



— BUREAU OF —  
RECLAMATION

## Stanislaus Watershed Team

2:00 PM – 4:00 PM

Stanislaus Watershed Team Notes: <https://www.usbr.gov/mp/bdo/stanislaus-watershed-team.html>

Wednesday, February 17, 2021

### Notes

#### 1. Actions

- SWT Members
  - Provide feedback to J.D. Wikert on the draft spring pulse flow schedule.
- J.D. Wikert
  - Discuss the content needed for the Proposed Action Elements update with Levi Johnson.
  - J.D. Wikert will prepare a list of potential presentations with the SWT for their feedback.
- Levi Johnson
  - Discuss the content needed for the Proposed Action Elements update with J.D. Wikert.
- Steve Knell
  - Connect with contacts regarding the origin of the ramping rates.
- Erin Foresman
  - Coordinate the presentation on functional flows for a future meeting.
  - Share research on ramping rates with J.D. Wikert.
- Peggy Manza
  - In each month's handouts, provide not only the current water year type but also the value of the current 75% exceedance 60-20-20 Index and the index ranges for each water year type.
  - Check in with CVO management about providing the operations forecast through the end of the water year.
- Peter Rietkerk

- Check in with Jarom Zimmerman, General Manager, Tri-Dam, on Tulloch operational parameters.

## 2. Introductions

- USBR: Levi Johnson, Zarela Guerrero, Peggy Manza, Spencer Marshall, Suzanne Manugian, Sarah Perrin & Elissa Buttermore
- NMFS: Barbara Byrne
- USFW: J.D. Wikert
- CDFW: Ryan Kok
- SWRCB: Erin Foresman & Yongxuan Gao
- DWR: Vinh Giang
- OID: Steve Knell
- SSJID: Peter Rietkerk
- SEWD: Jeanne Zolezzi
- WAPA: Michael Prowatzke
- 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 objection from participants.

## 4. Announcements

- There were no announcements.

## 5. Operations Update and Forecasts/Hydrology

- See pages two through six of the meeting handout for details.
- Reservoir condition: New Melones is at 1.97 MAF storage and has been level.
  - Inflows increased to 953 cfs on one day during the storm.
  - Conditions are decent relative to the rest of the CVP.
- Goodwin Operations: Salinity at Vernalis increased a week ago; one contributing factor may be drainage releases from from Mud Slough. Goodwin releases were increased to keep Vernalis EC below the standard (a 30-day running average of EC not to exceed 1.0 mmhos/cm), first to 400 cfs and then 600 cfs. The combination of the increased flow and two small precipitation events brought salinity down, so a change order was sent out to go back to 400 cfs on Friday. If salinity remains in compliance another change order will be placed for 200 cfs.

### Questions/Comments

- Does Reclamation ever ask the people discharging at Mud Slough to wait until it rains?

- Reclamation was not aware of any specific request, but reported that there was a salinity monitoring program which worked with local farms to help them understand the benefit of releasing during a storm event, which they tend to do. When there are no storms, it's harder. Reclamation will explore further.
- Is there any other data or information SWT members would like to see in addition to what has been provided in the current meeting handout?
  - In each month's handouts, it would be helpful if Reclamation could provide not only the current water year type but also the value of the current 75% exceedance 60-20-20 Index and the index ranges for each water year type.
  - The operations forecast through the end of the water year. Could that be added for projected monthly flows out of Goodwin? We could also include an average minimum flow requirement, but that's less of a priority.
  - **[Action]** In each month's handouts, Peggy Manza will provide not only the current water year type but also the value of the current 75% exceedance 60-20-20 Index and the index ranges for each water year type.
  - **[Action]** Peggy Manza will check in with CVO management about providing the operations forecast through the end of the water year.

## 6. Temperature Updates

- See pages seven through 14 of the meeting handout for details.
- Water temperatures are increasing but are still cool.

### Questions/Comments

- There were no questions or comments in this section.

## 7. Flow Planning

- Revise February Pulse Flow
  - The original WIF plan was based on a base flow of 200 cfs. Given that releases have increased to meet the salinity standard at Vernalis, which is considered a part of the base flow, Reclamation updated the reshaped flow schedules and graphs to reflect the anticipated peaks.
  - If the 793-acre feet allotted for the WIF is added on top of the base flow of 400 cfs, the peak release will be 1250 cfs. If the base flow is 600 cfs, as it currently is, the peak will be 1450 cfs.

### Questions/Comments

- The updated flow schedules look okay.
- NMFS noted that in some past years, water quality releases that satisfied the WIF volume (even if the shape and timing didn't follow the specific reshaped WIF) were considered to have satisfied the WIF requirement. This year, Reclamation is planning to implement the WIF volume above and beyond the water quality releases. Is this the policy going forward?
  - There was a preliminary discussion about that the issue. Right now, storage is at a decent level and conditions may not become dire according to current forecasts.

It would be good to create a policy between Reclamation and NMFS to provide clarity.

- **[Action]** K&W will add an item to April's agenda: Discuss the impact of water quality releases on WIF implementation.
- Does Reclamation expect that the water quality releases might be higher than 600 cfs?
  - Reclamation would be surprised; can develop another WIF schedule if needed.
- When releases have to be increased for the Vernalis standards, rather than staying flat they could alternate between 300 cfs and 500 cfs. Increasing the flow variability would be optimal for fish.
- Reclamation will revise the final February WIF plan (flow schedule, and narrative as needed), which will be sent to the SWT and posted on the website.
- What is the timing for the February WIF?
  - The intent is to match it with a storm event. If not, it'll be run the last week of February.
- Spring Pulse Flow
  - SWT members reviewed and discussed the proposals for the spring pulse flow.

#### Questions/Comments

- The spring pulse flow can have multiple iterations if the year type changes during the pulse flow (as it may based on each month's forecast). The minimum flow requirement is based on the previous month's year type for the first two weeks of a given month. If the year type changes, the requirement is adjusted accordingly from mid-month onward. If the March forecast shows an additional 100,000-acre feet of inflow, the water year type will change.
  - It's imperative to be flexible.
  - There's a possibility that OID/SSJID will seek to move water across the valley by augmenting/adding to the spring pulse flow. Hopefully, we'll have a better idea of that happening in March, depending on hydrology, and coordination with Reclamation and state and federal contractors.
- The timing of the spring pulse flow may change based on the way air temperatures are trending. It may be warm soon, so one SWT member expressed a preference to run the pulse sooner, but that might be an issue with the Vernalis requirement under D-1641.
  - SWT was not averse to that approach, though noted that flexibility makes it hard to work across different watersheds in the basin.
- Given the dry hydrology, it was suggested that it might be better to "stack" the water at Vernalis (by running the pulses on all the San Joaquin tributaries together) rather than stretch it out (by offsetting the pulse timing from each tributary).
- One SWT member was hesitant to put water down in March since it's the time most of the fish are parr-sized. If we could sustain inundated floodplains for a couple weeks, then it could be valuable to do it in March, but with the tiny amount of water, the focus should be on moving fish when most are either fry or smolts.
  - **[Action]** SWT members should provide feedback to J.D. Wikert on the draft spring pulse flow schedule.

- The pre-pulse base flow and post-pulse base flows are different in a Critically Dry year type and whoever is developing the schedule needs to be careful since that can affect the water volume accounting.
- What documents are needed for modifying the default 30-day spring pulse flow window at Vernalis?
  - D1641 doesn't speak to lead time, but it states that the Executive Director should be notified as soon as possible. The window could also be split into two. SWRCB is likely to support a change in timing but not volume (if below D1641 flows) with the fisheries agencies' support.
- Should someone provide a presentation on functional flows?
  - That's a great idea. The CEFF work group could provide helpful information.
  - **[Action]** Erin Foresman will coordinate the presentation on functional flows for a future meeting.

## 8. Stanislaus River Forum (SRF) Call Review

- Participants discussed the same operations and fish monitoring information covered at today's SWT meeting. Fishbio and PSMFC staff on the SRF call reported that they were coordinating on, whenever possible, sharing fish caught by Fishbio at the Oakdale rotary screw trap with PSMFC to use for efficiency trials at the Caswell rotary screw trap.

## 9. Fish Monitoring and Studies

- See handout page 14 through 15 for more details.

### Questions/Comments

- There were no questions or comments in this section.

## 10. Restoration Project Updates

- There were no updates.

### Questions/Comments

- There were no questions or comments in this section.

