BUREAU OF RECLAMATION

Stanislaus Watershed Team

10:00 AM – 12:00 PM
MS Teams: Join Microsoft Teams Meeting
Stanislaus Watershed Team Notes: https://www.usbr.gov/mp/bdo/stanislaus-watershed-team.html

Wednesday, November 18, 2020

Notes

1. **Action**
    - Kearns & West
        - Add a link to the location of the meeting notes on the website moving forward. **(DONE)**
        - Troubleshoot MS Teams issues (chat function and guest permissions).
    - Peggy Manza
        - Prepare two months of Goodwin Reservoir Daily Operations for the monthly meeting handout moving forward.
    - Elissa Buttermore
        - Prepare presentation on gravel placement for December's meeting.
    - Zarela Guerrero
        - Circulate a revised version of the timeline along with the most recent draft of the WY20 Annual Report to report team members for their review and update.
    - Barbara Byrne
        - Share with USBR previous advice for a Dry year winter instability flow alternate schedule. **(DONE)**
    - J.D. Wikert
        - Develop a straw proposal for February's instability flow to discuss in December's meeting.
2. **Introductions**
    - USBR: Elissa Buttermore, Luke Davis, Zarela Guerrero, Peggy Manza, Thuy Washburn, Liz Kiteck, Levi Johnson

- DWR: Jacob McQuirk & Vinh Giang
- NMFS: Barbara Byrne & Monica Gutierrez
- USFW: J.D. Wikert
- CDFW: Duane Linander, Gretchen Murphey & Steve Tsao
- SWRCB: Chris Carr, Erin Foresman & Yongxuan Gao
- South San Joaquin Irrigation District: Brandon Nakagawa
- Oakdale Irrigation District: Tim Wasiewski
- Stockton East Water District: Jeanne Zolezzi
- Kearns & West: Rafael Silberblatt & Kai Walcott

3. Ground Rules

- The facilitator referred to the ground rules, located in the footnotes of the agenda, and received no objections from participants.

4. Announcements

- There were no announcements.

5. Operations Update and Forecasts/Hydrology

- Information is from November 16th.
- CVP operations highlights included:
    - Reservoir Releases
        - Releases from Goodwin Dam are at the winter base flow of 200 cfs and expected to hold there except during the winter instability flows in January and February.
    - Inflow
        - The storage level in New Melones is slowly increasing as inflows were approximately 300 cfs and the releases were, on average, less than that.
        - The increase in inflows could be partially attributed to upstream power operators increasing their releases.
    - Precipitation
        - The watershed is currently experiencing its first measurable storm event of the year.
        - The Stanislaus River at New Melones has had precipitation of 0.11 inches, which is just 4% of average. That said, there is still enough time in the year for precipitation levels to increase.
        - A question was raised about the percentage of precipitation expected as snow versus rain. The response was given that though it is still unclear, it is expected that there would be snow at upper elevations only, since it's

still warm during the days at lower elevations. It was later clarified that the recent precipitation resulted in snow above ~7,000 ft elevation.

- Daily Operations: New Melones
    - Reservoir condition: New Melones is at 1.5 MAF storage.
    - The computed inflow was approximately 300 cfs. Over the last two days, November 17th to 18th inflows have been higher.
- Goodwin Reservoir Daily Operations
    - Releases reached 200 cfs after ramping down from the fall instability flow and releases have been held at 200 cfs since.
    - There has been no side flow given the lack of precipitation.
    - A member requested that these reports be provided with the last two weeks of the previous month, as they are not typically shared during the meeting.
        - **[Action]** Peggy Manza will prepare two months of Goodwin Reservoir Daily Operations for the monthly meeting handout moving forward.
    - A member asked if it was expected that New Melones releases would be necessary for reservoir management. The response was given that it was not expected to be necessary anytime soon given that current storage is well below the flood curve.
    - Tulloch elevation is being reduced to 470 feet for an inspection and any necessary maintenance. This process occurs every three years.
        - A member asked if the inspection and maintenance of Tulloch would affect the upcoming releases for the winter instability flows. The response was given that there should be no impact; Tulloch should be able to release whatever is needed for releases at Goodwin for the winter pulse flow.

6. Temperature Updates

- Key takeaways from the discussion are as follows:
    - Instream temperatures are suitable for both juvenile rearing of *O. mykiss* and fall-run Chinook spawning.
        - Orange Blossom Bridge (OBB) temperatures are ~52 °F but have increased over the last two days to ~54 °F and have been undulating for some time.
        - Ripon has followed a similar pattern as OBB.
        - At Vernalis, in the main stem San Joaquin, temperatures are in the low ~50 °F.
    - There has been cloud cover and fairly mild day-time temperatures.
        - Before the rain, air temperature was ~67°, which could have been a result of the cloud cover holding in the heat. Once that passes, air temperatures should decrease quickly and lead to further cooling of water temperatures.

        - The forecast should be clear for the next 10 days, starting tomorrow, November 18th.
        - There might be a potential storm event at the end of November, but otherwise its dry and fair during the day and cooler at night.
    - The heat maps from Figures 6 – 8 provide historical temperatures ranging from ~40 °F to ~70 °F.
        - Water year 2016 (which includes the fall of calendar year 2015) was the last bad drought year, where temperatures exceeded ~70 °Fin October, which is rather high. Typically, fall water temperatures (in °F) are in the 50s and 60s in the fall.
    - Figure 9, 2020 Stanislaus River Flow and Temperature, provides a comparison of temperatures across measurement locations. The seasonal shift from water warming as it moves downstream (so that water temperatures are warmer at Ripon than they are upstream in Goodwin Canyon), to water cooling as it moves downstream (so that water temperatures are cooler at Ripon than they are upstream in Goodwin Canyon) occurred in early November and will likely not shift back until early to mid-February.

7. Flow Planning

- Winter instability flows
    - A spreadsheet of alternative winter instability flow schedules was shared and discussed. Key takeaways are as follows:
        - It is expected that the January 2021 pulse flow will be classified under the current year type (Dry). It is unlikely that the year type will change by more than one classification either way.
        - The intent is to schedule the winter instability flow with a storm in January, however, if there is no storm, the flow should be implemented in the last week of January.
        - The "Daily" tab shows the Stepped Release Plan flow and provides generic day columns to reduce the risk of being beholden to a calendar day.
            - A schedule has been provided for Critical, Dry and Below Normal year types.
        - The "Sub-daily" tab shows the Stepped Release Plan flow using an hourly schedule to create a storm-like hydrograph.
            - Changes are made in increments of at least 50 cfs.
            - These schedules were created using previous advice and should meet the ramping rates, though, this should be confirmed.
    - Research is showing that it fry outmigration can be a more successful strategy than previously thought. The alternatives in the spreadsheet don't include any water shifted from the spring pulse flow.

