0	1,003	968	451
30	360.32	559	-1	2,408	0	1,004	853	370
Totals	N/A	N/A	-5	93,617	0	49,209	26,969	12,364

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
Acre-Feet	N/A	N/A	-5	185,689	0	97,606	53,493	24,524

Joint Main Operated by SSJID and OID.

Summary: Release (acre-feet)

Joint Main Canal	53,493
South Main Canal	24,524
Outlet	0
Spill	97,606
Total	**175,653**

June 2024 Water Temperature and Fish Monitoring Update

Year-to-Date Flows

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

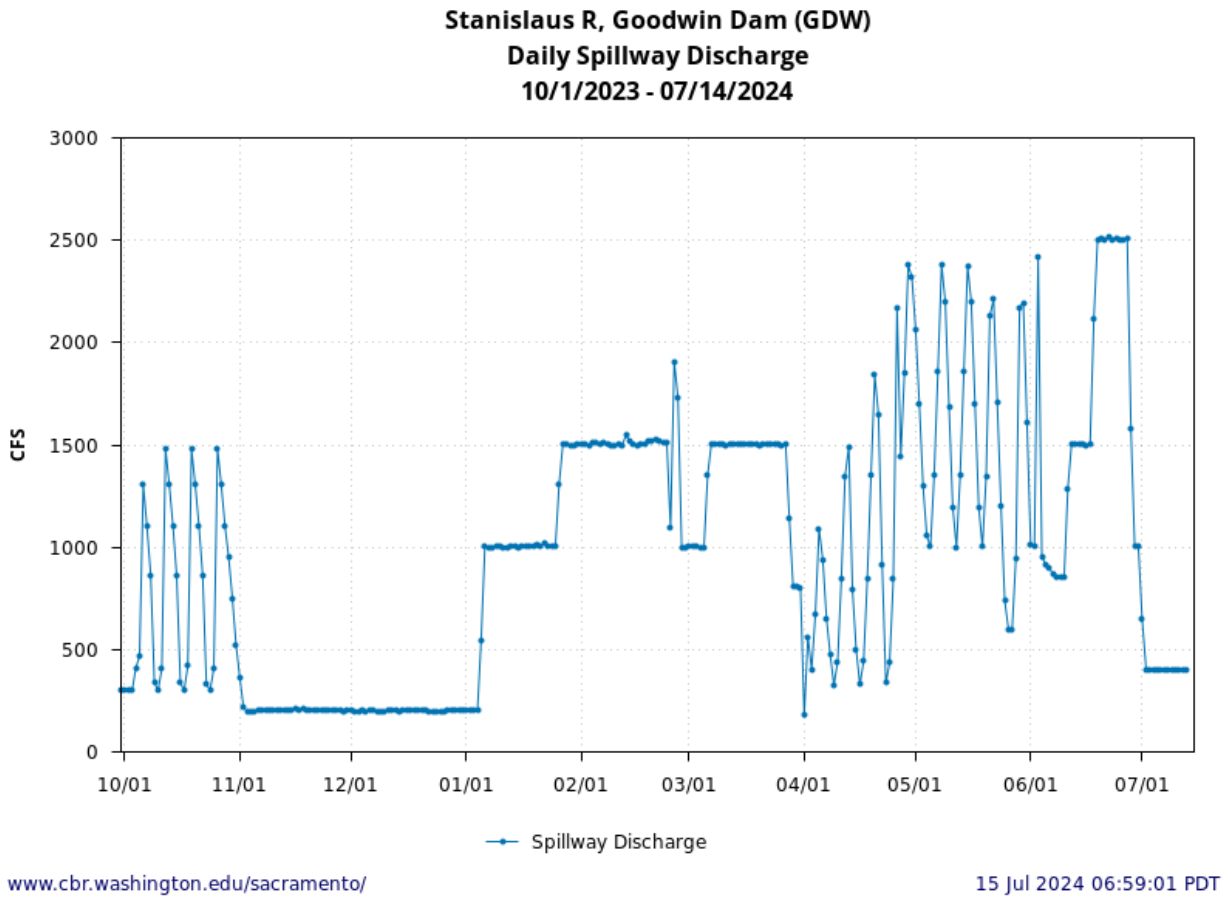

Figure 2. Goodwin (daily) releases to the Stanislaus River since October 1, 2023. Data from GDW station on CDEC.

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 a irregular peaks over 2,000 cfs happening between April 1st and June 1st, and an increased to 2,500 cfs happening mid-June with a drop to about 500 cfs on July 1st.

Water Temperature

The temperature thresholds included in Figures 2-10, below, are the thresholds used in the 2019 NMFS LTO BiOp1 (see Incidental Take Statement on p. 807) to define the extent of take anticipated from water temperature effects in the Stanislaus River. It is important to note that

many of the temperature figures provide subdaily information or information at locations other than Orange Blossom Bridge and thus don't reflect the specific metrics for take in the 2019 NMFS LTO BiOp. Temperature thresholds have been added to these figures at the request of Stanislaus Watershed Team members to provide a general reference of water temperature suitability.

Water temperatures in the Stanislaus River since May 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 May 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.

