



Stanislaus Watershed Team

January 18, 2023

Members Attending

- USBR: Liz Kiteck, Zarela Guerrero, Peggy Manza, Claire Hsu, Spencer Marshall, Melissa Vignau
- USFWS: JD Wikert, Craig Anderson
- CDFW: Gretchen Murphey, Crystal Rigby, Steve Tsao, Ryan Kok
- NMFS: Barb Byrne
- DWR: Mike Ford, Matthew Meyers
- SWRCB: Chris Carr, Yongxuan Gao, Erin Foresman
- Stockton East: Justin Hopkins
- Other: Logan Day, Brandon Nakagawa
- Kearns & West: Karis Johnston, Mia Schiappi

Announcements

NA.

Operations Update and Forecasts/ Hydrology

New Melones

- There was 8.75 inches of accumulated precipitation at New Melones last month;
- Storage at New Melones is increasing after the last three weeks of storms and is currently at 917 TAF as of 1/18/2023.
- Precipitation to date is 28.84 inches. Not all of the precipitation made it into New Melones, because a lot of the precipitation came as snow rather than water inflow.
- Snowpack above New Melones has increased.
- Accumulated inflow for WY 2023 is 370 TAF. This is significantly more than half of the inflow at the same time in WY 2022 and is at 62 % of the entirety of WY 2022.
- On January 12, power generation was necessary to supplement other supplies that were unable to generate due to the storm.

Tulloch

- Tulloch had a significant amount of water from side flow that required releases to exceed base flow. This was necessary to keep Tulloch's elevation at its operation limit. When over 502 ft., they are considered out of range and close to spilling over the top of the dam.
- The average daily release out of Tulloch was 1,500 cfs with a peak of 3,000 cfs.
- To meet the winter base flow of 200 cfs at Goodwin Dam, releases from Tulloch are at approximately 200 cfs.
- On 12/18/22 a small amount of water was sent down the spillway because the power plant was offline doing maintenance.
- Side flows peaked at 10,000 cfs.

Goodwin

- Releases from Goodwin Dam had a high daily average during January because of higher-than-baseflow releases from Tulloch Dam due to inflows into Tulloch Reservoir.
- Current releases from Goodwin are at 400 cfs and may decrease to 200 cfs if the side flows into Tulloch decrease.

Forecast

- The February 90% exceedance, end of September storage will likely show an increase in storage.
- SRP requirements in February include a base flow of 200 cfs and a winter instability flow.
- With the high storm events, the Roe Island requirement in D-1641 may be triggered. This requires higher Delta Outflow and higher Vernalis Base Flows. If other tributaries on the San Joaquin River are unable to increase flows, New Melones will have to increase its flows to meet this requirement.

Comments/Questions:

- SWRCB asked if it will be necessary to increase flows from New Melones if the reservoirs above New Melones in the watershed start releasing more water for their own flood control?
 - Reclamation responded that they have no need to increase flows because New Melones still has plenty of storage space and will keep all the water until the flood conservation line is hit.
- NMFS asked to discuss the long-term storage plan during the next SWT meeting.
 - Reclamation responded that the Bulletin 120 Forecast will be ready to discuss during the February meeting.
 - SSJID will ask TriDam what their operating targets are for the spring months.
- SWRCB asked if the current releases are for operating requirements?
 - Reclamation responded that the recent releases from Tulloch are per Tulloch Reservoirs operating requirements.
- USFWS asked about the process for finalizing and distributing the Forecast to SWT before the meetings.
 - Reclamation responded that SWT often does not get the Forecast prior to the meetings because they are still being finalized, which is usually by the last week

of the month. It is dependent on the conversations necessary between the state and federal water projects.

- Reclamation also commented that although the Forecast is not shared, they verbally give updates during the SWT meeting. They are unsure if the official Forecast is available to the public. Reclamation will provide an update at the February meeting.
- CDFW commented that if the Forecasts are available to the public, they would appreciate receiving them even after the SWT meeting.

Water Temperature Updates

- Temperatures are suitable for incubation and spawning for salmon and steelhead.
- The Orange Blossom Bridge gauge was offline temporarily during the storms which may be causing inaccurate data.

Flow Planning

- Reclamation and NMFS have determined that because of the significant precipitation that required high releases and allowed for multiple variability events during January, the regulatory requirements for the Stepped Release Plan (SRP) have been met and no further winter instability flows (WIF) are required for January.
 - CDFW and SWRCB commented that they agree that the storms allowed for optimum flows and support Reclamation and NMFS' plan.
 - NMFS suggested including an explanation in the Operations Plan that identifies the original plan, real time operations based on the actual conditions in January, and then plans for scheduling the WIF in February.
 - USFWS commented that they would like the WIF in February to align with a storm event if possible.

Stanislaus River Forum (SRF) Call Review

- Fish Bio updated SRF that they are expected to receive an answer soon regarding funding availability for the Oakdale Rotary Screw Trap.

Fish Monitoring

- Adult salmon carcass surveys on the Stanislaus River were completed the week of 1/16/23, with a total of 1,100 fish tagged. With high flows and turbidity, the observations of Chinook salmon and steelhead have been low. The final carcass survey will be distributed the week of 1/23/23.
- The acoustic-tagged green sturgeon (tagged near Horseshoe Recreation Area between Oakdale and Knights Ferry) left the river at the beginning of the month and was detected at Antioch a week later.
- The weir did not sample for most of the first half of January. It is only designed to function up to 1,500 cfs and flows were over 4,000 cfs. There were a few adult Chinook

that made it up the river; however, no additional *O. mykiss* have been observed since the December SWT meeting.

- The Caswell Rotary Screw Traps were going to be installed in early January; however, because of high flows and turbidity, installation has been postponed until the week of 1/23/23.
- The Mossdale Trawl has caught Chinook fry as well as one spring-run Chinook that was released from the San Joaquin Project.

Restoration Project Updates

- USFWS collaborated with Caswell State Park on submitting an application to the CVPIA NOFO (Notice of Funding Opportunity) to create additional fish habitat within Caswell State Park and is currently under review.
- Grant funds from a previous CVPIA submission recently became available. They are finalizing designs and hoping to begin construction in summer 2023.
- The Buffington Project is in the design and permit phase, but they are going to need further funding.
- The Stanislaus Project Team is looking to expand membership and build out more of a watershed restoration coalition as well as a watershed specific group that will require the RCD to find funding for implementation. If interested in joining the group please reach out to JD Wikert, USFWS.

Questions/Comments

- NMFS asked CDFW what the current higher flows have done to the recent gravel augmentation project?
 - There has been some gravel that has moved around, formed new gravel bars, and has also moved downstream to create a gravel patch about a mile down the river.
 - USFWS commented that this is good to hear as this was the intention. It would be good to find some money to do an assessment to find out how much gravel moved and how much actually needs to be replaced in the canyon.
 - SWRCB commented that although the gravel had not moved much over the last couple years, based on these new flows, there will need to be new gravel added.

Progress Update on Proposed Action Elements

- No update.

Other Discussion Items

Curtailments

- Curtailments have all been lifted.

Annual Reporting

- No update.

