



— BUREAU OF —  
RECLAMATION

## American River Group

**1:30 PM – 3:30 PM**

**Conference Line: +1 (321) 209-6143; Access Code: 780 506 355#**

**Webinar: [Join Microsoft Teams Meeting](#)**

Thursday, October 21, 2021

### Notes

#### 1. Action Items

- a. Spencer Marshall - distribute Annual Report to ARG for review.
- b. Kearns & West – put a placeholder on the May or June 2022 ARG agenda to revisit fall 2021 pre-spawn mortality as part of the power bypass planning discussion

#### Introductions:

- a. USBR: Spencer Marshall, Brad Hubbard, Ian Smith, Liz Kiteck, Sarah Perrin, Thuy Washburn, John Hannon, Carolyn Bragg, Zarela Guerrero
- b. NMFS: Barb Byrne, Katrina Poremba
- c. USFWS: Paul Cadrett
- d. CDFW: Morgan Kilgour, Duane Linander, Jason Julienne, Gary Novak, Tracy Grimes, Joel Craven, Crystal Rigby, Emily Fisher
- e. SWRCB: Reza Ghasemizadeh, Lauren Beaudin
- f. PCWA: Ben Barker, Darin Reintjes
- g. City of Sacramento: Brian Sanders, Brett Ewart, Anne Sanger
- h. City of Folsom: Marcus Yasutake
- i. DWR: Mike Ford
- j. City of Roseville: Sean Bigley
- k. SMUD: Ansel Lundberg
- l. Contra Costa Water District: Deanna Sereno
- m. SJWD: Paul Helliker, Greg Zlotnick

- n. EBMUD: Max Fefer
  - o. WAPA: Mike Prowatzke
  - p. Water Forum: Erica Bishop, Chris Hammersmark, Jessica Law
  - q. Sacramento Regional County Sanitation District: Lisa Thompson
  - r. PSMFC: Cory Starr, Logan Day
  - s. Northern California Power Agency: Regina Rieger
  - t. Cramer Fish Sciences: Kirsten Sellheim
  - u. HDR: Amanda Ransom, Paul Bratovich
  - v. Other: Rod Hall
  - w. Cardno: Vanessa Martinez
  - x. BKS Law Firm: Jennifer Buckman
  - y. Kearns & West: Rafi Silberblatt, Susan Ellsworth
2. Housekeeping & Announcements
    - a. No items were noted.
  3. Fisheries Update
    - a. CDFW juvenile salmonid seining surveys have ended for the season and the annual fall-run Chinook salmon carcass survey began October 18th. CDFW will provide updates on the carcass surveys at future meetings. Fall-run redd surveys have also started this month. Few redds have been seen in the upper reaches of the river where salmon are present but have yet to be confirmed.
    - b. In preparation for spawning, CDFW will be providing water to the fish ladder on 10/28 or 10/29/21, depending on maintenance, and the ladder will be open until January.
    - c. CDFW is preparing to move steelhead from the Mokelumne River Hatchery to the Nimbus Hatchery starting on Monday, 10/25/21. It may take 2-3 days to move the fish.
  4. Operations Forecast
    - a. SMUD provided an update on its operations. See handout for details.
      - o Work on the Union Valley boat ramp is complete and elevation restrictions are lifted. Water right curtailments are still in effect. A large storm event may yield a peak flow of 1500 cfs on Slab Creek on Sunday or Monday. Nearly 5" of precipitation are anticipated over the next several weeks
      - o See handout for additional details.
    - b. PCWA provided an update on its operations. See handout for details.
      - o Annual maintenance outage is in effect for all of October.
      - o The current rain event may bring up to 8" of precipitation and peak flows are expected on Monday, 10/25/21.
      - o See handout for additional details.
  5. Central Valley Operations (CVO)

- a. USBR provided an operations update.
  - See handout for details.
- b. Temperature Management
  - For September, average water temperature out of Folsom Dam was 68° F and the monthly average at Hazel was 70.1° F. The average air temperature for September was 72.2° F
  - For October to date, average air temperatures are 62.5° F which is cooler than average.
    - i. Temperature cross-sections of Folsom on 10/19/15 versus 10/19/21 show that the lake is starting to cool off and is much cooler than 2015.
    - ii. All top and middle shutters are currently raised and the bottom shutters on Unit 2 will be raised on Friday or Monday.
    - iii. The current storm event will likely increase storage in Folsom to 208 TAF and releases of 550 cfs will likely continue for the winter months.
  - See handout for details
- c. Power Bypass Scenarios.
  - USBR provided an update on the Power Bypass. The bypass started on 10/11/21 at 50 cfs, increased to 100 cfs on 10/12/21 and increased again to 150 cfs on 10/13/21. Water temperatures at Hazel were under 61°F on 10/20/21. Beginning 10/25/21, the bypass will increase to 250 cfs, then to 350 cfs on 10/26/21. This should get water temperatures closer to 56°F.
  - Gate 18 will be opened on 10/25/21 to provide the coldest water possible to Nimbus Hatchery. Water temperatures are expected to be near 60.5°F.

Questions/Comments:

- a. Northern California Power Agency asked what ambient air temperatures were used when modeling the bypass and what cooler than normal air temperatures might mean for the bypass timeline.
  - USBR explained that 2014 air temperatures were used to provide conservative estimates. The bypass will continue until a stable 56°F is achieved at Hazel at which point the bypass will be ramped down.
- b. CDFW requested that the record indicate that the bypass option selected by USBR is substantively different than Scenario C or any of the other scenarios modeled by the SWT.
  - USBR indicated that it will note the differences in a forthcoming memo including temperature differences.
- c. CDFW asked for further detail regarding the decision to limit initial bypass volumes to avoid cold-water shock to fish in Lake Natoma.
  - USBR indicated that the decision was made in response to a prior power bypass that resulted in cold-water shock to wakasagi, generating public outcry as a result.

- USFWS noted that managing temperature to avoid impacts on non-native species at the potential detriment to salmon and steelhead is not ideal.
- d. CDFW requested that USBR provide an explanation in its memo regarding the selection of 62°F as the bypass target temperature.
  - NMFS noted that while 62°F may have the intention of delaying spawning until egg incubation conditions are more suitable, there is a risk that at or above this temperature, females may be holding and may die without spawning which is equivalent to 100% egg mortality.
- e. USBR noted that this is the first time a bypass has started this early and that the current approach has enabled cooler temperatures with only several days of delay.
- f. CDFW suggested that the slow bypass ramp-up for wakasagi should be incorporated into temperature modeling runs in the future.
- g. NMFS proposed revisiting 2021 pre-spawn mortality rates in May or June 2022 when bypass planning begins.

