BUREAU OF RECLAMATION

American River Group

1:30 PM – 3:30 PM
Conference Line: +1 (321) 209-6143; Access Code: 985 598 947#
Webinar: Join Microsoft Teams Meeting

Thursday, March 20, 2025

Agenda

1. Introductions
2. Announcements
3. Housekeeping
    a. Meeting will be recorded for notetaking purposes
4. Fisheries Update
    a. CDFW
    b. CFS
    c. PSMFC
5. Operations Forecast
    a. SMUD
    b. PCWA
6. Central Valley Operations
7. Discussion
    a. Spring pulse flow
    b. WTMP Rollout
8. Next Monthly Meeting:
    a. Thursday, April 17, 1:30 – 3:30 p.m.

CALIFORNIA DEPARTMENT OF FISH and WILDLIFE

Provisional Data Subject to Revision

Nimbus Fish Hatchery

Presented by Emily Fisher, CDFW, 916-272-4113, emily.fisher@wildlife.ca.gov

- Parentage Based Tagging Chinook Salmon were released beginning in late February
    - 1,141,705 released on February 24, 2025
    - 1,106, 100 released on March 3, 2025
- Chinook Salmon are being moved to outdoor raceways
- 1,390,386 green eggs estimated to have been collected at this point
    - Season collection goal was 1,487,400 green eggs
    - Survival to eyed egg stage is 94%

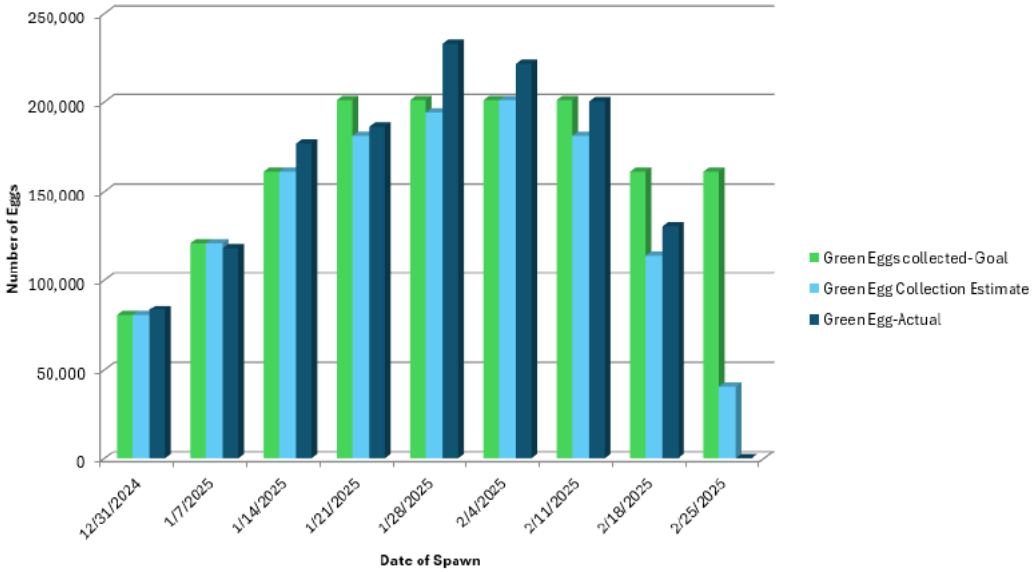

Figure 1. Graph of green eggs collected at Nimbus Fish Hatchery compared to the green egg collection goal for BY 2025 steelhead. Egg collection estimate is based on a historical average of 6,700 eggs per female.

Figure 1 is a bar graph comparing the number of green eggs collected compared to the collection goal and actual collection from December 2024 to February 2025.

Lower American River Spawning and Stranding Surveys

Steelhead redd counts through March 5, 2025

Table 3. Steelhead, Chinook Salmon, and Lamprey redd counts during 2025 steelhead spawning surveys. Only new, freshly built redds with clean rocks and no algae colonization are included in table.