## 11. Progress Update on Proposed Action Elements

- **[Action]** Levi Johnson and J.D. Wikert will discuss the content needed for the Proposed Action Elements update.
- Annual Report update
  - Reclamation has finalized and circulated the Annual Report.
  - **[Action]** SWT members should contact Zarela Guerrero if they have yet to receive the final Annual Report.

### Questions/Comments

- There were no questions or comments in this section.

## 12. Other Discussion Items

- Items to elevate to WOMT
  - There were no new items to raise to WOMT.
- Update on items elevated to WOMT from January SWT meeting
  - WOMT recommended that the disagreement between SWRCB and Reclamation regarding the flows required by D-1614 at Vernalis be resolved between those two agencies.
  - WOMT recommended that the item related to ramping rates be discussed at the LTO Interagency Coordination Group. A presentation is being prepared for the upcoming LTO meeting on February 25<sup>th</sup>.
    - **[Action]** Erin Foresman will share research on ramping rates with J.D. Wikert.
    - **[Action]** Steve Knell will connect with contacts regarding the origin of the ramping rates.
- Presentations to SWT
  - SWT members expressed an interest in increasing the frequency of presentations during SWT meetings.
  - It was suggested that presentations take place during the summer, May through August, when SWT has less on the agenda.
  - **[Action]** J.D. Wikert will prepare a list of potential presentations with the SWT for their feedback.
- Outstanding Action Items
  - Tri-Dam will provide the SWT with information on Tulloch operational parameters that are good and bad for releases.
  - **[Action]** Peter Rietkerk will check in with Jarom Zimmerman, General Manager, Tri-Dam, on Tulloch operational parameters.



— BUREAU OF —  
RECLAMATION

## Stanislaus Watershed Team

2:00 PM – 4:00 PM

Conference Line: 1 (321) 209-6143; Meeting ID: 591 446 987#

MT Teams [webinar](#)

Stanislaus Watershed Team Notes: <https://www.usbr.gov/mp/bdo/stanislaus-watershed-team.html>

**Wednesday, February 17, 2021**

### Agenda

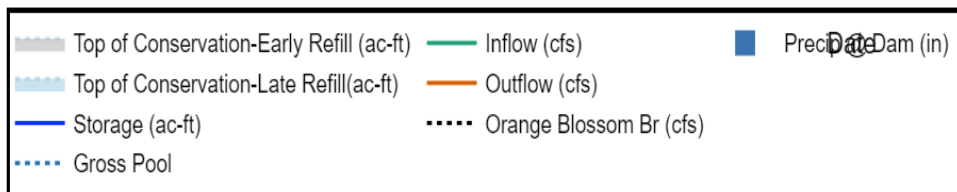
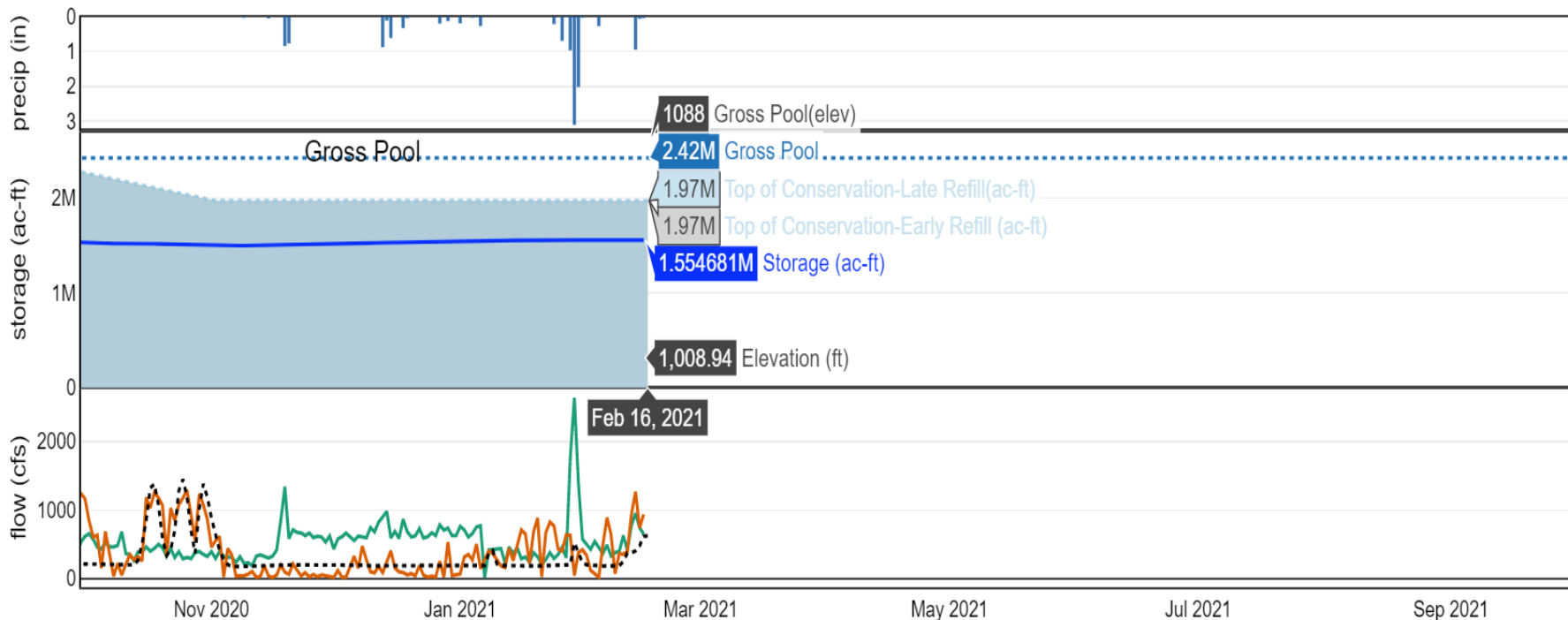
1. Introductions
2. Ground Rules<sup>1</sup>
3. Announcements
4. Operations Update and Forecasts/Hydrology
5. Temperature Updates
6. Flow Planning
  - a. Spring Pulse Flow
7. Stanislaus River Forum (SRF) Call Review
8. Fish Monitoring and Studies
9. Restoration Project Updates
10. Progress Update on Proposed Action Elements
  - a. Annual Report update
11. Other Discussion Items
  - a. Items to elevate to WOMT
12. Review Action Items
13. Next Meeting
  - a. Wednesday, March 17, 2021 (10am-12pm)

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<sup>1</sup> 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  
 2021-02-16T07:18:53-0800





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

**FEBRUARY 2021**

**NEW MELONES LAKE DAILY OPERATIONS**

RUN DATE: February 16, 2021

| DAY | ELEV     | STORAGE                   |        | COMPUTED*<br>INFLOW<br>C.F.S. | RELEASE - C.F.S. |       |        | EVAPORATION |        | PRECIP<br>INCHES |
|-----|----------|---------------------------|--------|-------------------------------|------------------|-------|--------|-------------|--------|------------------|
|     |          | 1000 ACRE-FEET<br>IN LAKE | CHANGE |                               | POWER            | SPILL | OUTLET | C.F.S.      | INCHES |                  |
|     |          | 1,554.9                   |        |                               |                  |       |        |             |        |                  |
| 1   | 1,009.02 | 1,555.4                   | +0.6   | 429                           | 120              | 0     | 0      | 22          | .07    | .00              |
| 2   | 1,009.11 | 1,556.3                   | +0.9   | 543                           | 74               | 0     | 0      | 37          | .12    | .00              |
| 3   | 1,009.20 | 1,557.2                   | +0.9   | 458                           | 23               | 0     | 0      | 3           | .01    | .28              |
| 4   | 1,009.17 | 1,556.9                   | -0.3   | 368                           | 494              | 0     | 0      | 18          | .06    | .00              |
| 5   | 1,009.08 | 1,556.0                   | -0.9   | 489                           | 890              | 0     | 0      | 31          | .10    | .00              |
| 6   | 1,009.01 | 1,555.3                   | -0.7   | 332                           | 646              | 0     | 0      | 22          | .07    | .00              |
| 7   | 1,009.07 | 1,555.9                   | +0.6   | 382                           | 72               | 0     | 0      | 22          | .07    | .00              |
| 8   | 1,009.07 | 1,555.9                   | +0.0   | 396                           | 368              | 0     | 0      | 28          | .09    | .00              |
| 9   | 1,009.11 | 1,556.3                   | +0.4   | 628                           | 356              | 0     | 0      | 80          | .26    | .00              |
| 10  | 1,009.11 | 1,556.3                   | +0.0   | 417                           | 395              | 0     | 0      | 22          | .07    | .00              |
| 11  | 1,009.07 | 1,555.9                   | -0.4   | 779                           | 940              | 0     | 0      | 31          | .10    | .00              |
| 12  | 1,009.00 | 1,555.3                   | -0.7   | 953                           | 1,267            | 0     | 0      | 22          | .07    | .95              |
| 13  | 1,009.00 | 1,555.3                   | +0.0   | 743                           | 740              | 0     | 0      | 3           | .01    | .07              |
| 14  | 1,008.94 | 1,554.7                   | -0.6   | 651                           | 938              | 0     | 0      | 0           | .00    | .05              |
| 15  | 1,008.87 | 1,554.0                   | -0.7   | 693                           | 1,006            | 0     | 0      | 22          | .07    | .15              |

