



— BUREAU OF —
RECLAMATION

Stanislaus Watershed Team

10:00 AM – 12:00 PM

Conference Line: 1 (773) 231-9226; Meeting ID: 148 869 4090

WebEx: <https://meetings.ringcentral.com/j/1488694090>

Wednesday, September 16, 2020

Notes

1. Actions

- Andrea Fuller
 - Look for (and share, if found) the summary spreadsheet of Stanislaus data that was located on Reclamation's website.
- Barbara Byrne
 - Coordinate with Gretchen Murphey and Elissa Buttermore on adding spawning data to SacPAS (low priority – no specific deadline).
- Gretchen Murphey
 - Follow up on the status of requests for confidence intervals for carcass survey estimates and the release of back logged Sport Fish Reports.
- J.D. Wikert
 - Adjust the flow planning spreadsheet to incorporate the new Stepped Release Plan flows for all year types.
 - Share any revisions to the draft flow schedule with the SWT. **(DONE)**
- Reclamation
 - Ask Elissa Buttermore to create and share a presentation on the gravel placement process.
- Zarela Guerrero
 - Circulate last year's Annual Report, as well as the responsibilities and new timeline for this year.
 - Ask if Kearns & West can save all SWT meeting documents to their MS Teams shared folder. **(DONE)**

2. Introductions

- USBR: Luke Davis, Zarela Guerrero, Levi Johnson, Liz Kiteck, Suzanne Manugian, Spencer Marshall, Sarah Perrin & Thuy Washburn
- NMFS: Barbara Byrne & Monica Gutierrez
- USFWS: J.D. Wikert
- CDFW: Ryan Kok, Duane Linander & Gretchen Murphey
- SWRCB: Chris Carr & Yongxuan Gao
- SSJID: Brandon Nakagawa & Peter Rietkerk
- OID: Steve Knell
- DWR: Jacob McQuirk, Vinh Giang & Matt Meyers
- WAPA: Tish Saare
- K&W: Rafael Silberblatt & Kai Walcott

3. Ground Rules

- The facilitator referenced the ground rules in the footnotes of the agenda. There were no objections from participants.

4. Announcements

- There were no announcements.
- Action items from August's meeting were reviewed. Outstanding items remain on the action list.

5. Operations Update and Forecasts/Hydrology

- Some CVP operations highlights include:
 - Keswick: 7000 cfs and will decrease to 6,600 cfs on Friday
 - Folsom: 1,750 cfs
 - Jones Pumping Plant: 4,300 cfs
 - Federal San Luis storage is at 316,000 acre-feet
- New Melones
 - Reservoir conditions: New Melones is at 1.57 MAF storage.
 - Flows
 - Releases at Goodwin Dam are at 200 cfs
 - Dissolved oxygen at Ripon and salinity at Vernalis remain suitable, so no increase in releases expected until the fall pulse flow.
 - Deliveries are on schedule.
- A question was raised regarding fire impacts on operations in the Stanislaus Basin. It was stated that no adjustments to New Melones operations have been made due to fires.

6. Temperature Updates

- Key takeaways from the discussion are as follows:
 - There was a large spike in water temperature throughout the system, from Goodwin Canyon to Vernalis, in mid-August. This increase was associated with a heat wave which caused ~5 days of extreme air temperature.
 - At Orange Blossom Bridge, the graph follows the same pattern, showing an increase in water temperature followed by a decrease to slightly below the temperatures observed before the heat wave. This decrease in water temperature after the heat wave could be related to smoke.
 - The tiny spike on the graph at Ripon is a data anomaly. The overall spike is in mid-August, following the pattern.
 - At Vernalis, the pattern holds as well.
- The scale on the heat maps was increased to 75°F which provided some higher resolution to the warmer temperatures observed at Ripon and Vernalis without entirely losing the resolution of cooler temperatures at Orange Blossom Bridge.
- Figure 9 depicts the mid-August spike throughout the entire system.
- Figure 12, an addition to the usual monthly meeting materials relevant for today's discussion of the fall pulse flow timing, depicts water temperature from October to December for Water Years 2001 to 2020. A few things to note:
 - Desired spawning conditions are roughly yellow or cooler.
 - Fall-run Chinook spawning typically starts in mid-late October, and in most years, temperatures are often below 56°F (see Figure 13 for easier temperature differentiation).
 - Temperatures are usually suitable by mid-November when peak spawning occurs.

7. Flow Planning

- The draft fall flow schedule was discussed, and members approved the timing and flow shaping of the Dry year SRP volume. Takeaways from the conversation are as follows:
 - Reminder that the Stepped Release Plan (SRP) flows are the same as the Appendix 2E flows for Critical, Dry, and Below Normal year types. The Above Normal SRP schedule is the same as the Below Normal Appendix 2E schedule. The Wet SRP schedule is the same as the Above Normal Appendix 2E schedule.
 - **[Action]** J.D. Wikert to update the flow planning spreadsheet to incorporate the new Stepped Release Plan flows for all year types.
 - Peaks are currently proposed at 1450 cfs to accommodate weir operations which tend to be challenging at flows over 1500 cfs.
 - Flow scheduling accommodates for carcass surveys, gravel placement and recreational activities (rafting), as well as other watershed interests.

- The recently laid gravel has already started moving with the current 200 cfs flow. As such, it is anticipated that more will move during the initial pulse flow. This may have small, limited, and short-term adverse impacts that are substantially offset by the long-term benefits.
- The Districts are amenable to providing additional water supply for pulse flows. The benefits of higher flows are likely highest in the spring during salmonid outmigration. However, the decision for releasing additional volumes of water is outside of the scope of SWT.
- The draft flow schedule may need some minor adjustments based on input received from SWT members or other groups planning fall pulse flows elsewhere in the San Joaquin basin.
- Reclamation will draft the Operations Plan (including a narrative description of the flow schedule) and circulate to SWT for review. The final Operations Plan will be posted on the website and made available to WOMT.

8. Stanislaus River Forum (SRF) Call Review

- Stanislaus River Forum was held via conference call on September 15, 2020. Barbara Byrne (NMFS), Logan Day (PSMFC), Zarela Guerrero (USBR), Levi Johnson (USBR), Gretchen Murphey (CDFW), Sarah Perrin (USBR), Cory Starr (PSMFC), Thuy Washburn (USBR), J.D. Wikert (USFWS), and Michelle Workman (EBMUD) were in attendance. Operations, temperature, and fish monitoring data were reviewed. Barbara Byrne informed the group that she had received an email from Scott Armstrong from All Outdoor Rafting inquiring about river flows during the fall pulse flow.

9. Fish Monitoring and Studies

- FISHBIO installed their weir on the September 10, the data from which should be available next week.
- CDFW will begin their carcass surveys on October 6. Surveys will be conducted Tuesday through Thursday.
- A steelhead redd survey is being planned from January to April. An SOP is being drafted and equipment ordered to this end.
- Reclamation has developed a charter for steelhead and lifecycle monitoring and has finalized the contracts with FISHBIO and Cramer Fish Sciences. For more information, members can contact J.D. Wikert or Mike Beakes.

10. Restoration Project Updates

- 15,000 tons of gravel are currently being placed in the canyon. The current date for completion is September 25.
 - **[Action]** Reclamation will ask Elissa Buttermore to create and share a presentation on the gravel placement process.

- Stanley Wakefield Wilderness Area (Kerr Park): Activities are slowly progressing.
- Migratory Corridor: Communication with landowners continues.
- Button Bush and Rodden Road: Post project monitoring is anticipated to be conducted this spring.
- CVPIA: The draft implementation plan, which outlines Reclamation's funding, has been finalized. Funding for FY2020 should be received in the coming days.

11. Progress Toward BiOp Requirements (Proposed Action Elements)

- The Annual Report deadline is approaching. See Annual Report outline for more details.
 - **[Action]** Zarela Guerrero will circulate last year's Annual Report, as well as the responsibilities and new timeline for this year.
 - **[Action]** Kearns & West will append the Annual Report outline and schedule to the meeting notes.

