



— 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, February 16, 2022

Agenda

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

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

- a. Spawning and rearing habitat restoration
- b. Temperature management study
- c. Yellow-bellied cuckoo survey

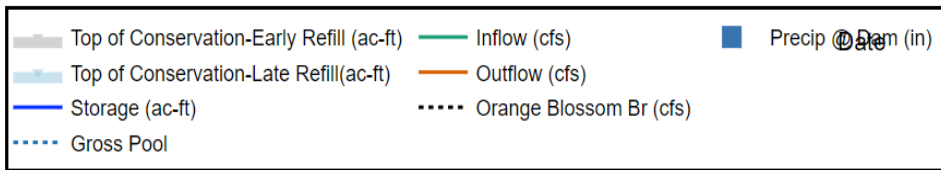
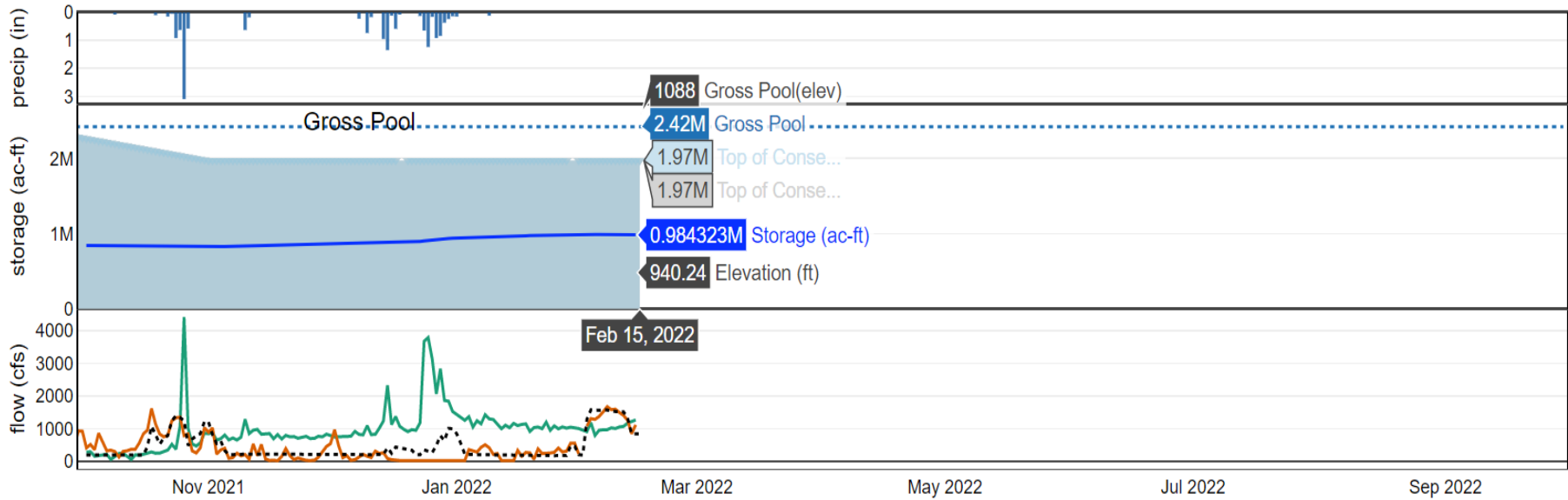
11. Other Discussion Items

- a. Curtailments
- b. Annual reporting check-in
- c. Revise Stanislaus fish conditions outlined in Ops Outlook
- d. Items to elevate to WOMT

12. Review Action Items

13. Next Meeting: Wednesday, March 16, 2022 (10am-12pm)

New Melones Dam & Lake - Stanislaus River Basin
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UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. BUREAU OF RECLAMATION-CENTRAL VALLEY PROJECT-CALIFORNIA

DAILY CVP WATER SUPPLY REPORT

JANUARY 17, 2022

RUN DATE: January 18, 2022

TABLE 1. RESERVOIR RELEASES IN CUBIC FEET/SECOND

RESERVOIR	DAM	WY 2021	WY 2022	15 YR MEDIAN
TRINITY	LEWISTON	312	311	306
SACRAMENTO	KESWICK	3,265	3,284	3,307
FEATHER	OROVILLE (SWP)	1,250	3,500	1,750
AMERICAN	NIMBUS	978	2,006	1,751
STANISLAUS	GOODWIN	601	903	353
SAN JOAQUIN	FRIANT	300	0	300

TABLE 2. STORAGE IN MAJOR RESERVOIRS IN THOUSANDS OF ACRE-FEET

RESERVOIR	CAPACITY	15 YR AVG	WY 2021	WY 2022	% O 15YR AVG
TRINITY	2,448	1,440	1,264	778	54
SHASTA	4,552	2,805	2,219	1,664	59
FOLSOM	977	462	311	532	115
NEW MELONES	2,420	1,400	1,555	984	70
FED. SAN LUIS	966	623	450	332	53
TOTAL NORTH CVP	11,363	6,730	5,799	4,290	64
MILLERTON	520	267	161	0	0
OROVILLE (SWP)	3,538	1,859	1,298	1,650	89

TABLE 3. ACCUMULATED INFLOW FOR WATER YEAR TO DATE IN THOUSANDS OF ACRE-FEET

RESERVOIR	CURRENT WY 2022	WY 1977	WY 1983	15 YRAVG	% O 15 YR AVG
TRINITY	230	48	605	294	78
SHASTA	1,503	1,034	3,486	1,770	85
FOLSOM	734	146	1,977	768	96
NEW MELONES	264	N/A	671	271	98
MILLERTON	265	91	985	272	97

TABLE 4. ACCUMULATED PRECIPITATION FOR WATER YEAR TO DATE IN INCHES

RESERVOIR	CURRENT WY 2022	WY 1997	WY 1983	AVG (IN YRS)	% OF AVG	LAST 24 HRS
TRINITY AT FISH HATCHERY	13.76	4.40	19.70	15.51 (60)	89	0.00
SACRAMENTO AT SHASTA DAM	34.90	5.34	30.56	27.79 (65)	126	0.00
AMERICAN AT BLUE CANYON	48.00	7.61	41.05	29.69 (47)	162	0.00
STANISLAUS AT NEW MELONES	15.64	n/a	14.75	11.59 (44)	135	0.00
SAN JOAQUIN AT HUNTINGTON LK	19.10	4.80	29.80	17.13 (47)	112	0.00

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

JANUARY 2022

NEW MELONES LAKE DAILY OPERATIONS

RUN DATE: January 18, 2022

DAY	ELEV	STORAGE 1000-ACRE- FEET IN LAKE	STORAG E 1000- ACRE- FEET CHANGE	COMPUTED* INFLOW C.F.S.	RELEAS E C.F.S. POWER	RELEAS E C.F.S. SPILL	RELEAS E C.F.S. OUTLET	EVAP. C.F.S.	EVAP. INCHES	PRECIP INCHES
N/A	N/A	992.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	941.36	992.3	-0.4	915	1,082	0	0	14	0.06	0
2	941.32	992	-0.3	1,187	1,313	0	0	19	0.08	0
3	941.18	991	-1.0	798	1,289	0	0	16	0.07	0
4	941.06	990.2	-0.9	955	1,377	0	0	12	0.05	0
5	940.9	989	-1.1	972	1,521	0	0	28	0.12	0
6	940.7	987.6	-1.4	974	1,678	0	0	16	0.07	0
7	940.54	986.5	-1.1	1,029	1,587	0	0	18	0.08	0
8	940.37	985.3	-1.2	1,010	1,602	0	0	21	0.09	0
9	940.24	984.3	-0.9	1,057	1,500	0	0	25	0.11	0
10	940.14	983.6	-0.7	1,074	1,413	0	0	21	0.09	0
11	940.11	983.4	-0.2	1,174	1,266	0	0	16	0.07	0
12	940.21	984.1	+0.7	1,236	853	0	0	23	0.1	0
13	940.24	984.3	+0.2	1,273	1,121	0	0	44	0.19	0
14	940.23	984.3	-0.1	1,231	1,232	0	0	35	0.15	0
TOTALS	N/A	N/A	-8.4	14,885	18,834	0	0	308	1.33	0
ACRE- FEET	N/A	N/A	-8,400	29,524	37,357	0	0	611	N/A	N/A

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

SUMMARY PERCIPITATION

TIME	PERCIPITATION
THIS MONTH	0
JULY 1, 2021, TO DATE	15.68
OCT 1, 2021, TO DATE	15.64

SUMMARY: RELEASE (ACRE-FEET)