Dates	Steelhead	Chinook	Lamprey	Unknown[1]	Total
Jan 7-10	14	10	0	2	26
Jan 21-22	8	0	0	0	8
Feb 3	4	0	0	0	4
Feb 17 – 18	2	0	0	0	2
Mar 4 – 5	1	0	1	0	1
Total	26	10	1	2	41

[1] Redd measurements unable to be collected due to angler activity, thus remained classified as 'unknown'

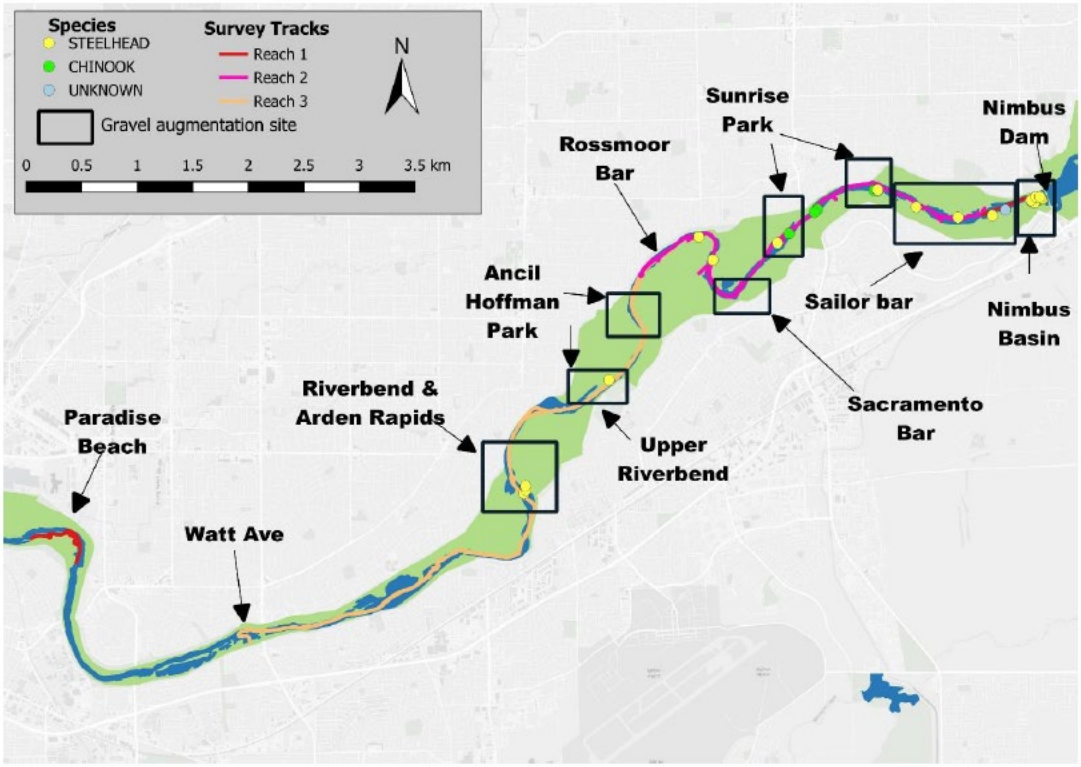

Figure 2. Locations of new redds identified during the 7 January through 5 March 2025 steelhead spawning surveys along the Lower American River. The gravel augmentation boxes represent general areas where gravel augmentation has occurred.

Figure 2 is a map of the locations of new redds at spawning survey spots along the Lower American River during January 7 – March 5, 2025.

The majority of the 2025 steelhead redds were observed in Nimbus Basin (~54%) and roughly 18% have been observed in the newly restored Riverbend side channel.

Stranding surveys through March 5, 2025

Table 4. Salmonids and environmental conditions in isolated pools during the March 5, 2025 stranding survey.

Location River Mile	Date	Chinook*	Steelhead	Unidentified Salmonids	Total Pool Area (m^2)	Rescued?	Density (fish/m^2)	Temp °C	DO (mg/L)
Paradise Beach (5)	5 Mar	426	0	0	63	Y	6.8	14	17.4
Paradise Beach (5)	6 Mar	1135	10	0	1262	Y	0.9	9.4	12.0
Paradise Beach (5)*	6 Mar	N/A*	N/A*	N/A*	670	N	N/A	13.7	6.0
Paradise Beach (5)	6 Mar	8	2	9	13	Y	0.6	14.8	19.4
Total	N/A	1569	12	0	2008	N/A	N/A	N/A	N/A

*Chinook Salmon in pool were dead

Figure 3. Location of the stranding pool observed on the Lower American River on 10 February 2025. Chinook Salmon in these pools were dead.