12. Other Discussion Items

- Stanislaus data review
 - No additional data is required for the fall pulse flow, and most of the data necessary for the spring pulse flow is available.
 - There is currently no time sensitive data required.
 - A summary of the data mentioned last month during FISHBIO's overview is available on page 16 of the meeting handout.
- COVID-19 impacts on SWT's functions
 - There were no updates regarding COVID-19 impacts.
- Items to elevate to WOMT
 - There were no items to elevate to WOMT.
- Microsoft (MS) Teams webinar will be used for October's meeting. As such, the facilitator led a walkthrough of MS Teams, suggesting members copy the meeting link into a private Microsoft Edge browser. SWT members should contact Rafi Silberblatt and/or Kai Walcott if they have any issues using MS Teams.
 - **[Action]** Zarela Guerrero will confirm if Kearns & West can save all SWT meeting documents to their MS Teams shared folder.
- September is Thuy Washburn's last month as the operator on the Stanislaus River; she will be moving to the American River in October. She will be replaced by Peggy Manza. Thanks to Thuy for her years of helpful operations support on the Stanislaus!



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Agenda

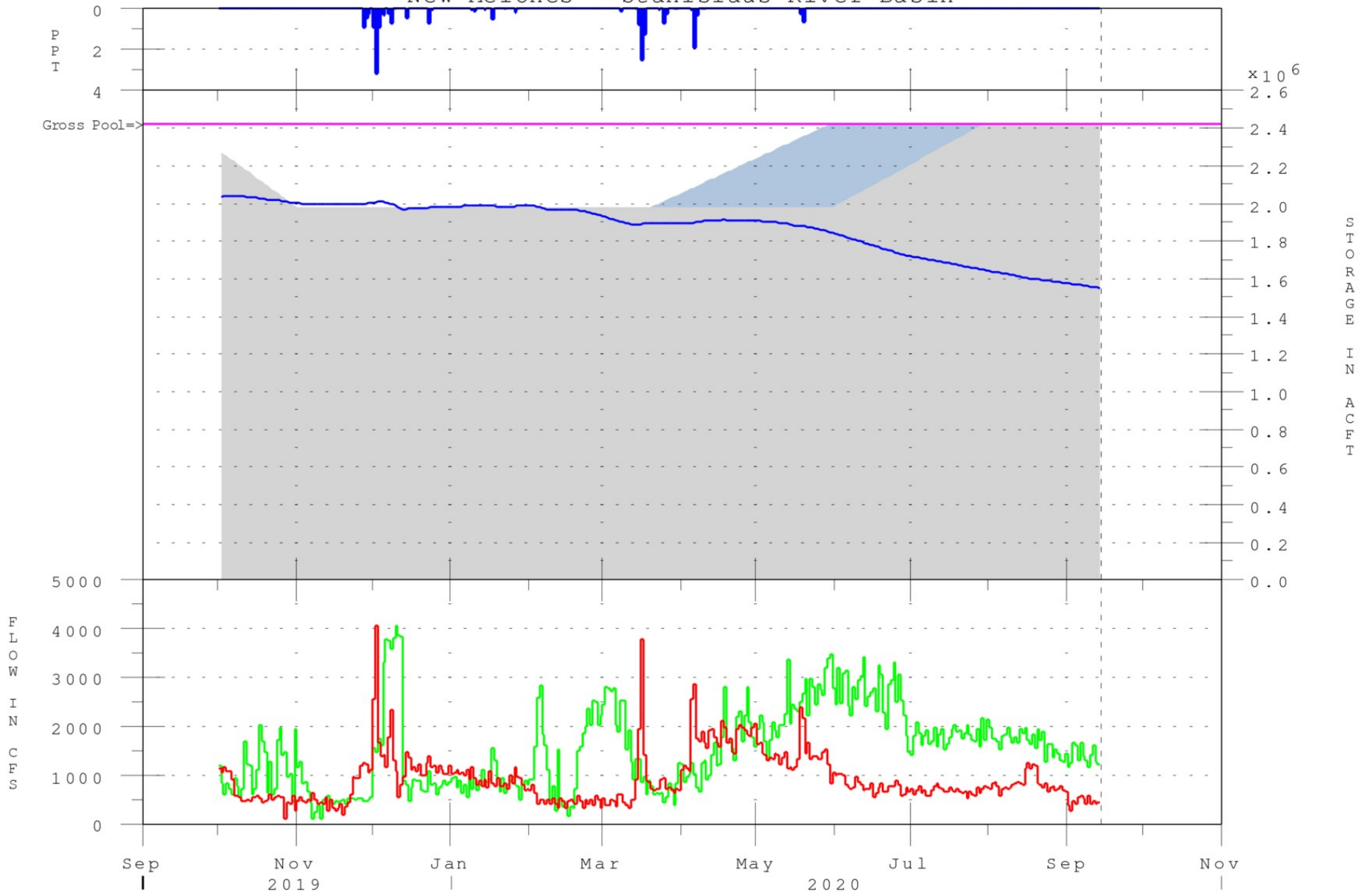
1. Introductions
2. Ground Rules¹
3. Announcements
4. Operations Update and Forecasts/Hydrology
5. Temperature Updates
6. Flow Planning
7. Stanislaus River Forum (SRF) Call Review
8. Fish Monitoring and Studies
9. Restoration Project Updates
10. Progress Toward BiOp Requirements (Proposed Action Elements)
 - a. Annual Report outline—Lessons Learned
11. Other Discussion Items
 - a. Stanislaus data review
 - b. COVID-19 impacts on SWT's functions
 - c. Items to elevate to WOMET
12. Review Action Items
13. Next Meeting
 - a. Wednesday, October 21, 2020 (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

14SEP20 08:42:25

New Melones - Stanislaus River Basin



- Outflow
- Inflow
- Top of Con (Early Refill Diagram)
- Top of Con (Late Refill Diagram)
- Reservoir Storage
- Precipitation

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

SEPTEMBER 2020

NEW MELONES LAKE DAILY OPERATIONS

RUN DATE: September 14, 2020

DAY	ELEV	STORAGE 1000		COMPUTED INFLOW C.F.S.	RELEASE - C.F.S.			EVAPORATION		PRECIP INCHES
		ACRE-FEET IN LAKE	CHANGE		POWER	SPILL	OUTLET	C.F.S.	INCHES	
		1,574.4								
1	1,010.83	1,572.7	-1.7	397	1,163	0	0	102	.33	.00
2	1,010.61	1,570.6	-2.1	265	1,238	0	0	87	.28	.00
3	1,010.34	1,568.0	-2.6	462	1,664	0	0	99	.32	.00
4	1,010.07	1,565.4	-2.6	407	1,609	0	0	99	.32	.00
5	1,009.89	1,563.7	-1.7	549	1,309	0	0	105	.34	.00
6	1,009.64	1,561.3	-2.4	577	1,678	0	0	99	.32	.00
7	1,009.43	1,559.3	-2.0	517	1,402	0	0	123	.40	.00
8	1,009.22	1,557.3	-2.0	410	1,295	0	0	123	.40	.00
9	1,009.07	1,555.9	-1.4	576	1,167	0	0	129	.42	.00
10	1,008.84	1,553.7	-2.2	414	1,426	0	0	89	.29	.00
11	1,008.59	1,551.4	-2.4	479	1,603	0	0	71	.23	.00
12	1,008.39	1,549.5	-1.9	408	1,284	0	0	80	.26	.00
13	1,008.21	1,547.8	-1.7	453	1,222	0	0	92	.30	.00
TOTALS			-26.7	5,914	18,060	0	0	1,298	4.21	.00
ACRE-FEET			-26,700	11,730	35,822	0	0	2,575		

COMMENTS:

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

SUMMARY

	RELEASE	ACRE-FEET		PRECIPITATION	
POWER		35,822	0	THIS MONTH	.00
SPILL	OUTLET	0	35,822	JULY 1, 2020 TO	.00
	TOTAL			DATE OCT 1, 2019 TO	22.35
				DATE	