**TO**

**A**

COMMENTS:

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

**SUMMARY**

|       |                     |        |        |                        |       |
|-------|---------------------|--------|--------|------------------------|-------|
|       | RELEASE (ACRE-FEET) |        |        | PRECIPITATION          |       |
| POWER | 16,521              | OUTLET | 0      | THIS MONTH =           | 1.50  |
| SPILL | 0                   | TOTAL  | 16,521 | JULY 1, 2020 TO DATE = | 13.26 |
|       |                     |        |        | OCT 1, 2020 TO DATE =  | 13.23 |

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

Table 13

JANUARY 2021

NEW MELONES LAKE DAILY OPERATIONS

RUN DATE: February 2, 2021

| DAY              | ELEV     | STORAGE                   |               | COMPUTED*<br>INFLOW<br>C.F.S. | RELEASE - C.F.S. |          |          | EVAPORATION  |             | PRECIP<br>INCHES |
|------------------|----------|---------------------------|---------------|-------------------------------|------------------|----------|----------|--------------|-------------|------------------|
|                  |          | 1000 ACRE-Feet<br>IN LAKE | CHANGE        |                               | POWER            | SPILL    | OUTLET   | C.F.S.       | INCHES      |                  |
|                  |          | 1,547.9                   |               |                               |                  |          |          |              |             |                  |
| 1                | 1,008.30 | 1,548.6                   | +0.8          | 713                           | 315              | 0        | 0        | 15           | .05         | .00              |
| 2                | 1,008.35 | 1,549.1                   | +0.5          | 608                           | 354              | 0        | 0        | 15           | .05         | .00              |
| 3                | 1,008.43 | 1,549.8                   | +0.8          | 659                           | 273              | 0        | 0        | 3            | .01         | .04              |
| 4                | 1,008.48 | 1,550.3                   | +0.5          | 754                           | 503              | 0        | 0        | 12           | .04         | .03              |
| 5                | 1,008.61 | 1,551.6                   | +1.2          | 772                           | 147              | 0        | 0        | 3            | .01         | .28              |
| 6                | 1,008.55 | 1,551.0                   | -0.6          | 14                            | 289              | 0        | 0        | 12           | .04         | .00              |
| 7                | 1,008.55 | 1,551.0                   | +0.0          | 419                           | 404              | 0        | 0        | 15           | .05         | .00              |
| 8                | 1,008.56 | 1,551.1                   | +0.1          | 429                           | 366              | 0        | 0        | 15           | .05         | .00              |
| 9                | 1,008.59 | 1,551.4                   | +0.3          | 446                           | 287              | 0        | 0        | 15           | .05         | .00              |
| 10               | 1,008.64 | 1,551.8                   | +0.5          | 439                           | 188              | 0        | 0        | 12           | .04         | .00              |
| 11               | 1,008.65 | 1,551.9                   | +0.1          | 224                           | 164              | 0        | 0        | 12           | .04         | .00              |
| 12               | 1,008.65 | 1,551.9                   | +0.0          | 461                           | 443              | 0        | 0        | 18           | .06         | .00              |
| 13               | 1,008.67 | 1,552.1                   | +0.2          | 370                           | 263              | 0        | 0        | 12           | .04         | .00              |
| 14               | 1,008.65 | 1,551.9                   | -0.2          | 447                           | 524              | 0        | 0        | 18           | .06         | .00              |
| 15               | 1,008.56 | 1,551.1                   | -0.9          | 292                           | 711              | 0        | 0        | 12           | .04         | .00              |
| 16               | 1,008.48 | 1,550.3                   | -0.8          | 316                           | 653              | 0        | 0        | 46           | .15         | .00              |
| 17               | 1,008.48 | 1,550.3                   | +0.0          | 244                           | 219              | 0        | 0        | 25           | .08         | .00              |
| 18               | 1,008.41 | 1,549.7                   | -0.7          | 378                           | 685              | 0        | 0        | 28           | .09         | .00              |
| 19               | 1,008.28 | 1,548.4                   | -1.2          | 320                           | 886              | 0        | 0        | 55           | .18         | .00              |
| 20               | 1,008.31 | 1,548.7                   | +0.3          | 208                           | 25               | 0        | 0        | 40           | .13         | .00              |
| 21               | 1,008.22 | 1,547.9                   | -0.9          | 280                           | 674              | 0        | 0        | 37           | .12         | .00              |
| 22               | 1,008.11 | 1,546.8                   | -1.0          | 380                           | 826              | 0        | 0        | 80           | .26         | .00              |
| 23               | 1,008.01 | 1,545.9                   | -0.9          | 295                           | 770              | 0        | 0        | 3            | .01         | .22              |
| 24               | 1,007.99 | 1,545.7                   | -0.2          | 352                           | 435              | 0        | 0        | 12           | .04         | .00              |
| 25               | 1,008.00 | 1,545.8                   | +0.1          | 459                           | 403              | 0        | 0        | 9            | .03         | .70              |
| 26               | 1,007.93 | 1,545.1                   | -0.7          | 306                           | 639              | 0        | 0        | 0            | .00         | .03              |
| 27               | 1,008.16 | 1,547.3                   | +2.2          | 1,761                         | 632              | 0        | 0        | 31           | .10         | .97              |
| 28               | 1,008.69 | 1,552.3                   | +5.0          | 2,640                         | 45               | 0        | 0        | 61           | .20         | 3.10             |
| 29               | 1,008.90 | 1,554.3                   | +2.0          | 1,389                         | 382              | 0        | 0        | 3            | .01         | 2.02             |
| 30               | 1,008.93 | 1,554.6                   | +0.3          | 574                           | 422              | 0        | 0        | 9            | .03         | .04              |
| 31               | 1,008.96 | 1,554.9                   | +0.3          | 502                           | 340              | 0        | 0        | 18           | .06         | .00              |
| <b>TOTALS</b>    |          |                           | <b>+7.1</b>   | <b>17,451</b>                 | <b>13,267</b>    | <b>0</b> | <b>0</b> | <b>646</b>   | <b>2.12</b> | <b>7.43</b>      |
| <b>ACRE-Feet</b> |          |                           | <b>+7,100</b> | <b>34,614</b>                 | <b>26,315</b>    | <b>0</b> | <b>0</b> | <b>1,281</b> |             |                  |

COMMENTS:

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

SUMMARY

|       |                     |        |        |                        |       |
|-------|---------------------|--------|--------|------------------------|-------|
|       | RELEASE (ACRE-Feet) |        |        | PRECIPITATION          |       |
| POWER | 26,315              | OUTLET | 0      | THIS MONTH =           | 7.43  |
| SPILL | 0                   | TOTAL  | 26,315 | JULY 1, 2020 TO DATE = | 11.76 |
|       |                     |        |        | OCT 1, 2020 TO DATE =  | 11.73 |