Figure 3 is a satellite image of Paradise Beach stranding pool on the Lower American River. A red box shows an isolated pool with stranded salmonids on March 6. A yellow box shows an isolated pool with stranded juvenile salmonids on March 5.

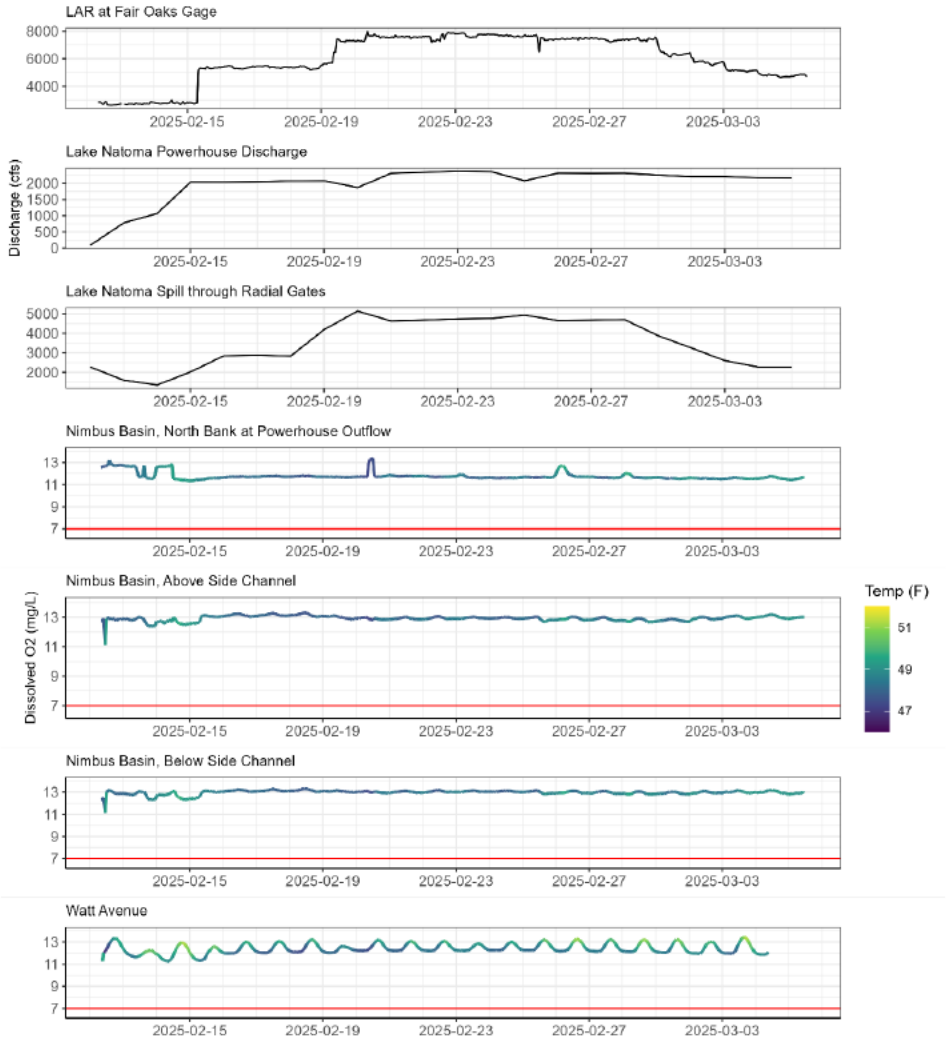

Figure 4. Discharge and dissolved oxygen data from Lower American River loggers from January 12, 2025 to March 5, 2025.

Figure 4 is a series of line graphs that show dissolved oxygen downloads from loggers in the American River. The graphs proceed from upstream to downstream with flow data from the United States Geological Survey AFO gage, Lake Natoma discharge through Nimbus Dam, and Folsom Dam.

Snorkel Surveys

CFS began snorkel surveys at Nimbus Basin, Lower Sailor, Ancil Hoffman, Upper River Bend, and the new River Bend channels (and associated main channel control sites) on February 28 and March 3-4, 2025.