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

SEPTEMBER 2020

GOODWIN RESERVOIR DAILY OPERATIONS

RUN DATE: September 14, 2020

DAY	ELEV	STORAGE		TULLOCH	RIVER		RELEASE - C.F.S.	
		ACRE-FEET RES.	CHANGE		RELEASE	OUTLET	SPILL	JOINT MAIN
		521						
1	359.77	521	+0	1,377	0	205	728	312
2	359.77	521	+0	1,424	0	208	767	345
3	359.77	521	+0	1,492	0	204	807	336
4	359.77	521	+0	1,518	0	202	792	372
5	359.77	521	+0	1,471	0	205	774	356
6	359.77	521	+0	1,407	0	205	771	299
7	359.76	520	-1	1,341	0	203	715	279
8	359.77	521	+1	1,303	0	203	715	241
9	359.77	521	+0	1,307	0	204	687	280
10	359.77	521	+0	1,335	0	200	690	302
11	359.77	521	+0	1,383	0	203	720	302
12	359.77	521	+0	1,394	0	202	733	303
13	359.77	521	+0	1,391	0	202	744	311
TOTALS			+0	18,143	0	2,646	9,643	4,038
ACRE-FEET			+0	35,987	0	5,248	19,127	8,009

JOINT MAIN OPERATED BY SSJID AND OID.

SUMMARY

RELEASE ACRE-FEET

JOINT MAIN CANAL	19,127	OUTLE	0
SOUTH MAIN CANAL	8,009	T SPILL	5,248
		TOTAL	32,384

September 2020 Stanislaus River Update

Water Year Type

San Joaquin Basin “60-20-20” water year type (based on the May 75% exceedance forecast):

Dry

Flows

After the spring pulse flow, through the summer until the fall pulse flow begins, the Dry year type SRP flow schedule requires minimum instream base flows of 200 cfs. Goodwin releases since January 2020 are shown in Figure 1.

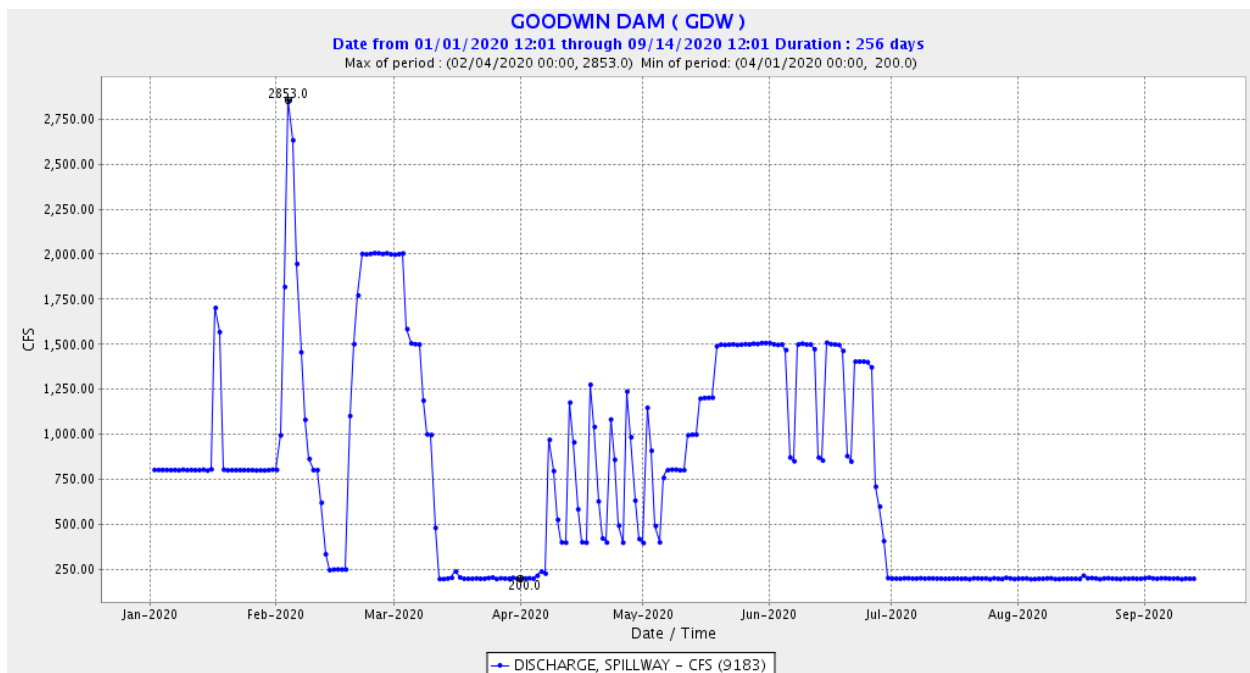


Figure 1. Goodwin (daily) releases to the Stanislaus River since January 1, 2020. Data from GDW station on CDEC.

Water Temperature

The temperature thresholds included in Figures 2-9, below, are the thresholds used in the 2019 NMFS LTO 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.

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>

Water temperatures in the Stanislaus River since June 1, 2020 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 2020 are shown below at Vernalis (Figure 5). Current-year water temperatures are plotted along with historical temperatures for Orange Blossom Bridge (Figure 6), Ripon (Figure 7), and Vernalis (Figure 8). A compilation of Stanislaus River water temperatures and Goodwin releases is provided in Figure 9.

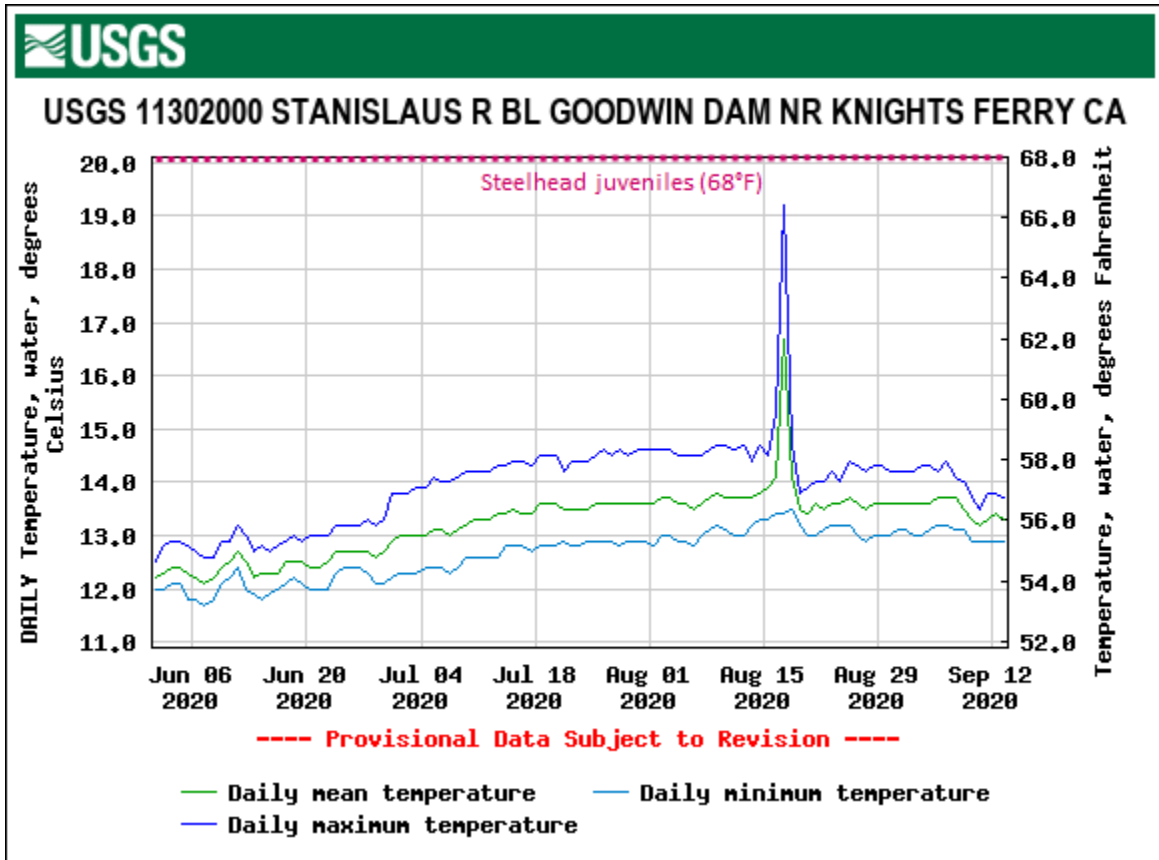


Figure 2. Daily water temperatures on the Stanislaus River upstream of Knights Ferry since June 1, 2020. Data from USGS gage 11302000 on NWIS; temperature threshold reference line added by SWT.