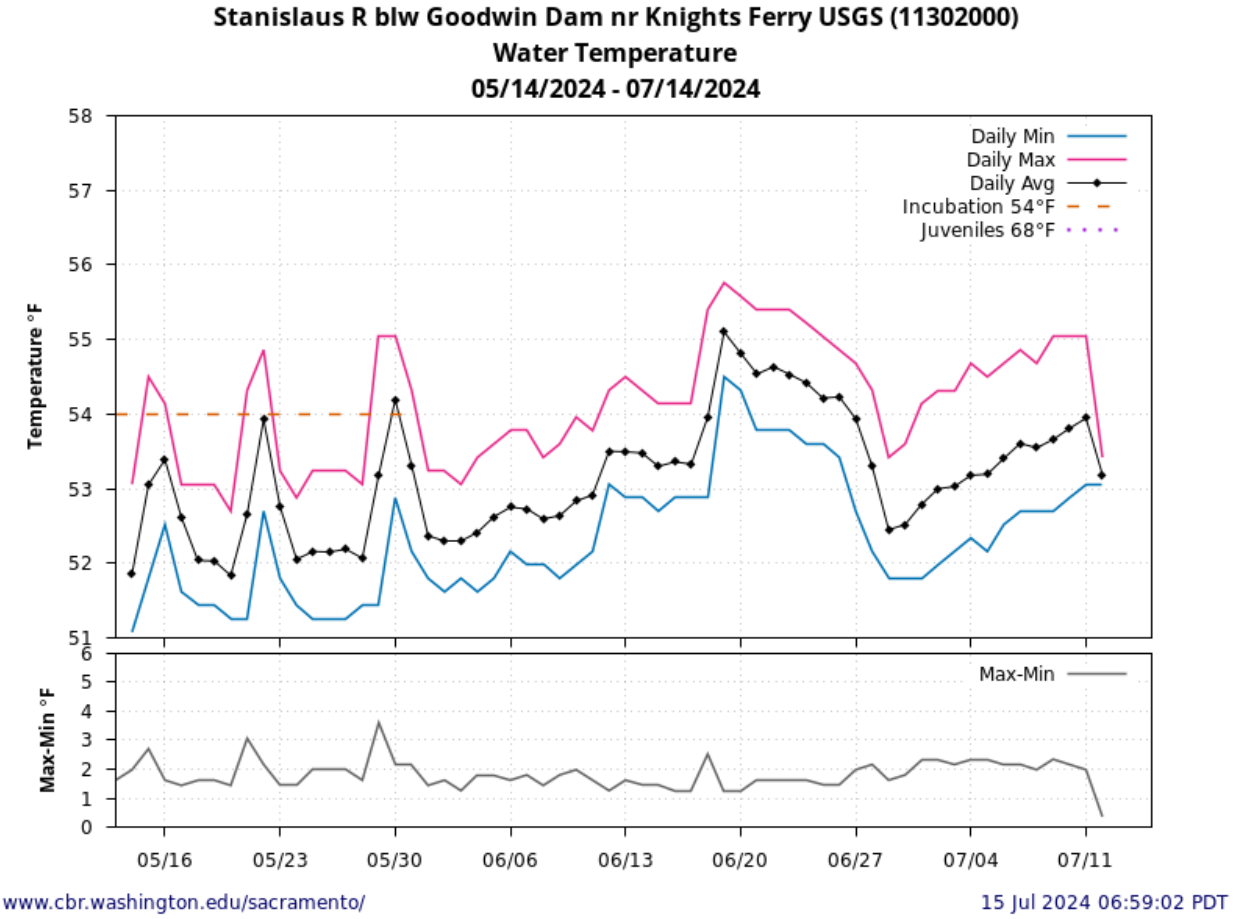

Figure 3. Daily water temperatures on the Stanislaus River upstream of Knights Ferry since May 14, 2024. Data from USGS gage 11302000 on NWIS; temperature threshold reference line added by SWT.

Figure 3 is a line graph showing Goodwin Dam daily minimum, maximum and average water temperature. The graph shows peaks over 54° Fahrenheit on May 16th, 23rd and 30th. There is a steady increase to 55° Fahrenheit on June 19th, with a decrease between 52° and 54° Fahrenheit to July 11th.

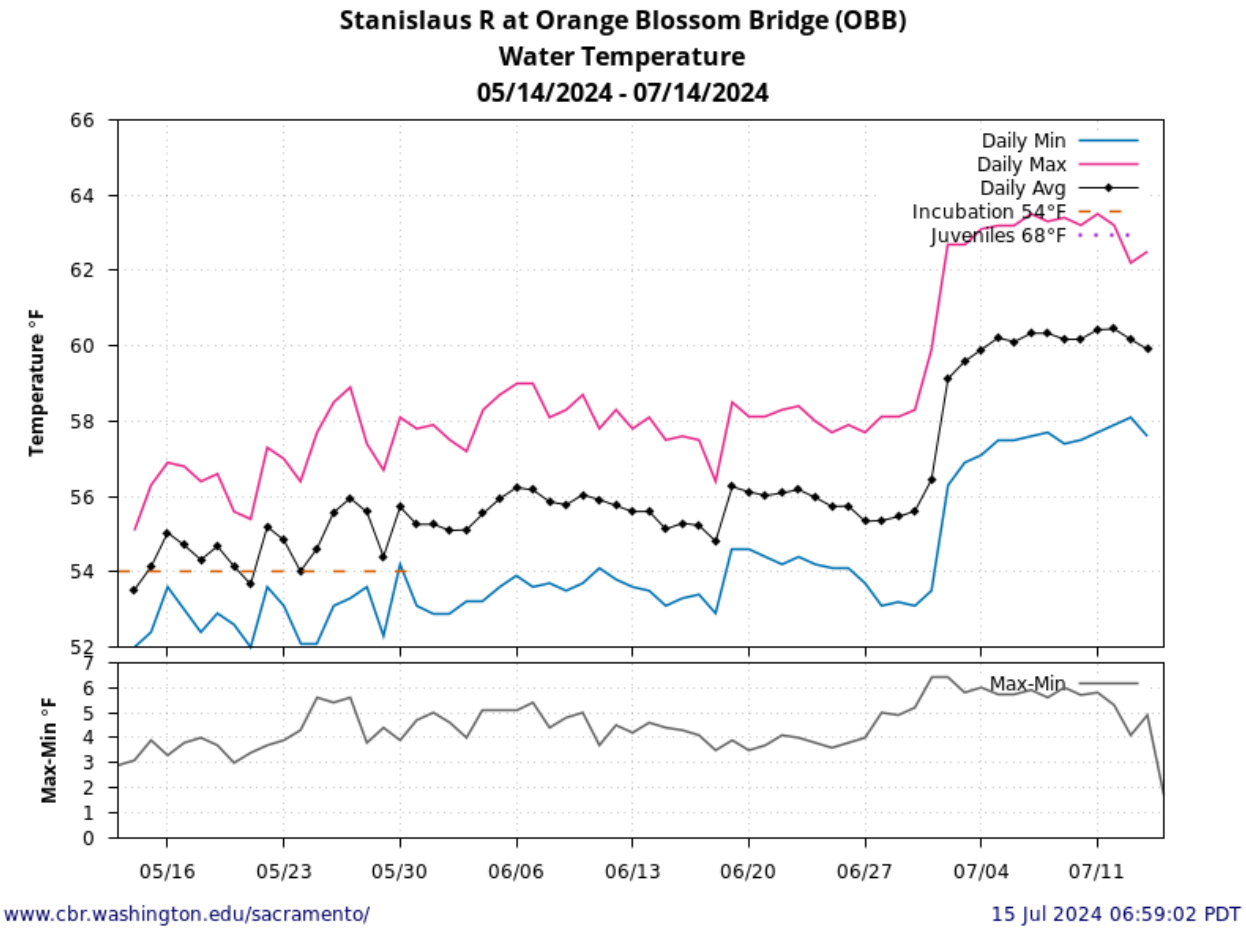

Figure 4. Stanislaus (hourly) water temperatures at Orange Blossom Bridge since May 14, 2024. Data from OBB station on CDEC.