Items to elevate to WOMT

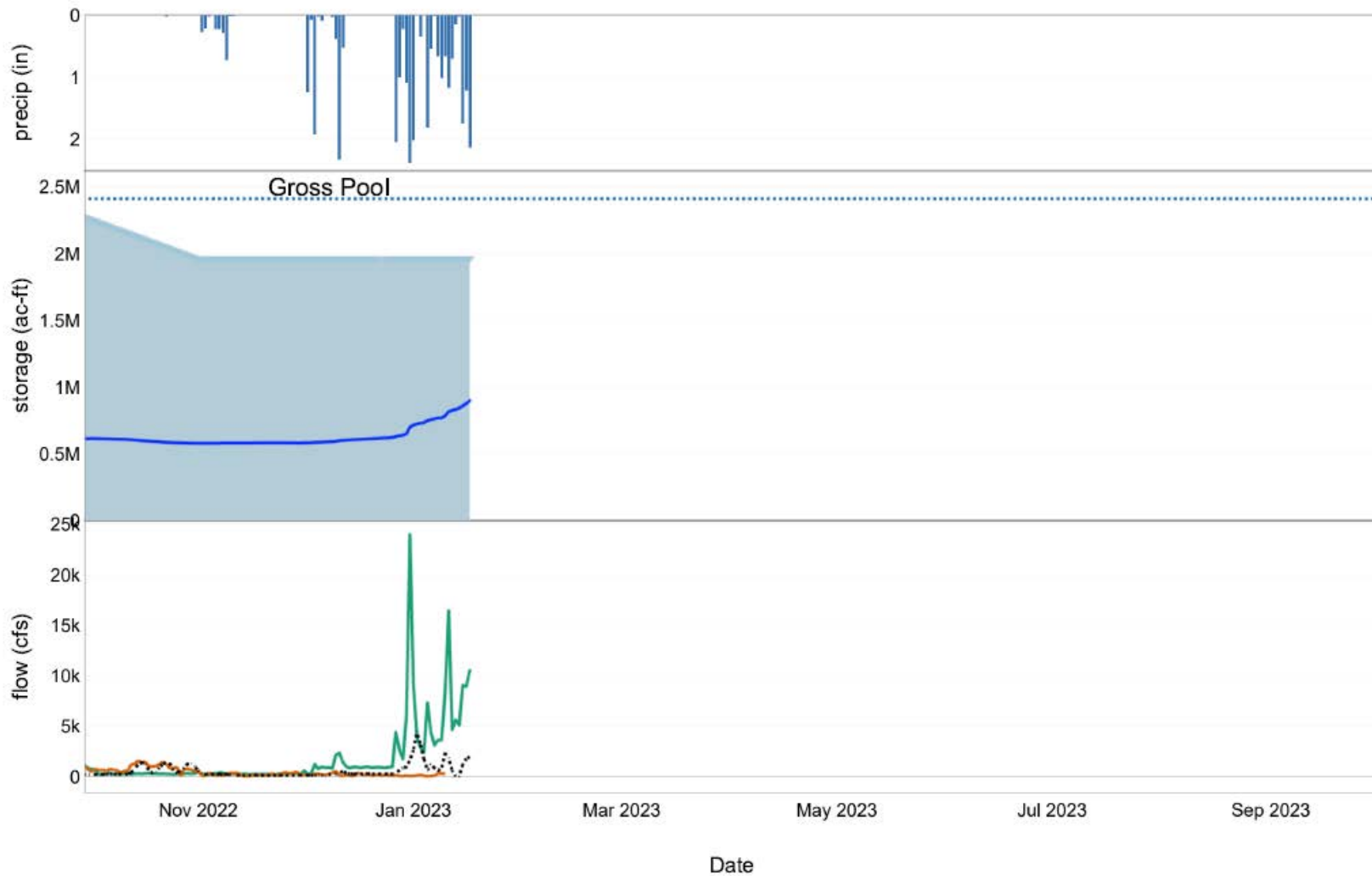
- No items for WOMT.

Next Meeting

Wednesday, February 15, 10:00 am –12:00 pm.

New Melones Dam & Lake - Stanislaus River Basin

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Tables for BDO

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

January 16, 2023

Run Date: January 01, 2022

Table 4. Reservoir Releases in Cubic Feet Per Second

Reservoir	Dam	WY 2020	WY 2021	15-Year Median
Trinity	Lewiston	305	296	304
Sacramento	Keswick	3,250	4,254	3,499
Feather	Oroville (SWP)	950	950	1,350
American	Nimbus	3,999	9,990	1,773
Stanislaus	Goodwin	202	1,900	277
San Joaquin	Friant	648	5,504	395

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	1,291	738	727	56
Shasta	4,552	2,483	1,552	2,358	95
Folsom	977	402	552	524	130
New Melones	2,420	1,300	972	903	69
Fed. San Luis	966	523	210	388	74
Total North CVP	11,363	5,999	4,024	4,900	82
Millerton	521	286	299	435	152
Oroville (SWP)	3,538	1,689	1,552	2,027	120

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	239	35	294	178	134
Shasta	1,459	818	1,700	1,174	124
Folsom	1,056	131	1,235	541	195
New Melones	370	N/A	433	199	186
Millerton	396	76	607	210	188

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	22.30	4.40	19.60	31.61 (61)	71	0.00
Sacramento at Shasta Dam	33.20	5.34	30.44	61.20 (66)	54	0.00
American at Blue Canyon	51.00	7.61	40.78	65.95 (47)	77	0.00
Stanislaus at New Melones	28.84	N/A	14.73	27.91 (44)	103	0.00
San Joaquin at Huntington LK	33.60	4.80	29.60	(48)	80	0.00

UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. BUREAU OF RECLAMATION-CENTRAL VALLEY PROJECT-CALIFORNIA

JANUARY 2023

NEW MELONES LAKE DAILY OPERATIONS

RUN DATE: 01/17/2023

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	NA	702.8	NA	NA	NA	NA	NA	NA	NA	NA
1	899.65	721.0	18.2	9,228	49	0	0	4	0.02	2.02
2	900.93	728.5	7.5	3,899	83	0	0	23	0.12	0.00
3	901.82	733.7	5.3	2,858	187	0	0	17	0.09	0.34
4	902.60	738.4	4.6	2,393	57	0	0	0	0.00	0.00
5	905.02	752.9	14.5	7,320	18	0	0	0	0.00	1.81
6	906.43	761.4	8.5	4,337	39	0	0	0	0.00	0.54
7	907.41	767.3	6.0	3,100	84	0	0	12	0.06	0.01
8	908.48	773.9	6.5	3,616	297	0	0	22	0.11	0.66
9	911.07	789.9	16.0	8,314	246	0	0	16	0.08	1.01
10	916.10	821.5	31.6	16,445	482	0	0	23	0.11	1.17
11	917.41	829.8	8.4	4,636	419	0	0	0	0.00	0.7
12	918.73	838.3	8.5	5,629	1,348	0	0	6	0.03	0.14
13	920.17	847.6	9.3	5,097	392	0	0	10	0.05	0.02
14	922.83	865.0	17.4	9,052	291	0	0	0	0.00	1.75
15	925.43	882.2	17.2	8,921	248	0	0	0	0.00	1.21
16	928.53	903.0	20.8	10,529	36	0	0	9	0.04	2.14
TOTALS	N/A	N/A	200.3	105,371	4,276	0	0	142	0.71	13.52
ACRE-FEET	N/A	N/A	200,300	209,003	8,481	0	0	282	N/A	N/A

COMMENTS:

* COMPUTED INFLOW IS THE SUM OF CHANGE IN STORAGE, RELEASES, PUMPING AND EVAPORATION.

SUMMARY PRECIPITATION

TIME	PRECIPITATION
THIS MONTH	13.52
OCT 1, 2021 TO DATE	28.84

SUMMARY: RELEASE (ACRE FEET)

CATEGORY	RELEASE ACRE-FEET
POWER	8,481
SPILL	0
OUTLET	0
TOTAL	8,481

UNITED STATES DEPARTMENT OF THE INTERIOR

U.S. BUREAU OF RECLAMATION-CENTRAL VALLEY PROJECT-CALIFORNIA

DECEMBER 2022

NEW MELONES LAKE DAILY OPERATIONS

RUN DATE: 01/03/2023

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	586.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	875.26	586.7	0.07	583	232	0	0	13	0.08	0.00
2	865.32	587.0	0.3	232	73	0	0	3	0.02	1.24
3	875.47	587.8	0.8	557	159	0	0	8	0.05	0.07
4	875.85	589.8	2.0	1,222	225	0	0	8	0.05	1.92
5	876.04	590.7	1.0	760	258	0	0	7	0.04	0.02
6	876.32	592.2	1.5	935	197	0	0	5	0.03	0.08
7	876.60	593.6	1.5	879	138	0	0	8	0.05	0.00
8	876.84	594.9	1.2	878	240	0	0	10	0.06	0.00
9	877.02	595.8	0.9	798	319	0	0	8	0.05	0.03
10	877.61	589.9	3.1	2,111	556	0	0	3	0.02	0.38
11	878.46	603.3	4.4	2,333	76	0	0	14	0.08	2.33
12	878.97	606.0	2.7	1,410	58	0	0	3	0.02	0.52
13	879.28	607.7	1.6	970	144	0	0	2	0.01	0.00
14	879.56	609.1	1.5	833	82	0	0	7	0.04	0.00
15	879.90	610.9	1.8	934	23	0	0	7	0.04	0.00
16	880.11	612.0	1.1	917	350	0	0	7	0.04	0.00
17	880.32	613.2	1.1	847	273	0	0	12	0.07	0.00
18	880.63	614.8	1.6	918	82	0	0	7	0.04	0.00
19	880.85	616.0	1.2	961	366	0	0	7	0.04	0.00
20	881.14	617.5	1.5	879	97	0	0	5	0.03	0.00
21	881.43	619.1	1.5	884	99	0	0	5	0.03	0.00
22	881.68	620.4	1.3	906	227	0	0	7	0.04	0.00
23	881.99	622.0	1.7	887	49	0	0	5	0.03	0.00
24	882.23	623.3	1.3	848	193	0	0	7	0.04	0.00
25	882.52	624.9	1.6	911	116	0	0	12	0.07	0.00
26	882.85	626.6	1.8	946	49	0	0	5	0.03	0.00
27	884.41	635.1	8.4	4,401	153	0	0	7	0.04	2.05
28	885.37	640.3	5.2	2,667	38	0	0	2	0.01	1.00
29	885.98	643.6	3.3	1,708	28	0	0	5	0.03	0.22
30	888.10	655.2	11.6	5,957	84	0	0	4	0.02	1.09
31	896.52	702.8	47.5	24,001	41	0	0	0	0.00	2.39
TOTALS	N/A	N/A	116.7	64,073	5,025	0	0	203	1.20	13.34
ACRE-FEET	N/A	N/A	116,700	127,089	9,967	0	0	403	N/A	N/A

COMMENTS:

* COMPUTED INFLOW IS THE SUM OF THE CHANGE IN STORAGE, RELEASES, PUMPING AND EVAPORATION.