- A discussion was had about the next steps for the winter instability flow planning. The following takeaways arose:
    - The Operations Plan should be completed before January 3 since USBR's commitment in the BA requires releases to increase to 400 cfs unless there's a plan to reshape the flow.
    - Members approved the alternative Dry (or Critical, or Below Normal, if the year type changes mid-January) flow schedule for January, which could be implemented along with a natural storm or run the last week of January, if no storm materializes.
    - The February pulse shaping may be updated to include some water shifted from the spring pulse flow, once we have a better idea (after the January forecast) of the year type and thus the amount of water in the spring pulse flow.
    - There will be more discussion about the February pulse flow in the December and January SWT meetings and the operations plan for the February pulse flow may not be finalized until late January.
    - **[Action]** Peggy Manza will coordinate with Tri-Dam to garner their feedback on the alternate Critical/Dry/Below Normal flow schedules.
    - **[Action]** J.D. Wikert will develop a straw proposal for February's instability flow to discuss in December's meeting.

8. Stanislaus River Forum (SRF) Call Review

- Stanislaus River Forum was held on Tuesday, November 17, 2020. Cory Starr, Pacific States Marine Fisheries Commission, mentioned that their Rotary Screw Trap (RST) sampling would start in early January 2021, and that they would prefer higher flows (between 400 and 2000 cfs) to move the RST upstream into position.
- SWT members noted that a storm in January could provide enough natural runoff to enable the moving process. Otherwise, there is no clear reason for increased releases before the winter instability flow. If a reason arises for increased releases prior to the winter instability flow, consideration should be made to do so in the first week of January.

9. Fish Monitoring and Studies

- CDFW started their fall-run Chinook salmon carcass survey in early October. In a recent update, they noted that the Stanislaus River has the most redds observed to date of the larger San Joaquin tributaries with a cumulative count of 271.
- FISBIO has continued operating their weir.
    - Through Thursday, November 12, approximately 1,600 Chinook and one steelhead, which measured more than 16 inches, were counted.

        - Figure 11, which shows the cumulative Chinook passage at the Stanislaus River weir, indicates that fish movement past the weir did seem to respond to peaks of the pulse flow. However, it was also noted that it wasn't surprising that fall-run Chinook salmon "ran" up the river during the fall. In addition to functioning as an attraction flow, the fall pulse flow can help to make water temperatures more suitable for adult holding.
        - Escapement levels are comparable to the lowest return in the past 5 years.
    - Outmigration monitoring using rotary screw traps is expected to begin in late December to early January.

10. Restoration Project Updates

- The gravel placement project in Goodwin Canyon was completed in September.
    - USBR is preparing to conduct a similar process in Summer 2021 and have attained most of the required permits. Consideration is being made to change the methodology, including placement location (upstream of the float-tube pool) and strategy.
    - In December's SWT meeting, USBR will provide a presentation on the placement process with pictures, an overview of the process from development to completion and maps of the locations at which gravel was placed (and will be placed in the future).
    - **[Action]** Elissa Buttermore will prepare presentation on gravel placement for December's meeting.
- The Stanley Wakefield Wilderness Area (Kerr Park) and the flood plains and side channel project proposed for Honolulu Bar Phase 2 and/or Lovers-Leap are still awaiting FY2020 funding.
- Migratory Corridor: A meeting is scheduled with the landowners on the Stanislaus River. A verbal report on this discussion will be provided in either December or January's SWT meeting. A presentation could also be arranged with Cramer Fish Sciences.

11. Progress Update on Proposed Action Elements

- Annual Report update
    - There has been little progress toward the completion of the Annual Report since October's SWT meeting.
    - Prior to December's SWT meeting, select members will review and update relevant sections of the Report, using last year's Report and drafted sections of this year's Report.
    - **[Action]** Zarela Guerrero will circulate a revised version of the timeline, and the most recent draft of the WY20 Annual Report to report team members for their review and update.

12. Other Discussion Items

- Items to elevate to WOMT
    - There were no items to elevate to WOMT.
- Housekeeping
    - K&W will troubleshoot the chat function on MS Teams.
    - All participants who are able to use MS Teams for editing meeting documents should try to do so. Participants who cannot use MS Teams should edit documents as usual.
    - **[Action]** Troubleshoot MS Teams issues (chat function and guest permissions).

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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. Winter instability flows
7. Stanislaus River Forum (SRF) Call Review
8. Fish Monitoring and Studies
9. Restoration Project Updates
10. Progress Update on Proposed Action Elements
    a. Annual Report update
11. Other Discussion Items
    a. Items to elevate to WOMT
    b. Housekeeping
12. Review Action Items
13. Next Meeting
    a. Wednesday, December 16, 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

November 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

The Dry year type SRP flow schedule requires minimum instream base flows of 200 cfs before and after the fall pulse flow. Goodwin releases since October 1, 2020 are shown in Figure 1.