RELEASE (ACRES-FEET)	N/A
POWER	37,357
SPILL	0
OUTLET	0
TOTAL	37,357

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

JANUARY 2022

GOODWIN RESERVOIR DAILY OPERATIONS

RUN DATE: January 18, 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	556	N/A	N/A	N/A	N/A	N/A	N/A
1	360.52	573	+17	1,462	0	1,477	0	0
2	360.51	573	+0	1,484	0	1,507	0	0
3	360.51	573	+0	1,480	0	1,504	0	0
4	360.51	573	+0	1,483	0	1,502	0	0
5	360.51	573	+0	1,483	0	1,505	0	0
6	360.52	573	+0	1,484	0	1,505	0	0
7	360.49	571	-2	1,470	0	1,503	0	0
8	360.51	573	+2	1,534	0	1,505	0	0
9	360.52	573	+0	1,538	0	1,508	0	0
10	360.51	573	+0	1,511	0	1,501	0	0
11	360.2	551	-22	1,279	0	1,190	115	0
12	360.2	551	+0	1,095	0	901	209	0
13	360.21	552	+1	1,097	0	901	210	0
14	360.23	553	+1	1,098	0	903	210	0
TOTALS	N/A	N/A	-3	19,498	0	18,912	744	0
ACRE- FEET	N/A	N/A	-3	38,674	0	38	1,476	0

JOINT MAIN OPERATED BY SSJID AND OID

SUMMARY: RELEASE (ACRE-FEET)

RELEASE (ACRES-FEET)	N/A
JOINT MAIN CANAL	1,476
SOUTH MAIN CANAL	0
OUTLET	0
SPILL	37,512
TOTAL	38,988

UNITED STATES DEPARTMENT OF THE
INTERIOR

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

JANUARY 2022

TULLOCH RESERVOIR DAILY OPERATIONS

RUN DATE: January 18, 2022

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	55,986	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	499.92	55,218	-768	1,077	1,082	1,462	0	0	2
2	499.6	54,876	-342	1,315	1,313	1,484	0	0	3
3	499.22	54,471	-405	1,278	1,289	1,480	0	0	2
4	498.97	54,204	-267	1,350	1,377	1,483	0	0	2
5	499.05	54,289	+85	1,530	1,521	1,483	0	0	4
6	499.45	54,716	+427	1,701	1,678	1,484	0	0	2
7	499.62	54,898	+182	1,565	1,587	433	537	500	3
8	499.91	55,207	+309	1,693	1,602	0	150	1,384	3
9	499.93	55,228	+21	1,553	1,500	0	1,384	154	4
10	499.76	55,047	-181	1,423	1,413	532	884	95	3
11	499.73	55,015	-32	1,265	1,266	1,279	0	0	2
12	499.29	54,545	-470	861	853	1,095	0	0	3
13	499.34	54,599	+54	1,131	1,121	1,097	0	0	7
14	499.51	54,780	+181	1,194	1,232	1,098	0	0	5
TOTALS	N/A	N/A	-1206	18,936	18,834	14,410	2,955	2,133	45
ACRES- FEET	N/A	N/A	-1206	37,560	37,357	28,582	5,861	4,231	89

*COMPUTED INFLOW IS SUM OF CHANGE IN STORAGE, RELEASES, AND EVAPORATION
(1) EVAPORATION RECORDS TAKEN FROM NEW MELONES PAN.

SUMMARY: RELEASE (ACRE-FEET)

RELEASE (ACRES-FEET)	N/A
POWER	28,582
SPILL	5,861
OUTLET	4,231
TOTAL	38,674

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

DECEMBER 2021

NEW MELONES LAKE DAILY OPERATIONS

RUN DATE: January 5, 2022

DAY	ELEV	STORAGE E 1000- ACRE- FEET IN LAKE	STORAGE E 1000- ACRE- FEET CHANGE	COMPUT ED INFLOW C.F.S.	RELEAS E C.F.S. POWER	RELEAS E C.F.S. SPILL	RELEAS E C.F.S. OUTLET	EVAP. C.F.S.	EVAP. INCHES	PRECIP INCHES
N/A	N/A	940.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	934.43	943.4	+2.5	1,325	30	0	0	34	0.15	0
2	934.78	945.8	+2.4	1,261	30	0	0	5	0.02	0
3	935.06	947.8	+1.9	1,372	365	0	0	25	0.11	0
4	935.27	949.3	+1.5	1,055	307	0	0	9	0.04	0
5	935.54	951.1	+1.9	1,248	289	0	0	9	0.04	0
6	935.74	952.5	+1.4	1,153	435	0	0	14	0.06	0
7	936	954.4	+1.8	1,433	513	0	0	5	0.02	0
8	936.25	956.1	+1.8	1,305	421	0	0	0	0	0.12
9	936.55	958.2	+2.1	1,285	219	0	0	5	0.02	0
10	936.79	959.9	+1.7	1,136	244	0	0	43	0.19	0
11	937.06	961.8	+1.9	1,003	31	0	0	16	0.07	0
12	937.36	963.9	+2.1	1,110	30	0	0	14	0.06	0
13	937.64	965.9	+2.0	1,034	26	0	0	14	0.06	0
14	937.96	968.1	+2.3	1,167	25	0	0	5	0.02	0
15	938.17	969.6	+1.5	1,100	342	0	0	9	0.04	0
16	938.44	971.5	+1.9	1,136	163	0	0	9	0.04	0
17	938.68	973.2	+1.7	1,152	279	0	0	16	0.07	0
18	938.86	974.5	+1.3	920	264	0	0	14	0.06	0
19	939.13	976.4	+1.9	1,037	70	0	0	2	0.01	0
20	939.31	977.7	+1.3	1,055	389	0	0	21	0.09	0
21	939.52	979.2	+1.5	1,004	244	0	0	7	0.03	0
22	939.78	981	+1.8	1,204	237	0	0	35	0.15	0
23	939.97	982.4	+1.4	954	259	0	0	14	0.06	0
24	940.19	984	+1.6	1,090	284	0	0	14	0.06	0
25	940.35	985.1	+1.1	1,000	412	0	0	12	0.05	0
26	940.56	986.6	+1.5	1,058	292	0	0	9	0.04	0
27	940.75	988	+1.4	1,021	318	0	0	19	0.08	0
28	940.88	988.9	+0.9	1,050	559	0	0	23	0.1	0
29	941	989.8	+0.9	1,025	565	0	0	28	0.12	0
30	941.21	991.3	+1.5	1,009	233	0	0	16	0.07	0
31	941.41	992.7	+1.4	974	234	0	0	16	0.07	0
TOTALS	N/A	N/A	+51.9	34,676	8,109	0	0	462	2	0.12
ACRE- FEET	N/A	N/A	+51,900	68,780	16,084	0	0	916	N/A	N/A

COMMENTS:

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

SUMMARY PERCIPITATION

TIME	PERCIPITATION
THIS MONTH	.12
JULY 1, 2021, TO DATE	15.68
OCT 1, 2021, TO DATE	15.64

SUMMARY: RELEASE (ACRE-FEET)

RELEASE (ACRES-FEET)	N/A
POWER	16,084
SPILL	0
OUTLET	0
TOTAL	16,084

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

DECEMBER 2021

GOODWIN RESERVOIR DAILY OPERATIONS

RUN DATE: January 3, 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	541	N/A	N/A	N/A	N/A	N/A	N/A
1	359.76	520	-21	405	0	408	0	0
2	359.76	520	+0	221	0	206	0	0
3	359.77	521	+1	222	0	205	0	0
4	359.77	521	+0	222	0	206	0	0
5	359.77	521	+0	218	0	203	0	0
6	359.77	521	+0	217	0	205	0	0
7	359.77	521	+0	218	0	203	0	0
8	359.77	521	+0	219	0	203	0	0
9	359.77	521	+0	219	0	202	0	0
10	359.77	521	+0	220	0	203	0	0
11	359.77	521	+0	218	0	202	0	0
12	359.77	521	+0	217	0	202	0	0
13	359.77	521	+0	217	0	202	0	0
14	359.77	521	+0	217	0	202	0	0
15	359.77	521	+0	217	0	201	0	0
16	359.77	521	+0	217	0	202	0	0
17	359.77	521	+0	217	0	202	0	0
18	359.77	521	+0	218	0	202	0	0
19	359.77	521	+0	218	0	202	0	0
20	359.77	521	+0	218	0	205	0	0
21	359.77	521	+0	216	0	203	0	0
22	359.77	521	+0	215	0	202	0	0
23	359.77	521	+0	214	0	201	0	0
24	359.77	521	+0	214	0	201	0	0
25	359.77	521	+0	215	0	201	0	0
26	359.77	521	+0	215	0	201	0	0
27	359.77	521	+0	215	0	203	0	0
28	360.02	538	+17	647	0	640	0	0
29	359.8	523	-15	349	0	358	0	0
30	359.76	520	-3	229	0	221	0	0
31	360.27	556	+36	380	0	349	0	0
TOTALS	N/A	N/A	+15	7,664	0	7,246	0	0
ACRE- FEET	N/A	N/A	+15	15,202	0	14,372	0	0

