BUREAU OF
RECLAMATION

Stanislaus Watershed Team

10:00 AM – 12:00 PM
Conference Line: 1 (321) 209-6143; Meeting ID: 297 240 723#MS Teams webinar
Stanislaus Watershed Team Notes: https://www.usbr.gov/mp/bdo/stanislaus-watershed-team.html

Wednesday, May 19, 2021

Notes

1. Actions
    a. All - submit questions or discussion items related to drought planning for the group to discuss.
    b. Elissa Buttermore - share information on BDO drought planning.
    c. USBR - finalize formatting of the "Progress Update on Proposed Action Elements."
    d. Kearns & West - add "Drought Planning" to next month's meeting agenda.
    e. Kearns & West – update the agenda for July's meeting to start at 9:30 to accommodate the Functional Flow presentation.
2. Introductions
    a. NMFS: Barb Byrne, Katrina Poremba & Page Vick
    b. USFWS: J.D. Wikert
    c. USBR: Luke Davis, Zarela Guerrero, Levi Johnson, Liz Kiteck, Sarah Perrin, Peggy Manza & Elissa Buttermore
    d. SWRCB: Chris Carr, Yongxuan Gao, Michael George & Erin Foresman
    e. DWR: Vinh Giang & Matthew Meyers
    f. CDFW: Gretchen Murphey & Steve Tsao
    g. SSJID: Brandon Nakagawa & Peter Rietkerk
    h. OID: Steve Knell
    i. SEWD: Jeanne Zolezzi

j. WAPA: Mike Prowatzke

k. K&W: Rafi Silberblatt, Susan Ellsworth & Kai Walcott

3. Ground Rules

    a. The facilitator reminded meeting participants of the ground rules.

4. Announcements

    a. This is Kai Walcott's last month at Kearns & West. Susan Ellsworth will be taking over note-taking responsibilities.

    b. Page Vick and Katrina Poremba are new staff in the Water Operations and Delta Consultations Branch in NMFS's California Central Valley Office.

5. Operations Update and Forecasts/Hydrology

    a. New Melones:

        i. Storage peaked at 1.55 MAF and is steadily decreasing. Current storage (as of May 19th) is 1.41 MAF.

        ii. Inflows are approximately 400 cfs. Natural run-off is higher but is being captured by the upstream reservoir.

        iii. Any chance of having a heightened flow event has passed.

    b. Goodwin Reservoir:

        i. After the last peak of the spring pulse flow on May 1 flows were decreased to 250 cfs.

        ii. Flows were then increased to 400 cfs to address salinity issues at Vernalis, and then further increased to 1500 cfs (for one day) to support Delta needs.

        iii. A change order was placed on May 19 for flows to be reduced to 700 cfs.

        iv. Contractors and water rights holders have started to take their water.

    c. See the meeting packet for more details and the Daily CVP Water Supply Report.

    d. Questions/Comments:

        i. In response to questions, USBR provided the following clarifications:

            1. The current requirement at Vernalis is 710 cfs, 2-week average.

            2. Cumulative inflow to New Melones this water year is ~265 TAF. Forecasted inflow for the rest of the year is ~50 TAF

(including expected releases from upstream reservoirs). Inflows to New Melones are anticipated to be in the low 300 cfs range for the rest of the water year.

3. The minimum San Joaquin Valley Hydrologic Index (based on the May 75% exceedance forecast) was 0.8, recorded in WY 2015. The WY 2021 index is 1.3. There is not yet a projection for December storage for New Melones.

4. Experience suggests a minimum flow of 150 cfs will not maintain dissolved oxygen at Ripon.

ii. Concern was expressed regarding using New Melones releases to meet Delta outflow needs when that has not previously been the case.

1. USBR noted that this decision was made at the Director level in coordination with SWRCB and other agencies.

iii. NMFS noted that there was high concern about protecting Shasta storage for temperature management for winter-run Chinook salmon spawning and egg incubation, given some early-season projections of 90-95% egg mortality.

6. Temperature Updates

a. NMFS provided an overview of temperature updates. See handout for details.

7. Flow Planning

a. USFWS led a discussion about drought planning and provided an overview of estimated vs. actual Vernalis flows during the spring pulse flow period.

b. Questions/Comments

i. There was widespread interest in adding a future agenda item regarding drought planning which could be an opportunity to potentially explore various future flow/storage scenarios and discuss their implications (e.g., at what storage level are temperature issues experienced?). It was noted that by engaging in contingency planning now for next year it may be possible to avoid passing an event horizon.

1. USBR noted that staff time is extremely limited at the moment so the timing of these discussions needs to be considered strategically. Furthermore, the difference between min/max storage scenarios won't be significant at least until more precise data becomes available.

2. USBR also noted that BDO has been doing a lot of drought planning activities. There are technical teams and toolkits, which include some actions relevant to the Stanislaus. The LTO group is reviewing these resources tomorrow.

ii. The most recent SWRCB meeting was webcast (see video at: https://www.youtube.com/watch?v=f54GRCWydZQ) and drought items were discussed at approximately 2:20 PM.

8. Stanislaus River Forum Call Review

    a. Stanislaus River Forum was held via Teams on May 18, 2021. Barbara Byrne (NMFS), Denise Barnard (EBMUD), Chris Shutes (public), Shiloh Foust (public), Zarela Guerrero (USBR), Jason Guignard (FishBio), Levi Johnson (USBR), Patrick Maloney (TID), Peggy Manza (USBR), Lee Mao (USBR), Gretchen Murphey (CDFW), Cory Starr (PSMFC), Steve Tsao (CDFW), J.D. Wikert (USFWS) and Jeanne Zolezzi (SEWD) were in attendance. Updates on operations, temperature and fish monitoring were provided. Several questions about current and future operations were raised and answered.

9. Fish Monitoring and Studies

    a. NMFS provided an update on the RST data from Fishbio and PSMFC. See meeting handout for details.

    b. CDFW presented on the Mossdale Trawl and steelhead redd survey. See handout for details.

10. Restoration Project Updates

    a. Work on the Migratory Corridor Project at San Joaquin Wildlife Refuge at River Mile 4 is underway.

    b. USBR anticipates meeting spawning habitat goals this summer as progress is being made on their gravel augmentation project.

11. Progress Update on Proposed Action Elements.

    a. USFWS noted that the Honolulu Bar project would benefit from gravel augmentation.

12. Other Discussion Items

    a. Items to elevate to WOMT

        i. None.

    b. Ramping rates proposal

        i. This agenda item will be moved to August's SWT meeting.

    c. Future presentations

        i. The July SWT meeting will start at 9:30 to accommodate a presentation on Functional Flows and additional drought planning.