SUMMARY: RELEASE (ACRE-FEET)

CATEGORY	RELEASE (ACRE FEET)
POWER	9,967
SPILL	0
OUTLET	0
TOTAL	9,967

SUMMARY PRECIPITATION

TIME	PRECIPITATION
THIS MONTH	13.34
OCT 1, 2021 TO DATE	15.32

UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. BUREAU OF RECLAMATION- CENTRAL VALLEY PROJECT- CALIFORNIA

JANUARY 2023

TULLOCH RESERVOIR DAILY OPERATIONS

RUN DATE: 01/17/2023

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. CFS (1)
N/A	N/A	62,620	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	503.69	59,397	-3,223	1,390	49	2,462	0	552	1
2	499.79	55,079	-4,318	326	83	2,231	0	368	4
3	498.54	53,753	-1,326	391	187	1,057	0	0	3
4	498.25	53,448	-305	252	57	406	0	0	0
5	500.76	56,127	2,679	1,758	18	407	0	0	0
6	501.02	56,409	282	550	39	408	0	0	0
7	500.82	56,192	-217	301	84	408	0	0	2
8	501.32	56,740	548	0	297	657	0	0	0
9	500.55	55,899	-841	1,905	246	1,659	447	220	3
10	499.79	55,079	-820	1,778	482	1,556	406	225	4
11	499.97	55,271	192	1,048	419	949	0	2	0
12	501.30	57,826	2,555	1,692	1,348	403	0	0	1
13	502.55	58,106	280	705	392	562	0	0	2
14	502.49	58,039	-67	1,912	291	1,554	0	392	0
15	501.68	57,137	-902	1,481	248	1,512	0	383	0
16	503.76	59,476	2,339	3,009	36	1,512	0	317	1
TOTALS	N/A	N/A	-3,144	18,498	4,276	17,785	853	2,359	21
ACRE-FEET	N/A	N/A	-3,144	36,691	8,481	35,275	1,692	4,679	42

*COMPUTED INFLOW IS SUM OF CHANGE IN STORAGE, RELEASES, AND EVAPORATION.

* (1) EVAPORATION RECORDS TAKEN FROM NEW MELONES PAN.

SUMMARY: RELEASE (ACRE FEET)

CATEGORY	RELEASE (ACRE-FEET)
POWER	35,275
SPILL	1,692
OUTLET	4,679
TOTAL	41,646

UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. BUREAU OF RECLAMATION-CENTRAL VALLEY PROJECT-CALIFORNIA

DECEMBER 2022

TULLOCH RESERVOIR DAILY OPERATIONS

RUN DATE: 01/04/2023

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. CFS (1)
N/A	N/A	54,823	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	499.68	54,962	139	295	232	222	0	0	3
2	499.40	54,663	-299	68	73	218	0	0	1
3	499.42	54,684	21	231	159	218	0	0	2
4	499.80	55,090	406	425	225	218	0	0	2
5	499.91	55,207	117	278	258	218	0	0	1
6	499.88	55,175	-32	198	197	213	0	0	1
7	499.74	55,026	1-49	143	138	216	0	0	2
8	499.76	55,047	21	233	240	220	0	0	2
9	499.95	55,250	203	323	319	219	0	0	2
10	501.83	57,302	2,052	1,255	556	216	0	3	1
11	502.13	57,636	334	389	76	218	0	0	3
12	501.97	57,457	-179	128	58	217	0	0	1
13	501.88	57,358	-99	165	144	215	0	0	0
14	501.67	57,126	-232	100	82	216	0	0	1
15	501.32	56,740	-386	23	23	217	0	0	1
16	501.57	57,016	276	357	350	217	0	0	1
17	501.66	57,115	99	170	273	217	0	0	3
18	501.44	56,872	-243	94	82	135	81	0	1
19	501.72	57,181	309	373	366	216	0	0	1
20	501.50	56,939	-242	96	97	217	0	0	1
21	501.29	56,707	-232	101	99	217	0	0	1
22	501.31	56,729	22	229	227	217	0	0	1
23	500.99	56,376	-353	40	49	217	0	0	1
24	500.94	56,322	-54	190	193	216	0	0	1
25	500.75	56,116	-206	116	116	218	0	0	2
26	500.44	55,780	-336	50	49	218	0	0	1
27	502.08	57,580	1,800	1,200	153	292	0	0	1
28	501.53	56,972	-608	275	38	582	0	0	0
29	500.39	55,726	-1,246	158	28	785	0	0	1
30	501.74	57,203	1,477	1,667	84	921	0	0	1
31	506.45	62,620	5,417	4,380	41	14,90	0	0	0
TOTALS	NA	NA	7,797	13,850	5,025	9,636	91	152	40
ACRE-FEET	NA	NA	7,797	27,471	9,967	19,113	180	301	79

COMMENTS:

* COMPUTED INFLOW IS THE SUM OF CHANGE IN STORAGE, RELEASES AND EVAPORATION.

*EVAPORATION RECORDS TAKEN FROM NEW MELONES PAN.

SUMMARY: RELEASE (ACRE FEET)

CATEGORY	RELEASE ACRE-FEET
POWER	19,113
SPILL	180
OUTLET	301
TOTAL	19,595

OAKDALE IRRIGATION DISTRICT
SOUTH SAN JOAQUIN IRRIGATION DISTRICT
TRI DAMS PROJECT-CALIFORNIA

JANUARY 2022

GOODWIN RESERVOIR DAILY OPERATIONS

RUN DATE: 01/17/2022

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	547	N/A	N/A	N/A	N/A	N/A	N/A
1	361.13	616	69	3,014	0	3,123	0	0
2	360.58	578	-38	2,499	0	2,559	0	0
3	359.92	531	47	1,057	0	1,085	0	0
4	359.86	527	4	406	0	417	0	0
5	359.89	529	2	407	0	443	0	0
6	359.89	529	0	408	0	425	0	0
7	359.89	529	0	408	0	418	0	0
8	360.46	569	40	657	0	657	0	0
9	360.92	601	32	2,326	0	2,367	0	0
10	360.55	576	-25	2,187	0	2,230	0	0
11	359.89	529	-47	951	0	992	0	0
12	359.89	529	0	403	0	408	0	0
13	360.39	564	35	562	0	549	0	0
14	360.74	589	25	1,946	0	1,981	0	0
15	360.58	578	-11	1,936	0	1,987	0	0
16	360.80	593	15	1,829	0	1,900	0	0
TOTALS	N/A	N/A	46	20,996	0	21,541	0	0
ACRE-FEET	N/A	N/A	46	41,646	0	42,727	0	0

JOINT MAIN OPERATED BY SSJID AND OID.

SUMMARY: RELEASE (ACRE FEET)

CATEGORY	ACRE-FEET
JOINT MAIN CANAL	0
SOUTH MAIN CANAL	0
OUTLET	0
SPILL	42,727
TOTAL	42726.5735

OAKDALE IRRIGATION DISTRICT
SOUTH SAN JOAQUIN IRRIGATION DISTRICT
TRI-DAMS PROJECT-CALIFORNIA

DECEMBER 2022

GOODWIN RESERVOIR DAILY OPERATIONS

RUN DATE: 01/05/2022

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	519	N/A	N/A	N/A	N/A	N/A	N/A
1	359.74	519	0	222	0	211	0	0
2	359.74	519	0	218	0	203	0	0
3	359.76	520	1	218	0	207	0	0
4	359.74	519	-1	218	0	219	0	0
5	359.74	520	0	218	0	209	0	0
6	359.74	519	0	213	0	203	0	0
7	359.74	519	0	216	0	201	0	0
8	359.76	519	1	220	0	202	0	0
9	259.76	519	0	219	0	204	0	0
10	359.77	520	1	219	0	228	0	0
11	359.76	521	-1	218	0	213	0	0
12	359.74	520	-1	217	0	206	0	0
13	359.74	519	0	215	0	200	0	0
14	359.74	519	0	216	0	202	0	0
15	359.74	519	0	217	0	202	0	0
16	359.74	519	0	217	0	202	0	0
17	359.74	519	0	217	0	202	0	0
18	359.76	520	1	216	0	202	0	0
19	359.76	520	0	216	0	202	0	0
20	359.76	520	0	217	0	202	0	0
21	359.77	521	1	217	0	202	0	0
22	359..77	521	0	217	0	202	0	0
23	359.76	520	-1	217	0	203	0	0
24	359.76	520	0	216	0	201	0	0
25	359.76	520	0	218	0	203	0	0
26	359.77	521	1	218	0	203	0	0
27	359.98	536	15	292	0	301	0	0
28	360.11	545	9	582	0	570	0	0
29	360.21	552	7	785	0	770	0	0
30	360.23	553	1	921	0	934	0	0
31	360.14	547	-6	1,649	0	1,724	0	0
TOTALS	N/A	N/A	28	9,879	0	9,633	0	0
ACRE-FEET	N/A	N/A	28	19,595	0	19,107	0	0

JOINT MAIN OPERATED BY SSJID AND OID.