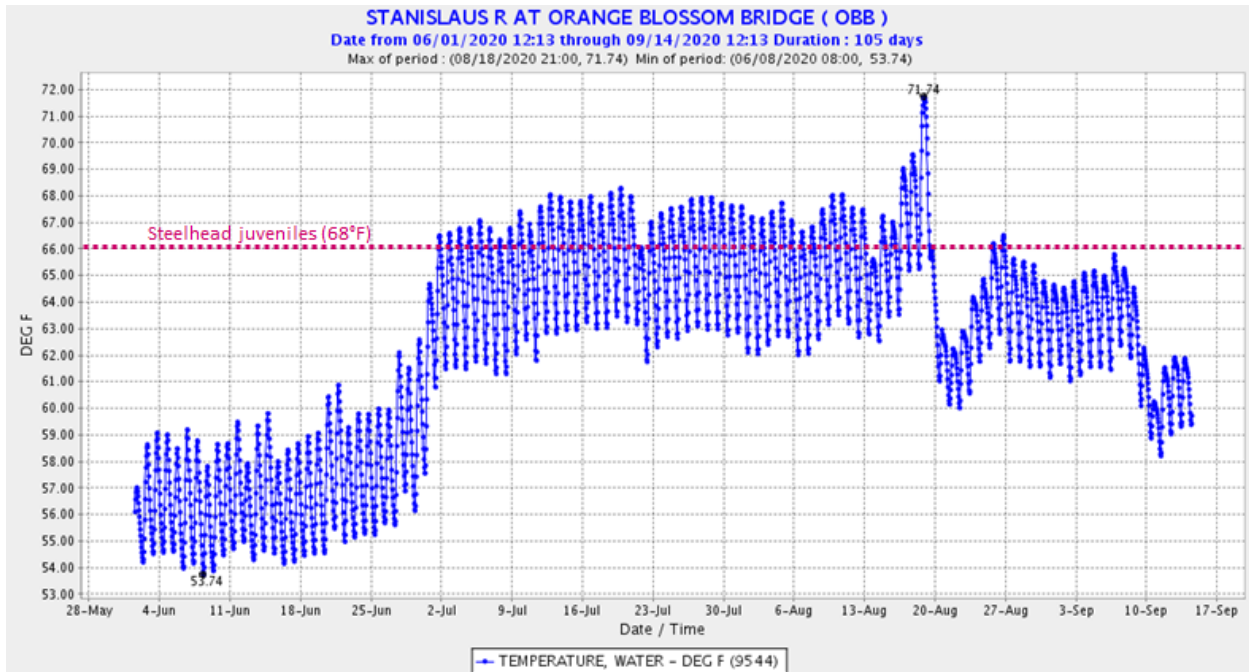


Figure 3. Stanislaus (hourly) water temperatures at Orange Blossom Bridge since June 1, 2020. Data from OBB station on CDEC; temperature threshold reference line added by SWT.

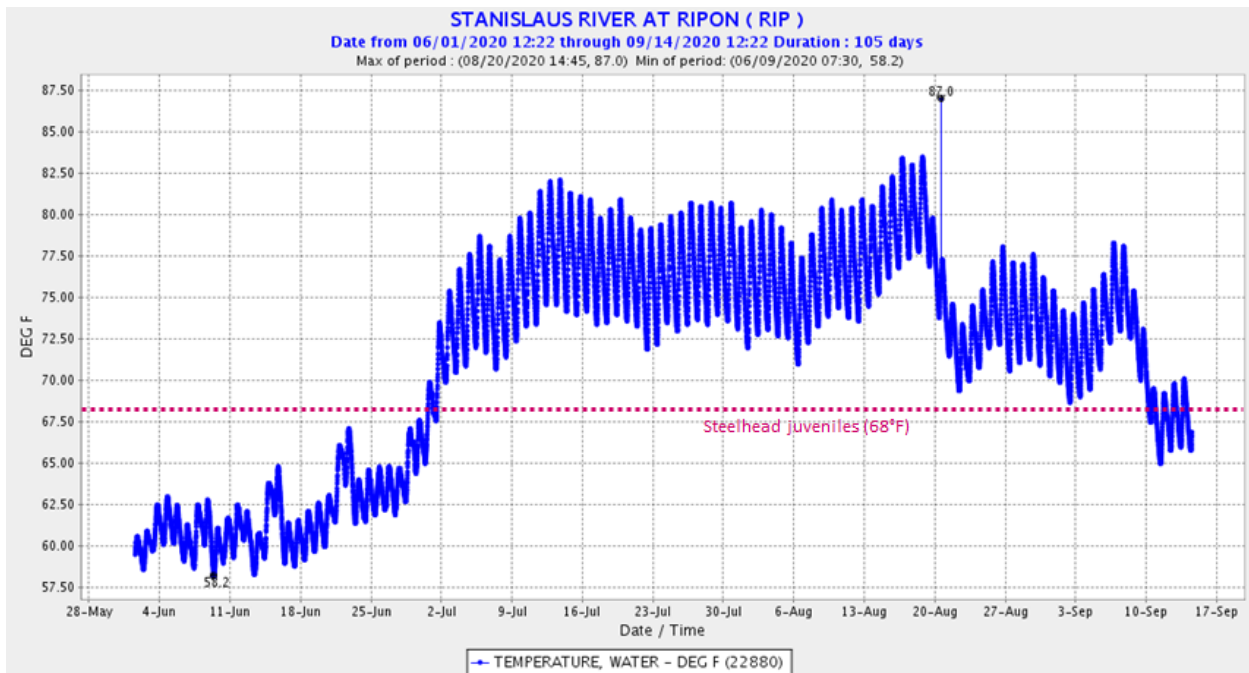


Figure 4. Stanislaus (15-minute) water temperatures at Ripon since June 1, 2020. Data from RIP station on CDEC; temperature threshold reference line added by SWT.