Low numbers of juvenile Chinook Salmon were observed at all sites. The next survey is scheduled next week, March 15-27, 2025.

PSMFC - Updated 3/18/25

RST Operations:

- No sampling occurred on 3/15 – 3/17 due to heavy and large debris as a result of the storm (rain/wind) and drop in flows. Only one RST (river left) was operated on 3/14 and 3/18.
- RSTs are currently online and expected to be continuously operated 7 days per week.

Table 5. Unmarked Juvenile Chinook Salmon (length-at-date):

Fall	Late Fall	Spring	Winter
123,981	0	6	17

Table 6. Unmarked O. mykiss (life stage):

Fry	Parr	Smolt	Adult
13	0	2	0

Lower American River RSTs at Watt Avenue:
Daily catch of unmarked Chinook Salmon and daily average discharge at Fair Oaks during the 2025 Lower American River rotary screw trap sampling season.

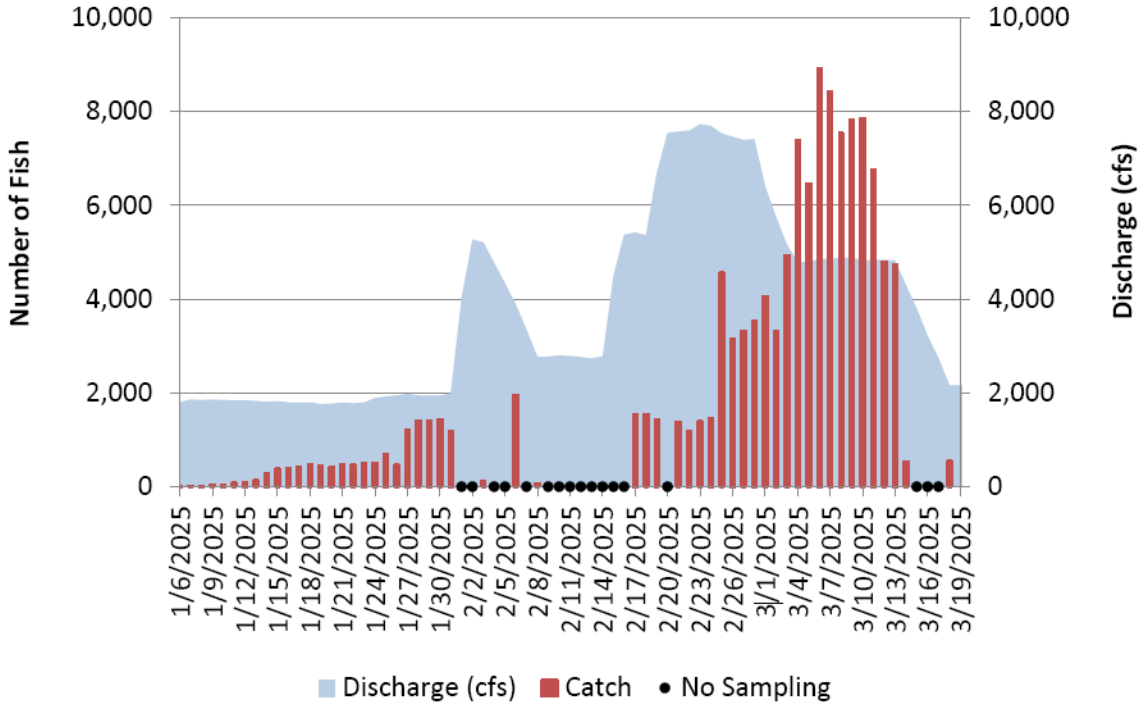

Figure 5. Lower American River RSTs at Watt Avenue – Daily catch of unmarked Chinook Salmon and daily average discharge at Fair Oaks during the 2025 Lower American River rotary screw trap sampling season.

Figure 5 is a bar graph that compares discharge (cfs), catch from January 6, 2025, to March 19, 2025.

Lower American River RSTs at Watt Avenue:
Daily fork length distribution by life stage of unmarked Chinook Salmon measured during the 2025 Lower American River rotary screw trap sampling season.