## 6. Discussion

- h. LTO Guidance Doc. Review Update – no updates provided.
- i. Review/Revise Ops Outlook Table Section:
  - All watershed groups are being asked to provide feedback on the Ops Outlook Table 1. Though the table is produced weekly, ARG feedback will be incorporated monthly.
    - The group suggested editing the right column to reflect “Fall-run Chinook holding and spawning; eggs are in gravel.”
    - NMFS suggested that the table may not need revision monthly as the current edits will likely apply through December.
  - Northern California Power Agency asked what the table is used for.
    - ARG members explained that the data is distributed to technical teams and WOMT and provides context to inform operational decisions.
- Annual Reporting
  - USBR is finalizing the report which should be complete this week. The report will be distributed for review:
    - [Action Item]: Spencer Marshall to distribute Annual Report to ARG for review.
- NMFS noted that consultation has been reinitiated on the long-term operation of CVP and SWP.

## 7. Next Meeting:

- a. Thursday, November 18, 1:30-3:30



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### Agenda

1. Introductions
2. Housekeeping
3. Fisheries Update
4. Operations Forecast
  - a. SMUD
  - b. PCWA
5. Central Valley Operations
  - a. Temperature management
  - b. Exceedance forecast & temperature schedules
  - c. Power Bypass Update
6. Discussion
  - a. LTO Guidance Doc Review Update
  - b. Review/Revise Ops Outlook Table Section
  - c. Annual reporting
7. Next Meetings:
  - a. Thursday, November 18, 1:30-3:30pm

# SMUD Upper American River Project Update

Conditions – Tuesday 19 October 2021:

- Happy new water year! October precipitation through 10/19/2021 at Fresh Pond is 1.30 in., which is 39% of the October average of 3.30". Water year total to date is 64% of average to date (2.02"). 4.8" of precipitation is forecasted for the area in the next two weeks.
- Runoff into the storage reservoir basins is 64% of median to date through Oct 18. The snowpack is 0% of average at selected snow sensors.

## Combined reservoir storage for Loon Lake, Union Valley and Ice House Reservoirs

- 169,266 acre feet (Storage this time last month: 181,033 acre feet); 45% full
- 72% of historical average (19 October historical average: 234,392 AF / 62%)
- 0% change in storage since last week

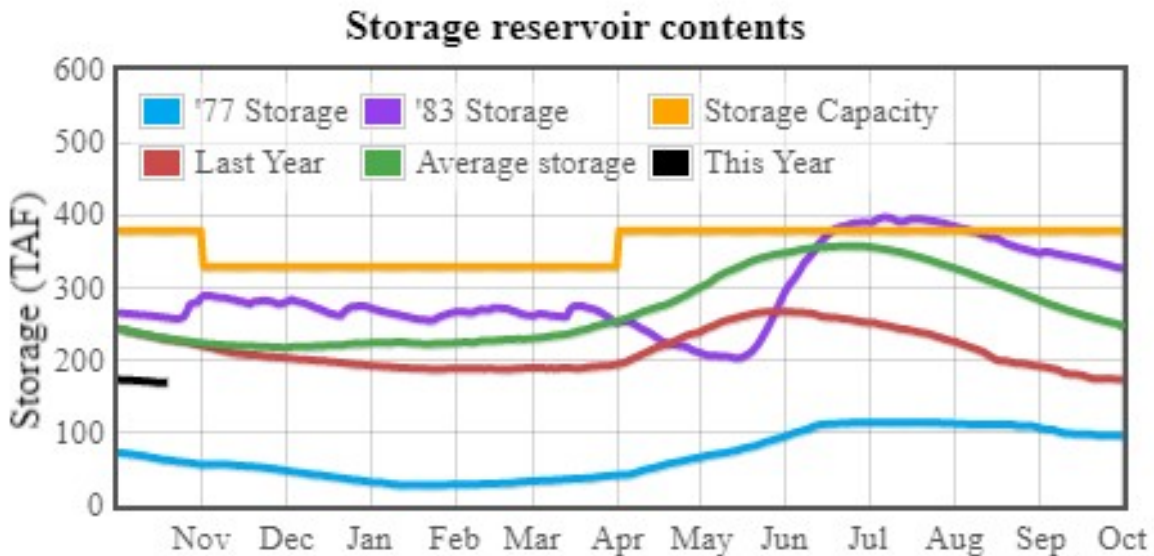


Figure 1. Storage Reservoir Contents

## Individual Reservoir Storage

- Loon Lake: 52,031 AF
- Ice House: 26,234 AF
- Union Valley: 91,001 AF (34% of avg)

Last year (on October 19, 2020), storage was at 60% (229,152 AF). \*Total capacity: 379,174 AF.

## Chili Bar releases into the South Fork American River

- September 2021 releases:
  - Daily average flow: 356 cfs
  - Total releases: 21,175 AF
- October 2021 releases (October 1-18)
  - Daily average flow so far: 239 cfs
  - Total releases so far: 8,540 AF

Table 1: South Fork American River Natural Runoff Forecast (in cfs, daily average forecasted flow, forecast 2021-10-18)

<b>BASIN</b>	<b>Fri Oct 22</b>	<b>23-Oct</b>	<b>24-Oct</b>	<b>25-Oct</b>	<b>26-Oct</b>	<b>27-Oct</b>
SFA above Slab	146.8	106.2	230.6	299.0	101.3	149.3
Slab Creek Reservoir	47.2	44.5	53.2	67.9	85.3	78.9
Combined South Fork	194	151	284	367	187	228