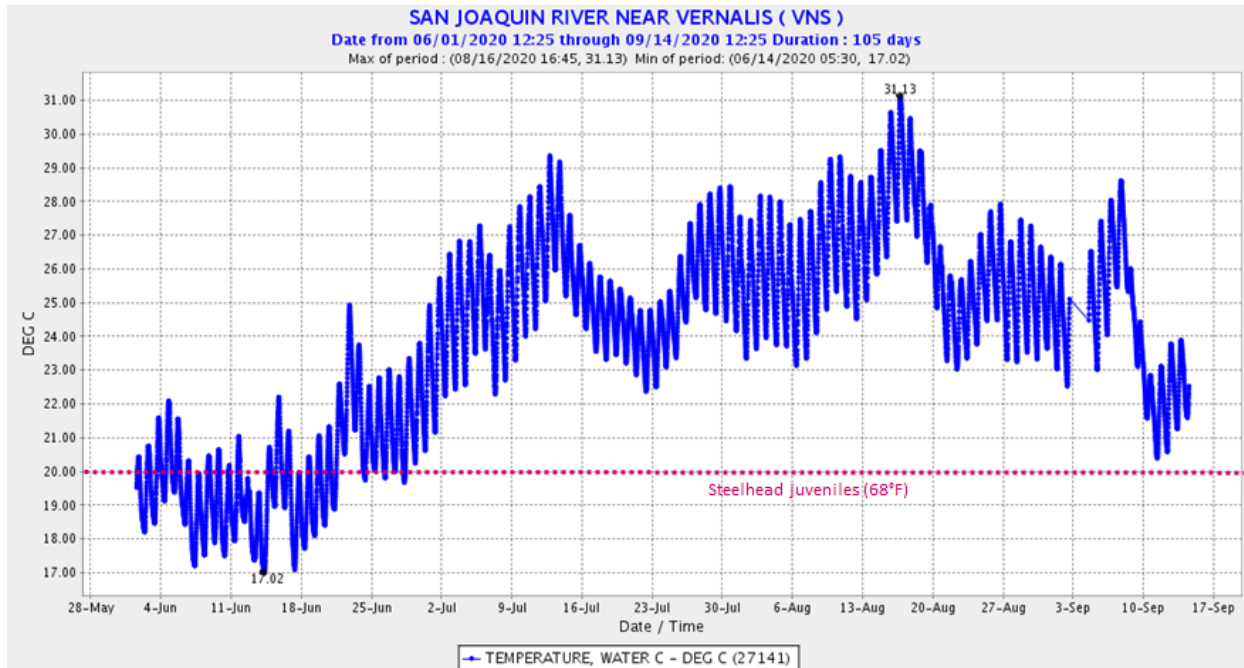


Figure 5. San Joaquin River (15-minute) water temperatures at Vernalis since June 1, 2020. Data from VNS station on CDEC; temperature threshold reference line added by SWT. Note that, unlike in the previous figures, temperature is reported in degrees Celsius. 10°C=50°F; 12°C=53.6°F; 14°C=57.2°F; 16°C=60.8°F; 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.

WY 2001-2020 OBB Stanislaus R at Orange Blossom Bridge
Daily Average Water Temperature (F)
Observed Range 36.30-73.07

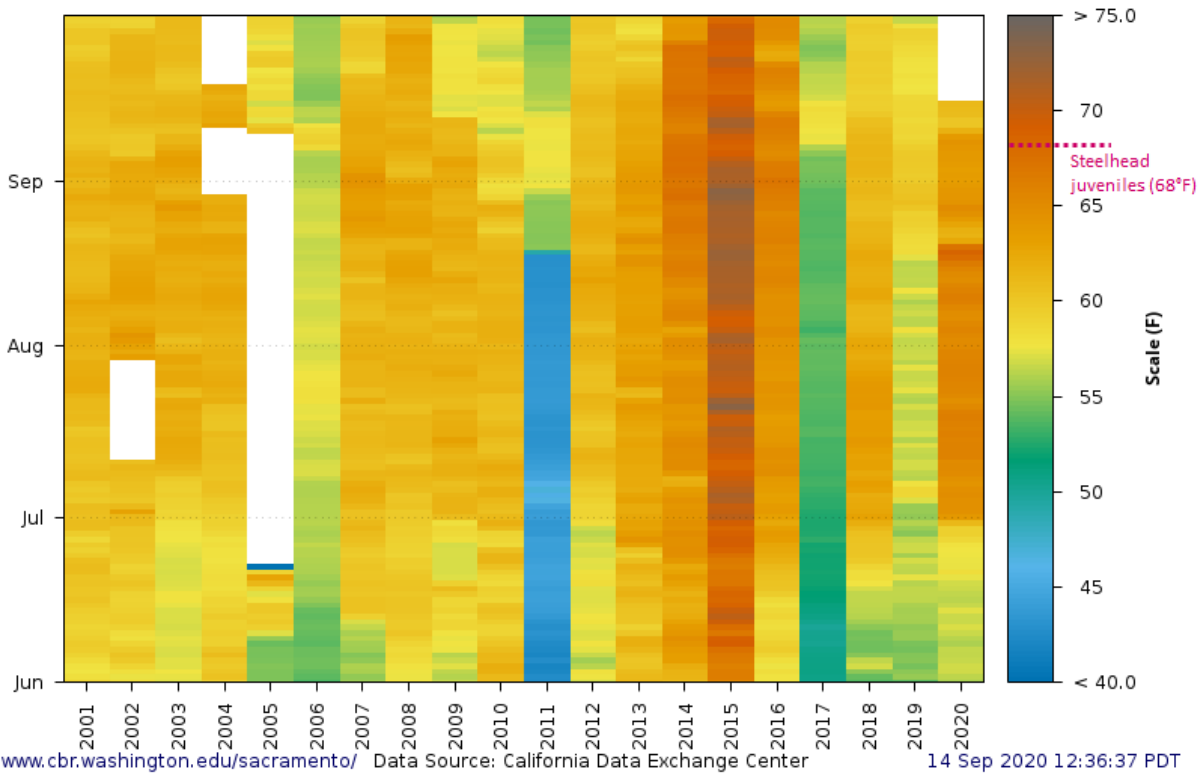


Figure 6. Stanislaus River water temperatures at Orange Blossom Bridge for June through September from 2001 to present. Data from SacPAS; temperature threshold reference line added by SWT. http://www.cbr.washington.edu/sacramento/data/query_river_allyears.html

WY 2012-2020 RIP Stanislaus R at Ripon (USGS)
Daily Average Water Temperature (F)
Observed Range 51.96-82.35

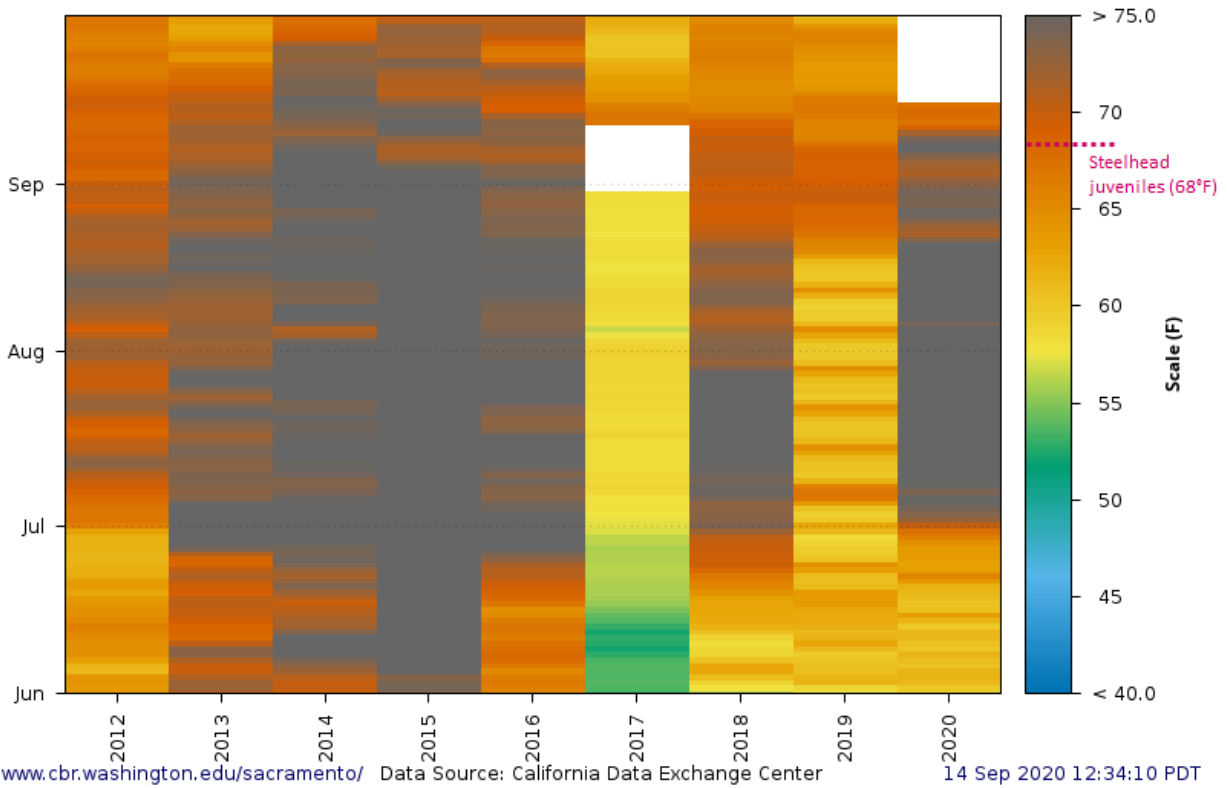


Figure 7. Stanislaus River water temperatures at Ripon for June through September from 2012 to present. Data from SacPAS; temperature threshold reference line added by SWT.
http://www.cbr.washington.edu/sacramento/data/query_river_allyears.html