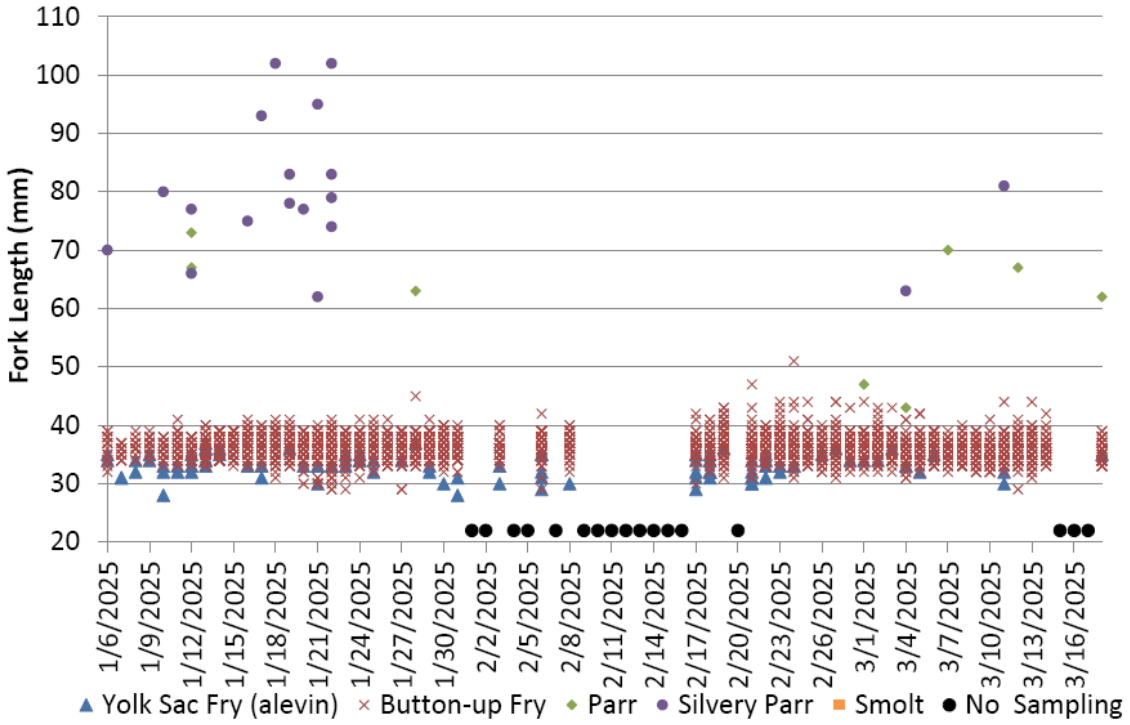

Figure 6. Lower American River RSTs at Watt Avenue – Daily fork length distribution by life stages of unmarked Chinook Salmon measured during the 2025 Lower American River rotary screw trap season.

Figure 6 is a bar graph that compares fork length (mm) from January 6, 2025, to March 16,2025.

Visit Lower American River RST CalFish Webpage for more information.

SMUD Upper American River Project Update 03/20/2025

Fresh Pond Precipitation

March precipitation through 3/20/2025 is 7.6 inches, which is 82.0% of the February average of 9.27 inches. Precipitation for the water year to date is 40.89 inches which is 92.5% of average to date (44.20 inches) and71.3% of the entire water year average of 57.32 inches.

Runoff and Snowpack Water Content

Runoff into storage reservoir basins is 118.3% of median to date through 3/20/2025. The snowpack is 71.4% of average at selected snow sensors: Robbs PH, Robbs Saddle, Van Vleck, Alpha, and Schneider.

Table 7. Fresh Pond Precipitation

Month	Current Water Year	Historical Average	% of Historical Average
October	0.31	3.30	9%
November	5.17	6.87	75%
December	10.81	9.14	118%
January	1.34	9.55	14%
February	15.66	9.29	169%
March	7.60	9.27	82%
April	0.00	4.84	0%
May	0.00	2.97	0%
June	0.00	0.79	0%
July	0.00	0.08	0%
August	0.00	0.20	0%
September	0.00	1.02	0%
Total	40.89	57.32	71%

* Month to date total, full month historical average.