## PCWA MFP OPERATIONS OVERVIEW for American River Operations Group (Real Time Data as of October 19, 2021)

- French Meadows Storage = 48,000 AF of 136,405 AF = 35% Capacity
  - MFAR above FM Inflow (R24) = 7-day AVG ~8 cfs
- Hell Hole Storage = 55,000 AF of 207,590 AF = 26% Capacity
  - Five Lakes Inflow (R23) = 7-day AVG ~2 cfs
  - Rubicon Inflow (R22) = 7-day AVG ~2 cfs
- Combined Storage (FM+HH) = 103,000 AF/342,590 AF = 30% Capacity; ~56% of AVG
  - 7 Day Change = -1,500 AF
- MFAR @ R11: 7-day daily average 170 cfs
- MFP Annual Maintenance Outage – The entire MFP will be offline October 1st – October 31st
  - PG&E 240 kV Transmission Outage November 1<sup>st</sup> – November 18<sup>th</sup>
  - MFP back online November 19<sup>th</sup>

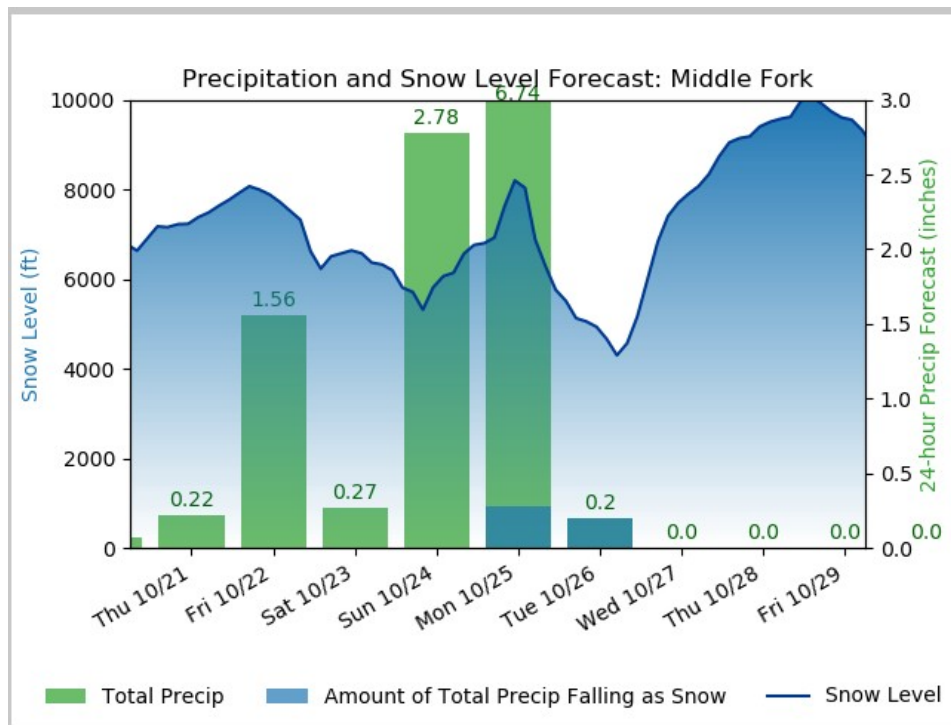


Figure 2. Precipitation and Snow Level Forecast: Middle Fork



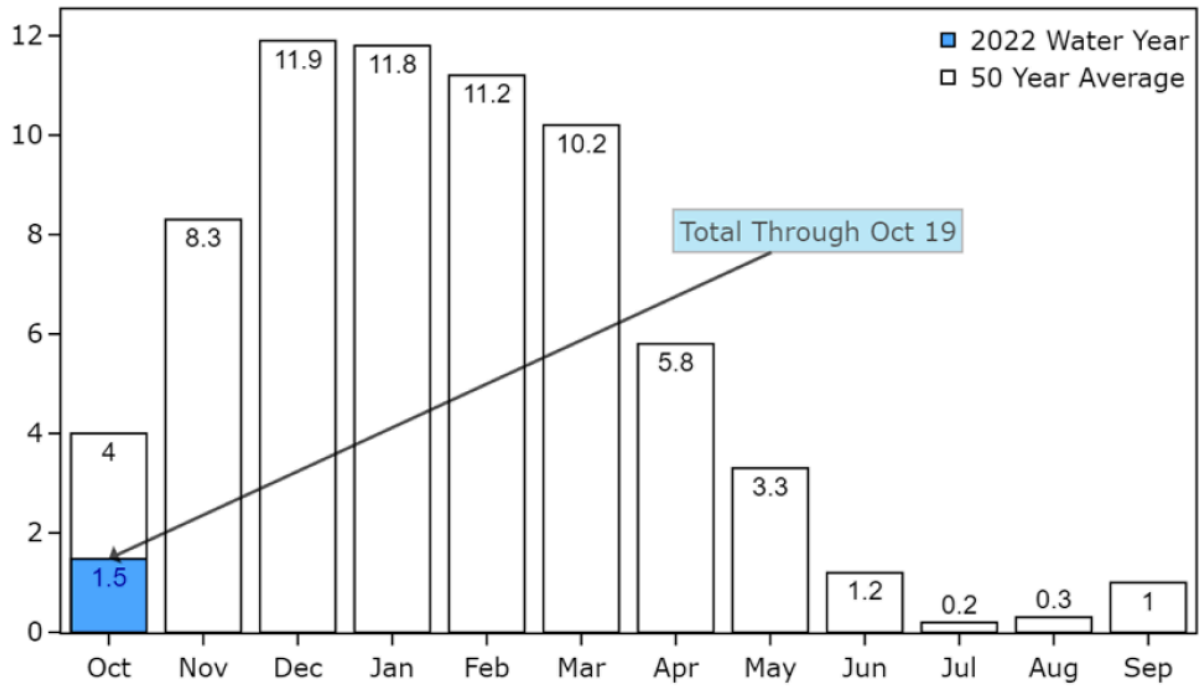


Figure 3. Lake Spaulding Precipitation Bar Graph: Water Year 2021 (as of 10/19/21)