SUMMARY: RELEASE (ACRE FEET)

CATEGORY	ACRE-FEET
JOINT MAIN CANAL	0
SOUTH MAIN CANAL	0
OUTLET	0
SPILL	19,107
TOTAL	19107.0555

January 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.

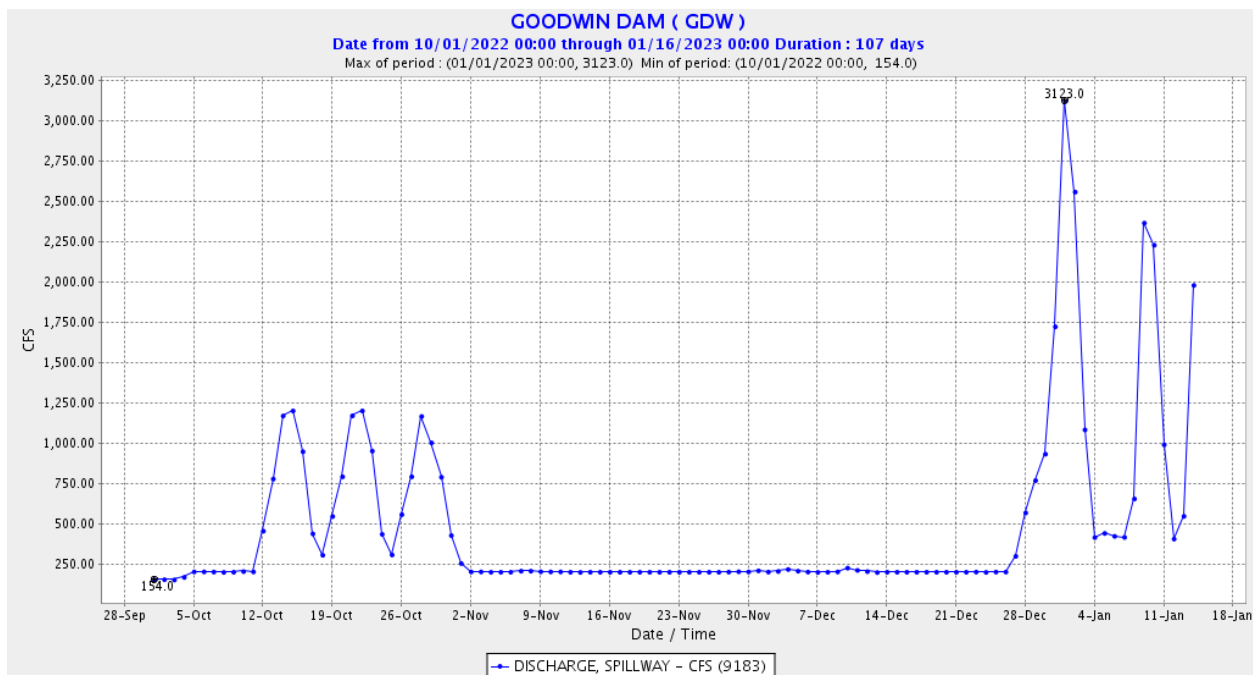


Figure 1. Goodwin (daily) releases to the Stanislaus River since October 1, 2022. Data from GDW station on CDEC.

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 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 July 1, 2022 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 March 1, 2022 are shown below at Vernalis (Figure 5). Current-year water temperatures are plotted along with historical temperatures for Orange Blossom Bridge (Figure 6),

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>

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.

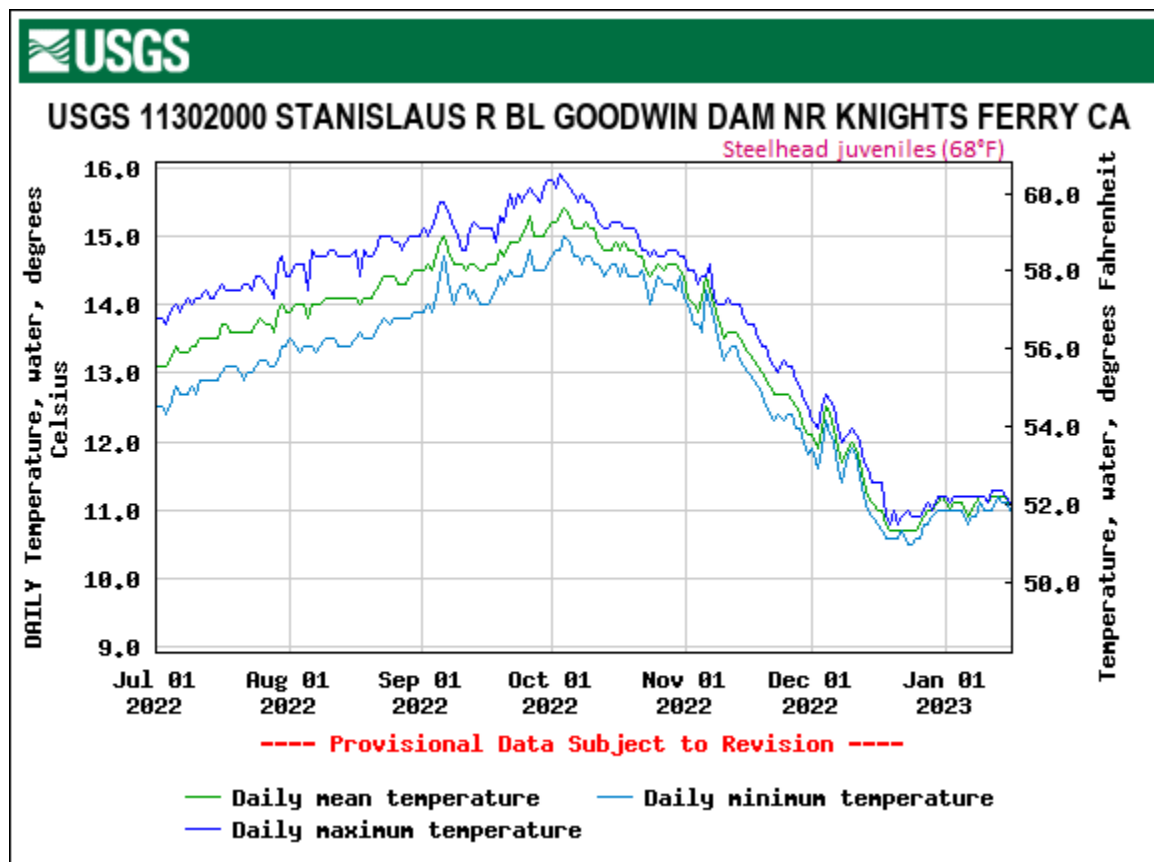


Figure 2. Daily water temperatures on the Stanislaus River upstream of Knights Ferry since July 1, 2022. Data from USGS gage 11302000 on NWIS; temperature threshold reference line added by SWT.

Chart: Vertical axis shows hourly water temperature (in Fahrenheit degrees) at Orange Blossom Bridge on the Stanislaus River. The horizontal axis shows date from 7-1-2022 through 1-16-23. Hourly water temperatures since 7-1-22 have ranged between approximately 48 and 59.4 degrees Fahrenheit. For more information, please call (916) 414-2400.