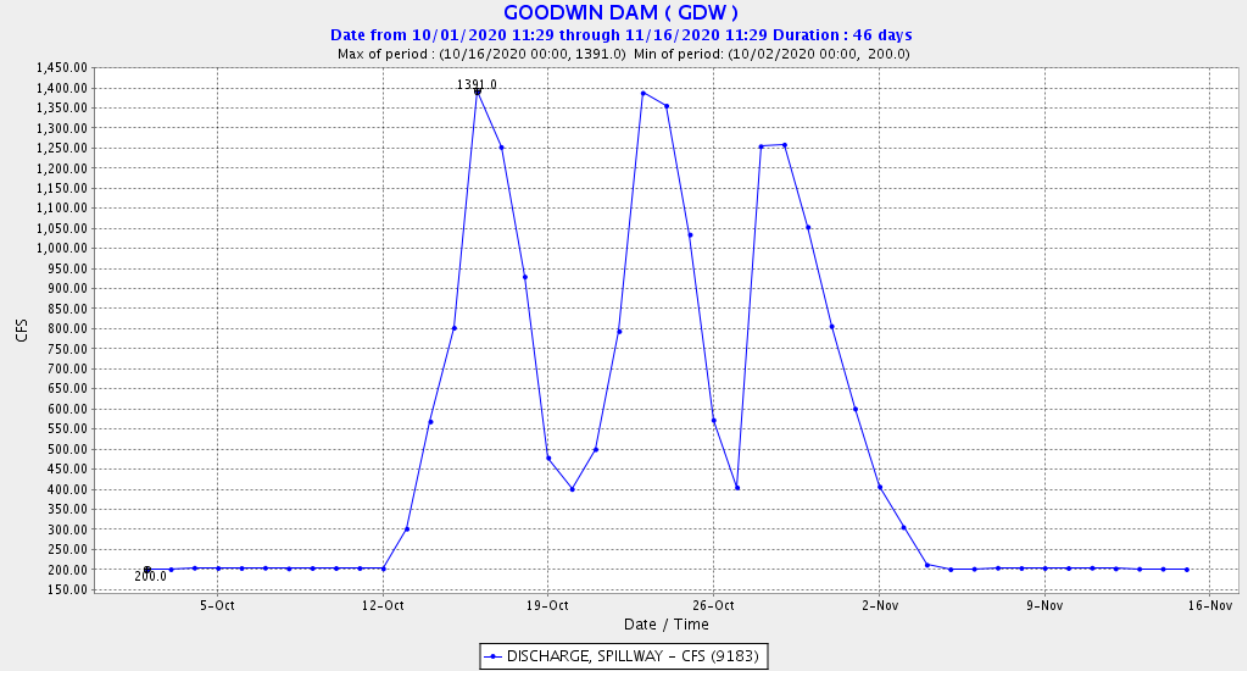

Figure 1. Goodwin (daily) releases to the Stanislaus River since October 1, 2020. Data from GDW station on CDEC.

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 June 1, 2020 are shown below at Goodwin Canyon (Figure 2), Orange Blossom Bridge (Figure 3), and at Ripon (Figure 4). Water

[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

temperatures in the San Joaquin River since June 1, 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.

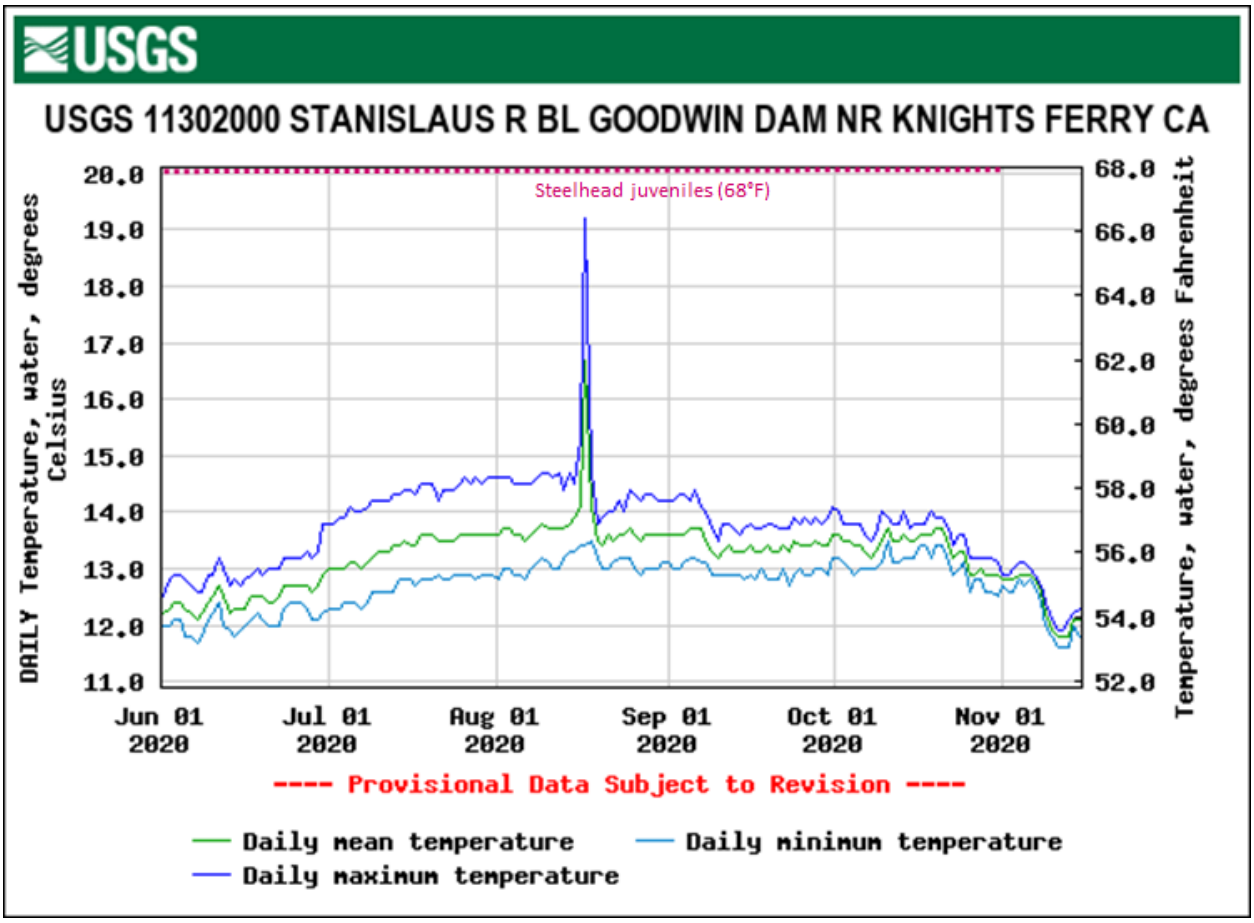

Figure 2. Daily water temperatures on the Stanislaus River upstream of Knights Ferry since June 1, 2020. Data from USGS gage 11302000 on NWIS; temperature threshold reference line added by SWT.