JOINT MAIN OPERATED BY SSJID AND OID

SUMMARY: RELEASE (ACRE-FEET)

RELEASE (ACRES-FEET)	N/A
JOINT MAIN CANAL	0
SOUTH MAIN CANAL	0
OUTLET	0
SPILL	14,372
TOTAL	14,372

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

DECEMBER 2021

TULLOCH RESERVOIR DAILY OPERATIONS

RUN DATE: 01/10/2022

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	54,279	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	498.47	53,679	-600	108	30	405	0	0	5
2	498.21	53,406	-273	84	30	221	0	0	1
3	498.59	53,805	+399	427	365	222	0	0	4
4	498.8	54,026	+221	334	307	222	0	0	1
5	498.99	54,225	+199	319	289	218	0	0	1
6	499.43	54,695	+470	456	435	217	0	0	2
7	500.01	55,314	+619	531	513	218	0	0	1
8	500.42	55,758	+444	443	421	219	0	0	0
9	500.45	55,791	+33	237	219	219	0	0	1
10	500.51	55,856	+65	260	244	220	0	0	7
11	500.15	55,466	-390	23	31	218	0	0	2
12	499.82	55,111	-355	40	30	217	0	0	2
13	499.47	54,737	-374	30	26	217	0	0	2
14	499.12	54,364	-373	30	25	217	0	0	1
15	499.37	54,631	+267	353	342	217	0	0	1
16	499.28	54,535	-96	170	163	217	0	0	1
17	499.38	54,641	+106	272	279	217	0	0	2
18	499.47	54,737	+96	268	264	218	0	0	2
19	499.19	54,439	-298	68	70	218	0	0	0
20	499.55	54,823	+384	415	389	218	0	0	3
21	499.58	54,855	+32	233	244	216	0	0	1
22	499.63	54,908	+53	247	237	215	0	0	5
23	499.65	54,930	+22	227	259	214	0	0	2
24	499.86	55,154	+224	329	284	214	0	0	2
25	500.21	55,531	+377	407	412	215	0	0	2
26	500.37	55,704	+173	303	292	215	0	0	1
27	500.58	55,932	+228	333	318	215	0	0	3
28	500.44	55,780	-152	574	559	647	0	0	4
29	500.85	56,224	+444	577	565	349	0	0	4
30	500.87	56,246	+22	242	233	229	0	0	2
31	500.63	55,986	-260	251	234	380	0	0	2
TOTALS	N/A	N/A	+1,707	8,591	8,109	7,664	0	0	67
ACRES- FEET	N/A	N/A	+1,707	17,040	16,084	15,202	0	0	133

*COMPUTED INFLOW IS SUM OF CHANGE IN STORAGE, RELEASES, AND EVAPORATION
(1) EVAPORATION RECORDS TAKEN FROM NEW MELONES PAN.

SUMMARY: RELEASE (ACRE-FEET)

RELEASE (ACRES- FEET)	N/A
POWER	15,202
SPILL	0
OUTLET	0
TOTAL	15,202

February 2022 Water Temperature and Fish Monitoring Update

Year-to-Date Flows

Goodwin releases since October 1, 2021 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. After the late January winter instability flow, Goodwin releases increased again for the Vernalis flow requirement.

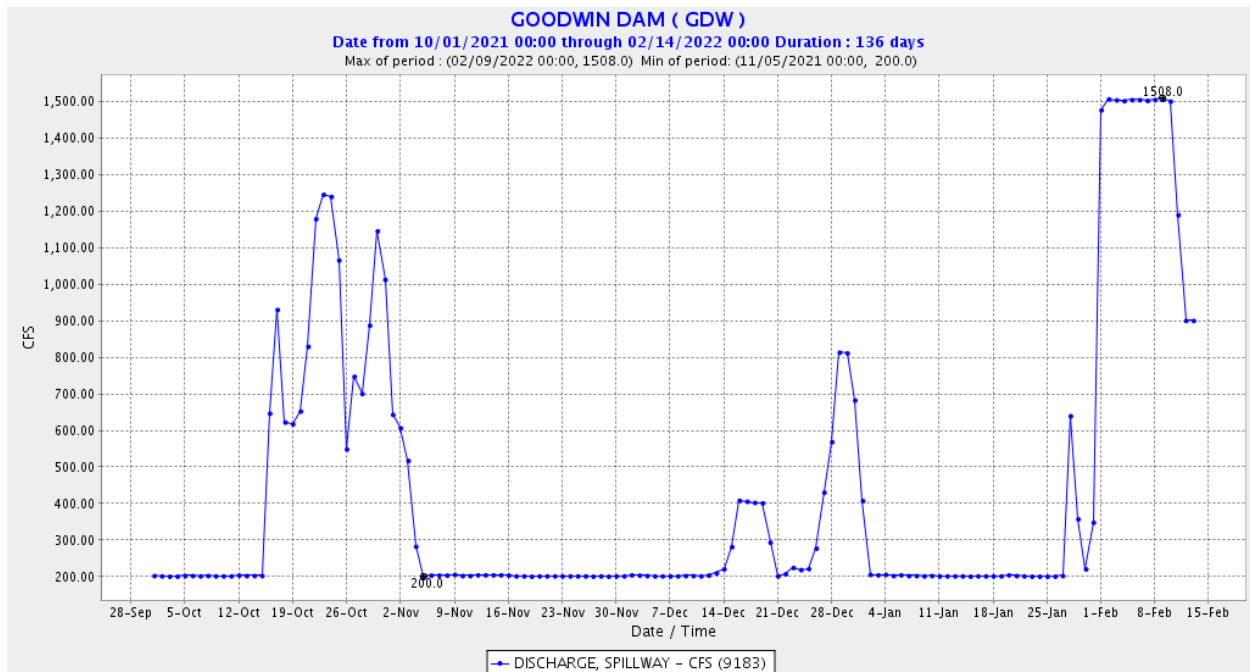


Figure 1. Goodwin (daily) releases to the Stanislaus River since October 1, 2021. Data from GDW station on CDEC.

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 January 1, 2021 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 January 1, 2021 are shown below at Vernalis (Figure 5). Current-year water temperatures are plotted along with historical temperatures for Orange Blossom Bridge

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>

(Figure 6), Ripon (Figure 7), and Vernalis (Figure 8). A compilation of Stanislaus River water temperatures and Goodwin releases is provided in Figure 9.