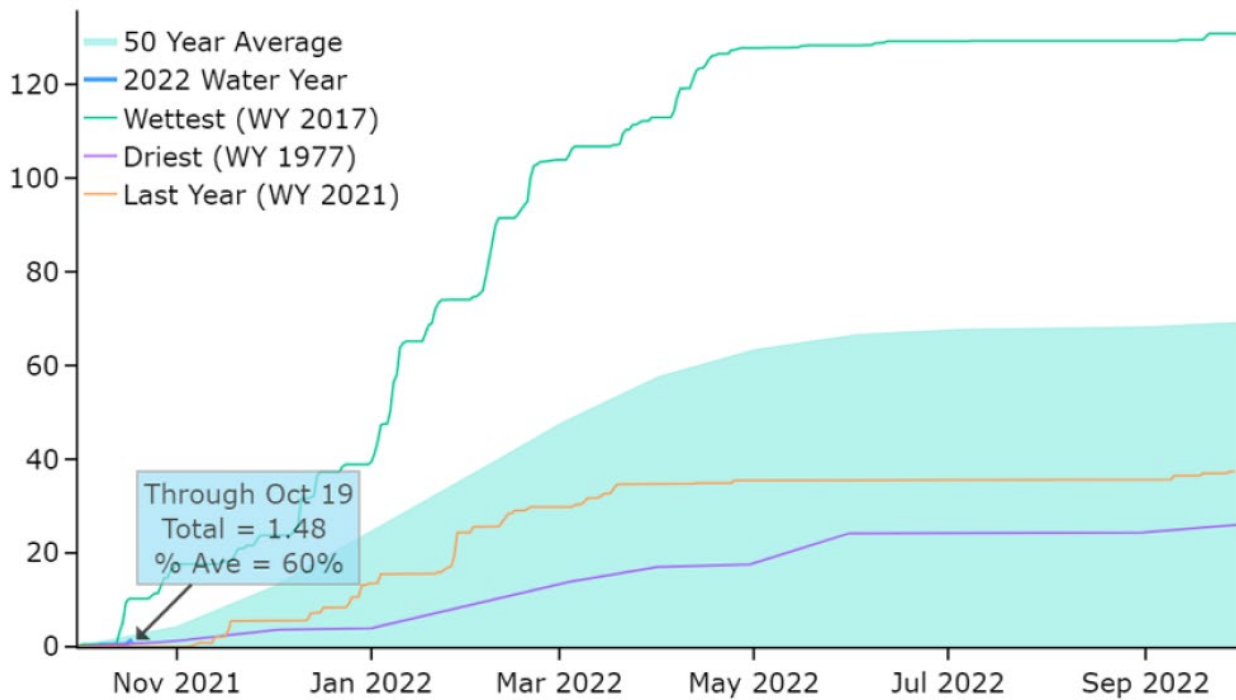


Figure 4. Lake Spaulding Precipitation Line Graph: Water Year 2021 (as of 10/19/21)

**UNITED STATES DEPARTMENT OF THE INTERIOR  
U.S. BUREAU OF RECLAMATION-CENTRAL VALLEY PROJECT-CALIFORNIA  
DAILY CVP WATER SUPPLY REPORT**

OCTOBER 19, 2021

RUNDATE: October 20, 2021

Table 2. Reservoir Releases in Cubic Feet/Second

RESERVOIR	DAM	WY 2020	WY 2021	15 YR MEDIAN
TRINITY	LEWISTON	291	291	302
SACRAMENTO	KESWICK	5,213	6,834	6,222
FEATHER	OROVILLE (SWP)	2,450	1,250	2,400
AMERICAN	NIMBUS	1,512	544	1,500
STANISLAUS	GOODWIN	479	618	759
SAN JOAQUIN	FRIANT	410	230	348

Table 3. Storage in Major Reservoirs in Thousands of Acre-Feet

RESERVOIR	CAPACITY	15 YR AVG	WY 2020	WY 2021	% O 15 YR AVG
TRINITY	2,448	1,283	1,318	645	50
SHASTA	4,552	2,197	2,124	974	44
FOLSOM	977	397	384	216	54
NEW MELONES	2,420	1,262	1,512	826	65
FED. SAN LUIS	966	305	386	16	5
TOTAL NORTH CVP	11,363	5,444	5,724	2,677	49
MILLERTON	520	254	166	304	120
OROVILLE (SWP)	3,538	1,501	1,560	790	53

Table 4. Accumulated Inflow for Water Year to Date in Thousands of Acre-Feet

RESERVOIR	CURRENTWY 2021	WY 1977	WY 1983	15 YRAVG	% O 15 YR AVG
TRINITY	1	5	5	6	21
SHASTA	89	140	146	120	75
FOLSOM	11	41	65	36	32
NEW MELONES	8	----	31	25	31
MILLERTON	24	20	94	34	71

Table 5. Accumulated Precipitation for Water Year to Date in Inches

<b>RESERVOIR</b>	<b>CURRENT WY 2021</b>	<b>WY 1977</b>	<b>WY1983</b>	<b>AVG (N YRS)</b>	<b>% OF AVG</b>	<b>LAST 24 HRS</b>
TRINITY AT FISH HATCHERY	0.06	0.13	0.39	0.75 ( 59 )	8	0.00
SACRAMENTO AT SHASTA DAM	0.21	0.07	0.24	1.22 ( 64 )	17	0.03
AMERICAN AT BLUE CANYON	1.53	0.87	0.73	1.47 ( 46 )	104	0.00
STANISLAUS AT NEW MELONES	0.20	----	0.30	0.56 ( 43 )	36	0.02
SAN JOAQUIN AT HUNTINGTON LK	0.66	1.20	0.00	1.00 ( 46 )	66	0.03