Figure 4 is a line graph showing Orange Blossom Bridge daily minimum, maximum and average water temperature. The graph shows average temperature between 54° Fahrenheit and 56° Fahrenheit from May 16th to June 27th, with a gradual increase over 58° Fahrenheit from June 28th to July 14th.

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

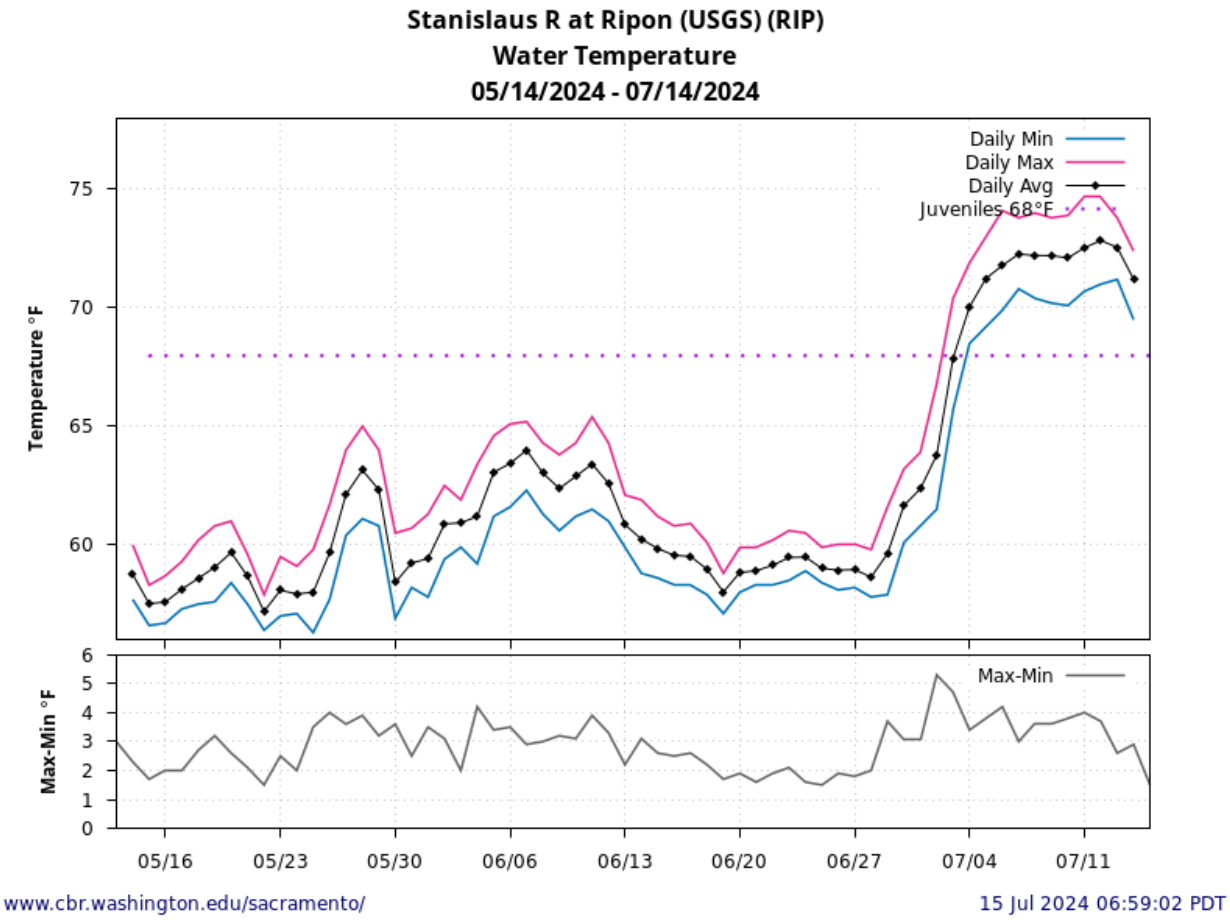

Figure 5. Stanislaus water temperatures at Ripon since May 14, 2024. Data from RIP station on CDEC.

Figure 5 is a line graph showing Ripton daily minimum, maximum and average water temperature. The graph shows average temperatures below 65° Fahrenheit up to June 27th, with an increase over 68° Fahrenheit from June 28th to July 14th.