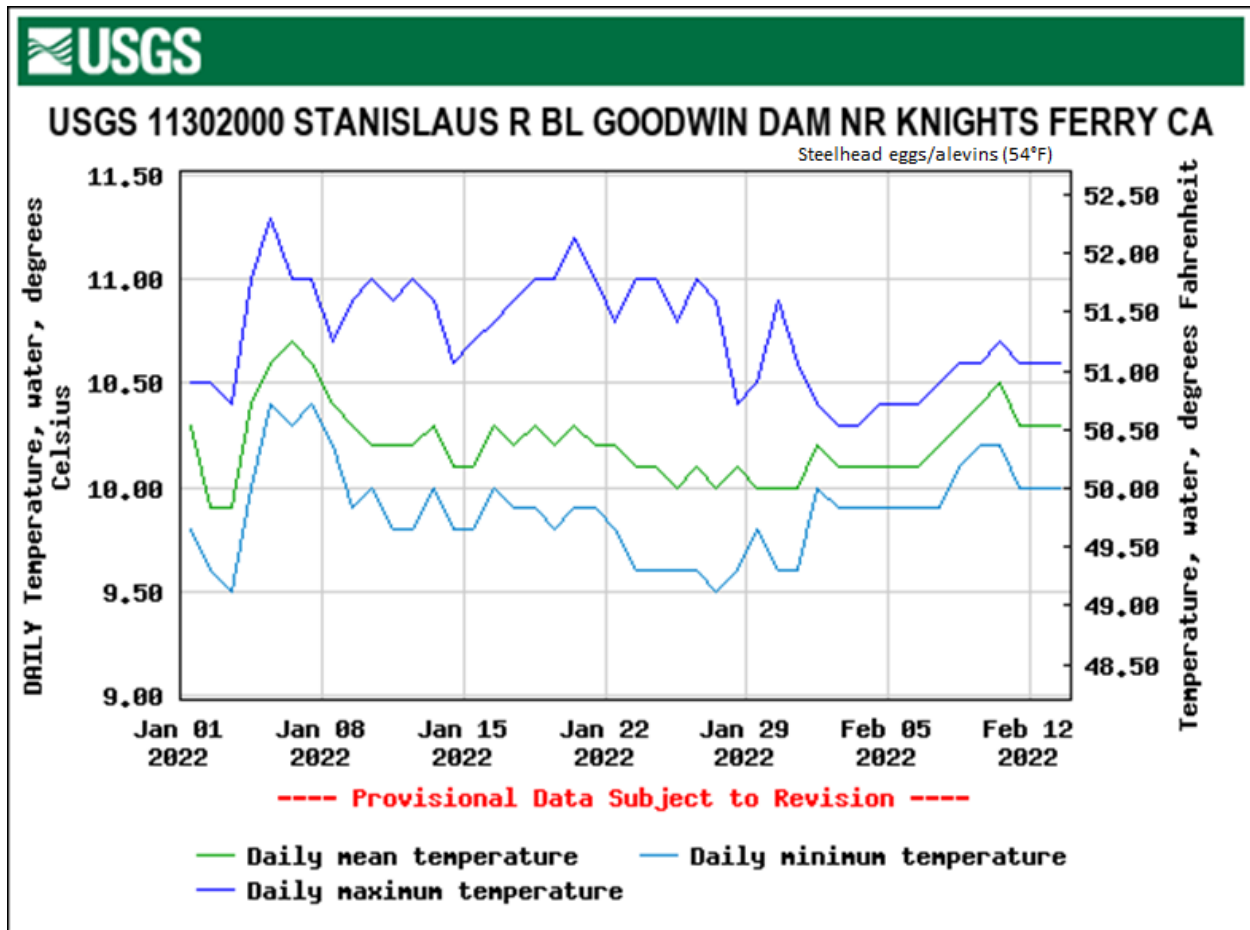


Figure 2. Daily water temperatures on the Stanislaus River upstream of Knights Ferry since January 1, 2021. Data from USGS gage 11302000 on NWIS; temperature threshold reference added by SWT.

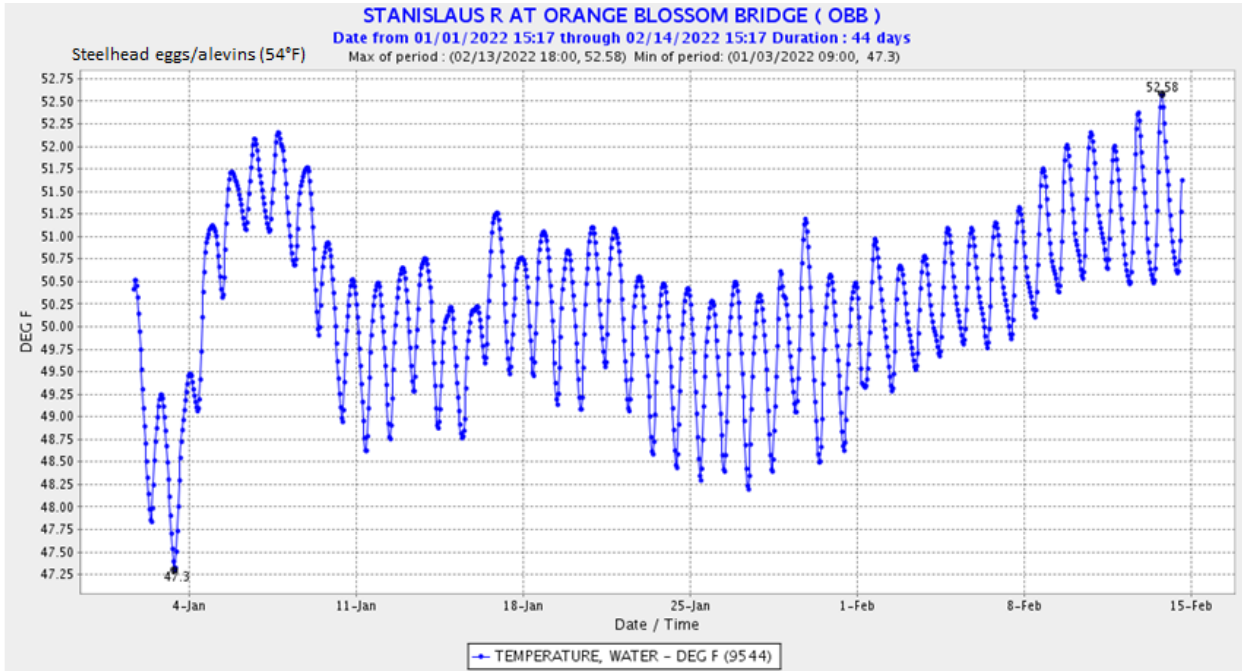


Figure 3. Stanislaus (hourly) water temperatures at Orange Blossom Bridge since January 1, 2021. Data from OBB station on CDEC; temperature threshold reference added by SWT.

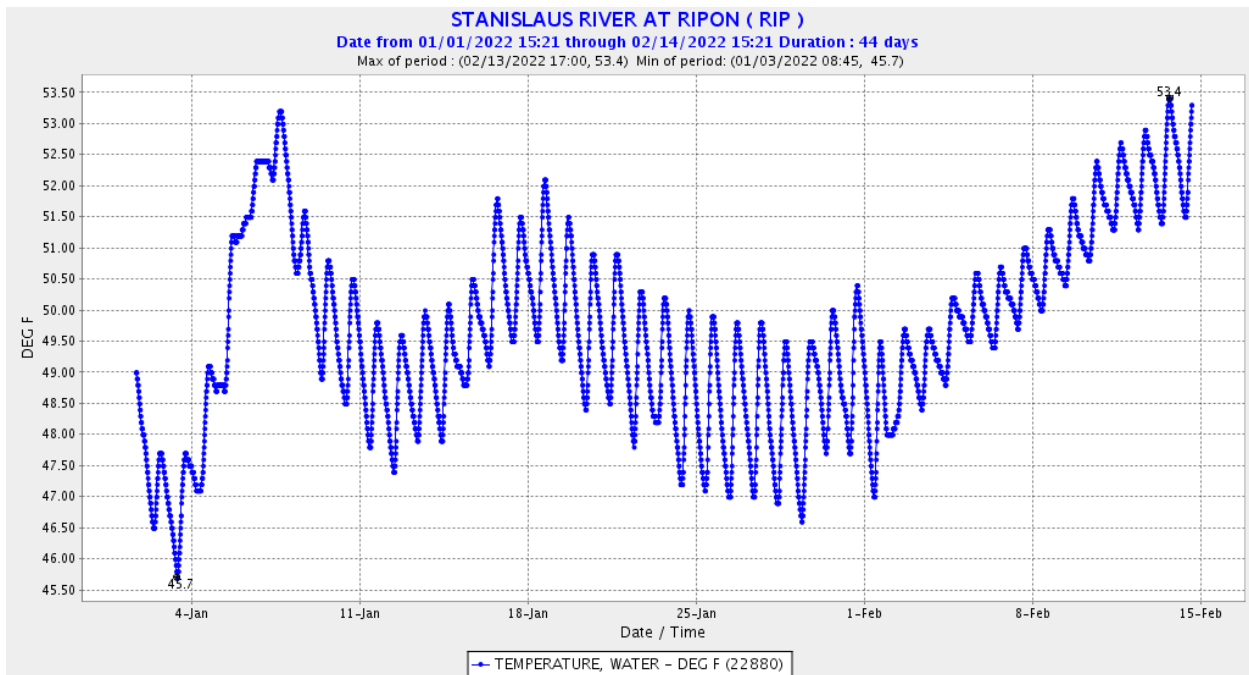


Figure 4. Stanislaus (15-minute) water temperatures at Ripon since January 1, 2021. Data from RIP station on CDEC.