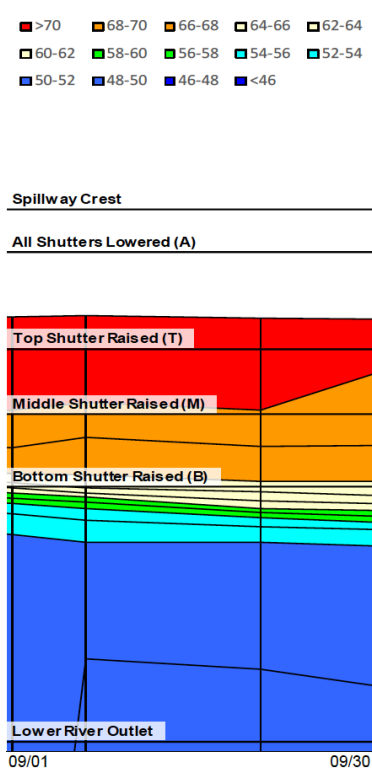


Figure 5. Isobath Plot 9/1/21-9/30/21

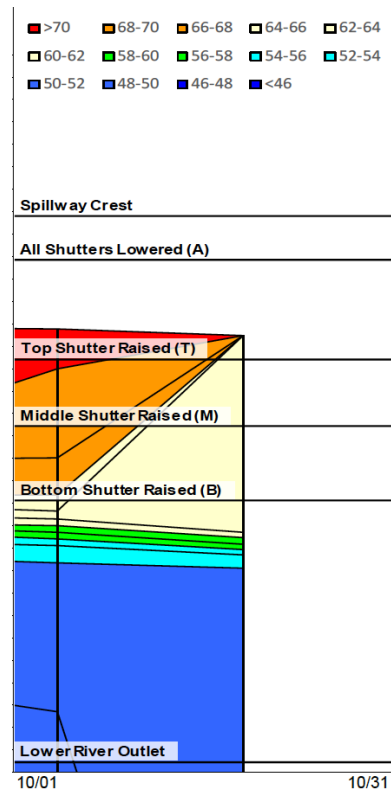


Figure 6. Isobath Plot 10/1/21-10/31/21

**Table 6. Isobath Plot 9/1-9/31**

Mean Daily Temperatures (°F) = MDT, Unit Shutter Position =USP, Load Percentage = LP

Date	MDT Water NFA	MDT Water ARP	MDT Water AFD	MDT Water AFO	MDT Water AWP	MDT Water AWB	MDT Air CSU	Release (CFS) Nimbus	Storage (TAF) Folsom	USP Unit 1	LP Unit 1	USP Unit 2	LP Unit 2	USP Unit 3	LP Unit 3
Aug	65.3	62.5	66.8	69.0	71.5	72.5	74.6	906	n/a	n/a	n/a	n/a	n/a	n/a	n/a
09/01	59.6	65.4	68.5	69.4	71.0	71.4	64.8	599	234	B	13	B1	41	M	46
09/02	59.3	65.2	68.3	69.9	71.0	71.1	65.4	599	234	B	17	B1	32	M	52
09/03	59.3	62.3	68.5	69.9	72.0	72.4	69.5	596	235	B	16	B1	31	M	53
09/04	59.4	61.6	68.2	70.1	72.3	73.3	74.3	606	235	B	17	B1	35	M	48
09/05	60.5	62.3	68.3	70.2	72.6	73.9	78.3	599	236	B	17	B1	35	M	48
09/06	60.8	62.9	68.2	70.2	73.0	74.5	80.8	610	236	B	15	B1	33	M	52
09/07	61.8	63.6	67.9	70.1	73.7	75.3	83.6	604	236	B	20	B1	31	M	49
09/08	65.5	63.1	68.1	70.2	73.8	75.7	84.1	592	235	B	17	B1	33	M	50
09/09	67.7	63.9	68.2	70.1	73.8	75.3	80.3	566	235	B	11	B1	41	M	49
09/10	69.1	62.7	68.3	70.3	73.2	74.4	74.0	571	235	B	11	B1	43	M	47
09/11	69.7	64.0	68.3	70.5	73.0	74.3	75.0	574	235	B	11	B1	42	M	46
09/12	69.9	63.9	68.3	70.6	73.7	74.9	78.0	574	234	B	11	B1	42	M	46
08/12	70.8	61.2	66.3	69.2	71.9	73.0	75.5	1013	235	B	11	B1	54	M	16
09/13	66.6	64.0	68.4	70.6	73.7	75.3	79.8	579	234	B	11	B1	43	M	46
08/14	69.2	60.2	66.9	69.5	72.6	73.6	79.4	1004	236	B	11	B1	57	M	13
09/14	64.8	66.0	67.6	70.5	73.4	74.8	77.9	576	233	B	20	B1	61	M	19
09/15	64.2	66.8	67.0	70.6	72.5	73.3	69.9	580	233	B	28	B1	53	M	19
09/16	63.4	66.2	n/a	70.6	71.5	71.8	65.9	577	232	B	14	B1	64	M	22
08/18	64.5	65.1	64.7	69.1	70.2	70.6	70.7	1003	234	B	14	B1	2	M	36
09/17	63.5	65.9	67.8	70.3	71.8	71.7	66.0	571	232	B	12	B1	65	M	23
09/18	63.5	65.5	68.0	69.9	70.9	71.1	65.1	565	232	B	12	B1	70	M	18
09/19	63.0	64.6	68.6	70.2	71.7	72.0	69.9	568	232	B	12	B1	69	M	19
09/20	63.8	63.2	68.4	70.4	71.3	71.8	72.0	570	232	B	12	B1	68	M	19
09/21	63.0	64.4	68.9	69.8	72.1	72.6	75.0	562	231	B	15	B1	61	M	24
09/22	63.1	65.2	67.5	69.7	72.2	73.3	77.8	566	231	B	15	B1	54	M	31
09/23	63.5	65.7	67.8	69.9	71.9	73.0	76.5	573	231	B	14	B1	64	M	22
09/24	63.2	66.0	67.7	70.2	72.0	72.9	76.9	556	231	B	14	B1	64	M	22
09/25	63.0	65.0	67.6	69.8	71.6	72.3	70.4	553	232	B	15	B1	63	M	22
09/26	62.8	62.9	67.5	69.8	70.6	70.9	64.6	541	232	B	14	B1	63	M	23
09/27	63.5	62.2	67.2	69.8	70.2	70.4	65.6	563	232	B	15	B1	63	M	22
09/28	64.3	64.0	67.5	69.7	70.0	70.0	65.6	629	231	B	19	B1	60	M	21
09/29	63.3	62.9	67.7	69.7	68.9	68.7	65.5	558	231	B	12	B1	62	M	25
09/30	62.6	61.9	67.6	69.3	69.7	69.6	67.3	568	230	B	11	B1	51	M	37
Sept	63.6	64.1	68.0	70.1	72.0	72.7	72.7	578	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	Total AF	34403	n/a	n/a	n/a	n/a	n/a	n/a	n/a

**Table 7. Isobath Plot 10/1-10/19**

Mean Daily Temperatures (°F) = MDT, Unit Shutter Position = USP, Load Percentage = LP