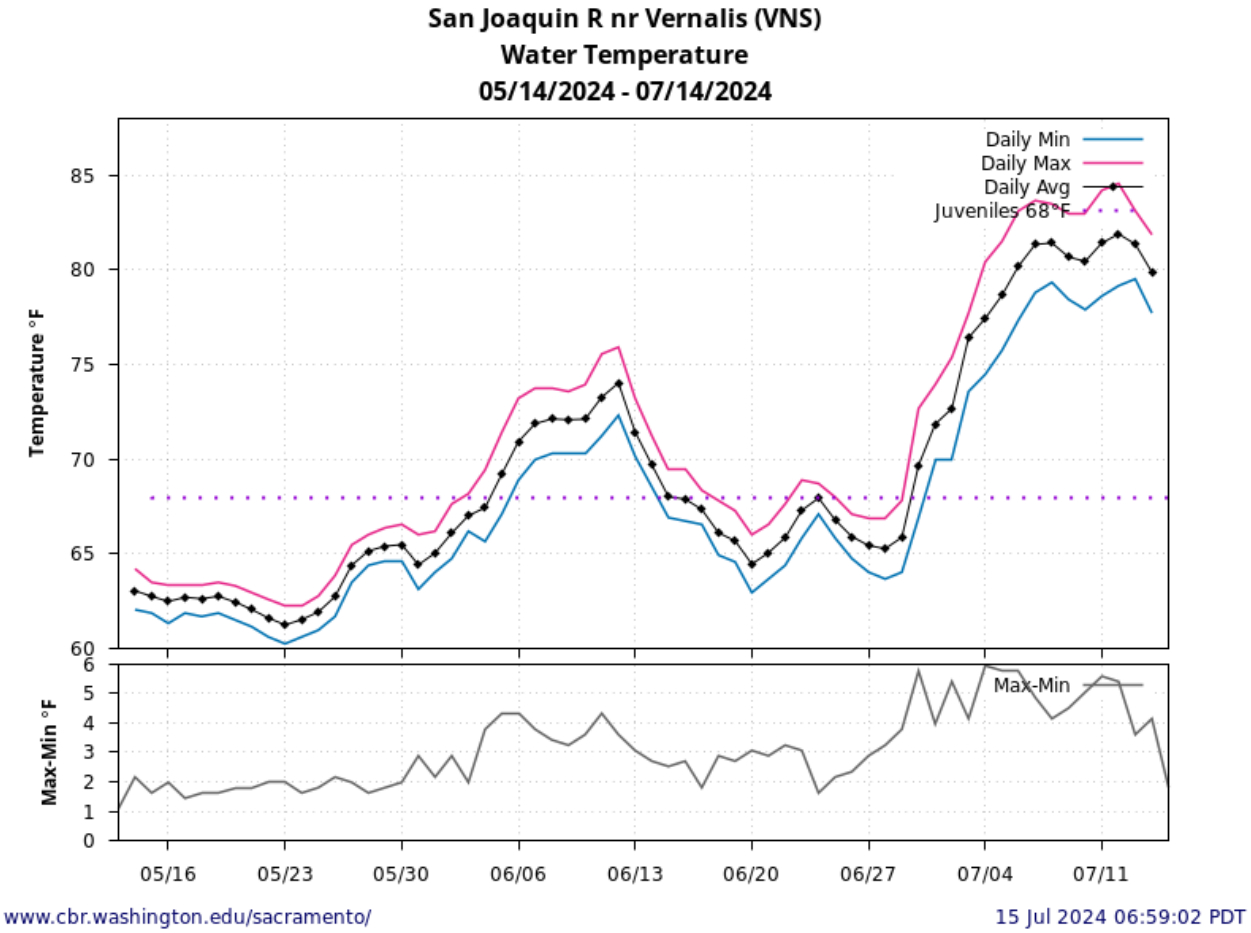

Figure 6. San Joaquin River (15-minute) water temperatures at Vernalis since May 14, 2024. Data from VNS station on CDEC. Note that, unlike in the previous figures, temperature is reported in degrees Celsius. 8°C=46.4°F; 10°C=50°F; 12°C=53.6°F; 14°C=57.2°F; 16°C=60.8°F; 18°C=64.4°F; 20°C=68.0°F; 22°C=71.6°F; 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 peak at 75° Fahrenheit on June 12th with a decrease below 70° Fahrenheit between June 13th and June 27th, and an increase over 75° Fahrenheit after until July 14th.

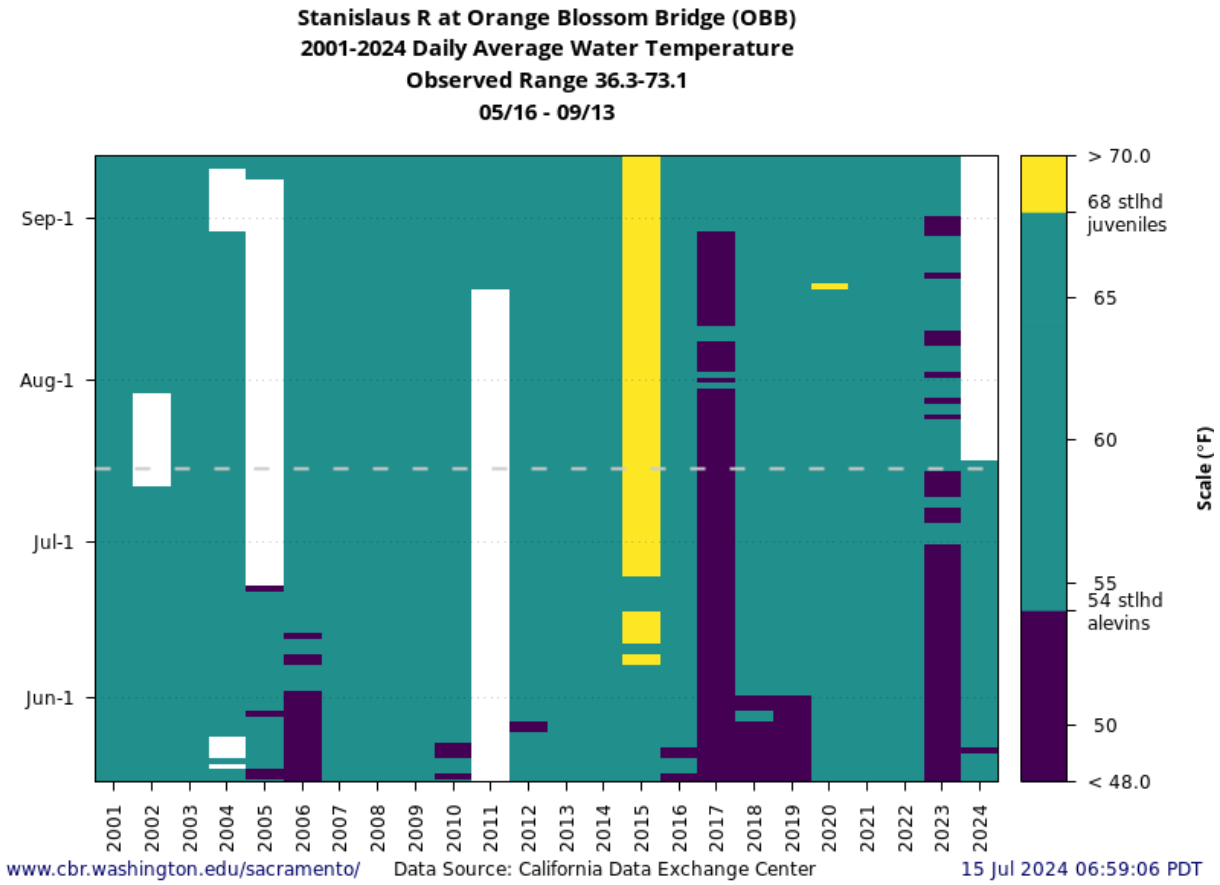

Figure 7. Stanislaus River water temperatures at Orange Blossom Bridge for WY 2001 to present. Data from SacPAS; temperature threshold reference lines added by SWT. http://www.cbr.washington.edu/sacramento/data/query_river_allyears.html

Figure 7 is a bar chart showing water temperatures at Orange Blossom Bridge for WY 2001 to present for June to September. The chart shows during this time, temperature remained below 68° Fahrenheit with temperatures being above 54° Fahrenheit between June and September in 2015, and below 54° Fahrenheit June to September in 2017 and parts of 2023..