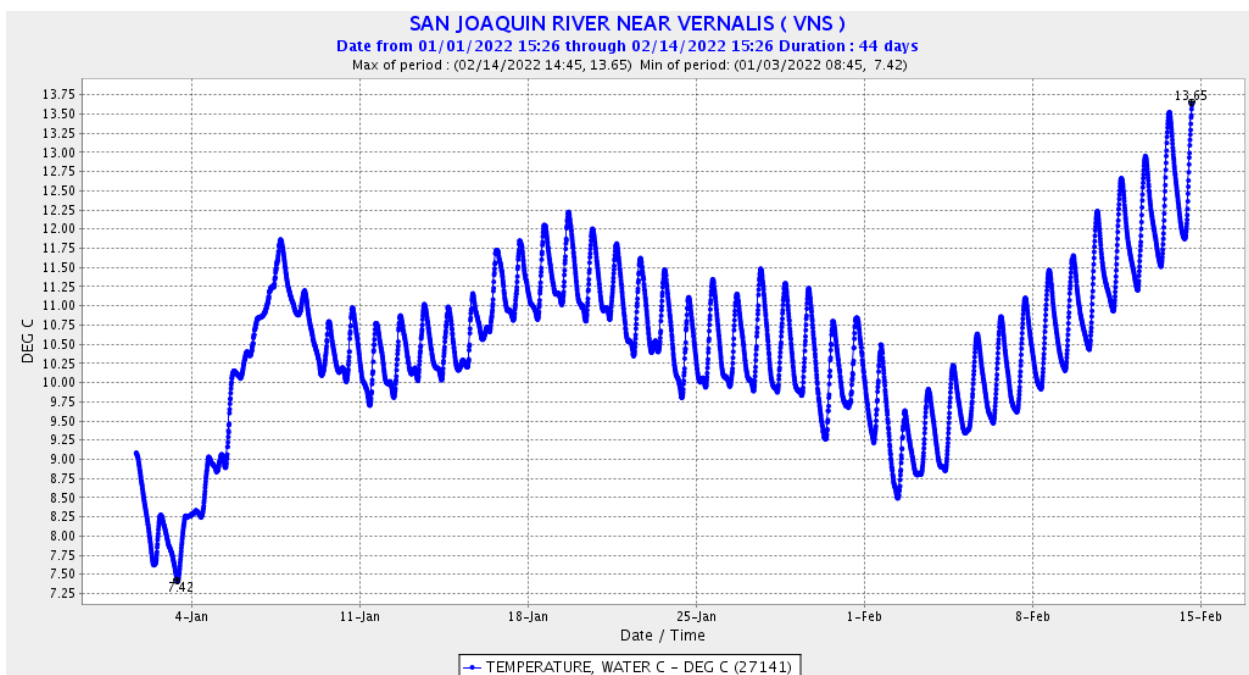


Figure 5. San Joaquin River (15-minute) water temperatures at Vernalis since January 1, 2021. Data from VNS station on CDEC; temperature threshold reference line added by SWT. Note that, unlike in the previous figures, temperature is reported in degrees Celsius. 8°C=46.4°F; 10°C=50°F; 12°C=53.6°F; 14°C=57.2°F; 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.

WY 2001-2022 OBB Stanislaus R at Orange Blossom Bridge
Daily Average Water Temperature (F)
Observed Range 46.00-64.12

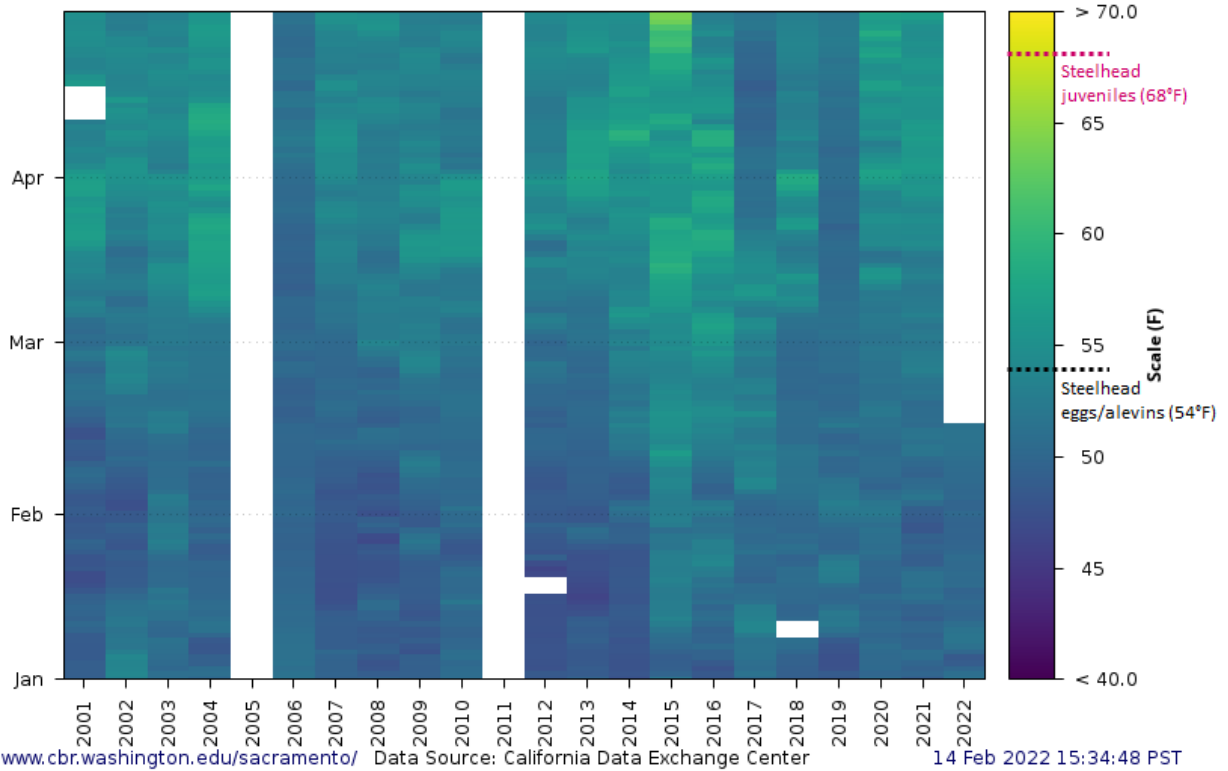


Figure 6. Stanislaus River water temperatures at Orange Blossom Bridge for January through April from WY 2001 to present. Data from SacPAS; temperature threshold reference lines added by SWT. http://www.cbr.washington.edu/sacramento/data/query_river_allyears.html

WY 2012-2022 RIP Stanislaus R at Ripon (USGS)
Daily Average Water Temperature (F)
Observed Range 43.04-71.88

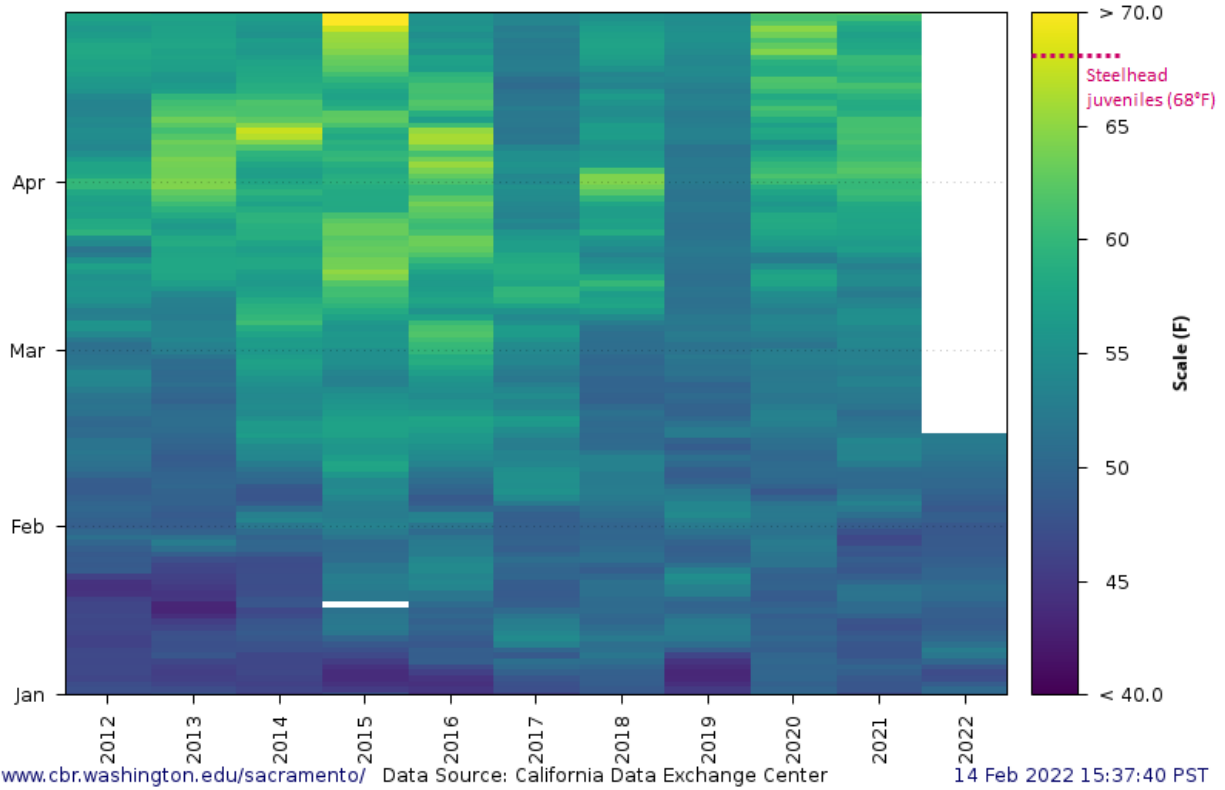


Figure 7. Stanislaus River water temperatures at Ripon for January through April from Water Year 2012 to present. Figure from SacPAS using RIP station data from CDEC; temperature threshold reference line added by SWT.