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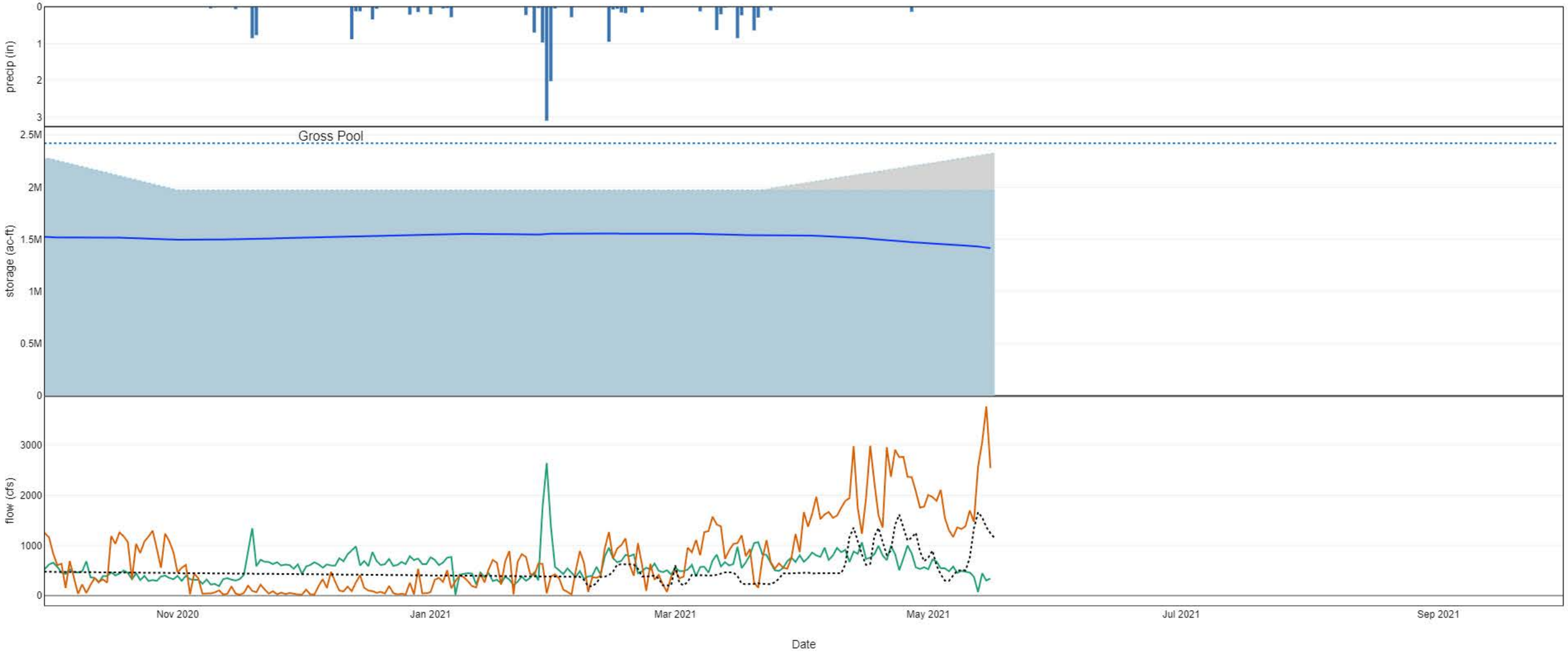
Agenda

1. Introductions
2. Ground Rules[1]
3. Announcements
4. Operations Update and Forecasts/Hydrology
5. Temperature Updates
6. Flow Planning
    a. Drought Planning
7. Stanislaus River Forum (SRF) Call Review
8. Fish Monitoring and Studies
9. Restoration Project Updates
10. Progress Update on Proposed Action Elements
11. Other Discussion Items
    a. Items to elevate to WOMT
    b. Ramping rates proposal
    c. Future presentations
12. Review Action Items
13. Next Meeting
    a. Wednesday, June 16, 2021 (10am-12pm)

[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.

New Melones Dam & Lake - Stanislaus River Basin
2021-05-17T07:18:32-0700



Current Releases

Goodwin Reservoir's Daily Operations for the month of May can be found at this website:
https://www.usbr.gov/mp/cvo/vungvari/gdwdop0521.pdf

New Melones' Lake Daily Operations for the month of May can be found at this website:
https://www.usbr.gov/mp/cvo/vungvari/nmldop0521.pdf

Tulloch Reservoir's Daily Operations for the month of May can be found at this website:
https://www.usbr.gov/mp/cvo/vungvari/tuldop0521.pdf

Last Month's Releases:

Goodwin Reservoir's Daily Operations for the month of April can be found at this website:
https://www.usbr.gov/mp/cvo/vungvari/gdwdop0421.pdf

New Melones' Lake Daily Operations for the month of April can be found at this website:
https://www.usbr.gov/mp/cvo/vungvari/nmldop0421.pdf

Tulloch Reservoir's Daily Operations for the month of April can be found at this website:
https://www.usbr.gov/mp/cvo/vungvari/tuldop0421.pdf

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

Daily CVP Water Supply Report, May 16, 2021, Run Date: May 17, 2021
(Reservoir Releases in Cubic Feet/Second)

Reservoir	Dam	WY 2020	WY 2021	15-Year Median
Trinity	Lewiston	981	1,468	2,837
Sacramento	Keswick	8,994	8,819	8,994
Feather	Oroville (SWP)	2,050	2,300	2,050
American	Nimbus	1,732	933	1,732
Stanislaus	Goodwin	1,205	961	1,205
San Joaquin	Friant	533	0	533

Storage in Major Reservoirs in Thousands of Acre-Feet

Reservoir	Capacity	15-Year Avg	WY 2020	WY 2021	% O 15 Yr Avg
Trinity	2,448	1,775	1,879	1,296	73
Shasta	4,552	3,624	3,571	2,132	59
Folsom	977	758	740	370	49
New Melones	2,420	1,494	1,878	1,410	94
Fed. San Luis	966	602	490	348	58
Total North CVP	11,363	8,253	8,558	5,556	67
Millerton	520	325	413	0	0
Oroville (SWP)	3,538	2,557	2,431	1,422	56

Accumulated Inflow for Water Year to Date in Thousands of Acre-Feet

Reservoir	Current WY 2020	WY 2020	WY 1977	WY 1983	15 Yr Avg
Trinity	299	142	1,638	812	37
Shasta	1,799	1,707	8,722	3,718	48
Folsom	624	250	4,575	1,785	35
New Melones	265	----	1,443	622	43
Millerton	349	123	2,123	741	47

Accumulated Precipitation for Water Year to Date in Inches

Reservoir	Current Water Year 2021	WY 1977	WY 1983	AVG (N Yrs)	% of Avg	Last 24 Hours
Trinity at Fish Hatchery	16.21	12.18	54.59	29.52 (59)	55	0.00
Sacramento at Shasta Dam	23.52	15.23	112.07	57.80 (64)	41	0.00
American at Blue Canyon	31.41	15.64	103.28	62.58 (46)	50	0.05
Stanislaus at New Melones	16.78	----	45.33	26.19 (43)	64	0.00
San Joaquin at Huntington LK	17.60	15.30	80.80	39.12 (46)	45	0.00

May 2021 Water Temperature and Fish Monitoring Update

Year-to-Date Flows

After the spring pulse flow, the SRP flow schedule for Critical years requires 150 cfs through the summer. Goodwin releases since October 1, 2020 are shown in Figure 1.