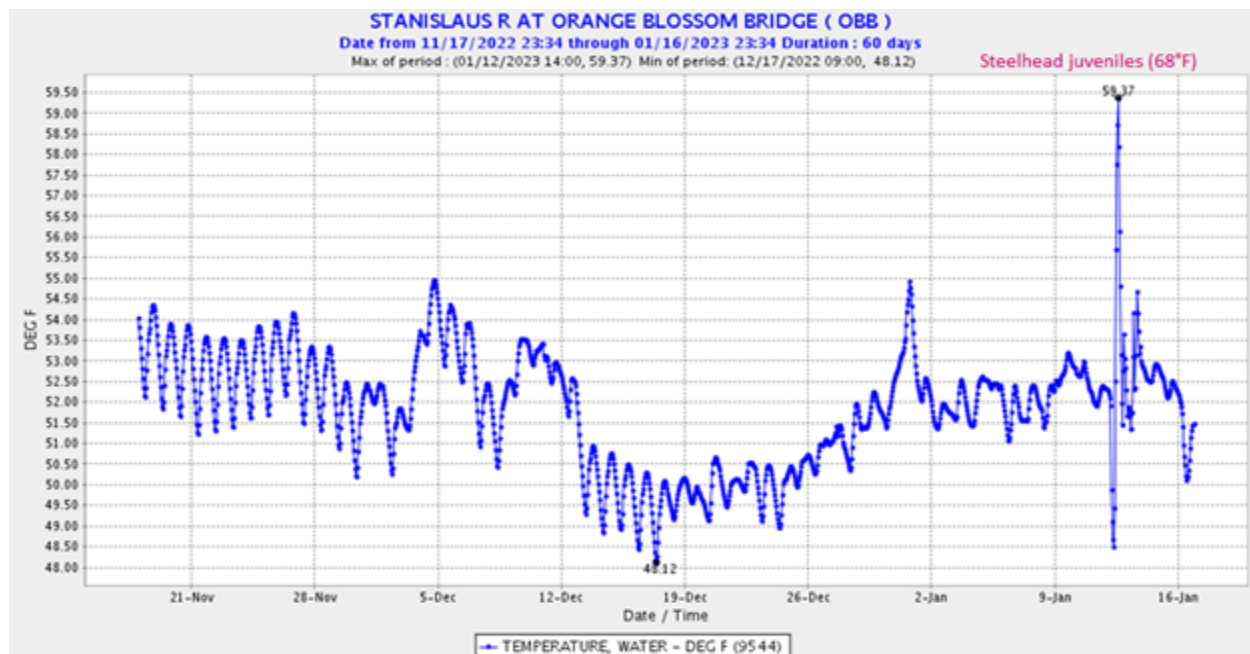


Figure 3. Stanislaus (hourly) water temperatures at Orange Blossom Bridge since November 17, 2022. Data from OBB station on CDEC.

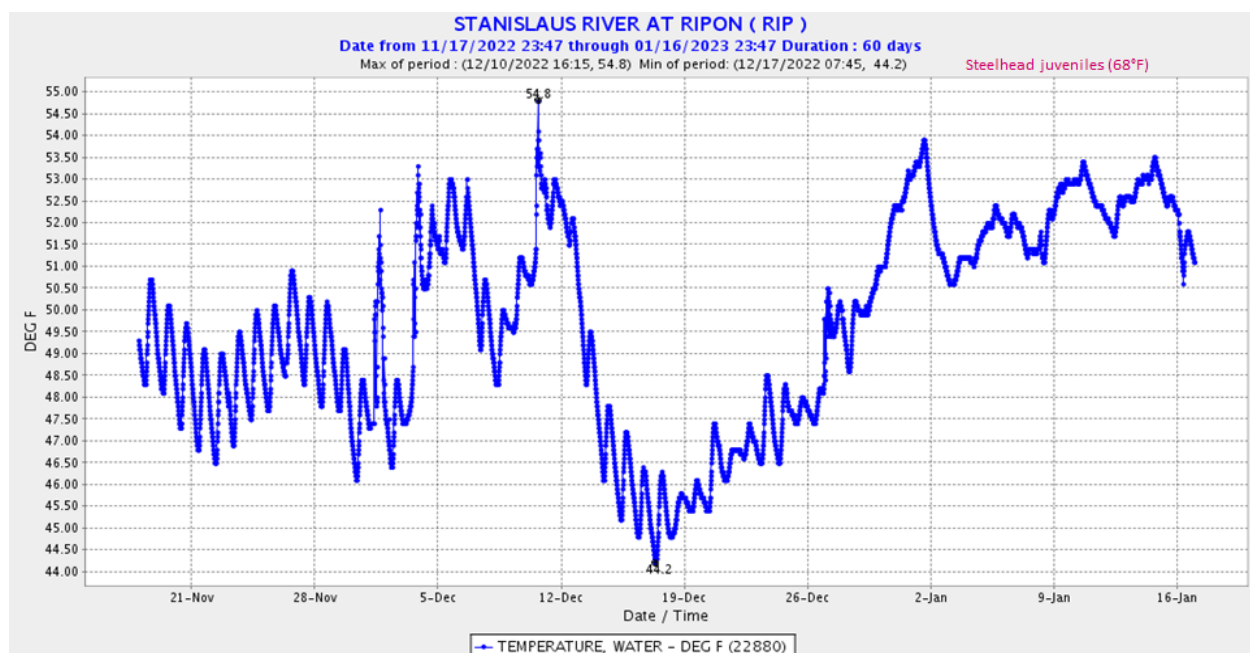


Figure 4. Stanislaus (15-minute) water temperatures at Ripon since November 17, 2022. Data from RIP station on CDEC.

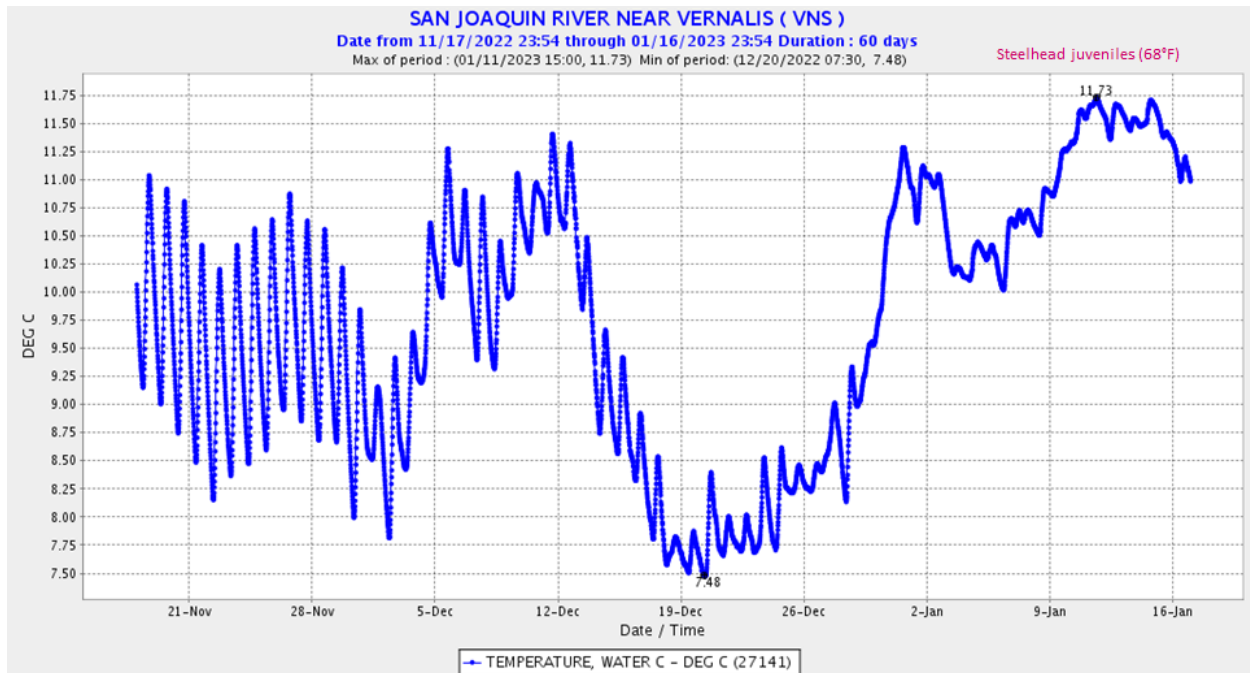


Figure 5. San Joaquin River (15-minute) water temperatures at Vernalis since November 17, 2022. Data from VNS station on CDEC. Note that, unlike in the previous figures, temperature is reported in degrees Celsius. 8°C=46.4°F; 10°C=50°F; 12°C=53.6°F; 14°C=57.2°F; 16°C=60.8°F; 18°C=64.4°F; 20°C=68.0°F; 22°C=71.6°F; 24°C=75.2°F; 26°C=78.8°F; 28°C=82.4°F.