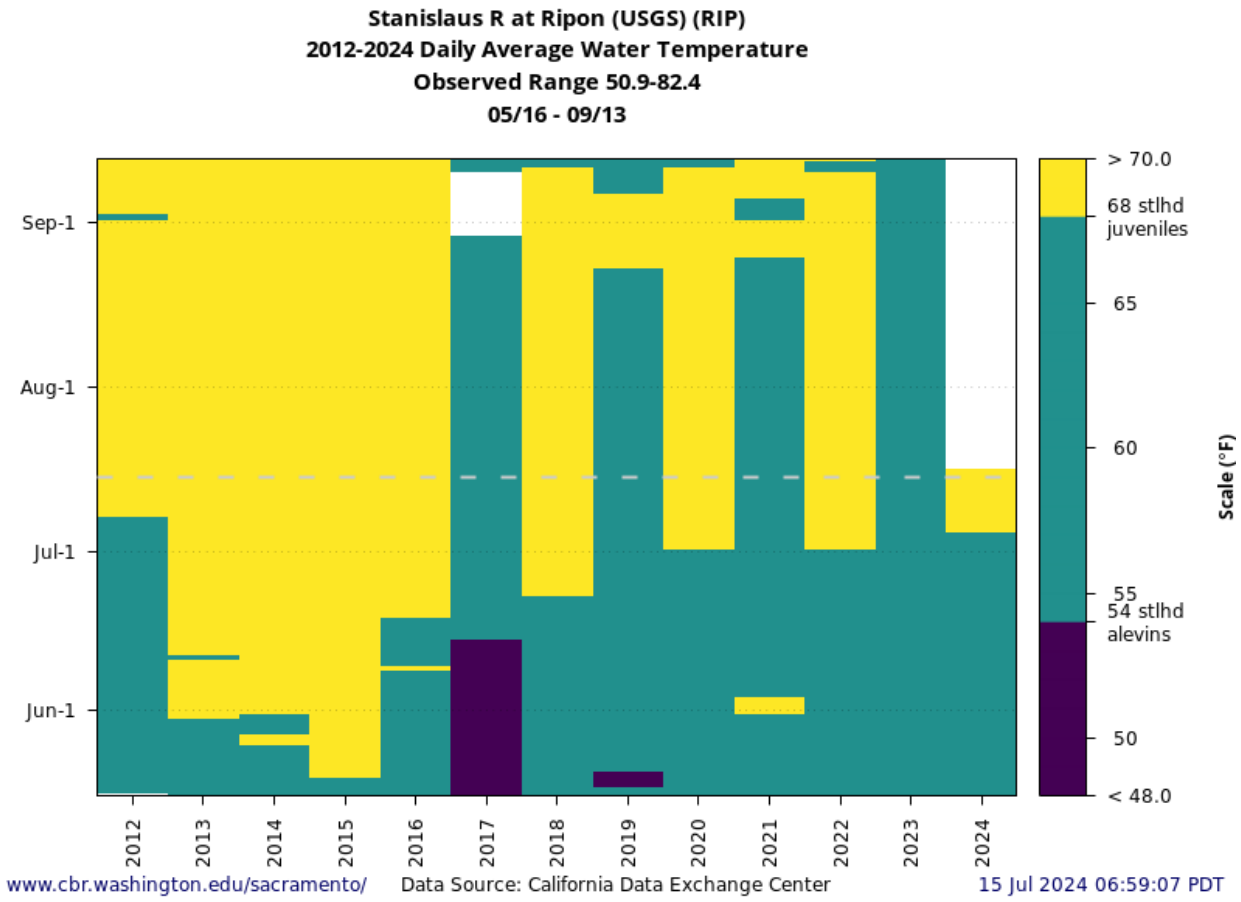

Figure 8. Stanislaus River water temperatures at Ripon for WY 2012 to present. Figure from SacPAS using RIP station data from CDEC; temperature threshold reference line added by SWT. http://www.cbr.washington.edu/sacramento/data/query_river_allyears.html

Figure 8 is a bar chart showing water temperatures at Ripon for WY 2012 to present for June to September. The chart shows that during this time, the daily average water temperature was mostly above 68° Fahrenheit except for temperatures in June through early July being below 68° Fahrenheit during 2012, 2026, and from June to September during 2019, 2021 and 2023.

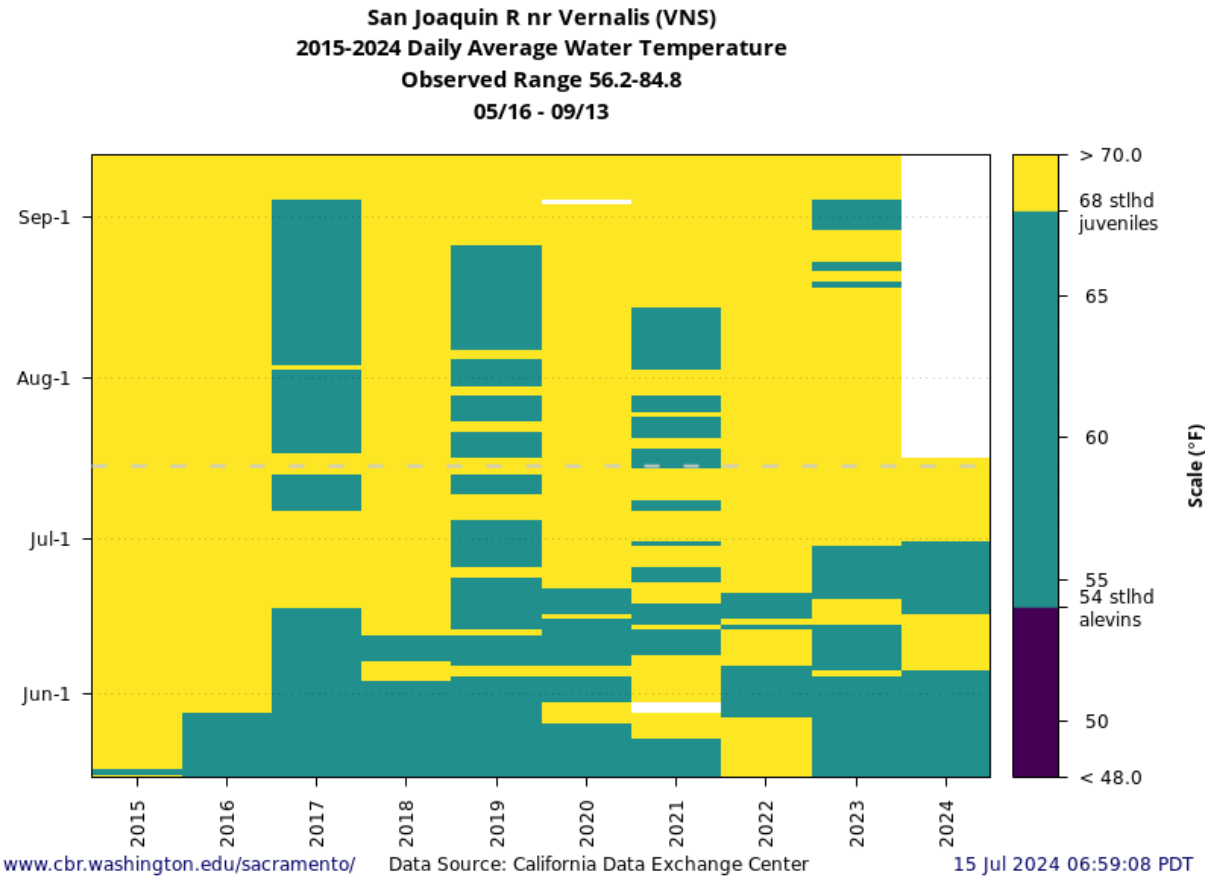

Figure 9. San Joaquin River water temperatures at Vernalis for WY 2015 to present. Figure from SacPAS using VNS station data from CDEC; temperature threshold reference line added by SWT. http://www.cbr.washington.edu/sacramento/data/query_river_allyears.html

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 late May to September. 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.