Date	MDT Water NFA	MDT Water ARP	MDT Water AFD	MDT Water AFO	MDT Water AWP	MDT Water AWB	MDT Air CSU	Release (CFS) Nimbus	Storage (TAF) Folsom	USP Unit 1	LP Unit 1	USP Unit 2	LP Unit 2	USP Unit 3	LP Unit 3
Aug	63.6	64.1	68.0	70.1	72.0	72.7	72.7	578	n/a	n/a	n/a	n/a	n/a	n/a	n/a
10/01	62.4	61.7	67.5	68.9	70.0	70.3	69.9	558	229	B	12	B1	56	M	32
10/02	62.9	61.8	67.5	68.7	69.8	70.4	71.4	582	228	B	12	B1	61	M	27
10/03	62.8	60.2	67.2	68.6	69.3	69.8	70.8	584	228	B	14	B1	48	M	38
10/04	62.7	60.0	66.6	68.5	69.2	69.5	70.8	580	227	B	27	B1	2	M	71
10/05	62.4	60.2	66.6	68.4	68.9	69.1	69.1	587	226	B	24	B1	2	M	74
10/06	62.3	60.7	66.2	68.0	68.2	68.0	63.9	568	225	B	26	B1	2	M	72
10/07	62.2	60.7	66.9	67.7	67.7	67.2	61.4	577	225	B	6	B1	2	M	92
10/08	61.8	60.8	65.2	67.3	66.6	66.1	58.7	585	224	B	44	B1	2	M	54
10/09	61.0	59.1	65.2	67.0	66.3	65.8	59.3	579	224	B	49	B1	2	M	49
10/10	60.6	58.6	64.9	66.7	66.8	66.6	63.0	586	223	B	49	B1	2	M	49
10/11	59.6	58.2	64.3	65.7	65.3	65.0	61.7	550	222	B	93	B1	2	M	4
10/12	57.7	56.2	62.1	64.6	62.4	61.7	57.7	546	221	B	97	B1	2	M	2
10/13	56.8	55.2	60.5	64.2	63.2	62.0	57.3	545	220	B	97	B2	2	M	2
10/14	56.3	55.2	60.4	63.5	63.2	63.1	58.6	556	220	B	97	B3	2	M	2
10/15	56.6	55.8	59.6	63.2	59.6	63.5	60.8	550	219	B	93	B3	4	M	3
10/16	57.0	56.5	59.8	62.4	63.5	64.2	62.5	549	218	B	94	B3	4	M	3
10/17	57.1	56.5	59.6	63.2	63.4	71.7	66.0	571	232	B	12	B1	65	M	23
10/18	56.9	56.4	59.2	61.6	63.8	63.3	60.5	550	218	B	94	B3	3	M	3
10/19	56.0	56.3	59.4	61.0	59.4	61.7	54.1	547	217	B	94	B3	3	M	3
10/20	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
10/21	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
10/22	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
10/23	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
10/24	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
10/25	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
10/26	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
10/27	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
10/28	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
10/29	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
10/30	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
10/31	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Sept	59.7	58.4	63.6	65.6	65.8	65.7	62.5	564	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	Total AF	21269	n/a	n/a	n/a	n/a	n/a	n/a	n/a

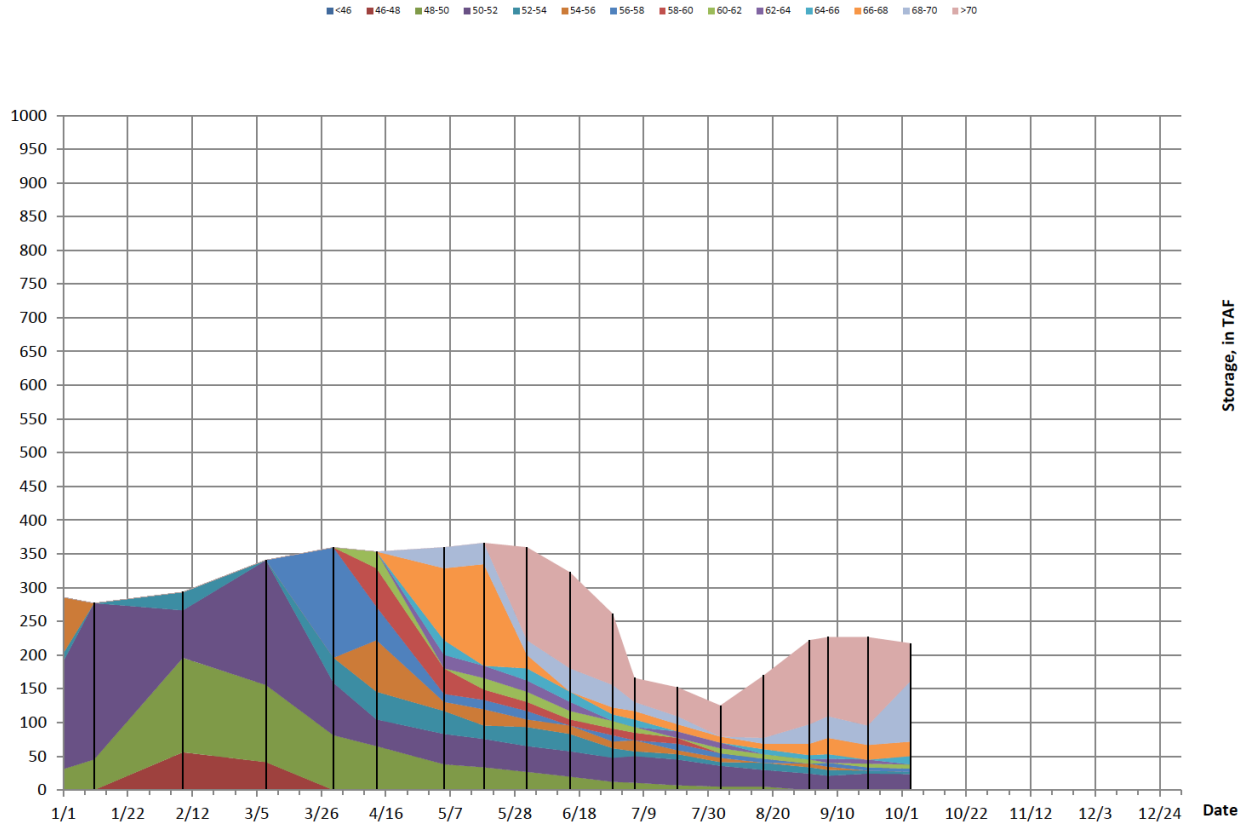


Figure 7. Folsom Lake Isothermobaths -2021 (Water temperature in ° F)