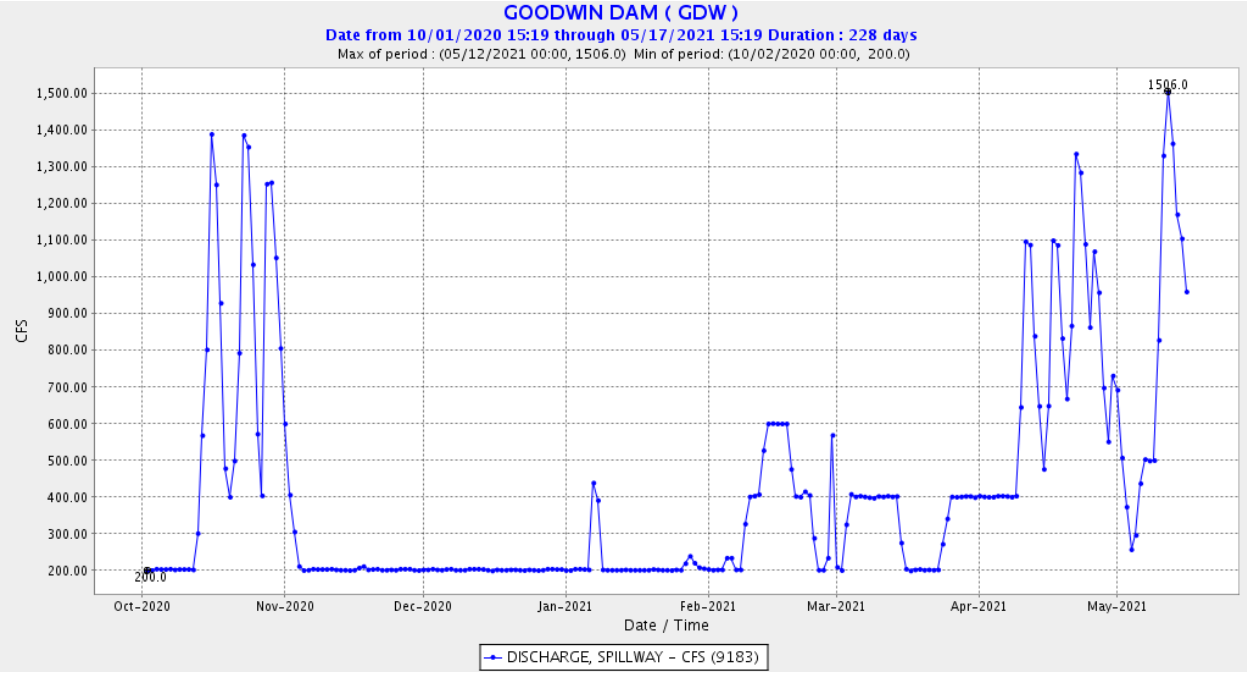


Figure 1. Goodwin (daily) releases to the Stanislaus River since October 1, 2020. Data from GDW station on CDEC.

Water Temperature

The temperature thresholds included in Figures 2-9, below, are the thresholds used in the 2019 NMFS LTO BiOp[1] (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

[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

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

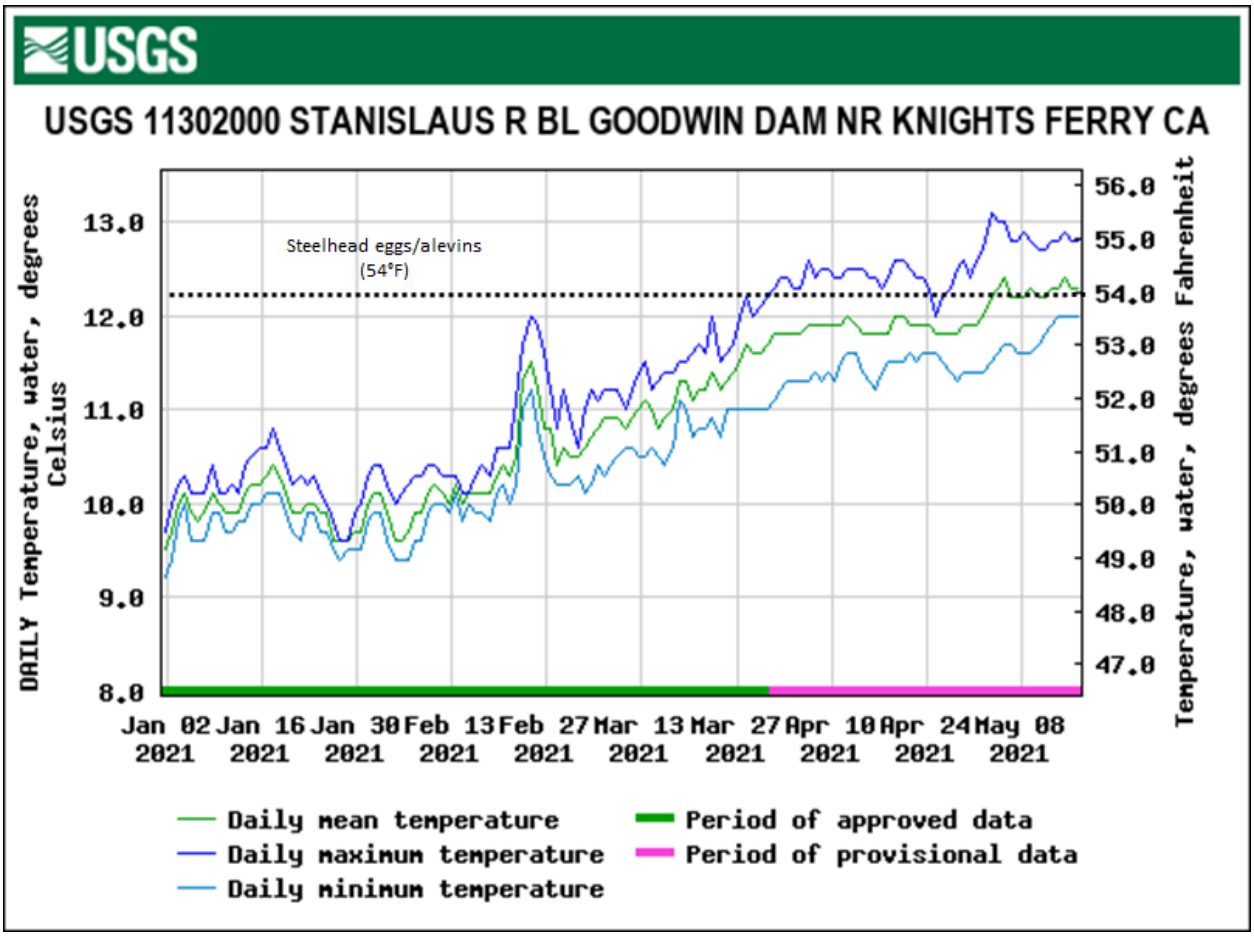


Figure 2. Daily water temperatures on the Stanislaus River upstream of Knights Ferry since January 1, 2021. Data from USGS gage 11302000 on NWIS; temperature threshold reference line added by SWT.