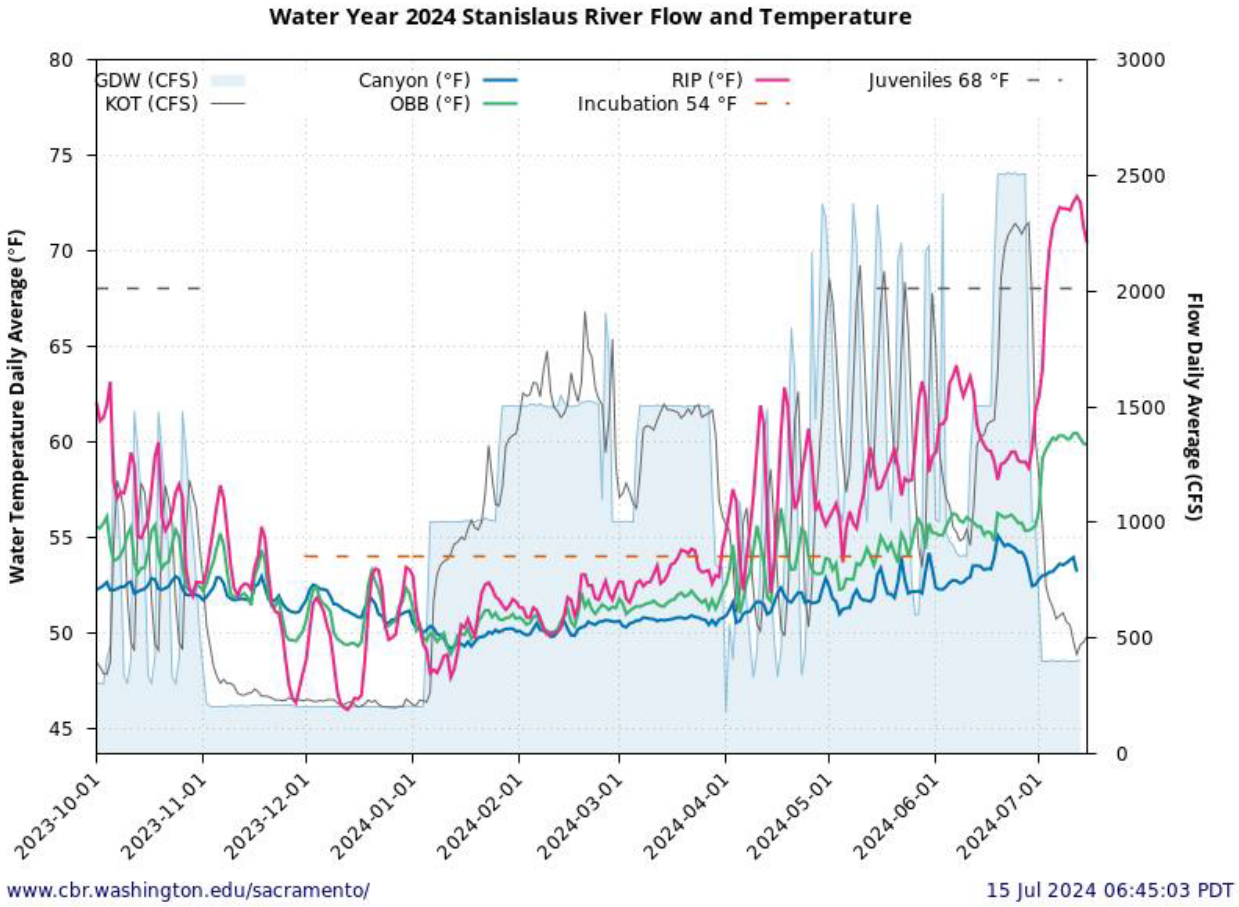

Figure 10. Stanislaus River flow and water temperatures from October 1, 2023 to July 1, 2024. Data (including temperature threshold reference lines) from SacPAS: http://www.cbr.washington.edu/sacramento/data/tc_stanislaus.html

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 7/17/24 meeting.

Forum (SRF) Call Review

USBR Updates: Receive live update from USBR staff on the 7/16/24 call.

Fish Monitoring and Studies

CDFW Update on Fish Monitoring

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

Steelhead reed surveys: CDFW plans to start the 2025 survey in January.

Juveniles:

Mossdale Trawl: Cooperative trawling with CDFW and USFWS began 7/1/2024.