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

FEBRUARY 2021

**GOODWIN RESERVOIR DAILY OPERATIONS**

RUN DATE: February 16, 2021

| DAY              | ELEV   | STORAGE   |            | TULLOCH       | RIVER    |              | RELEASE - C.F.S. |            |
|------------------|--------|-----------|------------|---------------|----------|--------------|------------------|------------|
|                  |        | ACRE-FEET | CHANGE     |               | RELEASE  | OUTLET       | SPILL            | JOINT MAIN |
|                  |        | 518       |            |               |          |              |                  |            |
| 1                | 359.71 | 517       | -1         | 255           | 0        | 204          | 0                | 0          |
| 2                | 359.73 | 518       | +1         | 268           | 0        | 202          | 0                | 0          |
| 3                | 359.73 | 518       | +0         | 266           | 0        | 203          | 0                | 0          |
| 4                | 359.73 | 518       | +0         | 262           | 0        | 203          | 0                | 0          |
| 5                | 359.73 | 518       | +0         | 258           | 0        | 235          | 0                | 0          |
| 6                | 359.73 | 518       | +0         | 251           | 0        | 235          | 0                | 0          |
| 7                | 359.73 | 518       | +0         | 251           | 0        | 203          | 0                | 0          |
| 8                | 359.73 | 518       | +0         | 251           | 0        | 203          | 0                | 0          |
| 9                | 359.89 | 529       | +11        | 370           | 0        | 328          | 0                | 0          |
| 10               | 359.89 | 529       | +0         | 432           | 0        | 402          | 0                | 0          |
| 11               | 359.89 | 529       | +0         | 433           | 0        | 404          | 0                | 0          |
| 12               | 359.89 | 529       | +0         | 433           | 0        | 408          | 0                | 0          |
| 13               | 360.02 | 538       | +9         | 567           | 0        | 528          | 0                | 0          |
| 14               | 360.04 | 540       | +2         | 635           | 0        | 601          | 0                | 0          |
| 15               | 360.04 | 540       | +0         | 637           | 0        | 602          | 0                | 0          |
| <b>TOTALS</b>    |        |           | <b>+22</b> | <b>5,569</b>  | <b>0</b> | <b>4,961</b> | <b>0</b>         | <b>0</b>   |
| <b>ACRE-FEET</b> |        |           | <b>+22</b> | <b>11,046</b> | <b>0</b> | <b>9,840</b> | <b>0</b>         | <b>0</b>   |

JOINT MAIN OPERATED BY SSJID AND OID.

**SUMMARY**  
 RELEASE (ACRE-FEET)

|                  |   |        |       |
|------------------|---|--------|-------|
| JOINT MAIN CANAL | 0 | OUTLET | 0     |
| SOUTH MAIN CANAL | 0 | SPILL  | 9,840 |
|                  |   | TOTAL  | 9,840 |

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

JANUARY 2021

GOODWIN RESERVOIR DAILY OPERATIONS

RUN DATE: February 1, 2021

| DAY              | ELEV   | STORAGE   |           | TULLOCH       | RIVER    |               | RELEASE - C.F.S. |          | SOUTH    |
|------------------|--------|-----------|-----------|---------------|----------|---------------|------------------|----------|----------|
|                  |        | ACRE-FEET | CHANGE    |               | RELEASE  | OUTLET        | SPILL            | JOINT    |          |
|                  |        | RES.      |           |               |          |               | MAIN             | MAIN     |          |
|                  |        | 516       |           |               |          |               |                  |          |          |
| 1                | 359.70 | 516       | +0        | 253           | 0        | 201           | 0                | 0        | 0        |
| 2                | 359.73 | 518       | +2        | 252           | 0        | 201           | 0                | 0        | 0        |
| 3                | 359.73 | 518       | +0        | 255           | 0        | 205           | 0                | 0        | 0        |
| 4                | 359.71 | 517       | -1        | 251           | 0        | 205           | 0                | 0        | 0        |
| 5                | 359.73 | 518       | +1        | 251           | 0        | 204           | 0                | 0        | 0        |
| 6                | 359.73 | 518       | +0        | 251           | 0        | 203           | 0                | 0        | 0        |
| 7                | 359.85 | 527       | +9        | 478           | 0        | 440           | 0                | 0        | 0        |
| 8                | 359.73 | 518       | -9        | 416           | 0        | 392           | 0                | 0        | 0        |
| 9                | 359.71 | 517       | -1        | 247           | 0        | 203           | 0                | 0        | 0        |
| 10               | 359.73 | 518       | +1        | 250           | 0        | 202           | 0                | 0        | 0        |
| 11               | 359.73 | 518       | +0        | 252           | 0        | 202           | 0                | 0        | 0        |
| 12               | 359.73 | 518       | +0        | 253           | 0        | 202           | 0                | 0        | 0        |
| 13               | 359.73 | 518       | +0        | 259           | 0        | 202           | 0                | 0        | 0        |
| 14               | 359.71 | 517       | -1        | 248           | 0        | 203           | 0                | 0        | 0        |
| 15               | 359.71 | 517       | +0        | 251           | 0        | 202           | 0                | 0        | 0        |
| 16               | 359.71 | 517       | +0        | 258           | 0        | 202           | 0                | 0        | 0        |
| 17               | 359.71 | 517       | +0        | 261           | 0        | 202           | 0                | 0        | 0        |
| 18               | 359.71 | 517       | +0        | 261           | 0        | 202           | 0                | 0        | 0        |
| 19               | 359.71 | 517       | +0        | 260           | 0        | 202           | 0                | 0        | 0        |
| 20               | 359.70 | 516       | -1        | 259           | 0        | 204           | 0                | 0        | 0        |
| 21               | 359.71 | 517       | +1        | 257           | 0        | 203           | 0                | 0        | 0        |
| 22               | 359.73 | 518       | +1        | 254           | 0        | 202           | 0                | 0        | 0        |
| 23               | 359.71 | 517       | -1        | 248           | 0        | 202           | 0                | 0        | 0        |
| 24               | 359.73 | 518       | +1        | 248           | 0        | 201           | 0                | 0        | 0        |
| 25               | 359.71 | 517       | -1        | 246           | 0        | 203           | 0                | 0        | 0        |
| 26               | 359.73 | 518       | +1        | 260           | 0        | 202           | 0                | 0        | 0        |
| 27               | 359.77 | 521       | +3        | 257           | 0        | 220           | 0                | 0        | 0        |
| 28               | 359.73 | 518       | -3        | 256           | 0        | 240           | 0                | 0        | 0        |
| 29               | 359.73 | 518       | +0        | 255           | 0        | 221           | 0                | 0        | 0        |
| 30               | 359.73 | 518       | +0        | 255           | 0        | 209           | 0                | 0        | 0        |
| 31               | 359.73 | 518       | +0        | 255           | 0        | 206           | 0                | 0        | 0        |
| <b>TOTALS</b>    |        |           | <b>+2</b> | <b>8,257</b>  | <b>0</b> | <b>6,788</b>  | <b>0</b>         | <b>0</b> | <b>0</b> |
| <b>ACRE-FEET</b> |        |           | <b>+2</b> | <b>16,378</b> | <b>0</b> | <b>13,464</b> | <b>0</b>         | <b>0</b> | <b>0</b> |

JOINT MAIN OPERATED BY SSJID AND OID.

**SUMMARY**  
 RELEASE (ACRE-FEET)

|                  |   |        |        |
|------------------|---|--------|--------|
| JOINT MAIN CANAL | 0 | OUTLET | 0      |
| SOUTH MAIN CANAL | 0 | SPILL  | 13,464 |
|                  |   | TOTAL  | 13,464 |

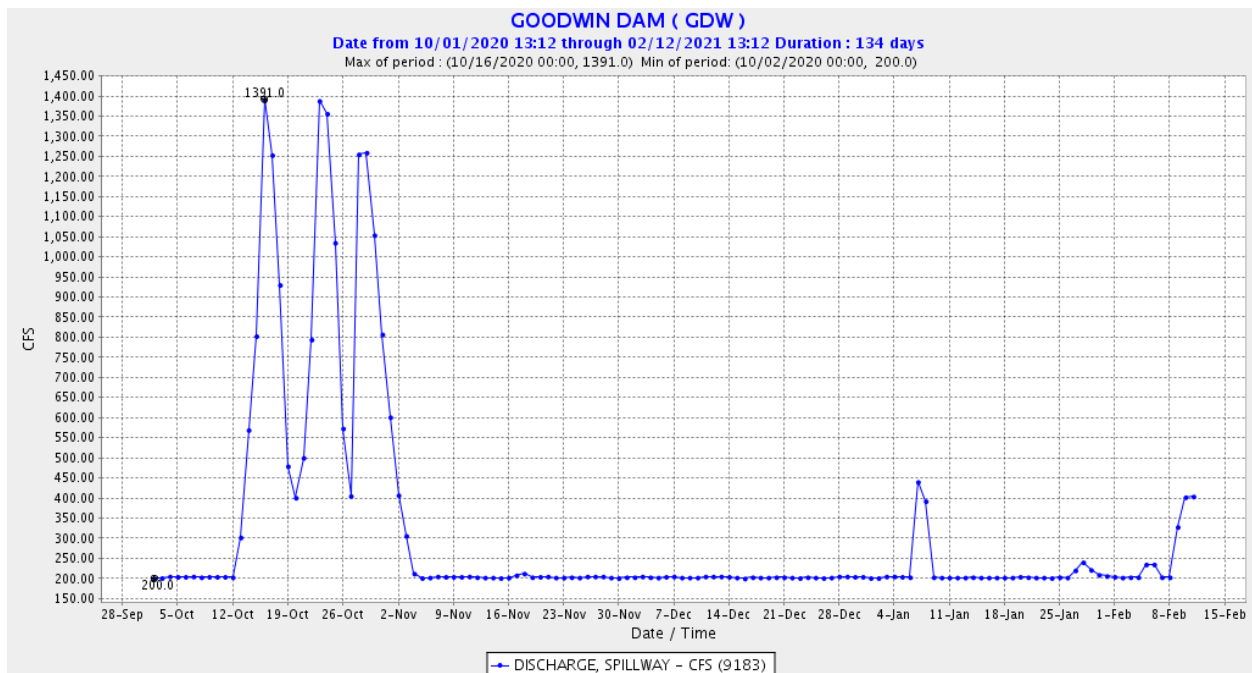
# February 2021 Stanislaus River Update

## Water Year Type

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

## Flows

The SRP flow schedule for the month of February requires minimum instream base flows of 200 cfs in all year types, and a winter instability flow. Goodwin releases since October 1, 2020 are shown in Figure 1. The recent flows of greater than 200 cfs have been released to address the D-1641 salinity requirement at Vernalis.