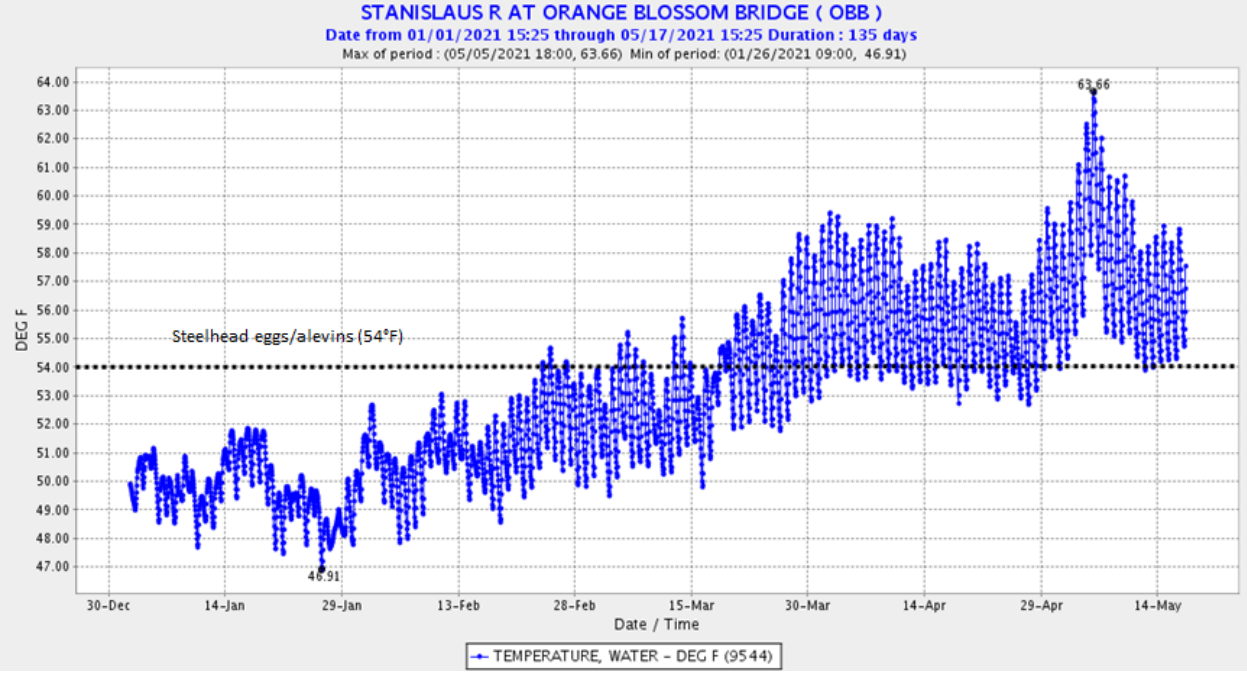


Figure 3. Stanislaus (hourly) water temperatures at Orange Blossom Bridge since January 1, 2021. Data from OBB station on CDEC; temperature threshold reference line added by SWT.

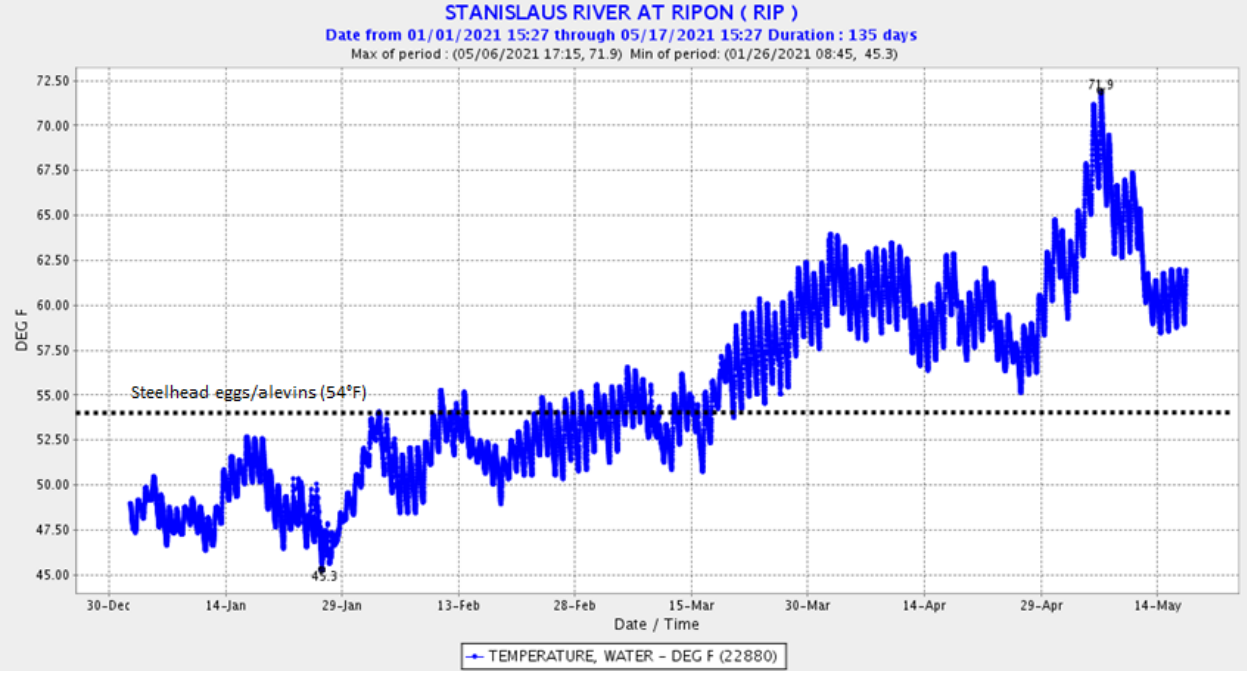


Figure 4. Stanislaus (15-minute) water temperatures at Ripon since January 1, 2021. Data from RIP station on CDEC; temperature threshold reference lines added by SWT.

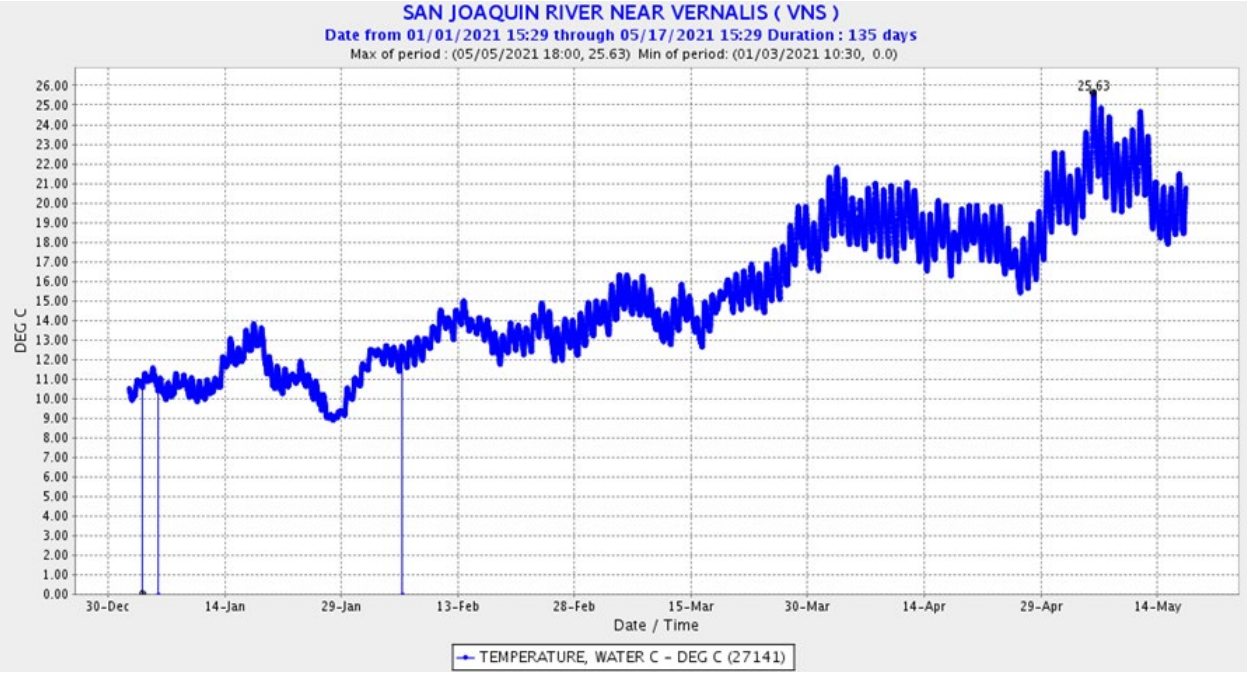


Figure 5. San Joaquin River (15-minute) water temperatures at Vernalis since January 1, 2021. Data from VNS station on CDEC; temperature threshold reference line added by SWT. Note that, unlike in the previous figures, temperature is reported in degrees Celsius. 10°C=50°F; 12°C=53.6°F; 14°C=57.2°F; 16°C=60.8°F; 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; 30°C=86.0°F.