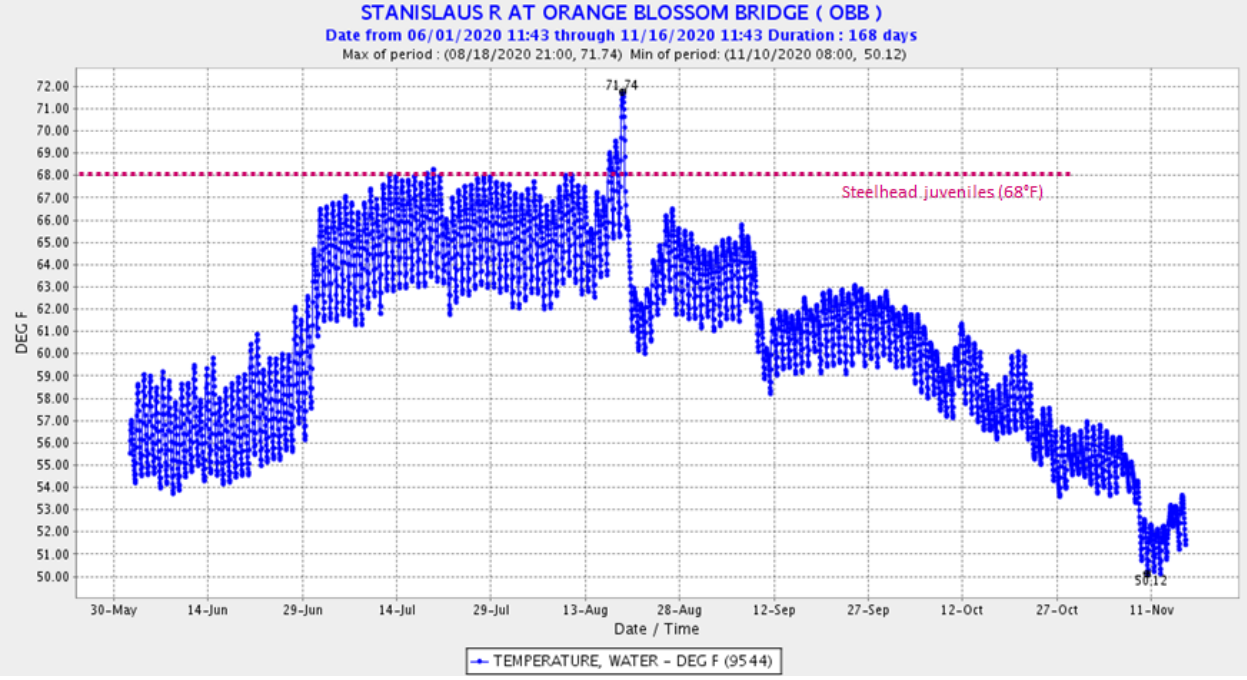

Figure 3. Stanislaus (hourly) water temperatures at Orange Blossom Bridge since June 1, 2020. Data from OBB station on CDEC; temperature threshold reference line added by SWT.

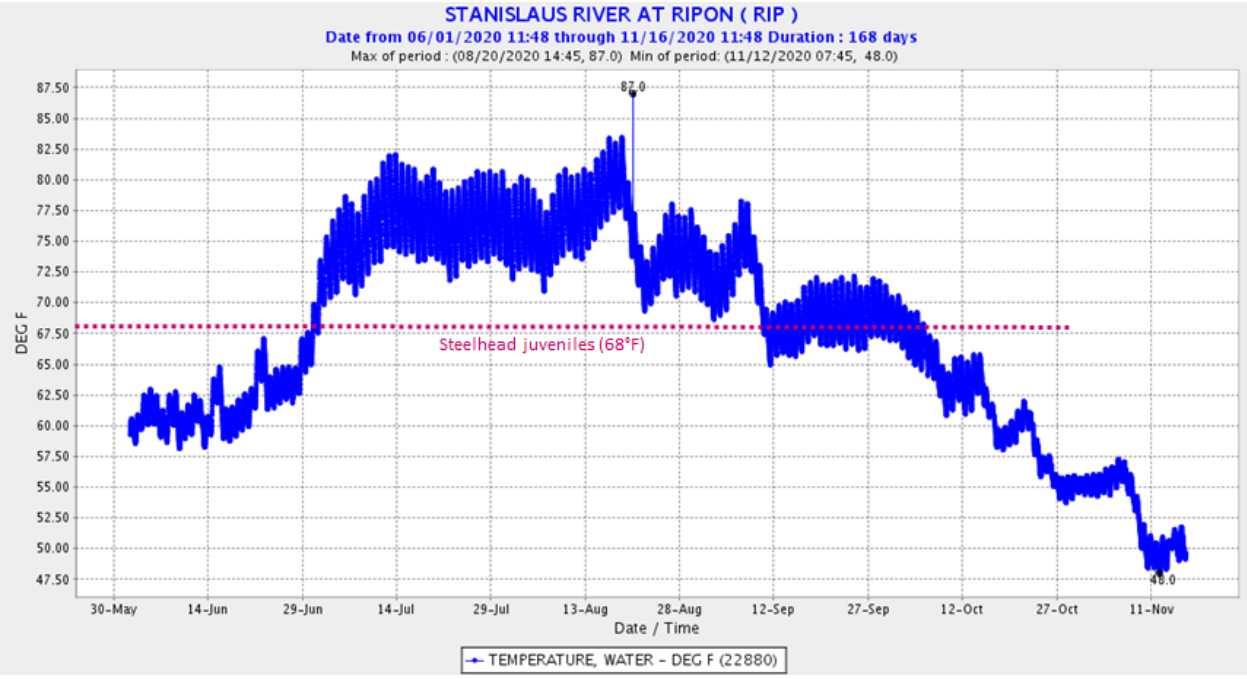

Figure 4. Stanislaus (15-minute) water temperatures at Ripon since June 1, 2020. Data from RIP station on CDEC; temperature threshold reference line added by SWT.