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

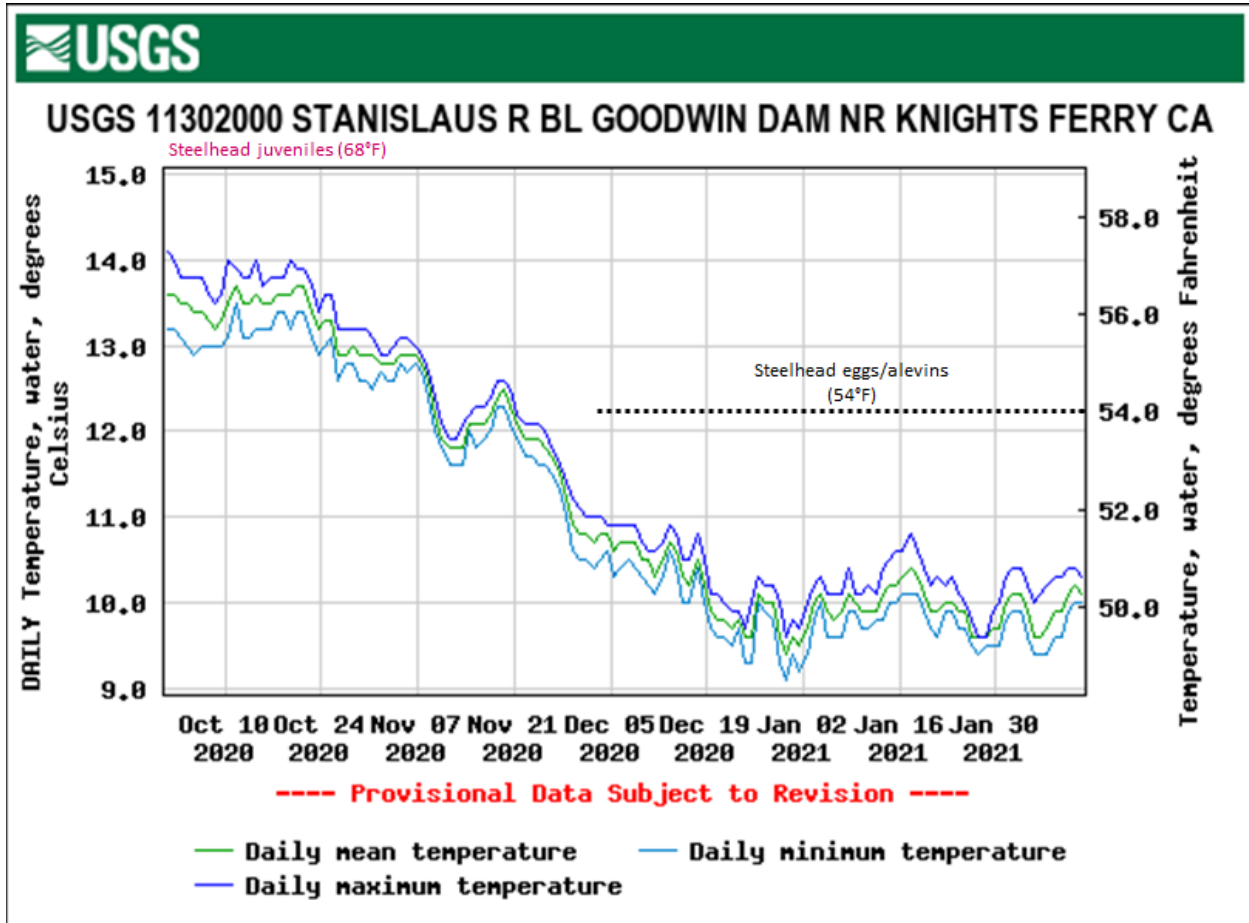
## Water Temperature

The temperature thresholds included in Figures 2-9, below, are the thresholds used in the 2019 NMFS LTO BiOp<sup>1</sup> (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

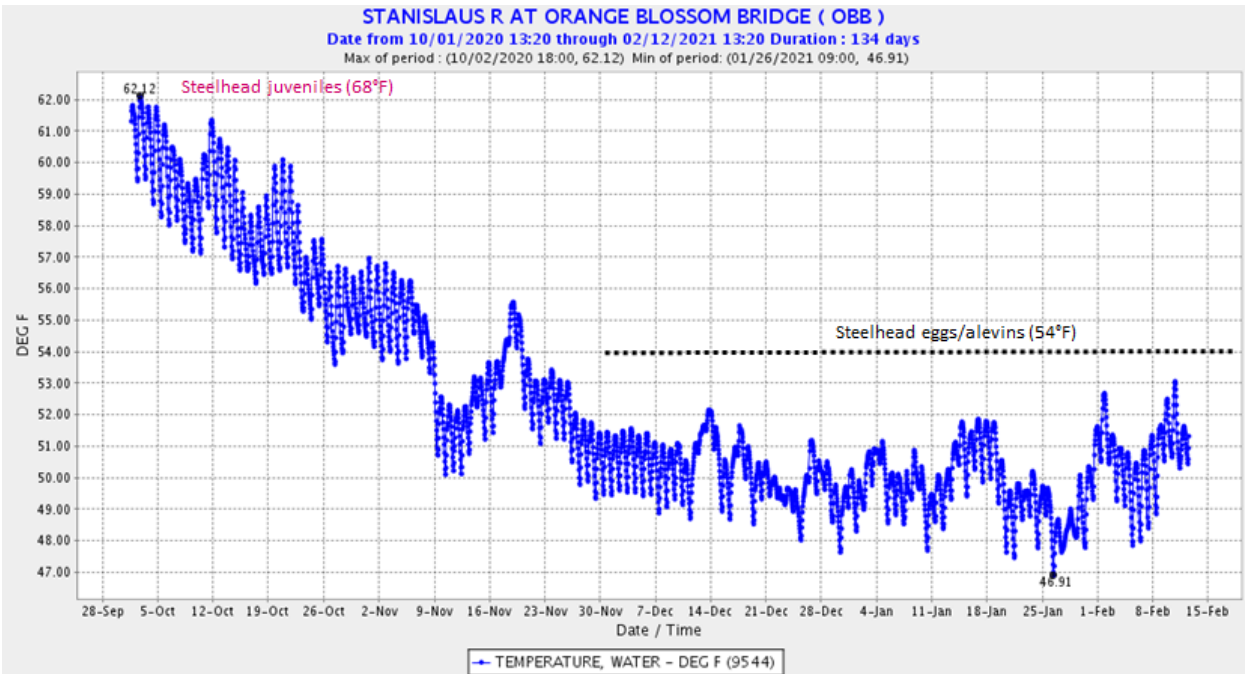
<sup>1</sup> The 2019 NMFS LTO BiOp is available online at: <https://www.fisheries.noaa.gov/resource/document/biological-opinion-reinitiation-consultation-long-term-operation-central-valley>

Stanislaus Watershed Team members to provide a general reference of water temperature suitability.