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

WY 2015-2022 VNS San Joaquin R near Vernalis
Daily Average Water Temperature (F)
Observed Range 44.20-71.51

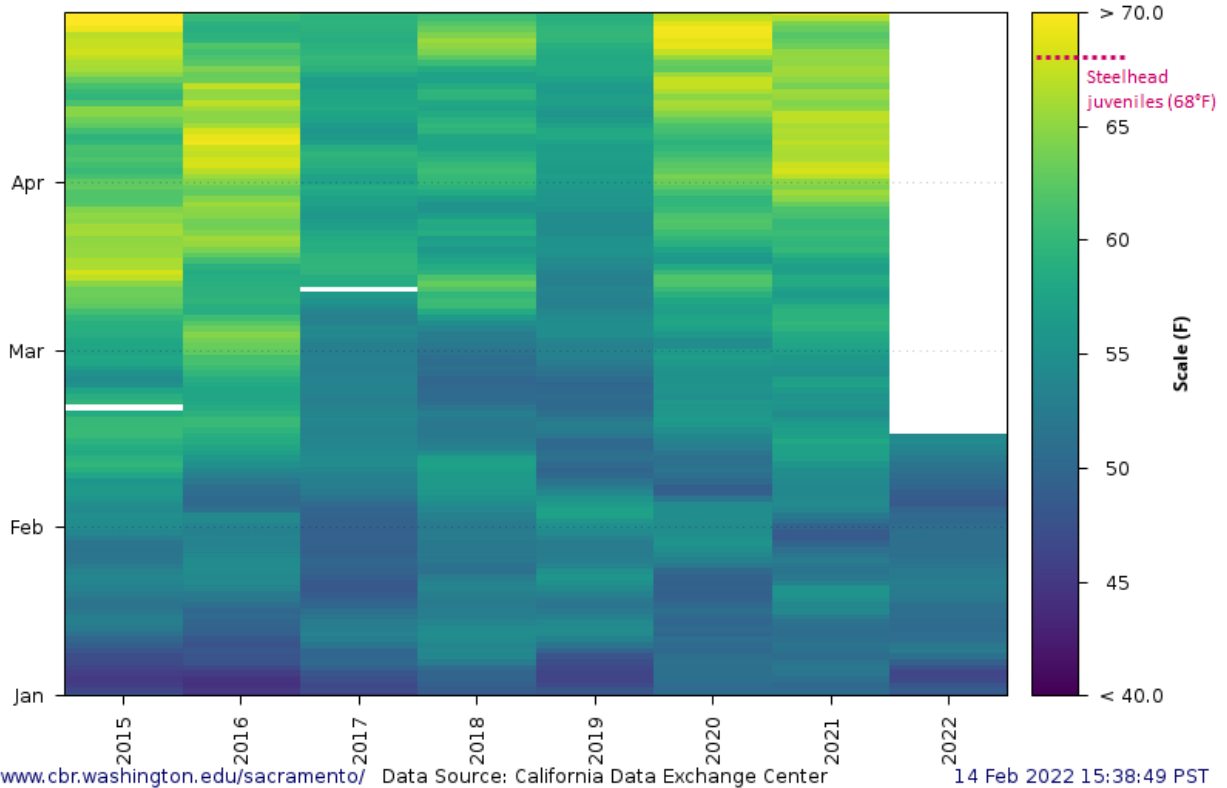


Figure 8. San Joaquin River water temperatures at Vernalis for January through April from Water Year 2015 to present. Figure from SacPAS using VNS station data from CDEC; temperature threshold reference line added by SWT.

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

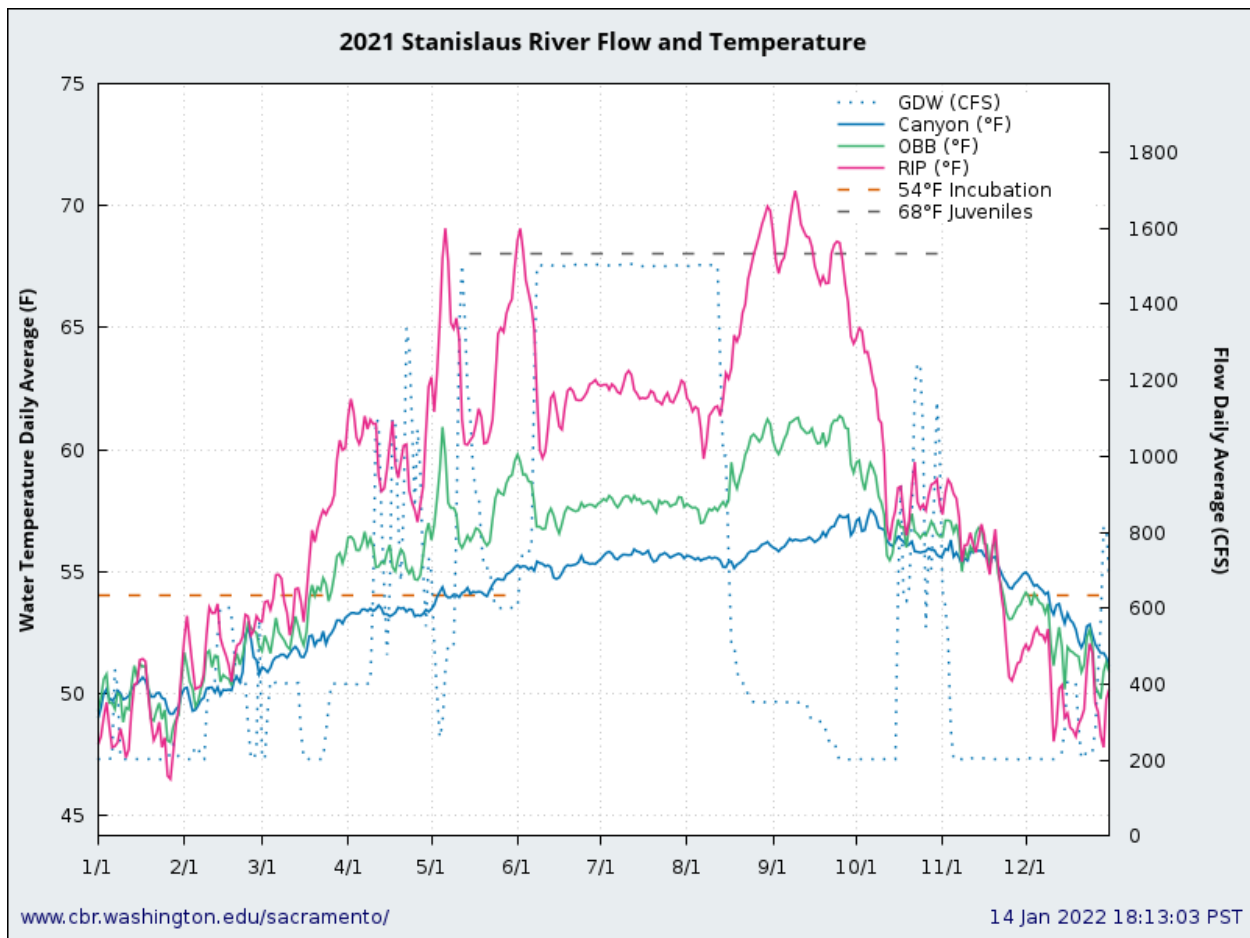


Figure 9. Stanislaus River flow and water temperatures from January 1, 2021 to December 31, 2021. Data (including temperature threshold reference lines) from SacPAS: http://www.cbr.washington.edu/sacramento/data/tc_stanislaus.html