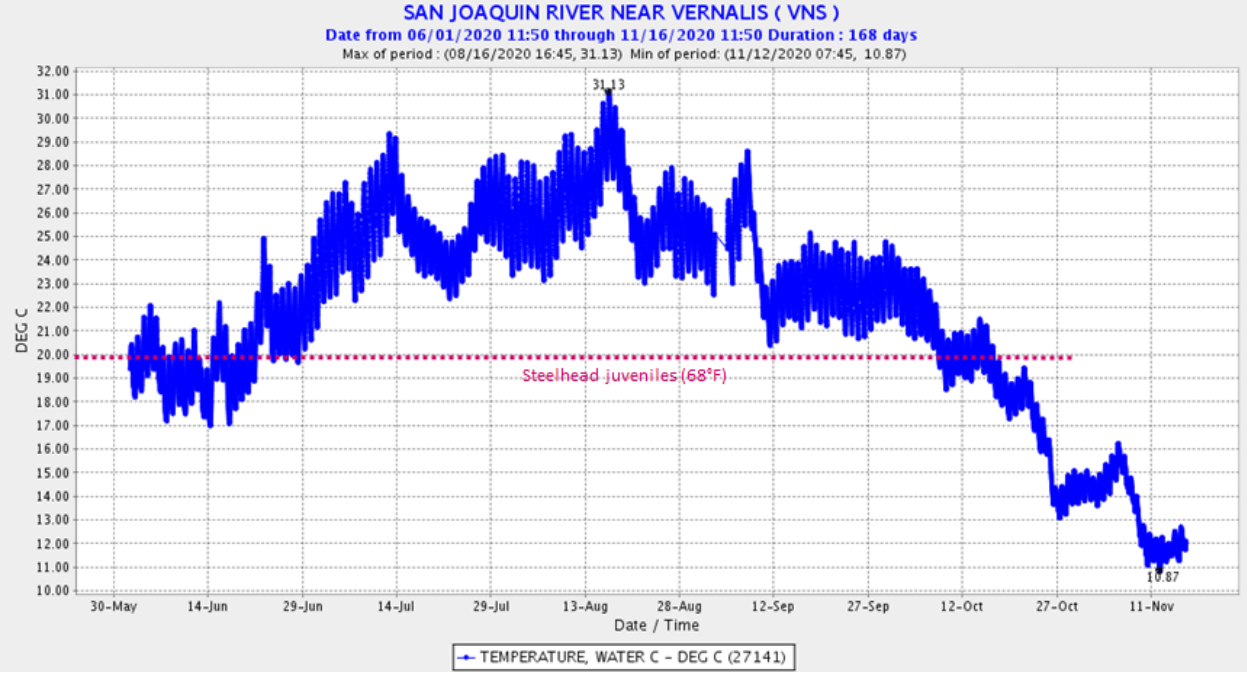

Figure 5. San Joaquin River (15-minute) water temperatures at Vernalis since June 1, 2020. Data from VNS station on CDEC; temperature threshold reference line added by SWT. Note that, unlike in the previous figures, temperature is reported in degrees Celsius. 10°C=50°F; 12°C=53.6°F; 14°C=57.2°F; 16°C=60.8°F;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

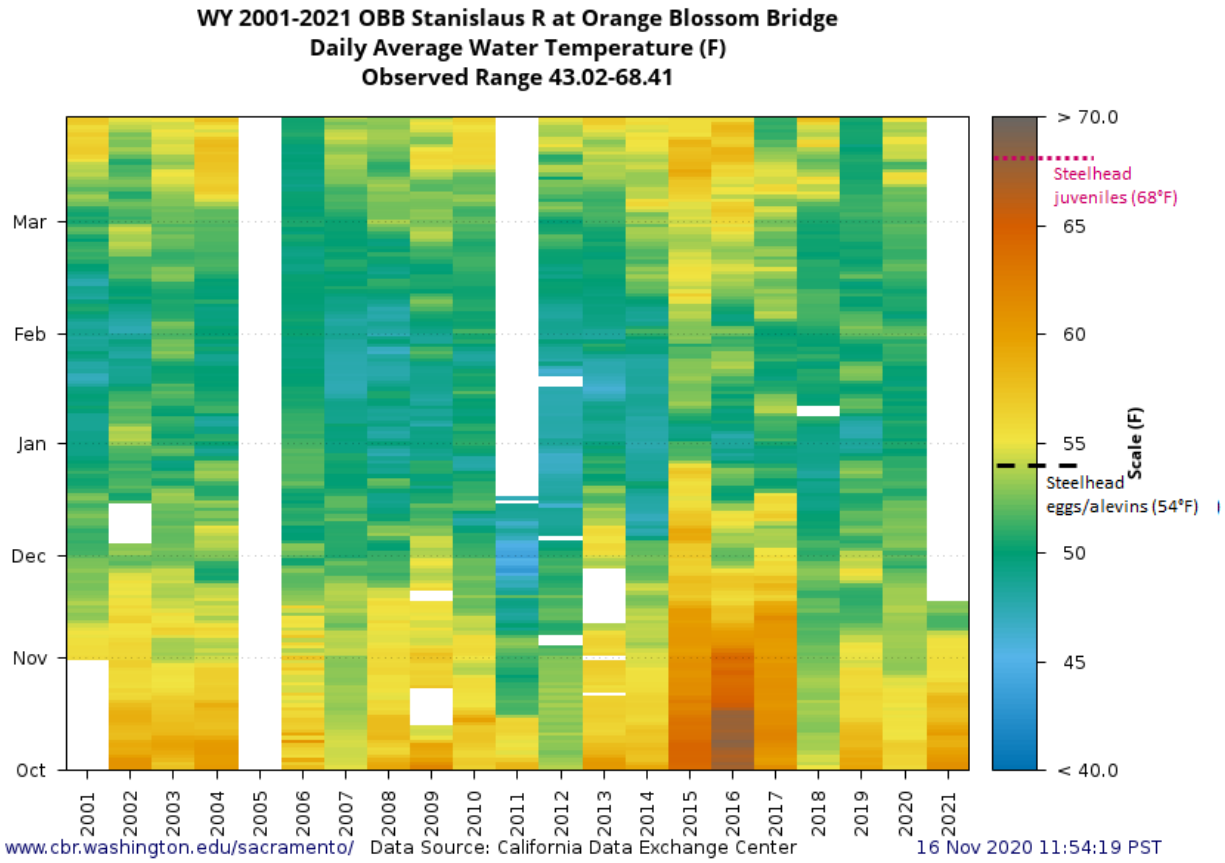

Figure 6. Stanislaus River water temperatures at Orange Blossom Bridge for October through March from 2001 to present. Data from SacPAS; temperature threshold reference lines added by SWT. http://www.cbr.washington.edu/sacramento/data/query_river_allyears.html