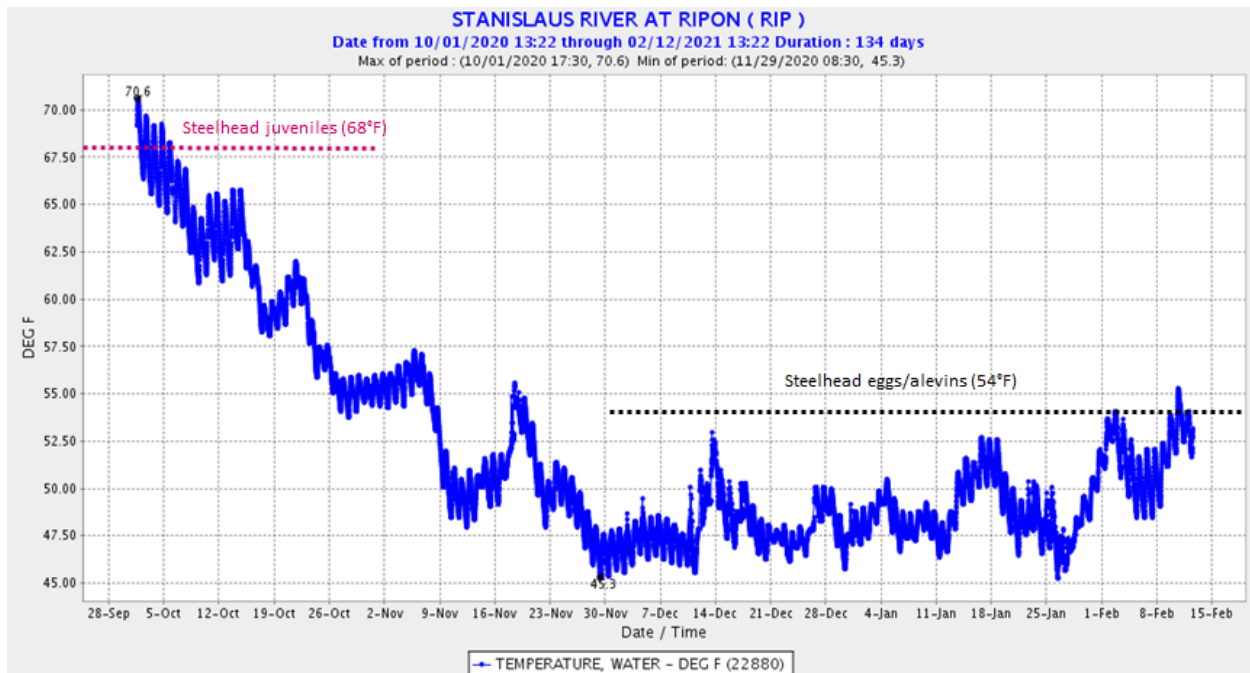
Water temperatures in the Stanislaus River since October 1, 2020 are shown below at Goodwin Canyon (Figure 2), Orange Blossom Bridge (Figure 3), and at Ripon (Figure 4). Water temperatures in the San Joaquin River since October 1, 2020 are shown below at Vernalis (Figure 5). Current-year water temperatures 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.



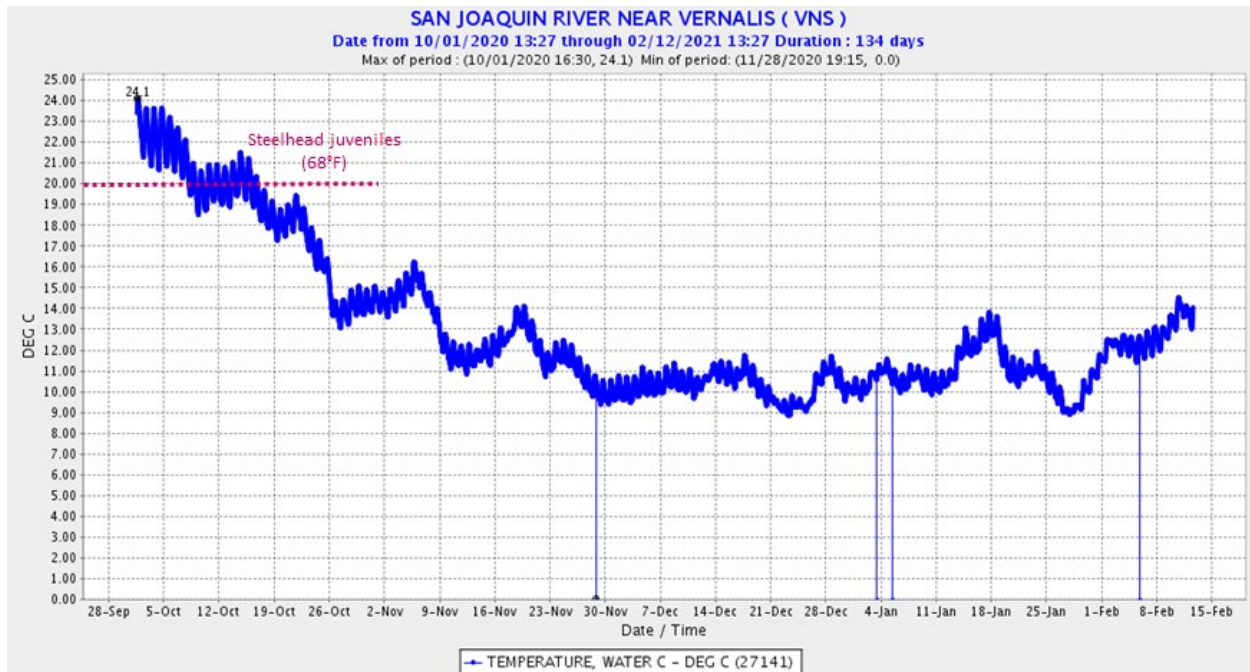
**Figure 2.** Daily water temperatures on the Stanislaus River upstream of Knights Ferry since October 1, 2020. Data from USGS gage 11302000 on NWIS; temperature threshold reference line added by SWT.



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



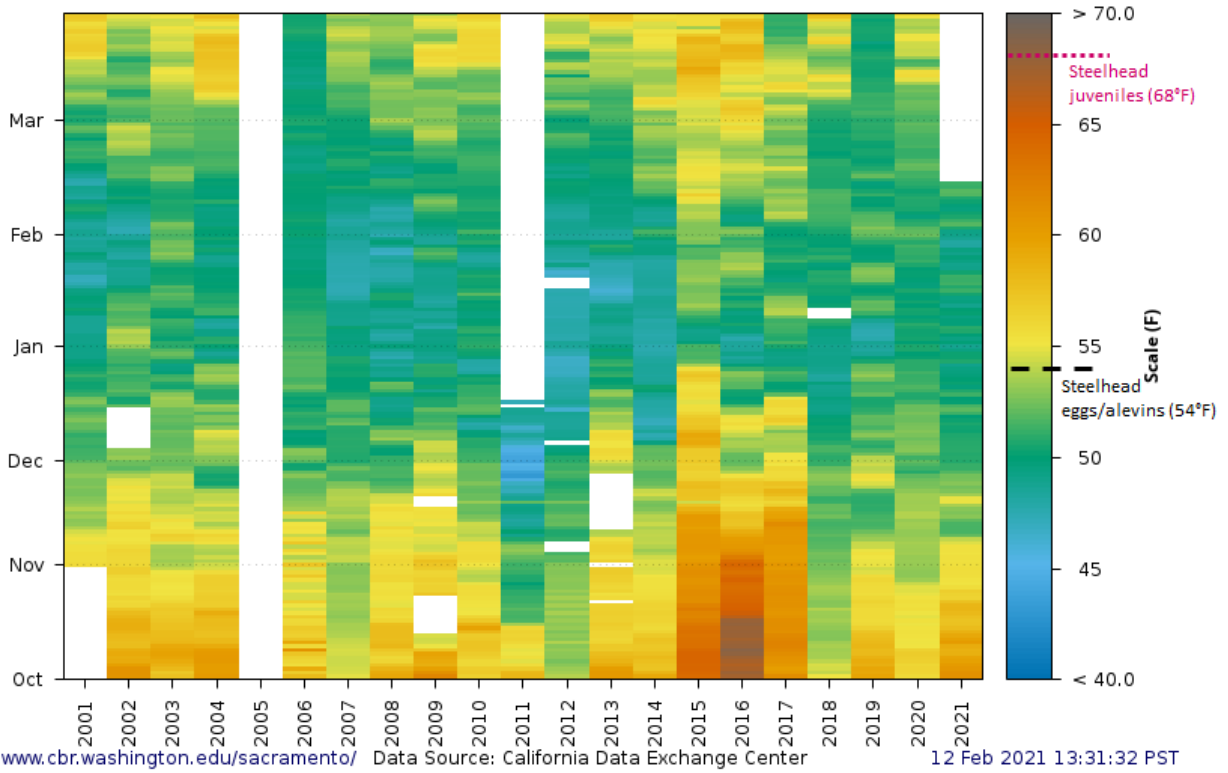
**Figure 4.** Stanislaus (15-minute) water temperatures at Ripon since October 1, 2020. Data from RIP station on CDEC; temperature threshold reference lines added by SWT.