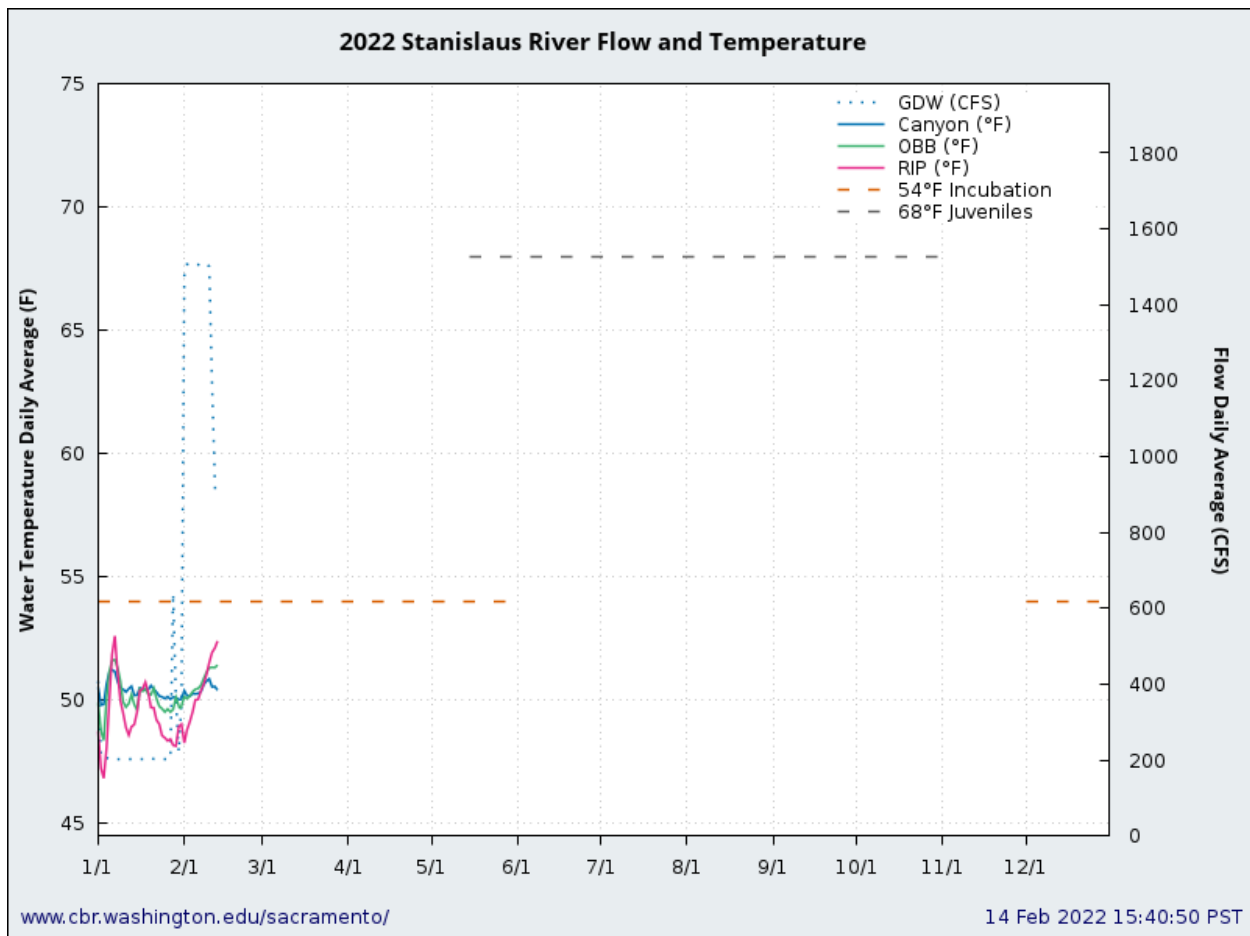


Figure 10. Stanislaus River flow and water temperatures from January 1, 2022 to present. Data (including temperature threshold reference lines) from SacPAS: http://www.cbr.washington.edu/sacramento/data/tc_stanislaus.html

Update on Fish Monitoring (Adults)

Weir

Fishbio installed the weir near Riverbank and began monitoring for upstream passage of adult salmonids on September 8, 2021. The cumulative net upstream passage through February 8, 2022 is 6,068 Chinook (23% were ad-clipped, indicating a hatchery origin) and 25 *Oncorhynchus mykiss*. Of the 25 *O. mykiss* observed, 22 were greater than 16" (indicating possible anadromy) and 15 of the 23 were ad-clipped (indicating a hatchery origin). Data highlights provided by Fishbio on February 9, 2022 in their "Stanislaus River Weir Update through 2/8/22" are provided below in Figure 11 and Figure 12.

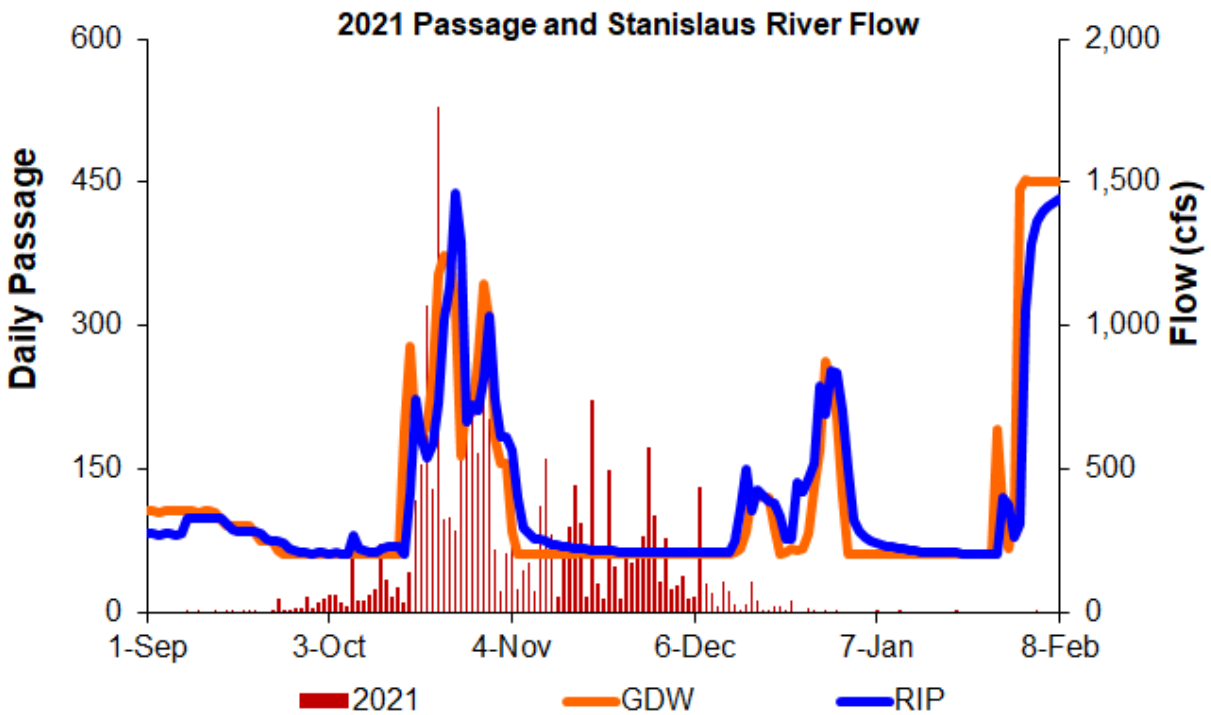


Figure 11. Daily Chinook salmon passage through February 8, 2022, at the Stanislaus River weir near Riverbank. *Data courtesy of Fishbio.*

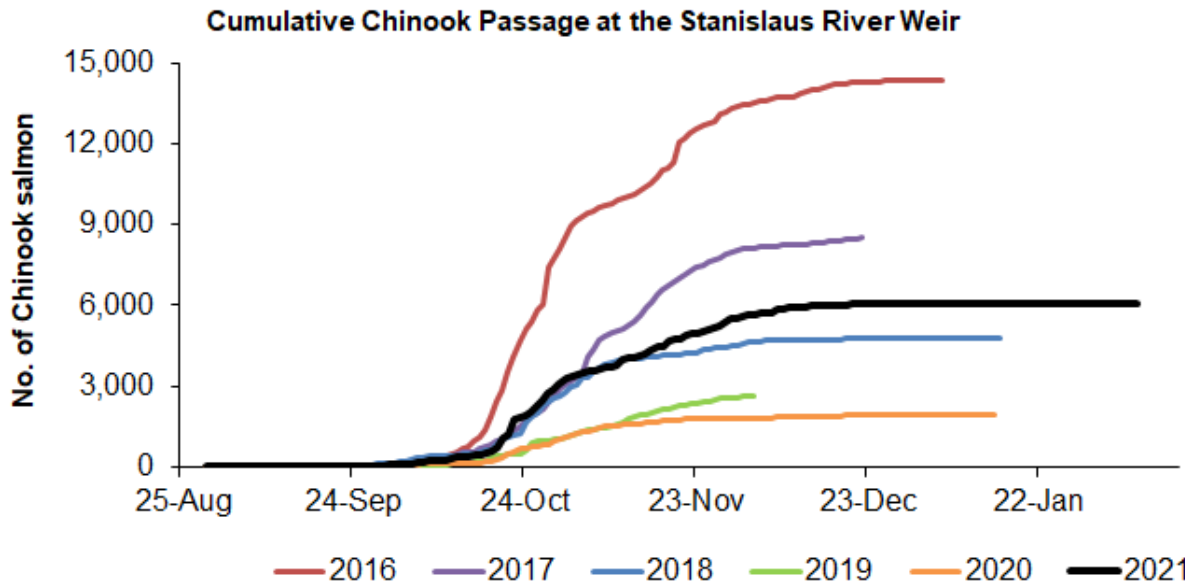


Figure 12. Cumulative Chinook salmon passage in the current year through February 8, 2022, at the Stanislaus River weir near Riverbank, along with cumulative passage for the previous five years. *Data courtesy of Fishbio.*

Update on Fish Monitoring (Juveniles)

Mossdale Trawl

Regular sampling at the Mossdale trawl resumed in January 2022. Since January 1, 2022, based on data reported at <https://www.baydeltalive.com/fish/djfmh-highlights>, the trawl has caught:

- Two fall-run-sized Chinook salmon yolk-sac-fry, both in early February.
- One *O. mykiss* smolt in mid-January.