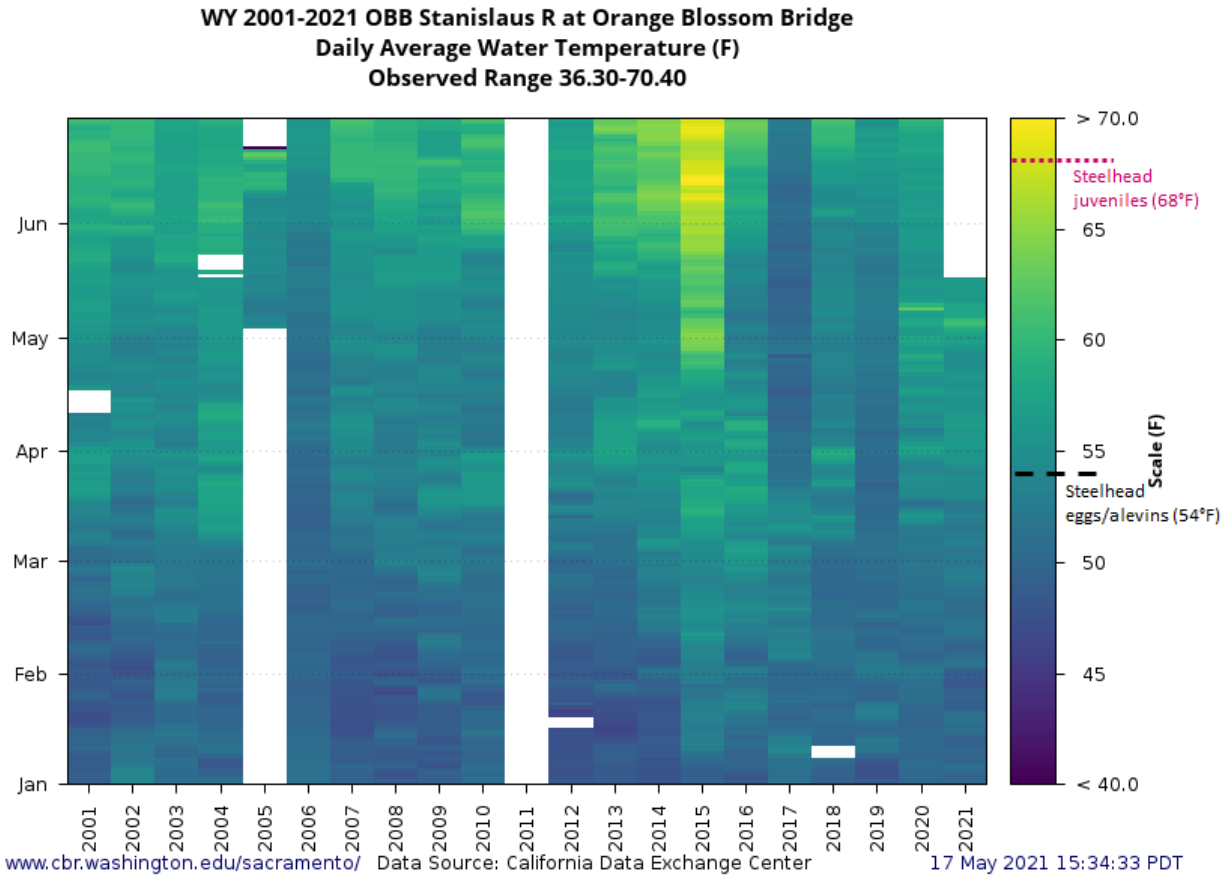


Figure 6. Stanislaus River water temperatures at Orange Blossom Bridge for January through June from 2001 to present. Data from SacPAS; temperature threshold reference lines added by SWT. http://www.cbr.washington.edu/sacramento/data/query_river_allyears.html

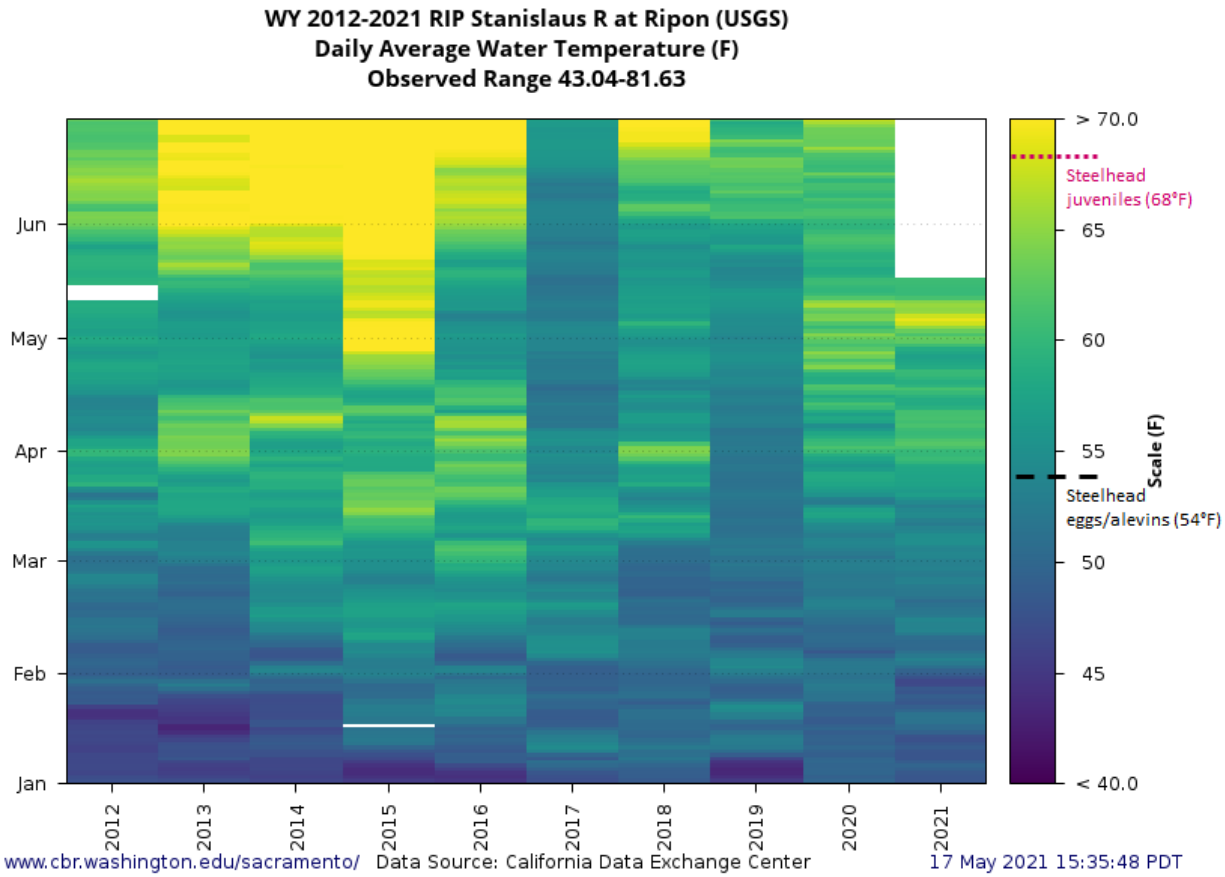


Figure 7. Stanislaus River water temperatures at Ripon for January through June from 2012 to present. Figure from SacPAS using RIP station data from CDEC; temperature threshold reference lines added by SWT.
http://www.cbr.washington.edu/sacramento/data/query_river_allyears.html