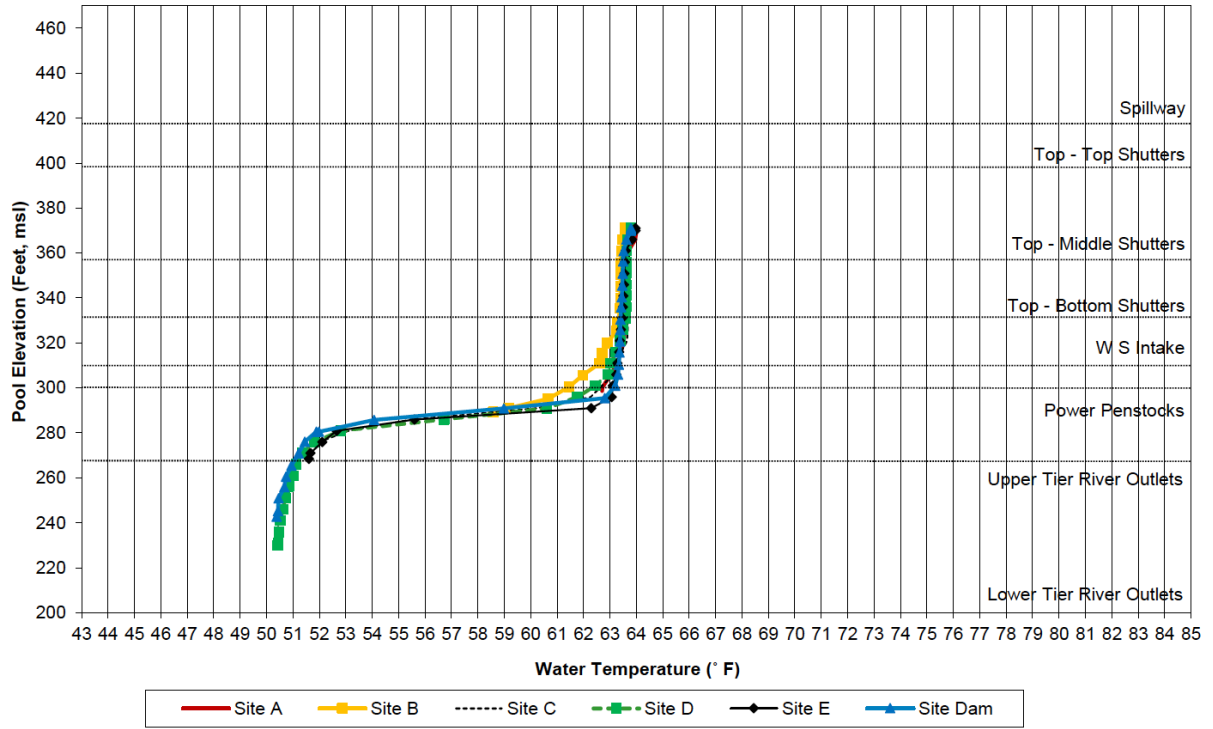


Figure 8. Folsom Lake Temperature Profiles: 10/19/2021



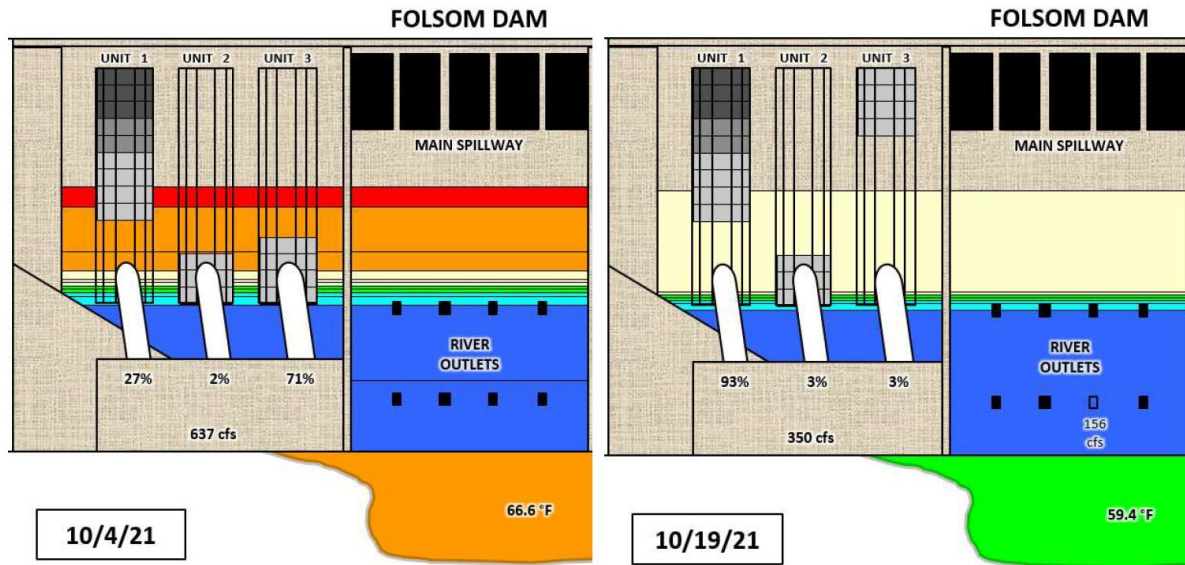


Figure 9. Folsom Dam Temperature Conditions [10/4/21] and [10/19/21]