WY 2015-2020 VNS San Joaquin R near Vernalis
Daily Average Water Temperature (F)
Observed Range 60.82-84.80

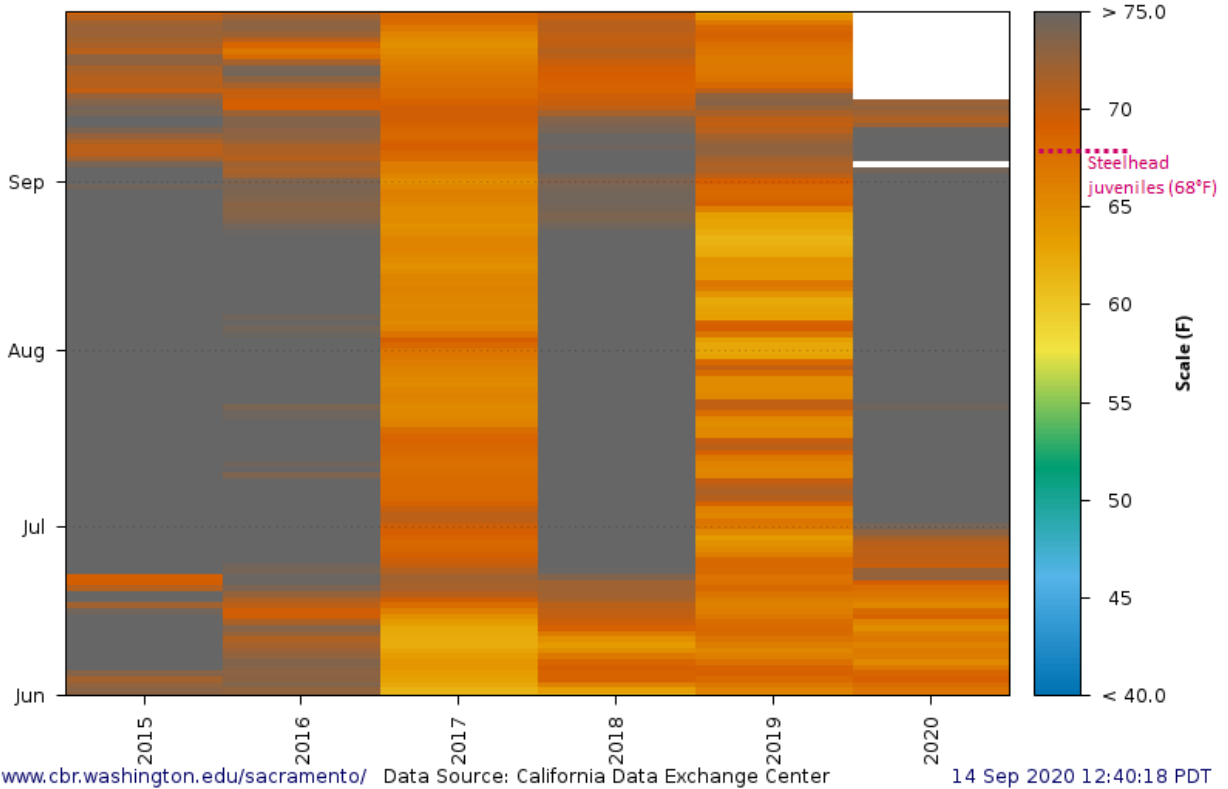


Figure 8. San Joaquin River water temperatures at Vernalis for June through September from 2015 to present. Data from SacPAS; temperature threshold reference line added by SWT.
http://www.cbr.washington.edu/sacramento/data/query_river_allyears.html

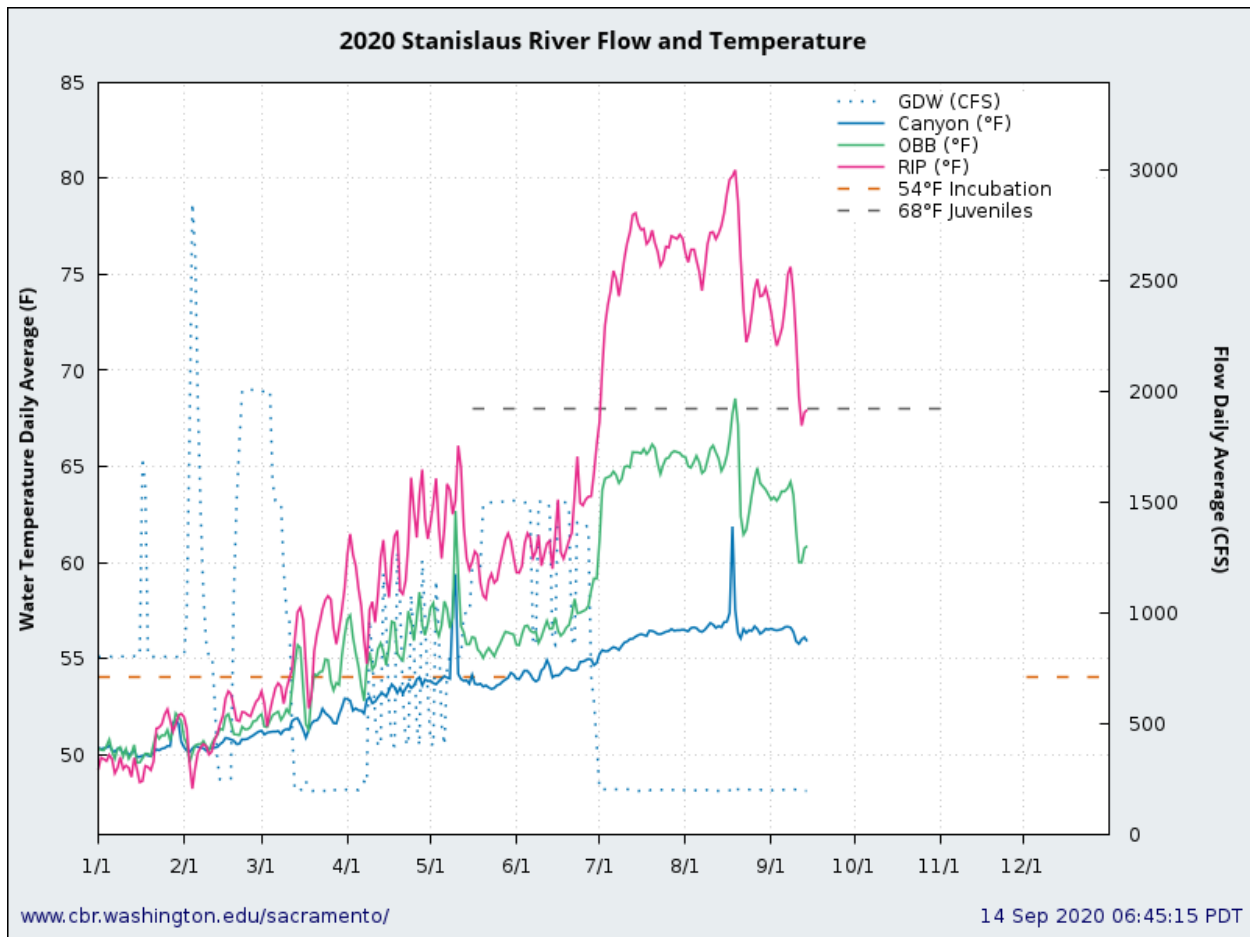


Figure 9. 2020 Stanislaus River flow and water temperatures from January 1, 2020 to present. Data (including temperature threshold reference lines) from SacPAS:

http://www.cbr.washington.edu/sacramento/data/tc_stanislaus.html#nmfs2019

Additional Context for Water Temperatures

The significant change in water temperatures (seen from Orange Blossom Bridge down to Vernalis) in late August is likely primarily related to weather conditions (Figure 10). Instream flows may also have had an effect on water temperatures at Vernalis, where flows increased somewhat in late August (Figure 11).