**Figure 5.** San Joaquin River (15-minute) water temperatures at Vernalis since October 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.

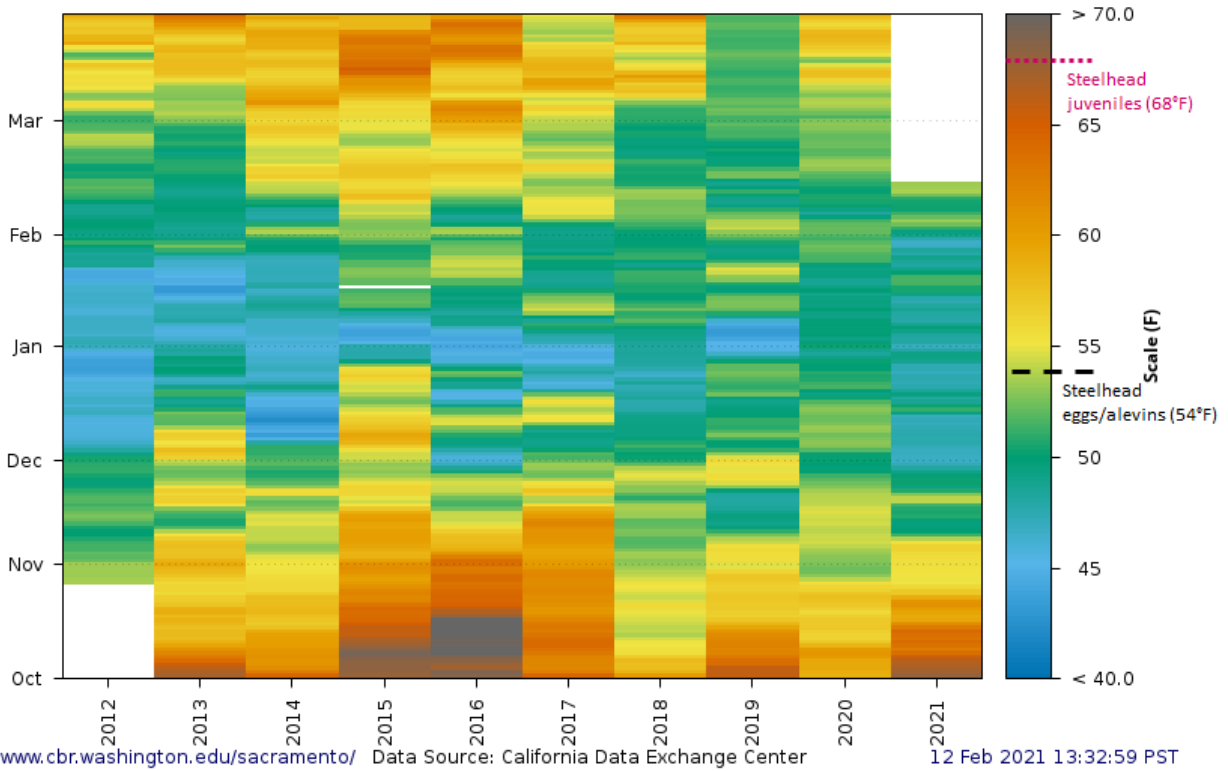


**WY 2001-2021 OBB Stanislaus R at Orange Blossom Bridge**  
**Daily Average Water Temperature (F)**  
**Observed Range 43.02-68.41**



**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](http://www.cbr.washington.edu/sacramento/data/query_river_allyears.html)

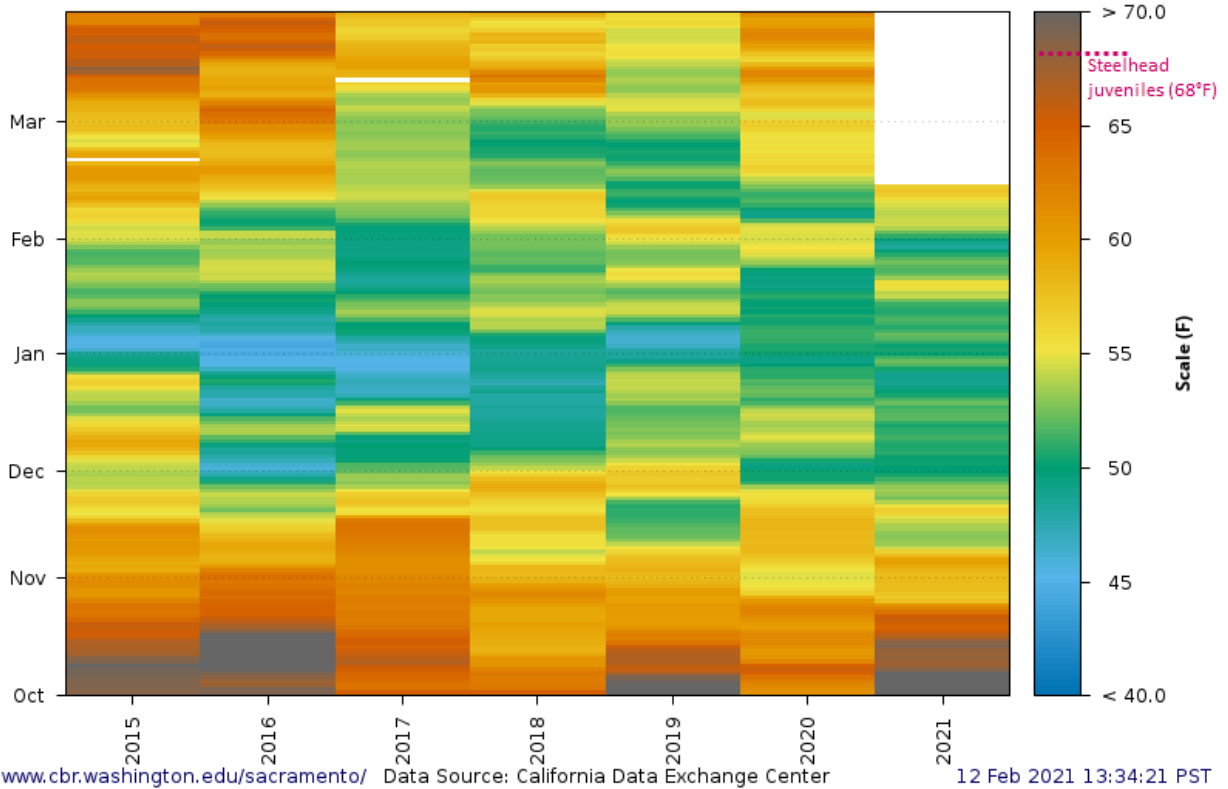
WY 2012-2021 RIP Stanislaus R at Ripon (USGS)  
Daily Average Water Temperature (F)  
Observed Range 42.10-70.94