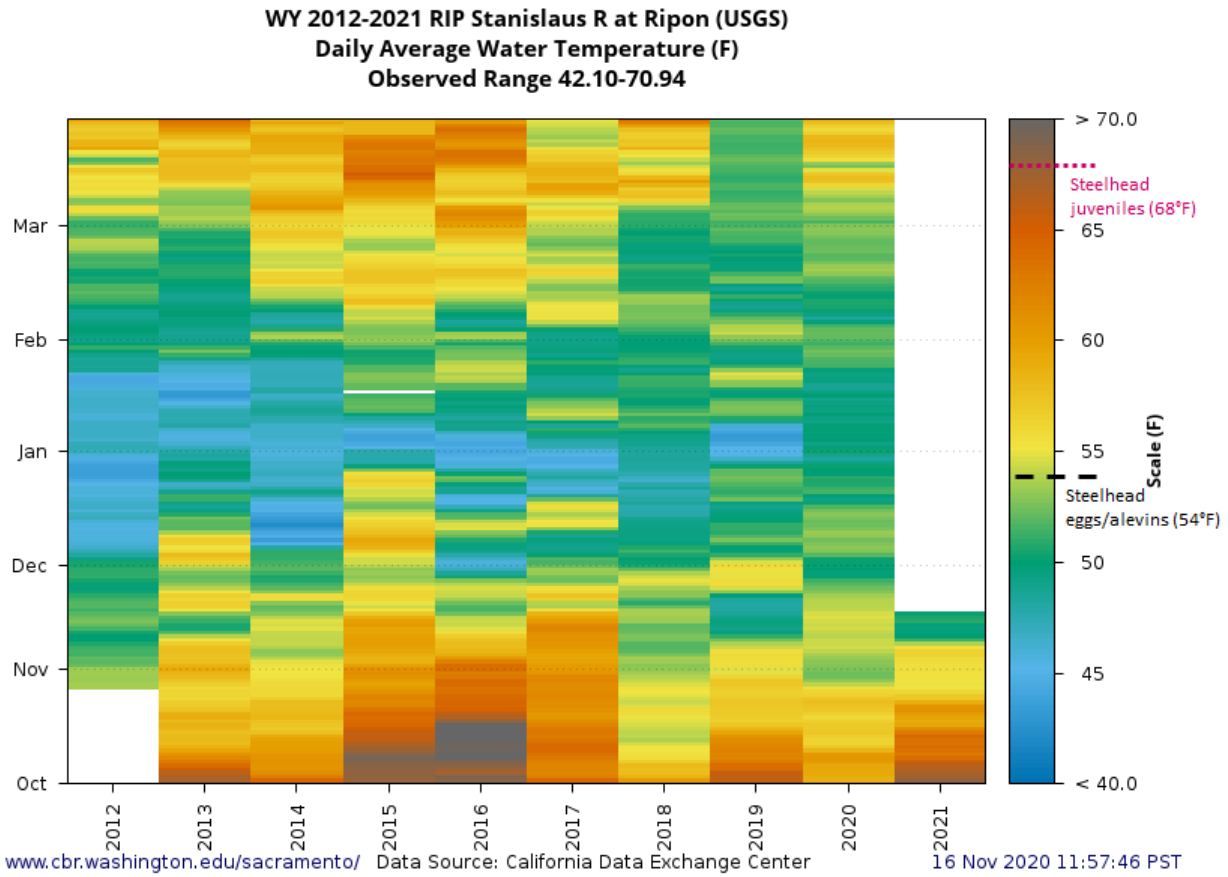

Figure 7. Stanislaus River water temperatures at Ripon for October through March from 2012 to present. Figure from SacPAS using RIP station data from CDEC; temperature threshold reference lines added by SWT.
http://www.cbr.washington.edu/sacramento/data/query_river_allyears.html

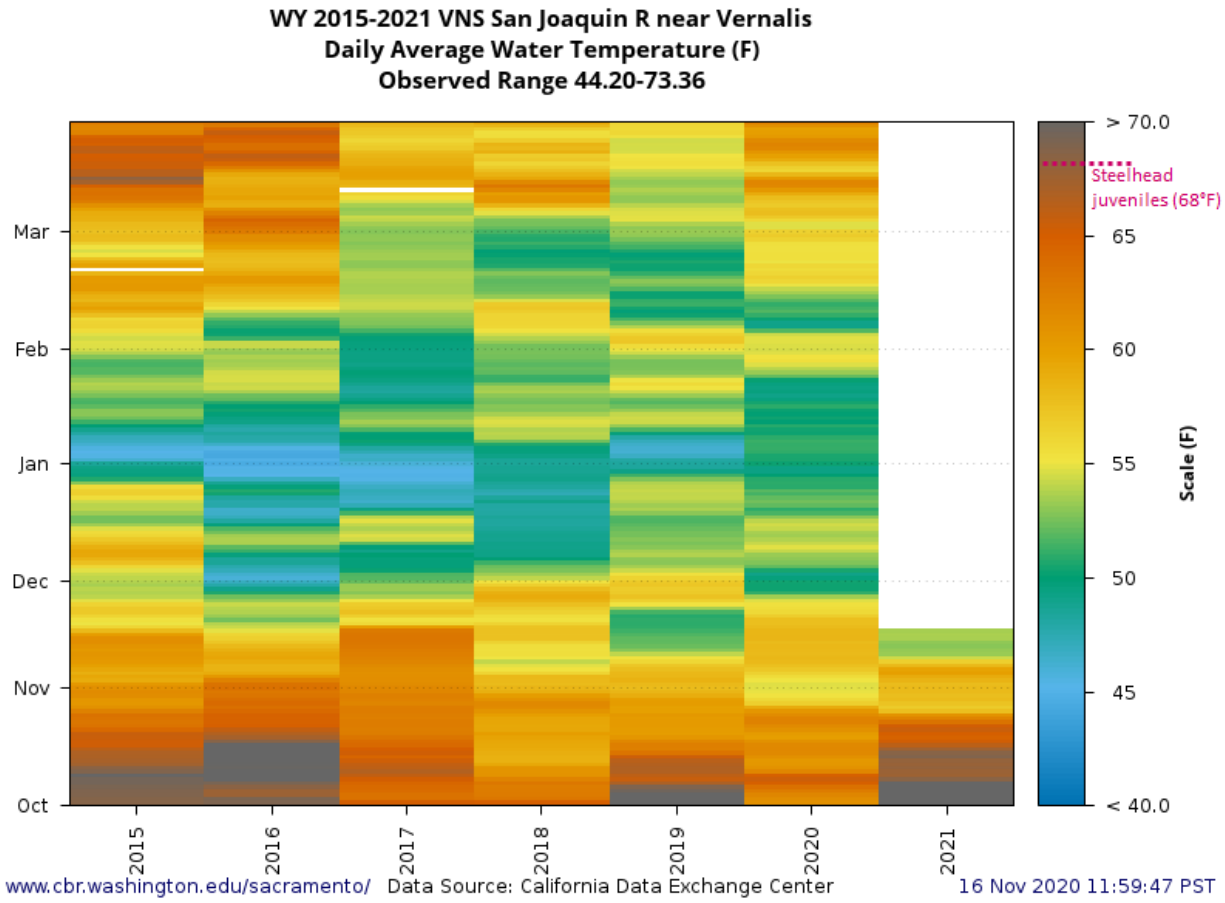

Figure 8. San Joaquin River water temperatures at Vernalis for October through March from 2015 to present. Figure from SacPAS using VNS station data from CDEC; temperature threshold reference line added by SWT.
http://www.cbr.washington.edu/sacramento/data/query_river_allyears.html