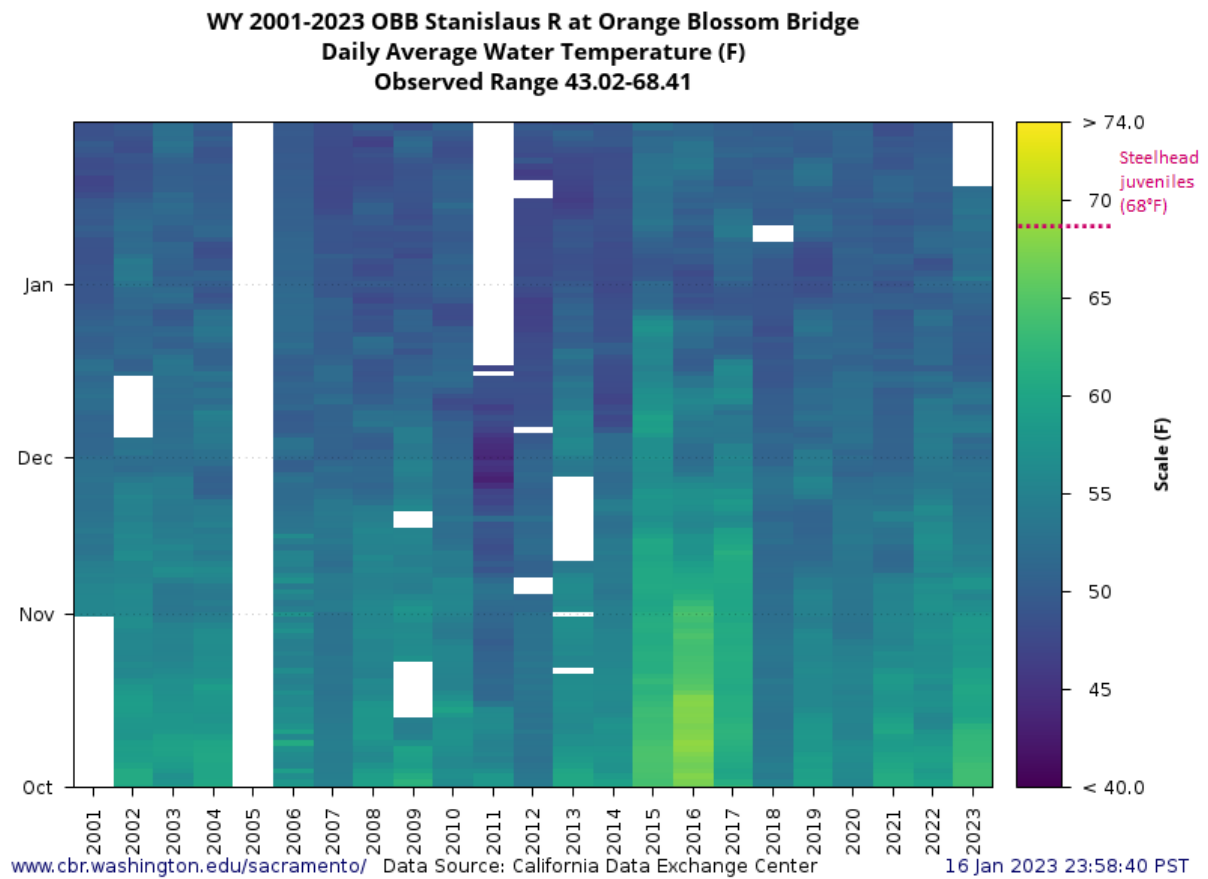


Figure 6. Stanislaus River water temperatures at Orange Blossom Bridge for October through December from WY 2001 to present. Data from SacPAS; temperature threshold reference lines added by SWT. http://www.cbr.washington.edu/sacramento/data/query_river_allyears.html

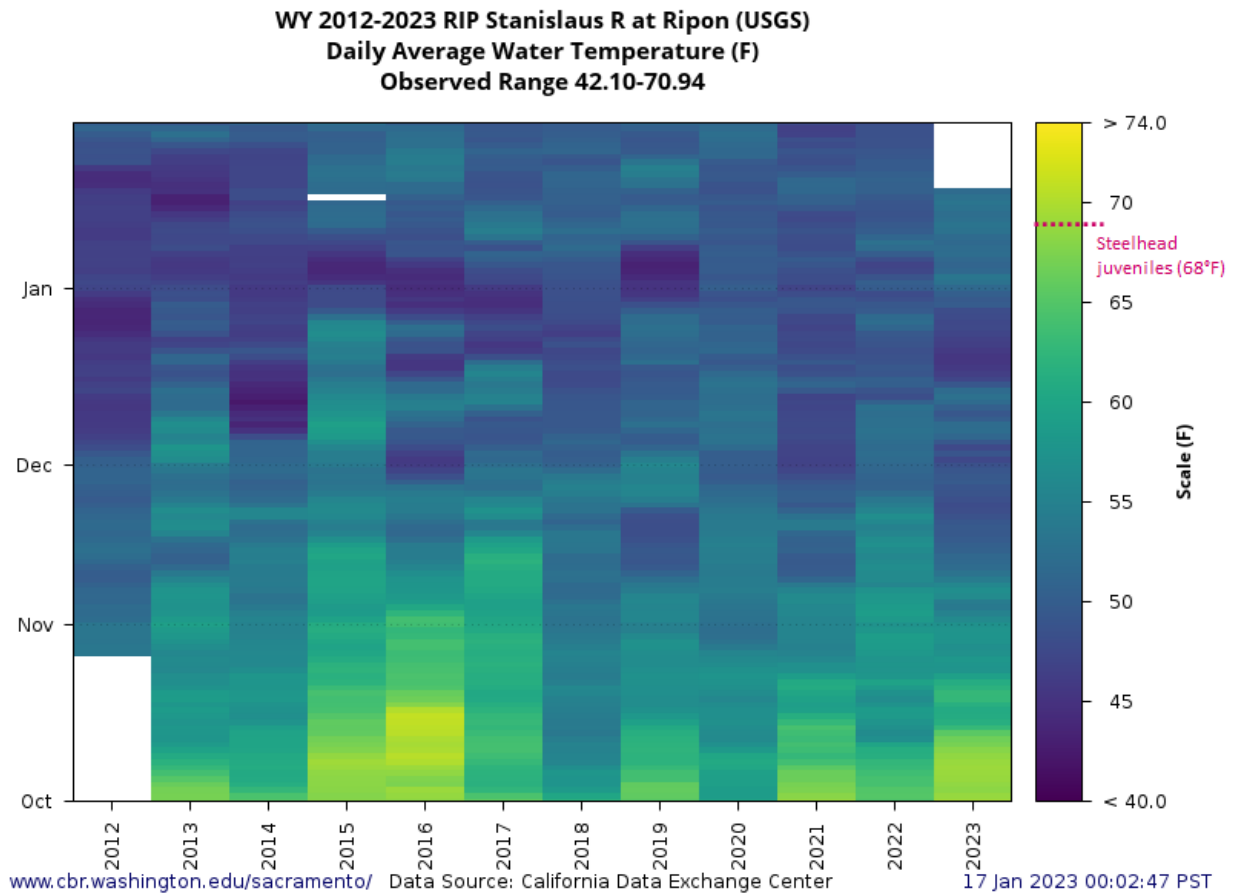


Figure 7. Stanislaus River water temperatures at Ripon for October through January from Water Year 2012 to present. Figure from SacPAS using RIP station data from CDEC; temperature threshold reference line added by SWT.