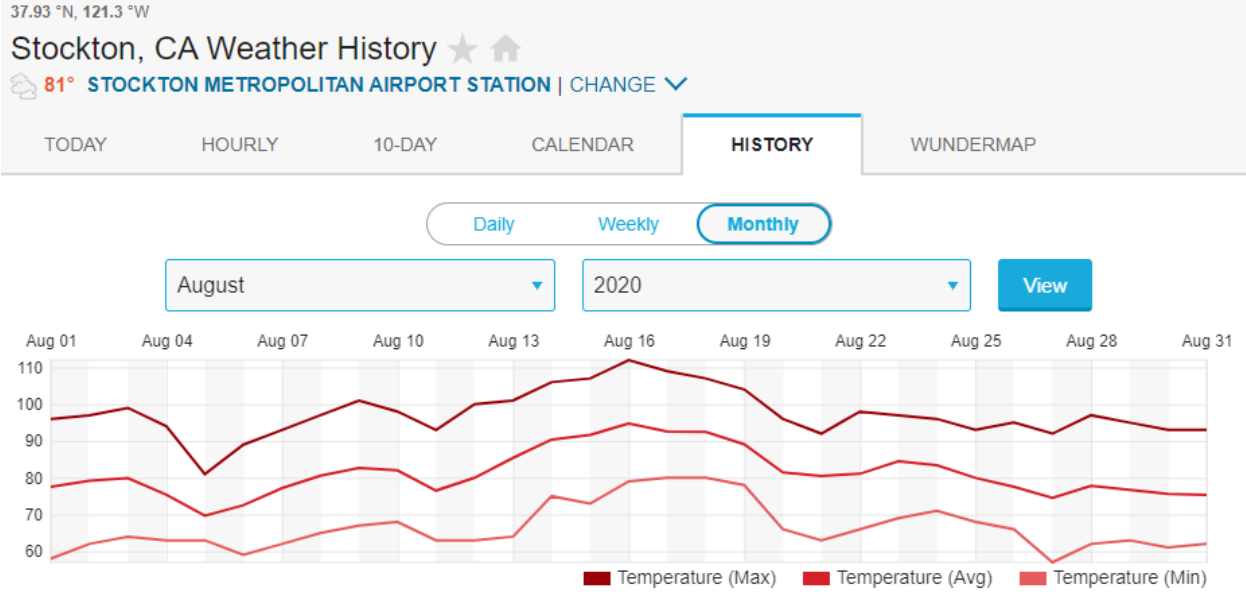


Figure 10. Air temperatures near Stockton, CA, in August 2020. Data from: <https://www.wunderground.com/history/monthly/us/ca/stockton/KSCK/date/2020-8>

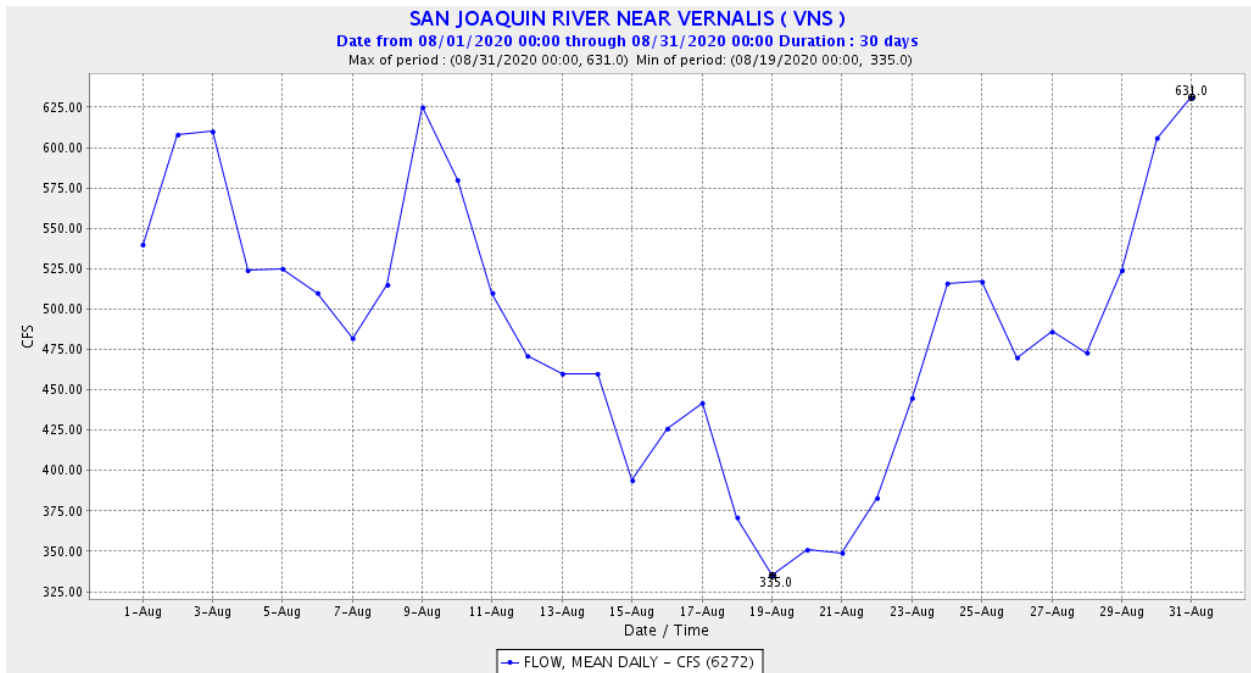


Figure 11. San Joaquin River daily flow at Vernalis in August 2020. Data from VNS station on CDEC.

Figures 12 and 13 provide historical context for fall temperature trends in the Stanislaus River.

WY 2001-2020 OBB Stanislaus R at Orange Blossom Bridge
Daily Average Water Temperature (F)
Observed Range 43.02-68.41