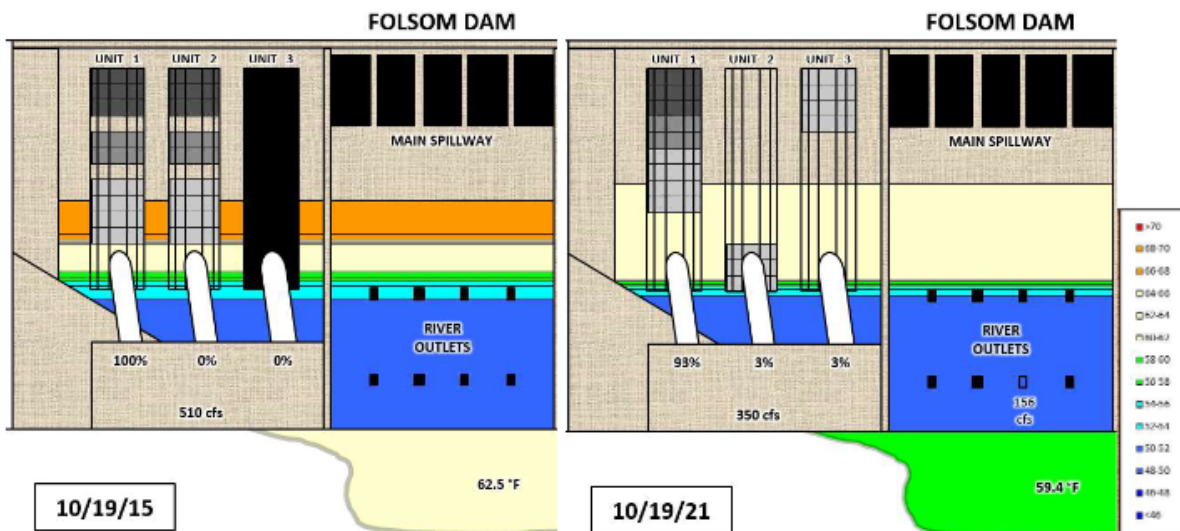


Figure 10. Folsom Dam Temperature Conditions [9/7/15] and [9/7/21]

## American River Summary Conditions – October (On-going)

### Storage/Release Management Conditions

- Releases are currently at 550 cfs to conserve storage

### Temperature Management:

- Top Shutters: Units 1, 2, & 3 – raised
- Middle Shutters: Units 1, 2 and 3 -- raised,
- Bottom Shutters: Units 1 and Unit 3 – raised, Unit 2 (Deganged): 1 top panel up, 3 lower panels down

### Folsom Shutter Configuration and Changes:

\*Next action – raise unit 2 Bottom Shutters

### American River Release Outlook for September:

Table 8. Federal End of the Month Storage/Elevation (TAF/feet)

Month	n/a	Sept	Oct	Nov	Dec	Jan
Folsom	244	248	226	207	196	225
n/a	Elev.	377	373	369	366	373

Table 9. Monthly River Releases (TAF/cfs)

Month	n/a	Sept	Oct	Nov	Dec	Jan
American	TAF	33	34	33	34	34
n/a	cfs	550	550	550	550	550

### American River Release Outlook for October:

Table 10. Federal End of the Month Storage/Elevation (TAF/feet)

Month	n/a	Oct	Nov	Dec	Jan	Feb
Folsom	230	208	188	178	207	280
n/a	Elev.	369	364	361	369	384

Table 11. Monthly River Releases (TAF/cfs)

Month	n/a	Oct	Nov	Dec	Jan	Feb
American	TAF	34	33	34	34	31
n/a	cfs	550	550	553	550	550

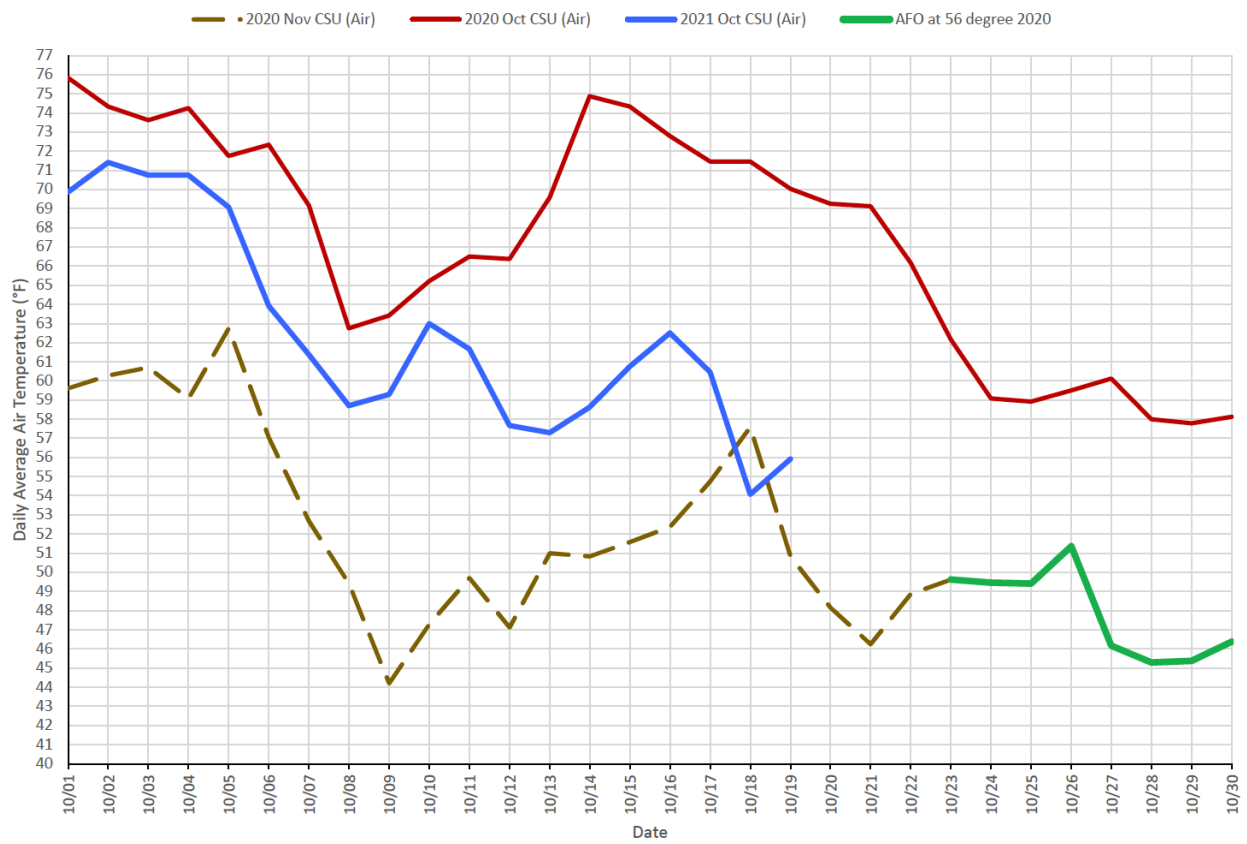


Figure 11. American River Daily Average Air Temperatures Comparison