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

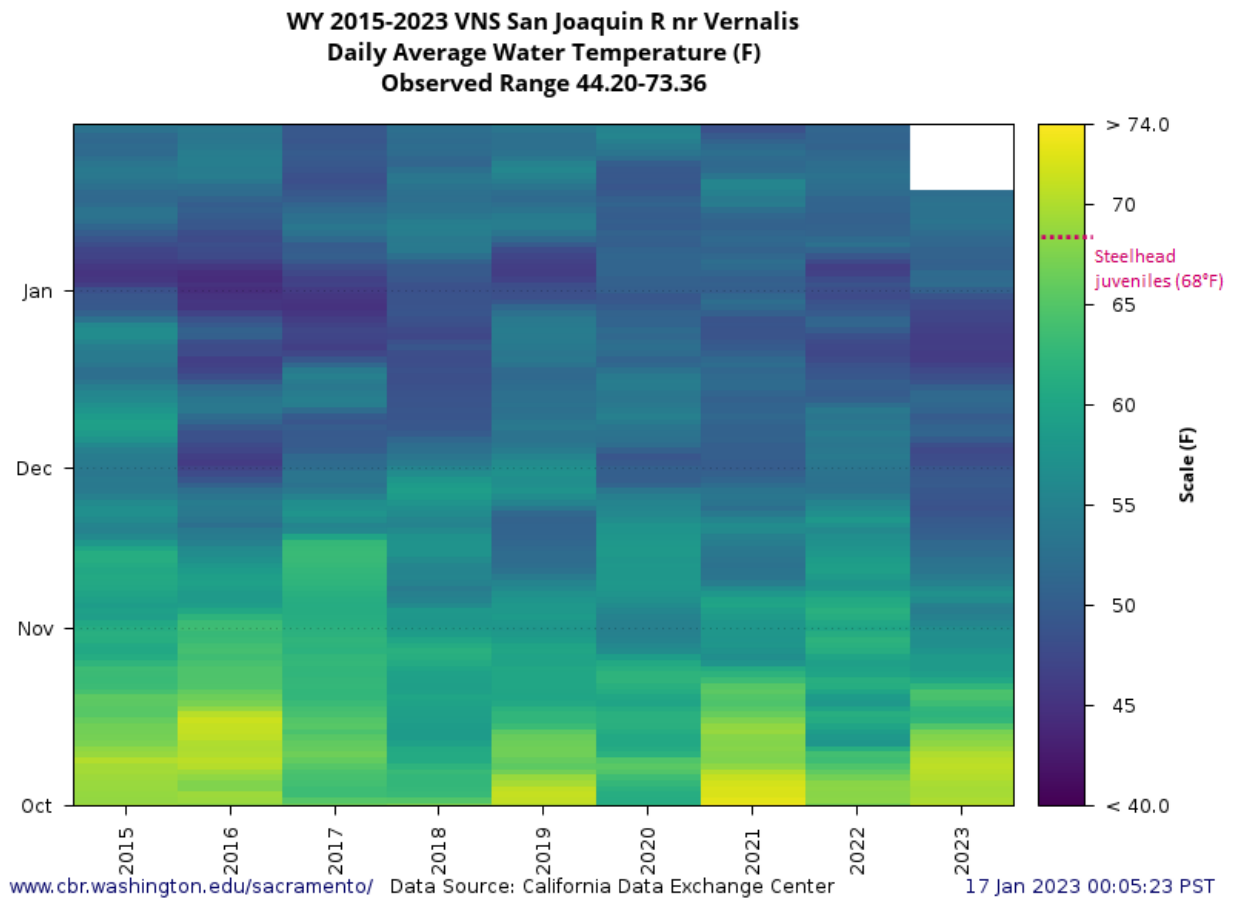


Figure 8. San Joaquin River water temperatures at Vernalis for October through January from Water Year 2015 to present. Figure from SacPAS using VNS station data from CDEC; temperature threshold reference line added by SWT.

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

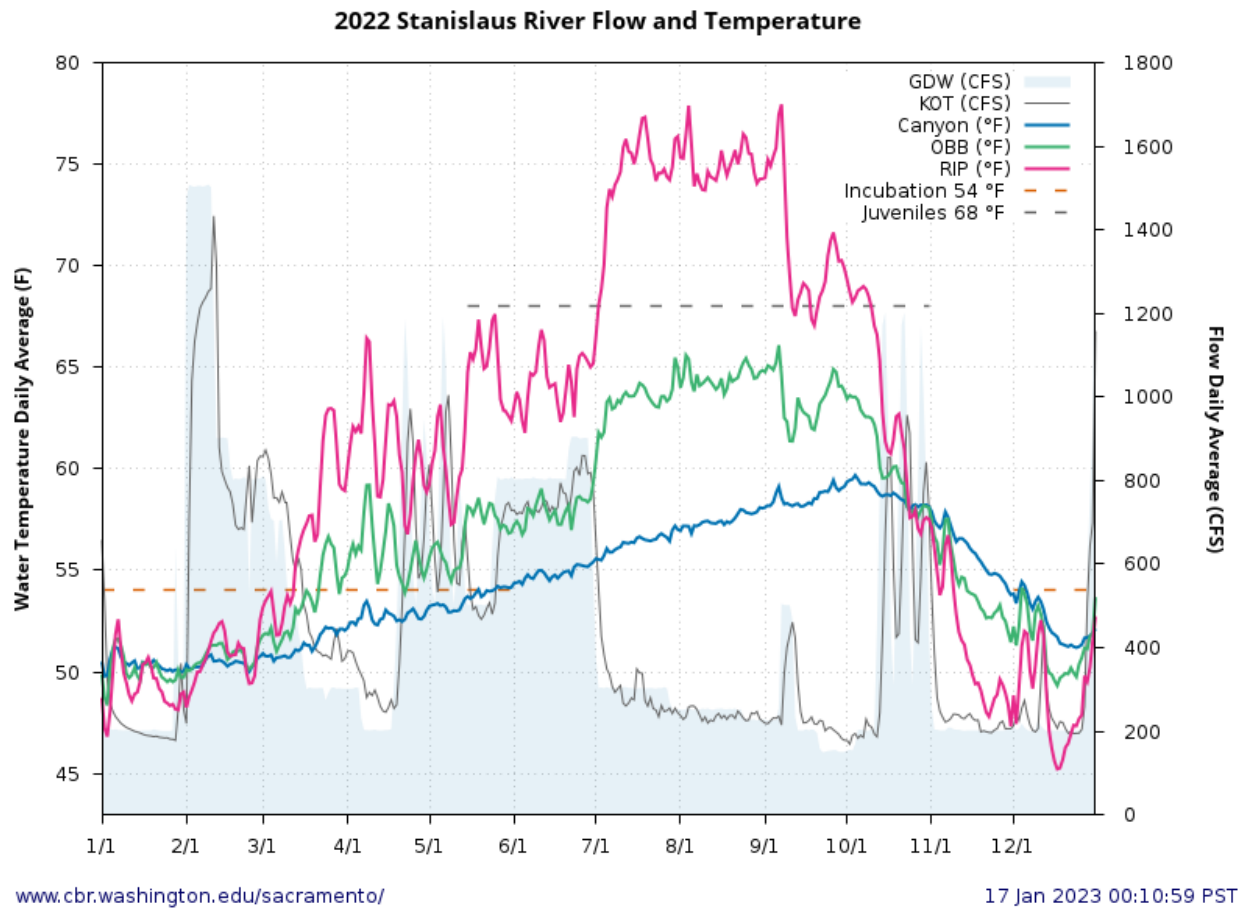


Figure 9. Stanislaus River flow and water temperatures from January 1, 2022 to December 31, 2022. Data (including temperature threshold reference lines) from SacPAS: http://www.cbr.washington.edu/sacramento/data/tc_stanislaus.html