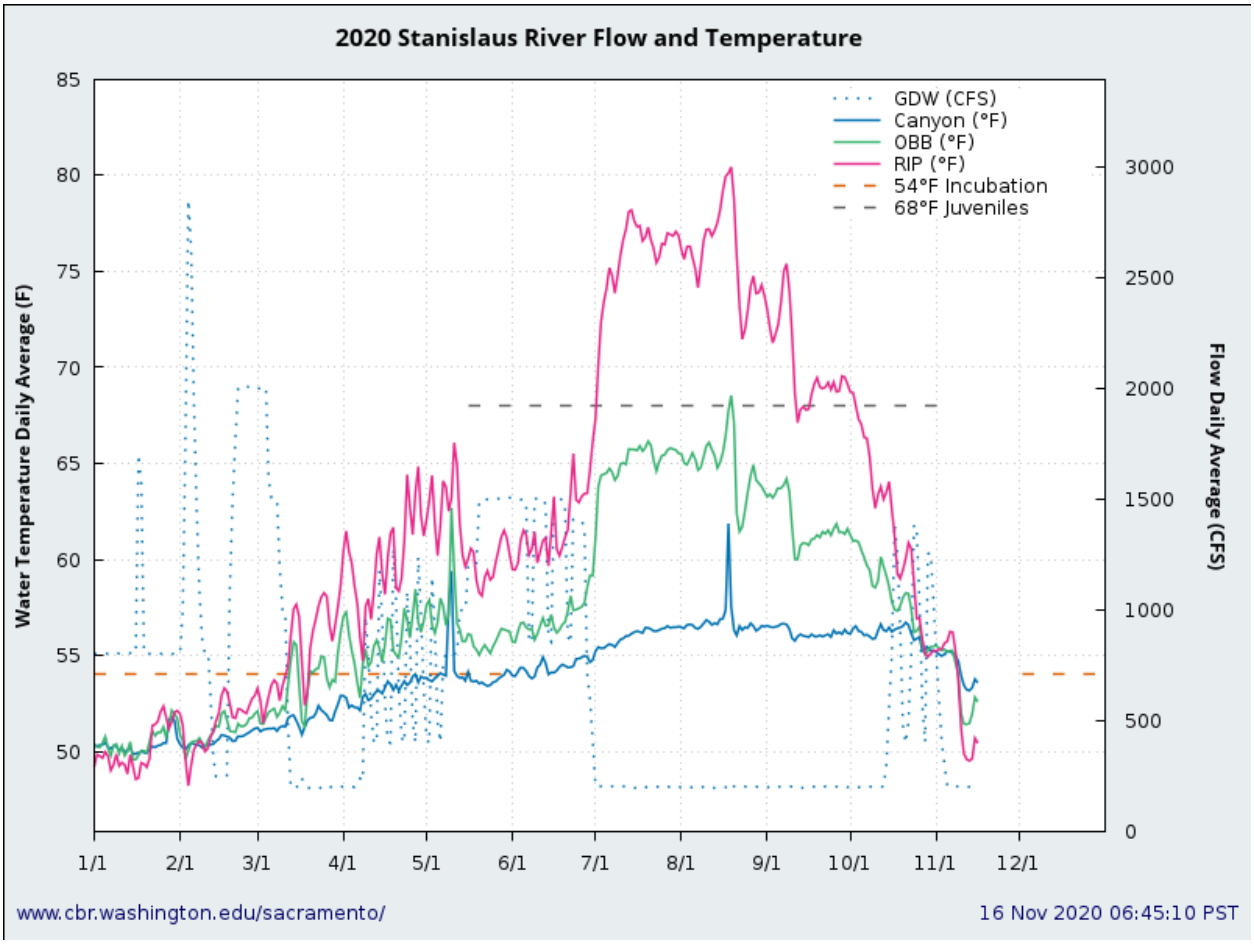

Figure 9. 2020 Stanislaus River flow and water temperatures from January 1, 2020 to present. Data (including temperature threshold reference lines) from SacPAS: http://www.cbr.washington.edu/sacramento/data/tc_stanislaus.html

Update on Fish Monitoring

Monitoring for adult salmonid migration into the river has begun.

The California Department of Fish & Wildlife (CDFW) began conducting fall-run Chinook salmon carcass and redd surveys the week of October 5, 2020 for the Stanislaus River, Tuolumne River and Merced River. Through the week of November 9, 2020, CDFW has observed a seasonal total of 271 redds on the Stanislaus River, compared to 255 on the Tuolumne River and 96 on the Merced River (see Stanislaus data in Figure 10).

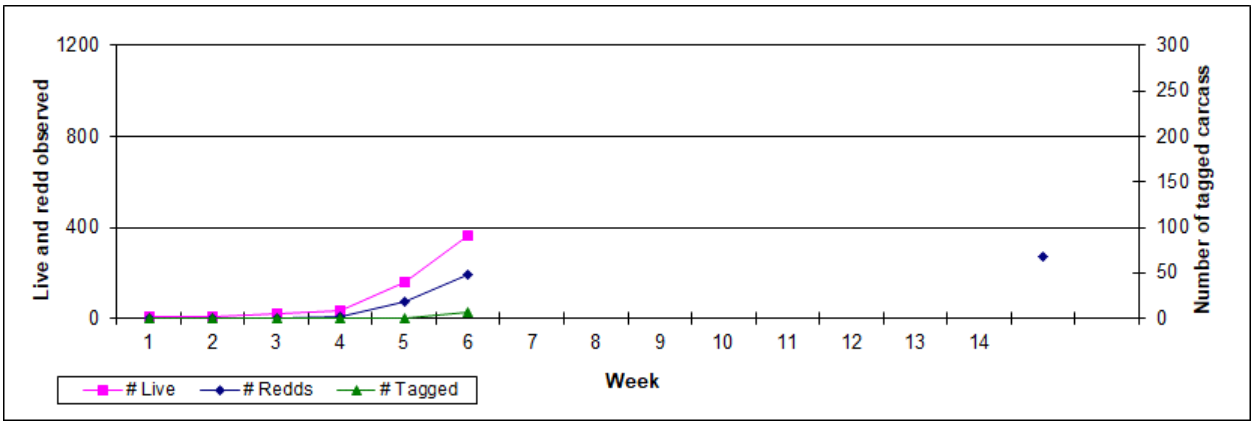

Figure 10. CDFW fall-run Chinook salmon carcass survey data for the Stanislaus River. Week 1 started October 5, 2020 and Week 6 started November 9, 2020.