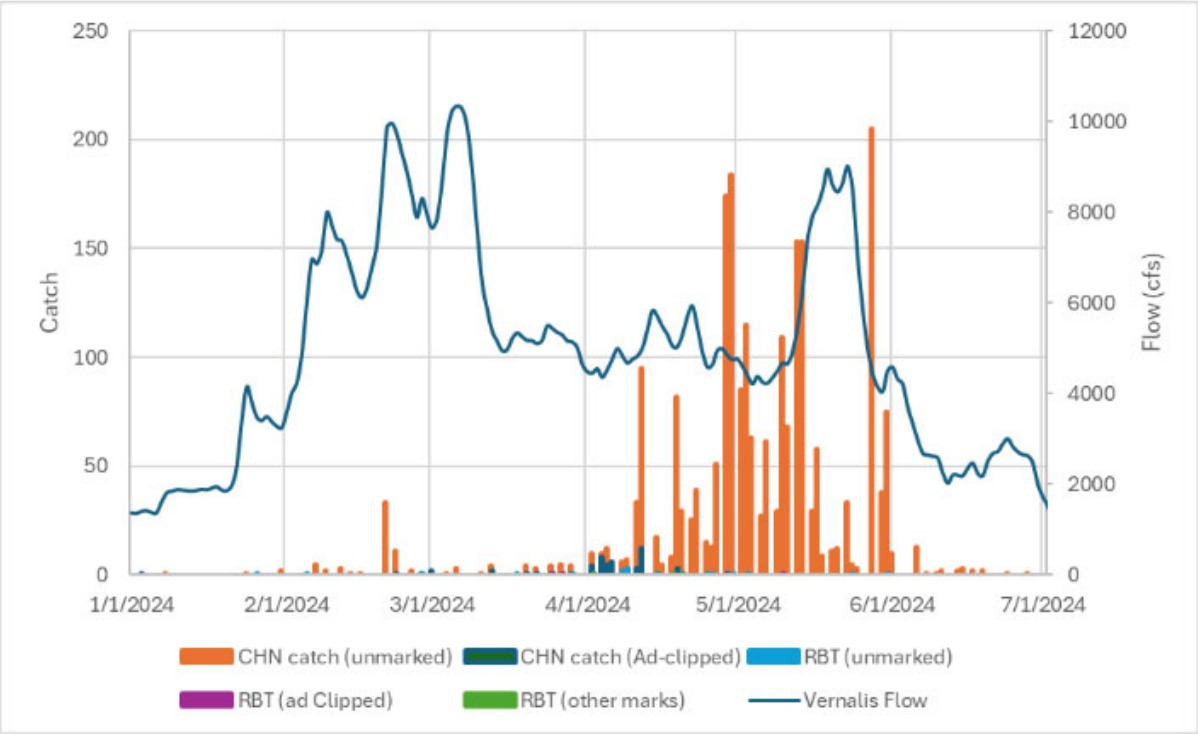

Figure 11. Salmonid catch at Mossdale and flow at Vernalis since January 1, 2024.

Figure 11 is a line chart showing the Vernalis flow with peaks above 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 200 in June

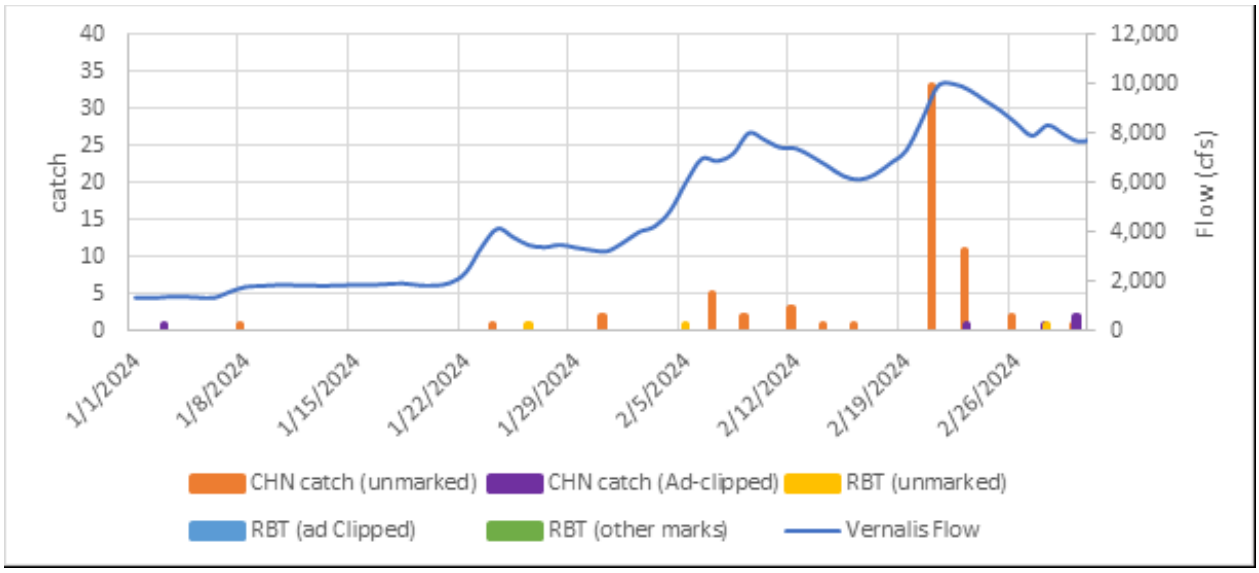

Figure 12. Salmonid catch at Mossdale and flow at Vernalis for January and February 2024.

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 5: 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 July 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 6/28/2024, we have captured a total of 6,080 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 June are of the silvery parr and smolt life stages with fork lengths currently averaging about 80-100 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%.

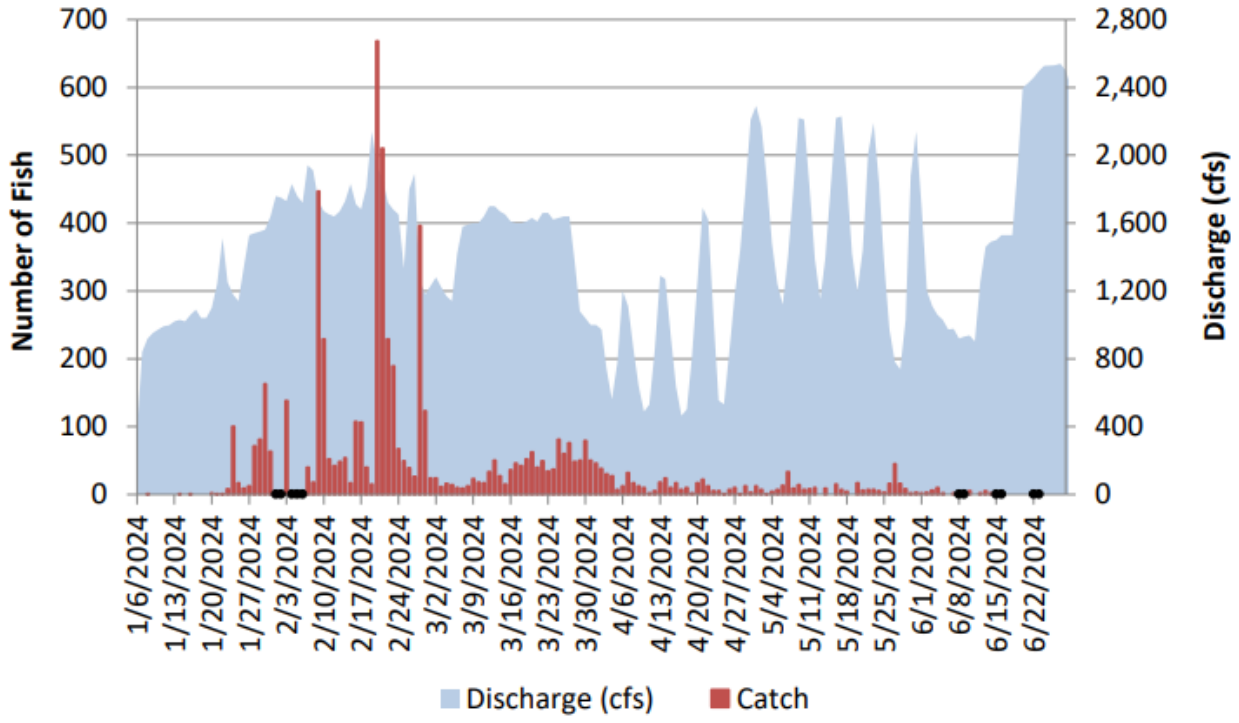

Figure 13. Daily catch of unmarked Chinook salmon and daily average at Ripon during the 2024 Stanislaus River RST sampling season.