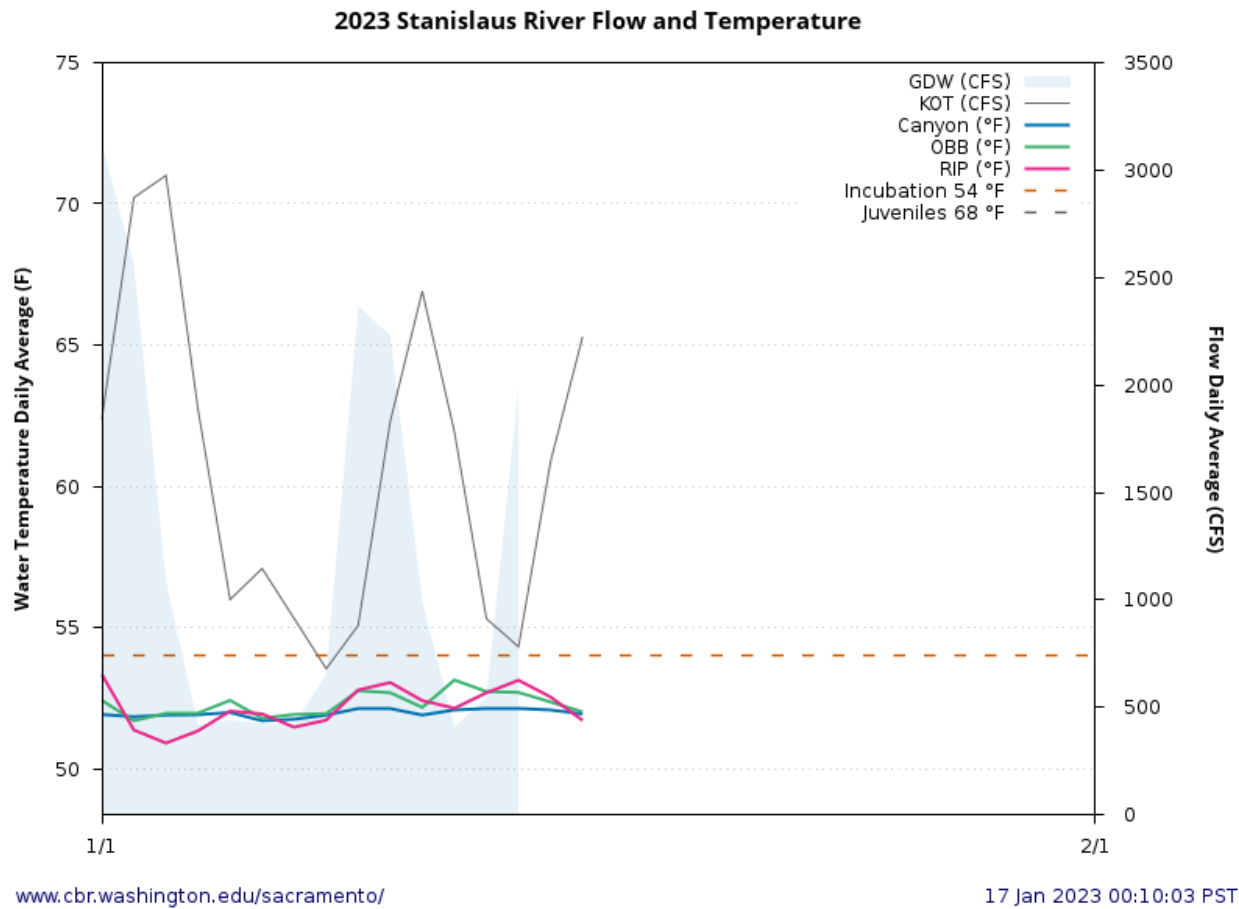


Figure 10. Stanislaus River flow and water temperatures from January 1, 2023, to present. Data (including temperature threshold reference lines) from SacPAS:
http://www.cbr.washington.edu/sacramento/data/tc_stanislaus.html

Update on Fish Monitoring (Adults)

Chinook carcass and redd surveys

Annual Escapement Surveys complete, estimates are in progress.

Steelhead redd surveys

Began in January but high turbidity and high flows have made surveys difficult, no data available at this time

Weir

Fishbio installed the weir near Riverbank and began monitoring for upstream passage of adult salmonids on September 15, 2022. The cumulative net upstream passage through January 12, 2023 is 3,624 Chinook salmon (an additional 120 since the 3,504 Chinook reported in the December handout). Twenty-three percent of the observed Chinook were ad-clipped, indicating a hatchery origin. Two *Oncorhynchus mykiss* have been observed (one each on October 20 and December 5; none since last month's report). Both *O. mykiss* observed were greater than 16" (indicating possible anadromy) and ad-clipped (indicating a hatchery origin). Data highlights provided by Fishbio on January 13, 2023 in their "Stanislaus River Weir Update through 1/12/23" are provided below in Figure 10 and Figure 11.

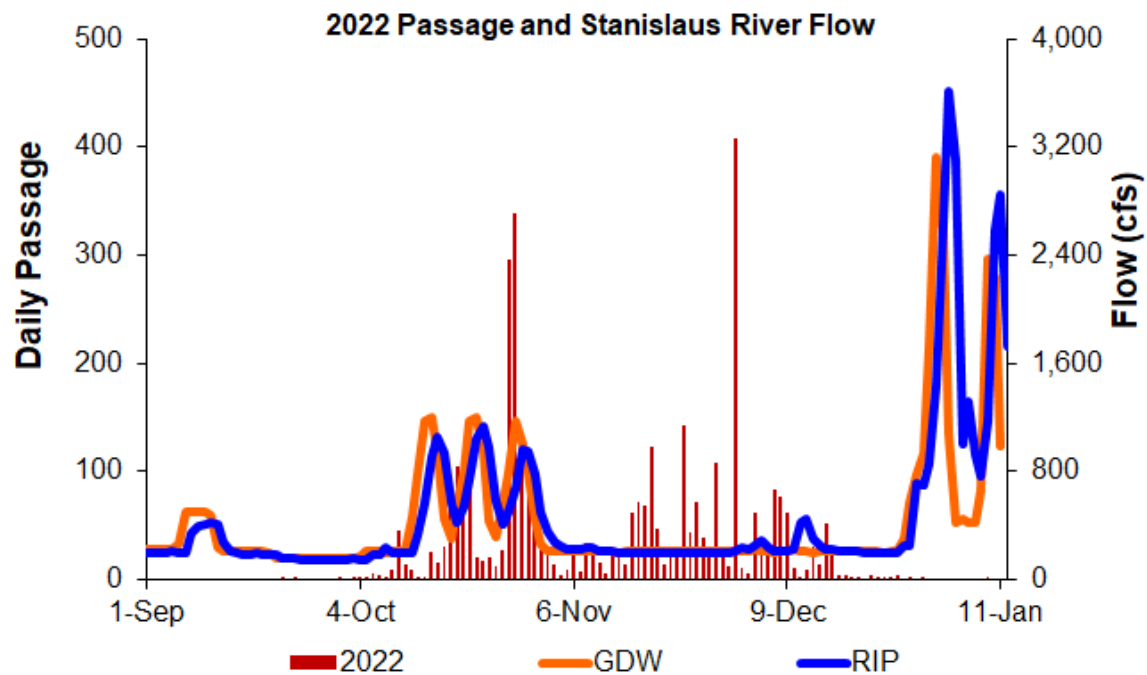


Figure 11. Daily Chinook salmon passage through January 12, 2023, at the Stanislaus River weir near Riverbank. *Data courtesy of Fishbio.*

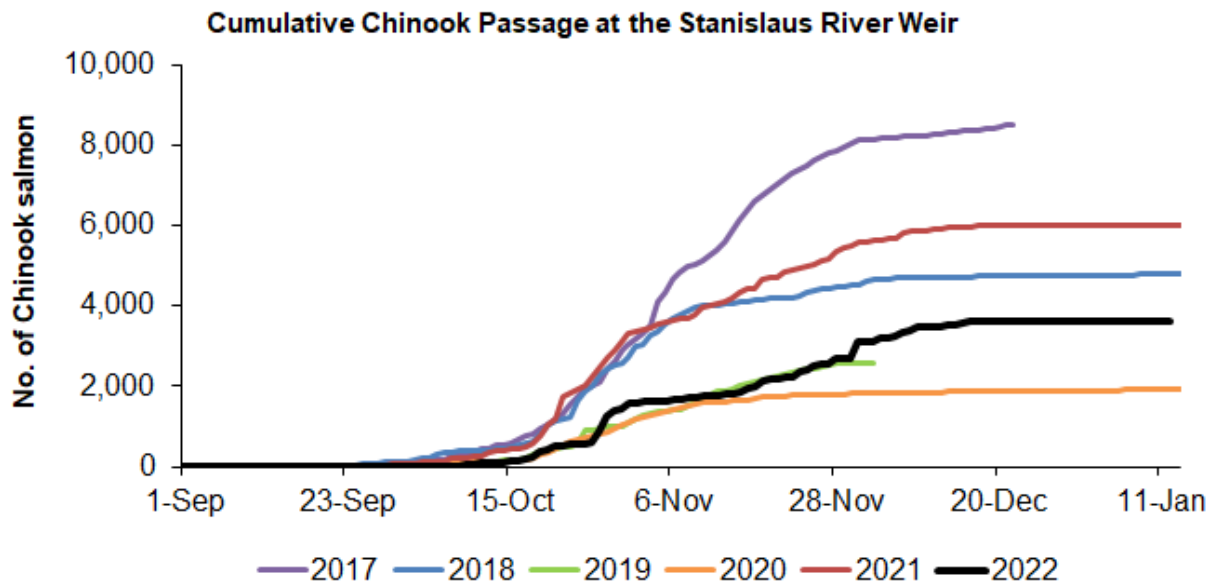


Figure 12. Cumulative Chinook salmon passage in the current year through January 12, 2023, at the Stanislaus River weir near Riverbank, along with cumulative passage for the previous five years. *Data courtesy of Fishbio.*

Update on Fish Monitoring (Juveniles)

Mossdale Trawl

1/3/23-Captured 1 CHN (FL 190) with ad-clip and PIT tag, determined to be a Spring Run from the SJRRP

Fry catch

Date	Catch
1/3/23	2 CHN (fry)
1/4/23	1 CHN (fry)
1/6/23	1 CHN (fry)

Rotary Screw Traps

Rotary screw trapping at Oakdale and Caswell for the 2022/2023 outmigration season (for monitoring of outmigrating juvenile salmonids) has not yet started. The rotary screw traps at Oakdale may begin sampling in February 2023 if funding is secured. The rotary screw traps at Caswell will likely be installed and begin sampling the week of January 23rd; plans to start sampling in early January were postponed due to high flows and debris loads in the river due to the recent storms.

Green Sturgeon Update

The Green Sturgeon has moved from the pool it was tagged in. It was detected at the weir on 1/1/23, and Antioch on 1/8/23