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 2021/2022 outmigration season, sampling began at Caswell on January 5, 2022 and at Oakdale on January 24, 2022.

Chinook catch at each location is summarized in Figure 13 (Oakdale) and Figure 14 (Caswell); fish lengths and life stages are provided in Figure 15 for the Chinook catch at Caswell. Through February 8, 2022, the trap at Caswell has captured a total of 240 unmarked fall-run-sized Chinook Salmon (all fry), 0 unmarked steelhead, and 32 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>

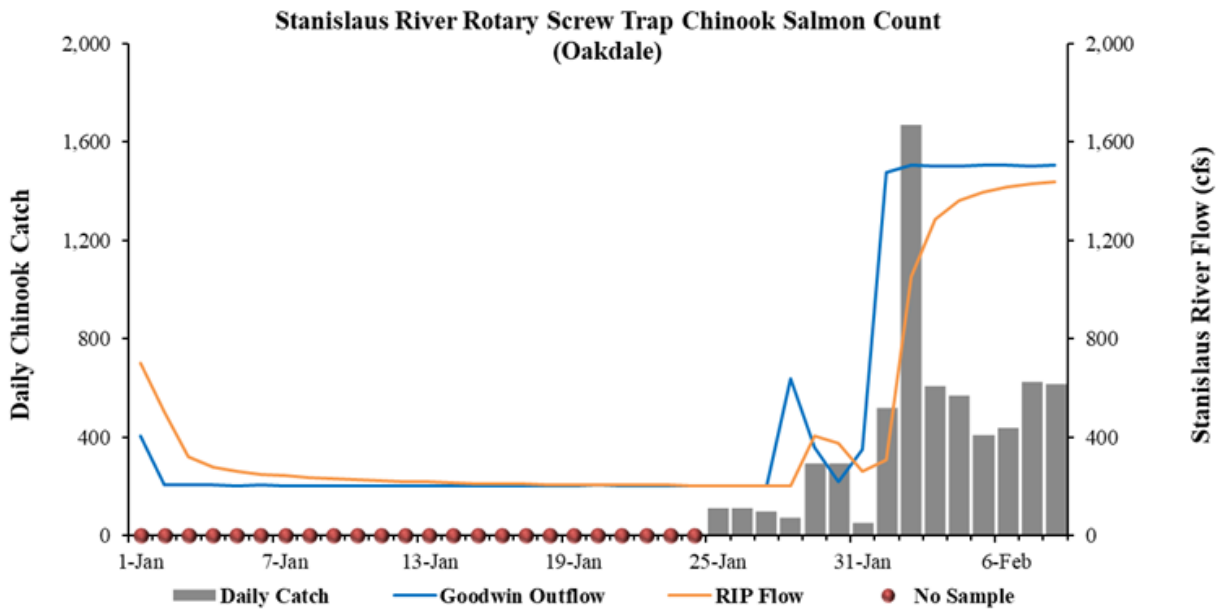


Figure 13. Daily juvenile Chinook catch through February 8, 2022, at the rotary screw trap near Oakdale. Figure courtesy of Fishbio.

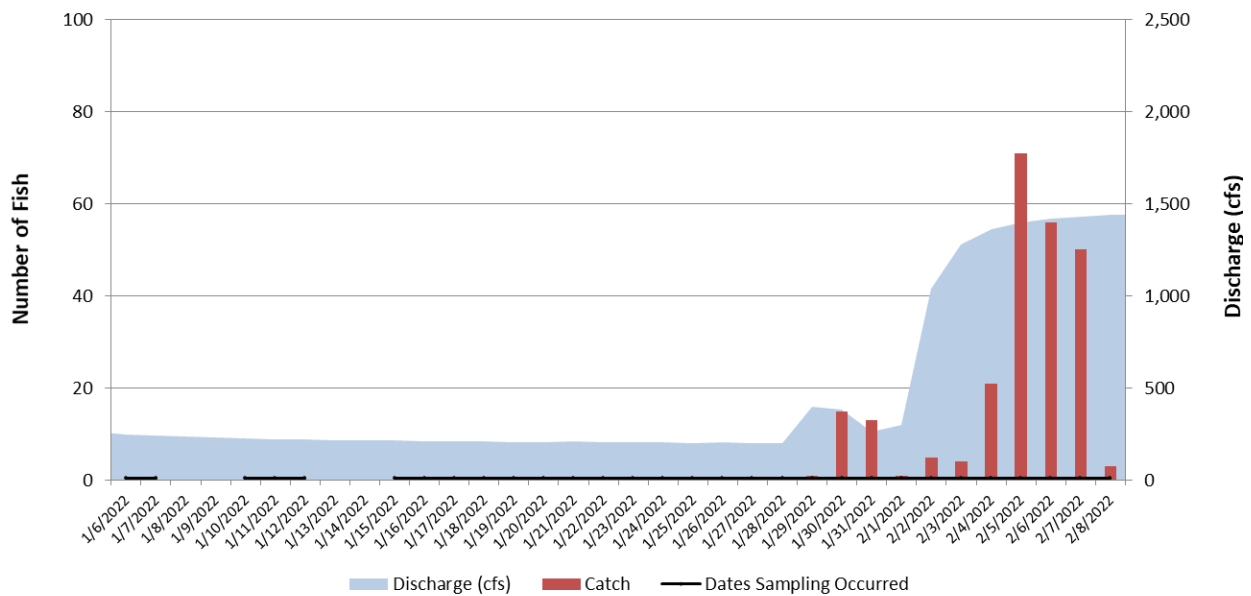


Figure 14. Daily juvenile Chinook catch through May 11, 2021, at the rotary screw trap near Caswell State Park. Discharge data is at Ripon. Figure courtesy of Pacific States Marine Fisheries Commission.

Stanislaus River at Caswell Memorial State Park (RSTs):

Daily fork length distribution by life stage of unmarked Chinook Salmon measured during the 2022 Stanislaus River rotary screw trap survey season.

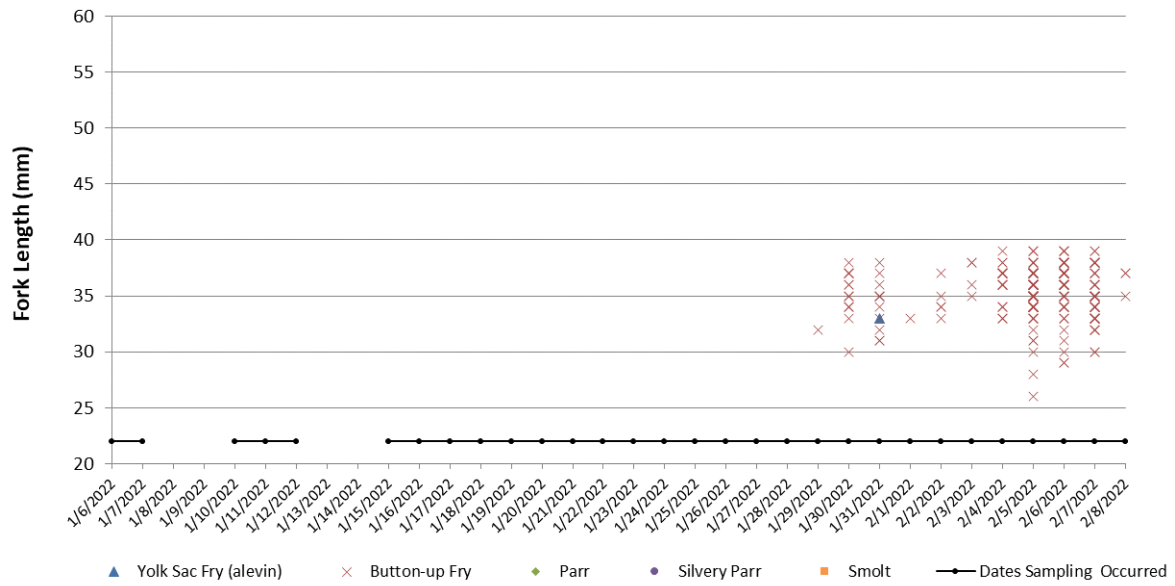


Figure 15. Daily juvenile Chinook catch (plotted by fork length and life stage) through May 11, 2021, at the rotary screw trap near Caswell State Park. Figure courtesy of Pacific States Marine Fisheries Commission.

Operations Outlook

River	N/A
Stanislaus River	Juvenile and adult O. mykiss are present. O. mykiss are spawning.
Stanislaus River	Fall-run Chinook Salmon eggs are in gravel and fry are emerging.