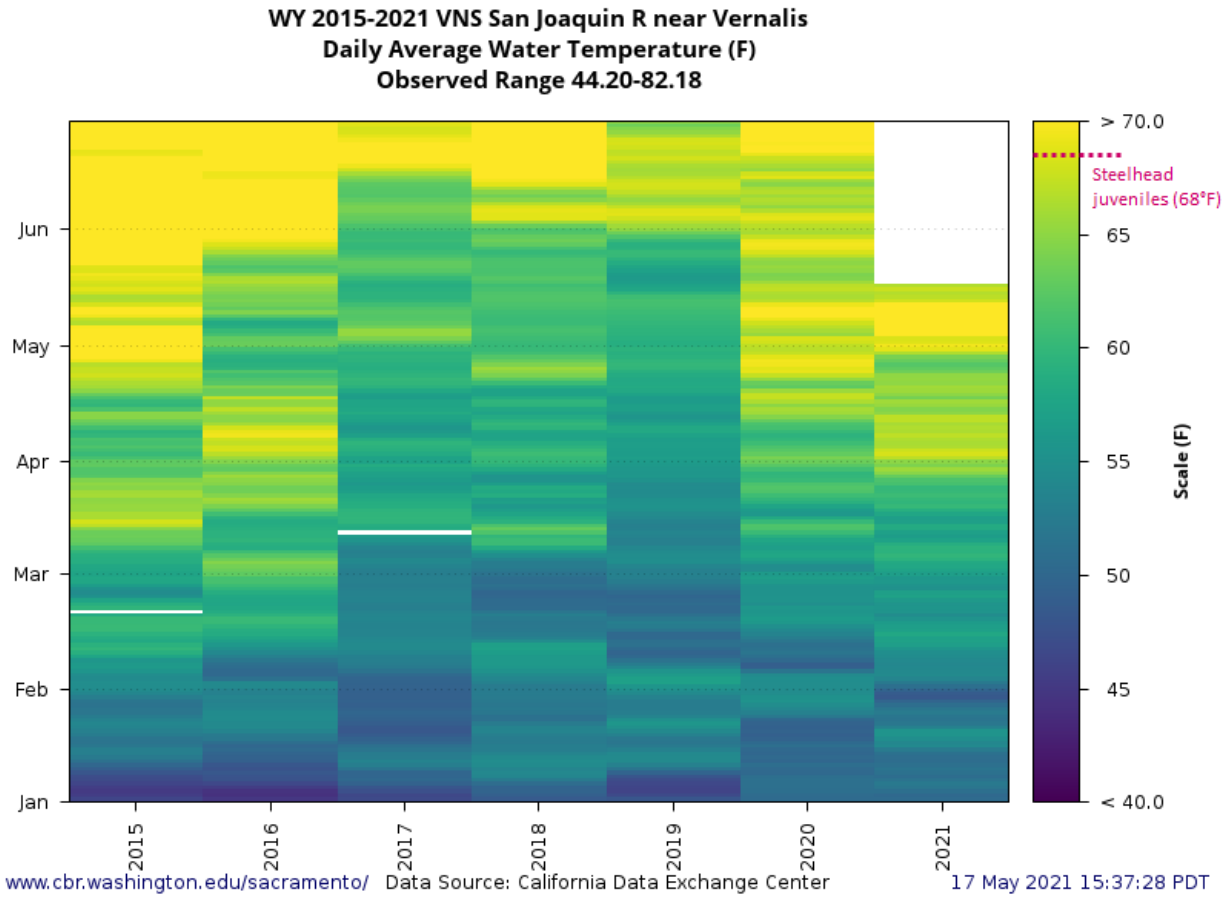


Figure 8. San Joaquin River water temperatures at Vernalis for January through June from 2015 to present. Figure from SacPAS using VNS station data from CDEC; temperature threshold reference line added by SWT.
http://www.cbr.washington.edu/sacramento/data/query_river_allyears.html