Fishbio installed the weir near Riverbank and began monitoring for upstream passage of adult salmonids on September 10, 2020. Per their October 16, 2020, update, "the weir has been prepped for high flows and monitoring will increase to ensure the weir fishes through the pulses". The cumulative net upstream passage through November 12, 2020 is 1595 Chinook (20% were ad-clipped, indicating a hatchery origin) and one *Oncorhynchus mykiss*. The single *O. mykiss* observed was greater than 16" (indicating possible anadromy) and ad-clipped (indicating a hatchery origin). Data highlights provided by Fishbio on November 13, 2020 in their "Stanislaus River Weir Update through 11/12/20" are provided below in Figure 11 and Figure 12.

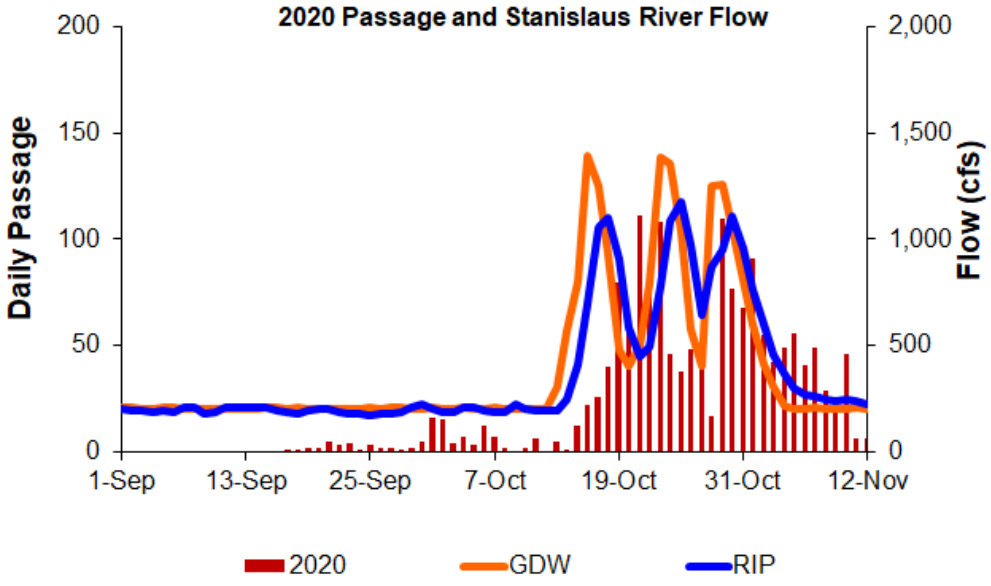

Figure 11: Daily Chinook salmon passage through November 12, 2020, at the Stanislaus River weir near Riverbank. *Data courtesy of Fishbio.*

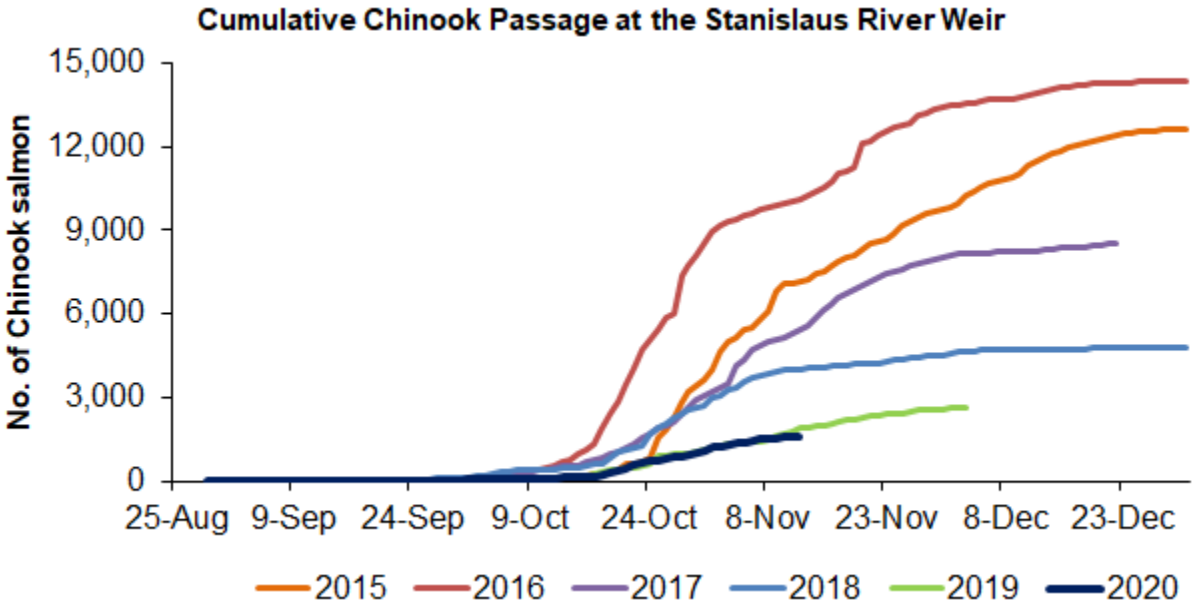

Figure 12: Cumulative Chinook salmon passage in the current year through November 12, 2020, at the Stanislaus River weir near Riverbank, along with cumulative passage for the previous five years. *Data courtesy of Fishbio.*

Reclamation plans to implement steelhead redd surveys on the Stanislaus River this year. Rotary screw trapping at Oakdale and Caswell for the 2020/2021 outmigration season (for monitoring of outmigrating juvenile salmonids) is expected to begin in December 2020 or January 2021.