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, and an increase to up to 2,400 cfs from June 15th to 22nd. It also shows catch happening in February 2024, with the highest over 600 number of fish.

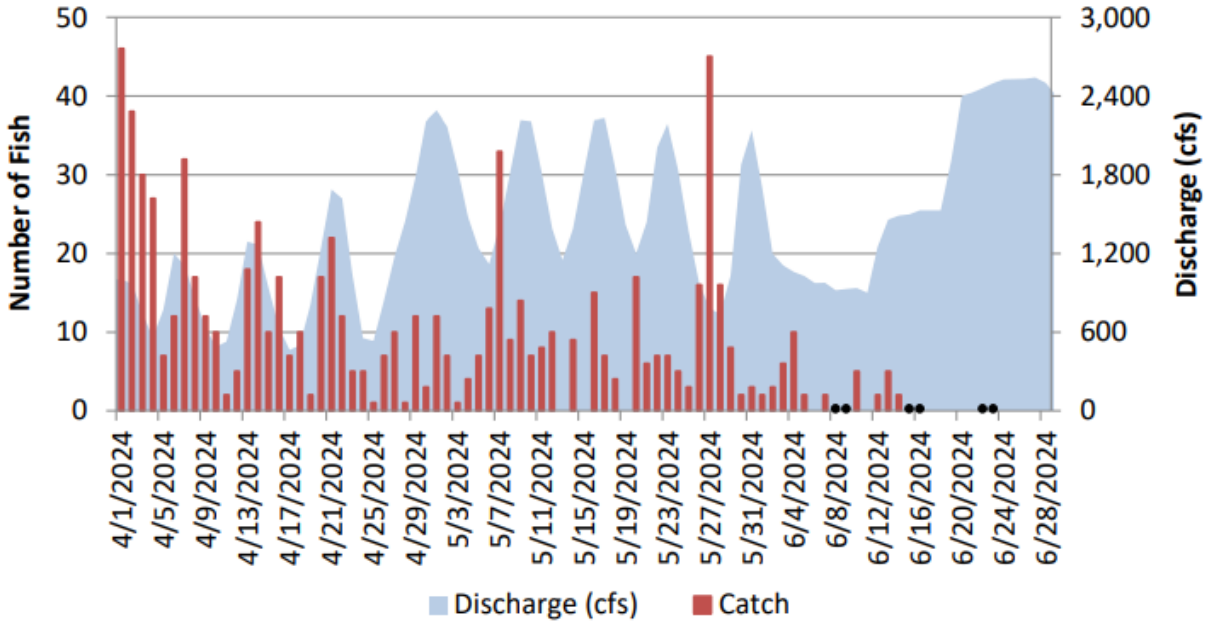

Figure 14. Daily catch of unmarked Chinook salmon and daily average discharge at Ripon from April 1 to June 28 during the 2024 Stanislaus River RST sampling season.

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, with an increased over 2,400 cfs throughout June with a catch under 10.

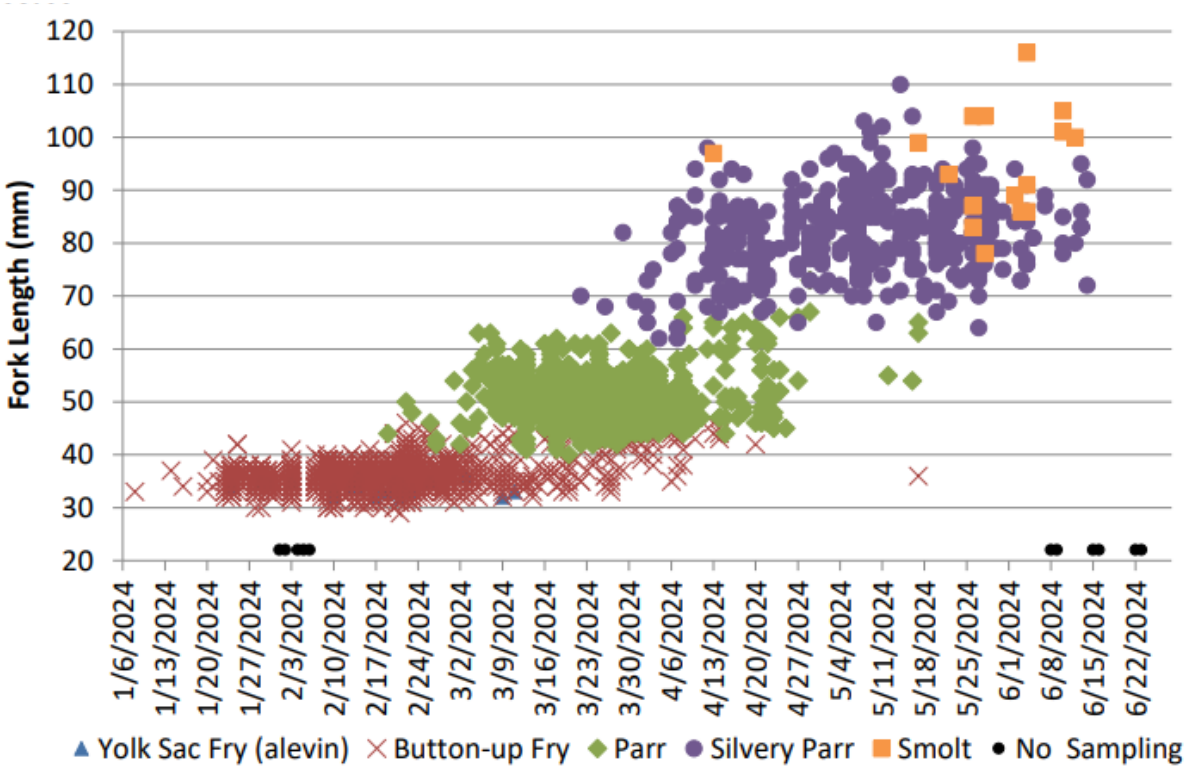

Figure 15. Daily fork length distribution by life stage of unmarked Chinook salmon measured during the 2024 Stanislaus River RST sampling season.

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 updates in advance of the 7/17 meeting)*