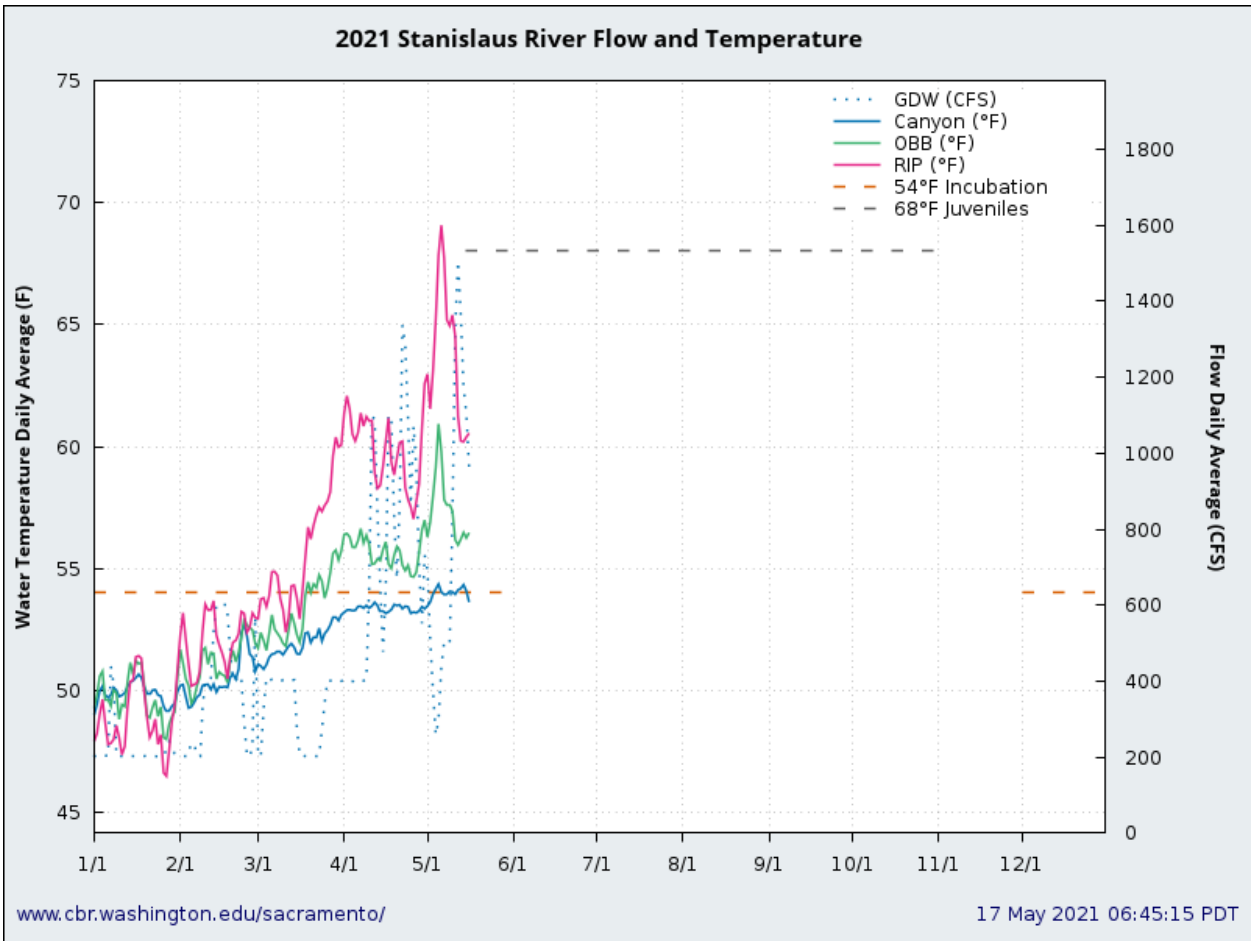


Figure 9. Stanislaus River flow and water temperatures from January 1, 2021 to present. Data (including temperature threshold reference lines) from SacPAS: http://www.cbr.washington.edu/sacramento/data/tc_stanislaus.html

Update on Fish Monitoring

Rotary Screw Traps

Rotary screw trapping at Oakdale (conducted by FISHBIO) and Caswell [conducted by the Pacific States Marine Fisheries Commission (PSMFC)] for the 2020/2021 outmigration season (for monitoring of outmigrating juvenile salmonids) began in early January. Chinook catch at each location is summarized in Figure 10 (Oakdale) and Figures 11 and 12 (Caswell). Through May 11, 2021, the trap at Caswell has captured a total of 165 unmarked Chinook salmon, 0 unmarked steelhead, and 3,385 juvenile lamprey.

Starting May 7, 2021, due to seasonal increase of river recreationalists, the rotary screw trap cones at the Caswell trap have been (and will continue to be) raised over the weekend to allow floaters and boaters to safely circumvent the traps.

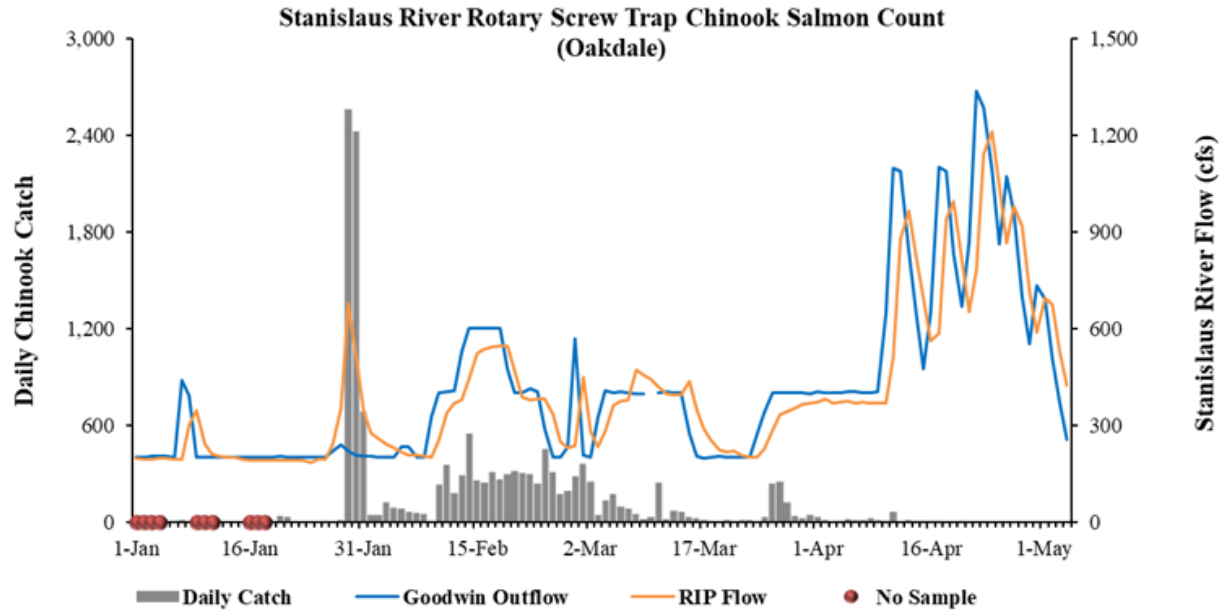


Figure 10. Daily juvenile Chinook catch through May 4, 2021, at the rotary screw trap near Oakdale. Figure courtesy of Fishbio from their San Joaquin Basin update.

Stanislaus River at Caswell Memorial State Park (RSTs):
Daily catch of natural origin Chinook Salmon and daily average discharge at Ripon during the 2021 Stanislaus River rotary screw trap survey season.

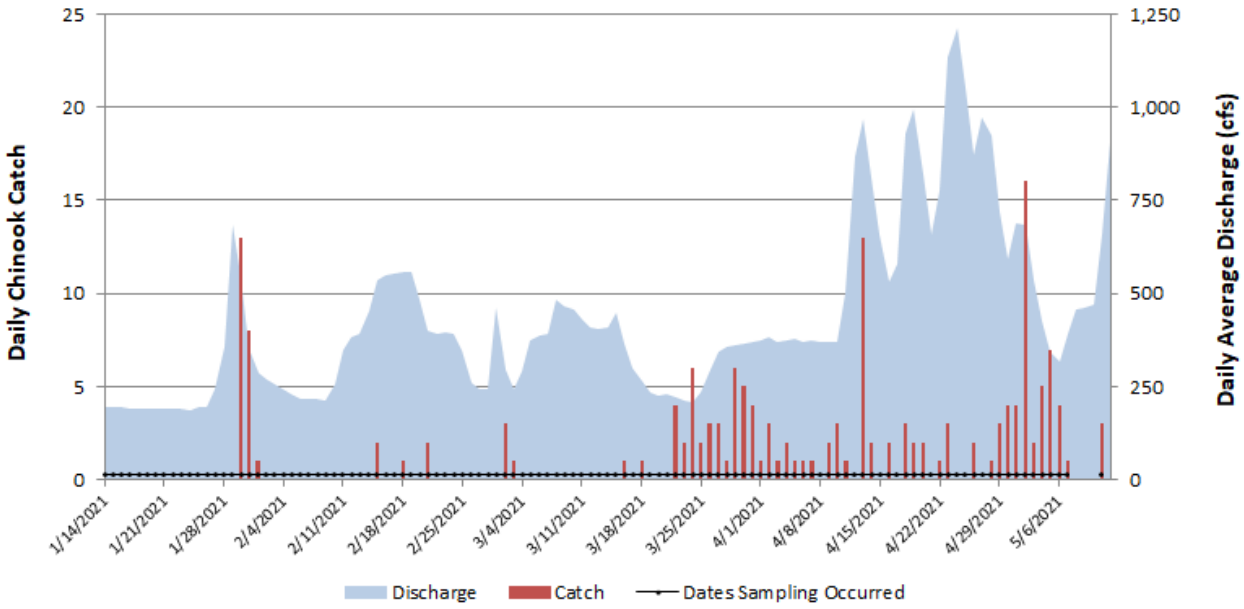


Figure 11. Daily juvenile Chinook catch through May 11, 2021, at the rotary screw trap near Caswell State Park. Discharge data is at Ripon. Figure courtesy of Pacific States Marine Fisheries Commission.