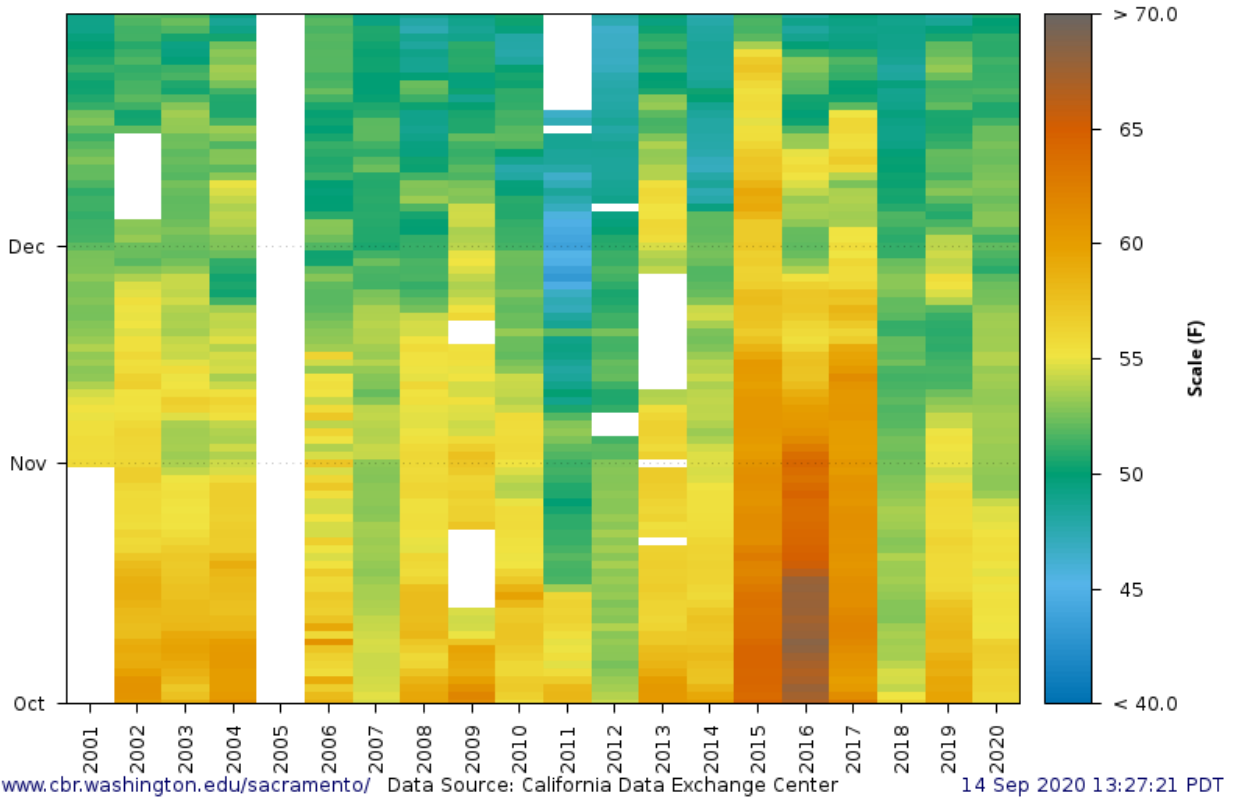


Figure 12. Stanislaus River water temperatures (continuous scale) at Orange Blossom Bridge for October through December from 2001 to present. Data from SacPAS.

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

WY 2001-2020 OBB Stanislaus R at Orange Blossom Bridge
Daily Average Daily Average Water Temperature (F)
Observed Range 43.02-68.41

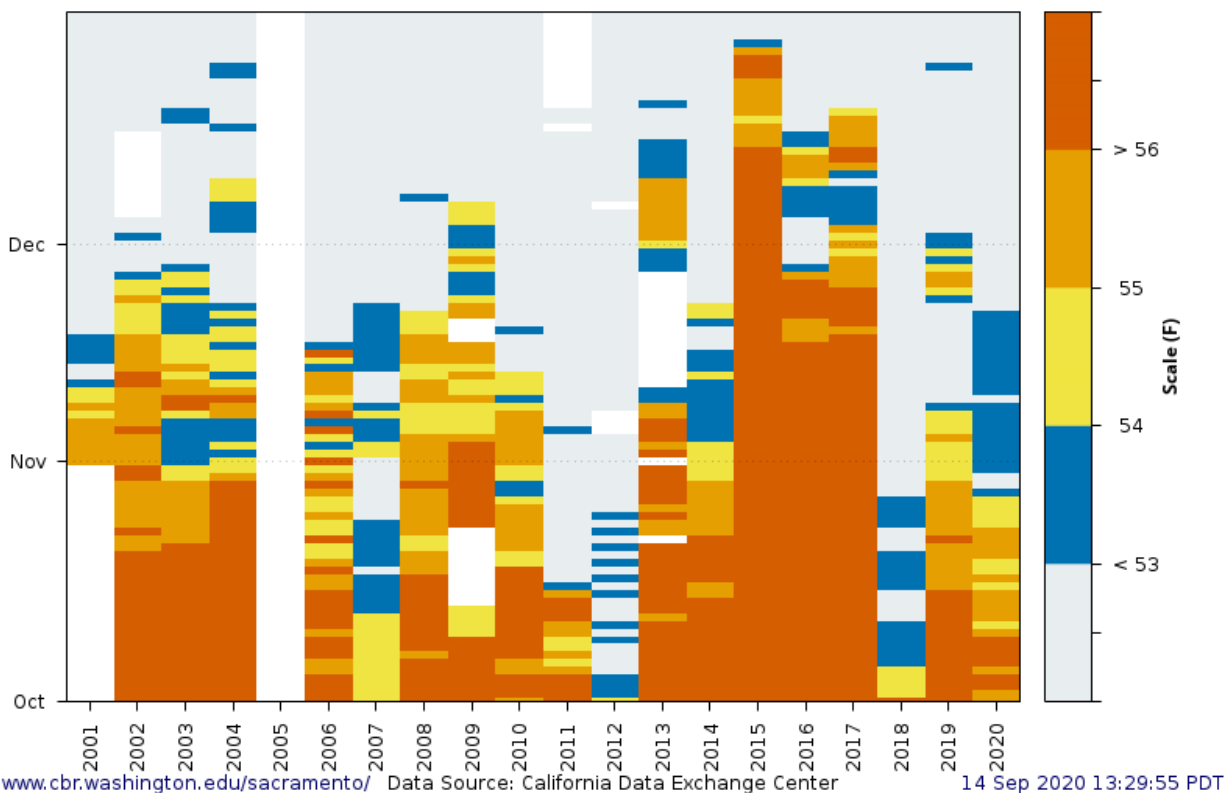


Figure 13. Stanislaus River water temperatures (“temperature target” scale) at Orange Blossom Bridge for October through December from 2001 to present. Data from SacPAS.

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

Update on Fish Monitoring

Monitoring for juvenile salmonid outmigration using rotary screw traps has ended for the year. Monitoring for adult salmonid migration into the river is beginning. Fishbio installed the weir near Riverbank on September 10, 2020. CDFW expects to begin carcass surveys on October 6, 2020.

Districts' research and monitoring efforts

Detailed project descriptions, objectives, and methods can be found on NOAA apps search page at: <https://apps.nmfs.noaa.gov/search/search.cfm>

- Lifecycle monitoring - Elements designed to cover in-river segments of life-history
 - Weir
 - Operated each fall/winter
 - Spreadsheet updates provided via frequent email distribution
 - Published analysis of data through 2014 in paper entitled *Environmental Factors Associated with the Upstream Migration of Fall-Run Chinook Salmon in a Regulated River*
<https://afspubs.onlinelibrary.wiley.com/doi/abs/10.1080/02755947.2016.1240120>
 - Redd surveys
 - Bi-weekly to weekly each fall/winter
 - Published results in paper entitled Stability in reproductive timing and habitat usage of Chinook salmon across six years of varying environmental conditions and abundance
<https://onlinelibrary.wiley.com/doi/abs/10.1111/fme.12421>
 - Oakdale RST
 - Operated January-June
 - Weekly updates distributed via email
 - Published *Evaluation of Long-Term Mark-Recapture Data for Estimating Abundance of Juvenile Fall-Run Chinook Salmon on the Stanislaus River from 1996 to 2017*
<https://escholarship.org/uc/item/2z38p12t>
 - O. mykiss abundance and distribution
 - Summer snorkel surveys between Goodwin and Oakdale
 - 2009-2015 report available at
<https://fishbio.com/wp-content/uploads/Stanislaus-Rainbow-Trout-Report-2015-Surveys.pdf>
 - Here we posted updated results coming out of the drought
<https://fishbio.com/field-notes/the-fish-report/hope-rainbow-trout-stanislaus-river>
- Native Fish Plan
 - Born out of 2016 WIIN Act; started late season 2018 due to permitting
 - Abundance, distribution, diets of non-native fish
 - Impacts to salmonids
 - Pilot removals
 - Data posted on NMFS site for 2018-2020
<https://www.fisheries.noaa.gov/west-coast/endangered-species-conservation/california-central-valley-water-operations-stanislaus-nonnative-predator-research>