**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.

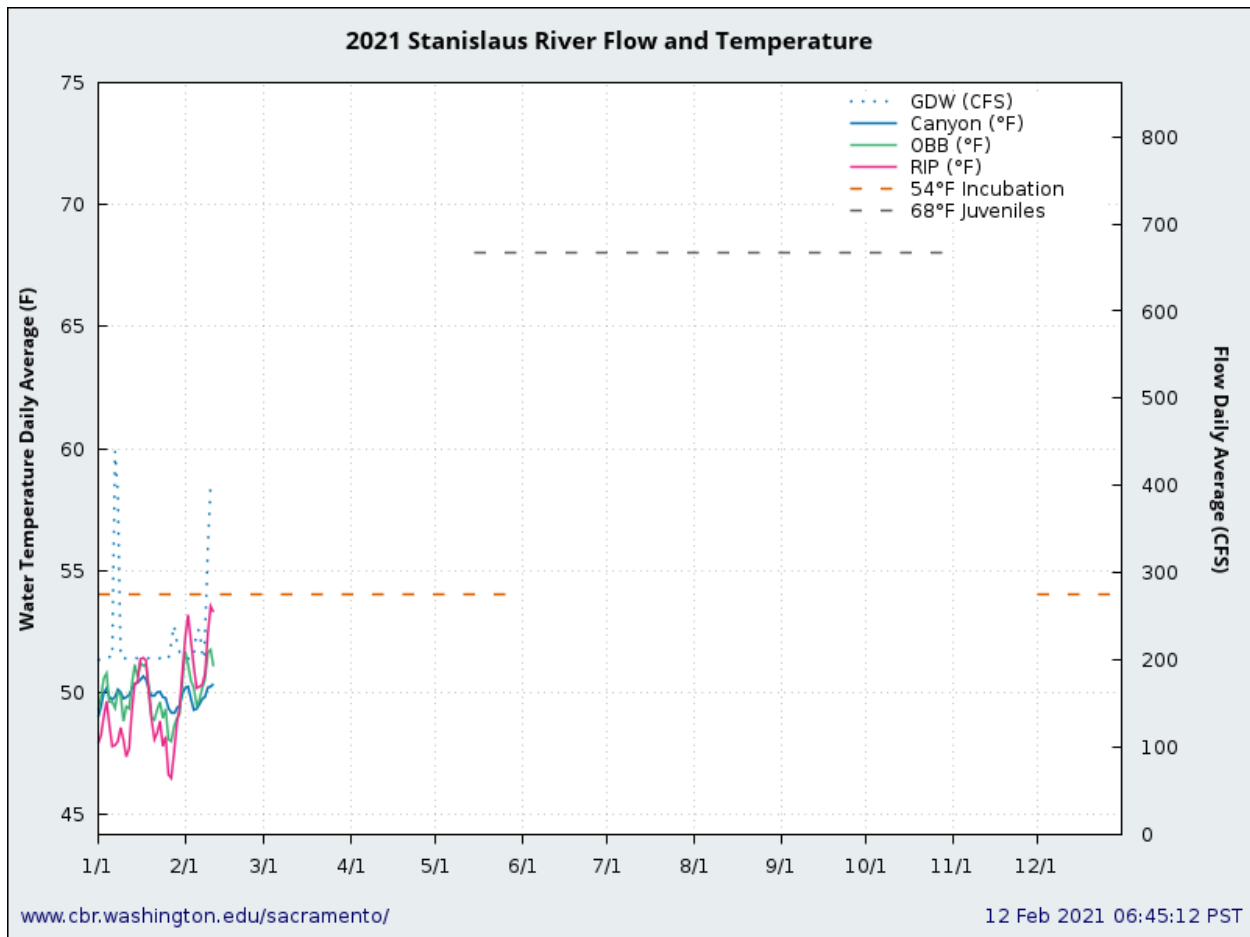
[http://www.cbr.washington.edu/sacramento/data/query\\_river\\_allyears.html](http://www.cbr.washington.edu/sacramento/data/query_river_allyears.html)

WY 2015-2021 VNS San Joaquin R near Vernalis  
Daily Average Water Temperature (F)  
Observed Range 44.20-73.36



**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](http://www.cbr.washington.edu/sacramento/data/query_river_allyears.html)

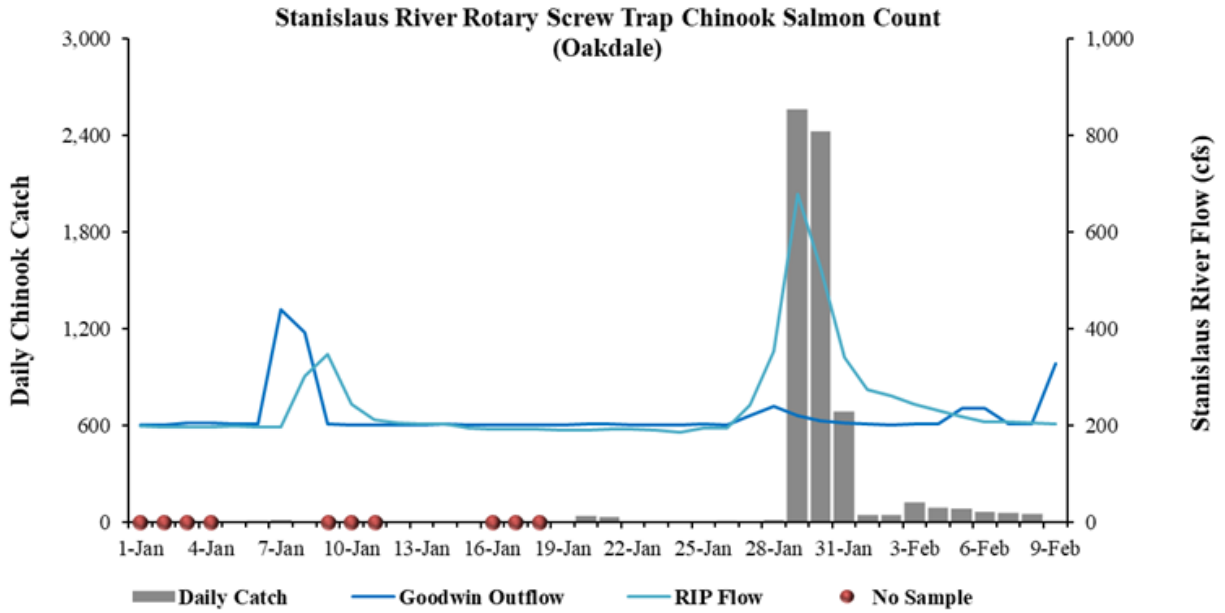


**Figure 9.** 2021 Stanislaus River flow and water temperatures from January 1, 2021 to present. Data (including temperature threshold reference lines) from SacPAS:

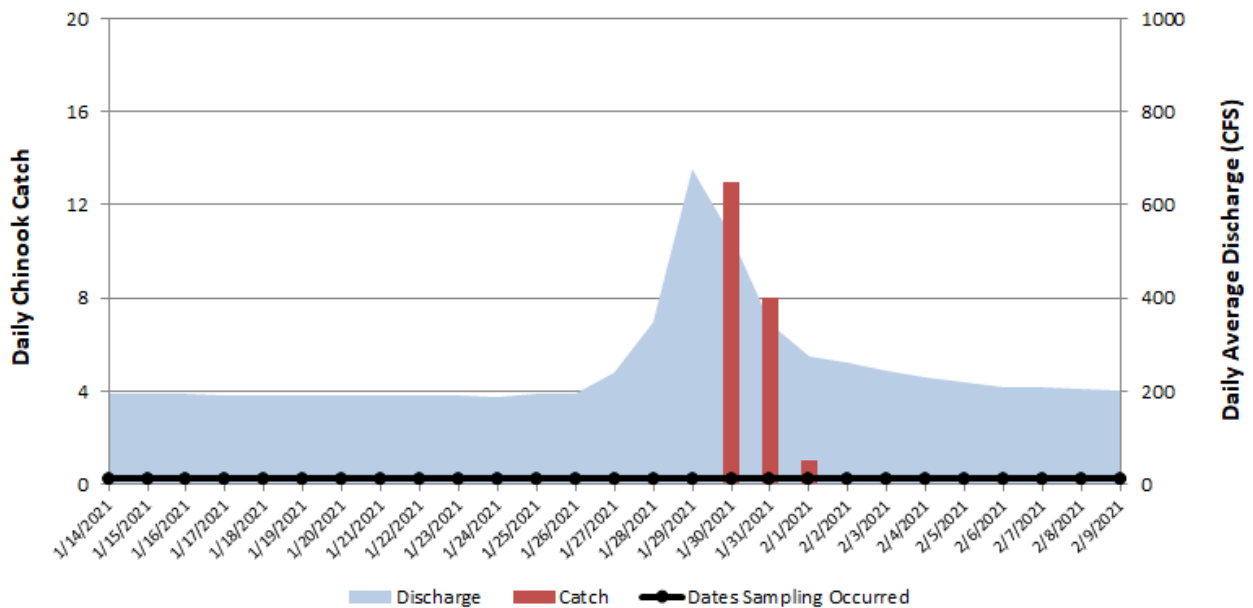
[http://www.cbr.washington.edu/sacramento/data/tc\\_stanislaus.html](http://www.cbr.washington.edu/sacramento/data/tc_stanislaus.html)

### Update on Fish Monitoring

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 Figure 11 (Caswell). Through February 9, 2021, the trap at Caswell has captured a total of 22 unmarked Chinook salmon (all fry), 0 steelhead, and 2,700 juvenile lamprey.



**Figure 10.** Daily juvenile Chinook catch through February 9, 2021, at the rotary screw trap near Oakdale. Figure courtesy of Fishbio.



**Figure 11.** Daily juvenile Chinook catch through February 9, 2021, at the rotary screw trap near Caswell State Park. Discharge data is at Ripon. Figure courtesy of Pacific States Marine Fisheries Commission.

Sampling at the Mossdale Trawl on the mainstem San Joaquin River has been suspended since spring 2020.