Stanislaus River at Caswell Memorial State Park (RSTs):
Daily fork length distribution by life stage of natural origin Chinook Salmon measured during the 2021 Stanislaus River rotary screw trap survey season.

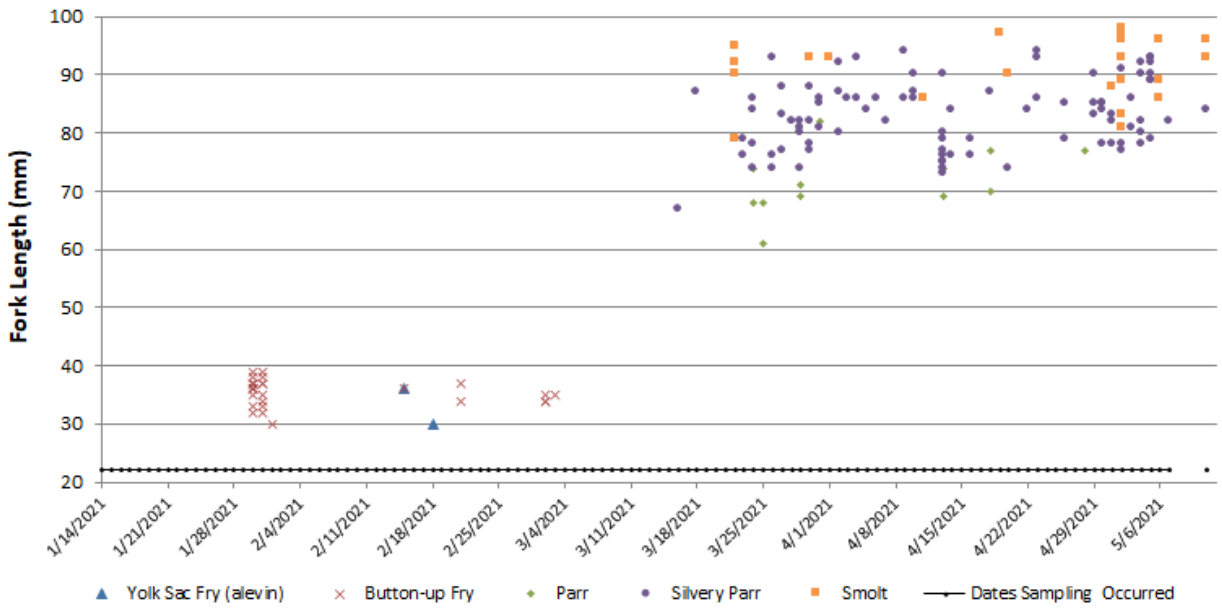


Figure 12. Daily juvenile Chinook catch (plotted by fork length and life stage) through May 11, 2021, at the rotary screw trap near Caswell State Park. Figure courtesy of Pacific States Marine Fisheries Commission.

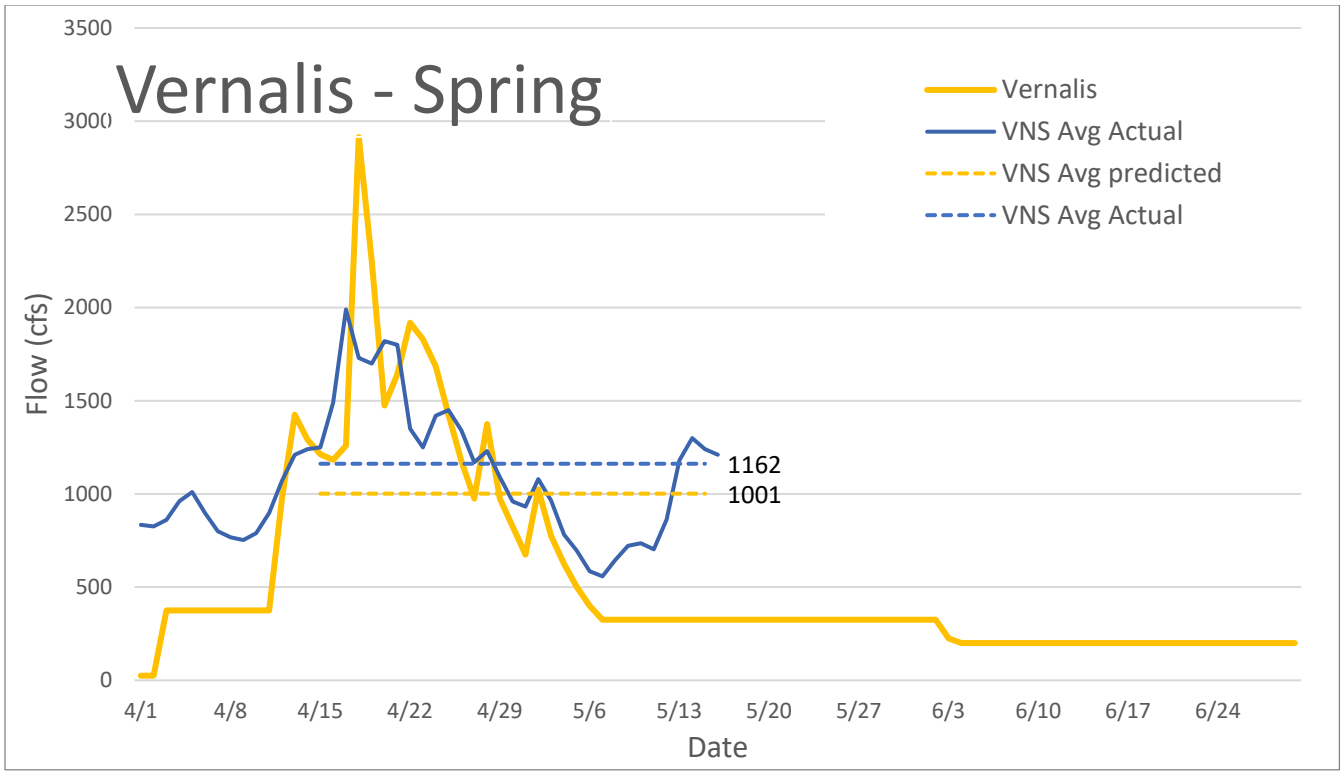
Mossdale Trawl

Because of COVID19 concerns, there was no Mossdale trawl sampling for much of the year, including from mid-March through early May. USFWS began sampling using the Mossdale trawl on May 4, 2021, and sampling shifted to CDFW on May 10, 2021. Since 5/4/21, 85 unclipped Chinook salmon and zero *O. mykiss* have been caught in the trawl.

Steelhead Redd Survey

During April, the CDFW crew counted 19 *O. mykiss* and two redds. All *O. mykiss* spawning activity was observed upstream of Oakdale Recreation Area during the first two weeks of April. CDFW also observed two live lampreys and five lamprey redds in the Stanislaus River (Figure 13). The Stanislaus Steelhead redd survey ended April 30, 2021.

Figure 13. Photo of lamprey redd on the Stanislaus River. Photo credit: CDFW


Vernalis - Spring
Vernalis
VNS Avg Actual
VNS Avg predicted
VNS Avg Actual
Flow (cfs)
3500
3000
2500
2000
1500
1000
500
0
4/1
4/8
4/15
4/22
4/29
5/6
5/13
5/20
5/27
6/3
6/10
6/17
6/24
Date
1162
1001