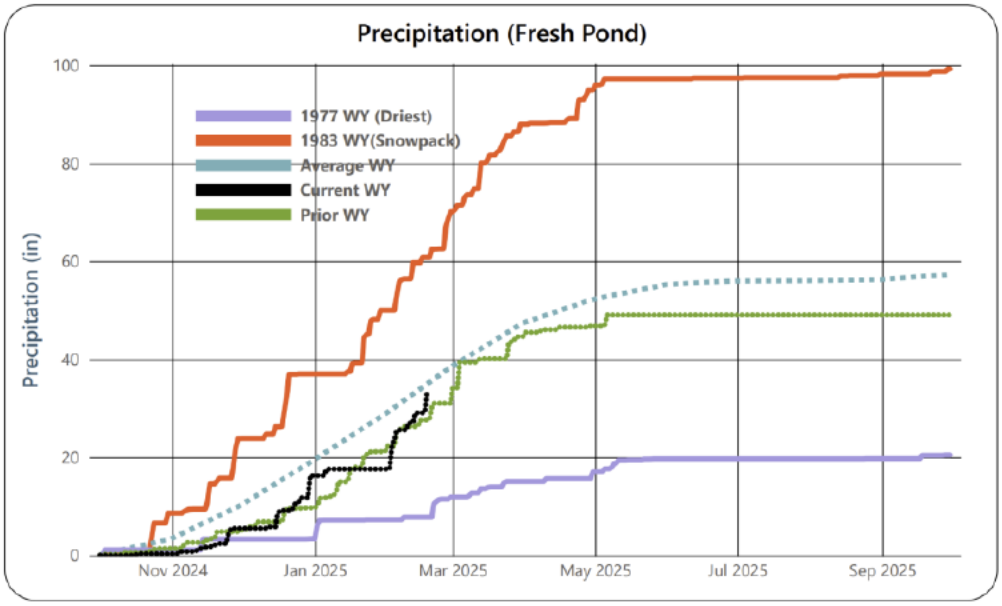

Figure 7. Fresh Pond Precipitation

Figure 7 is a line graph of fresh pond precipitation in inches for November 2024 – September 2025. It includes precipitation data from the driest water year (1977), 1983's water year snowpack, average, current, and prior water year. March precipitation through 3/20/2025 is 7.60 inches, which is 82% of the March average of 9.27 inches.

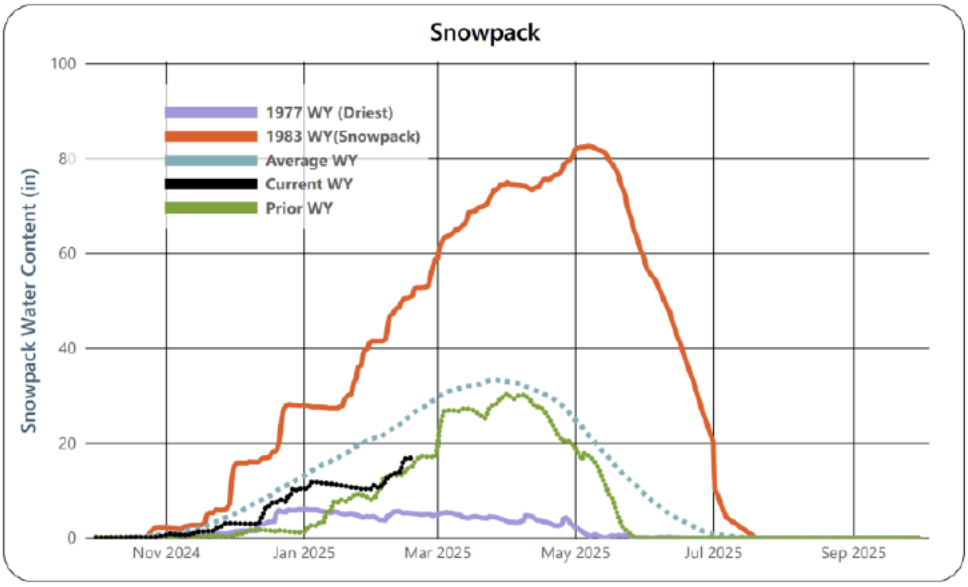

Figure 8. February 18, 2025 snowpack

Figure 8 is a line graph of snowpack water content in inches for November 2024 – September 2025. It includes data from the driest water year (2015), 1983's water year snowpack, average, current, and prior water year. Runoff into the storage reservoir basins is 118.3% of median to date through 3/20/2025.

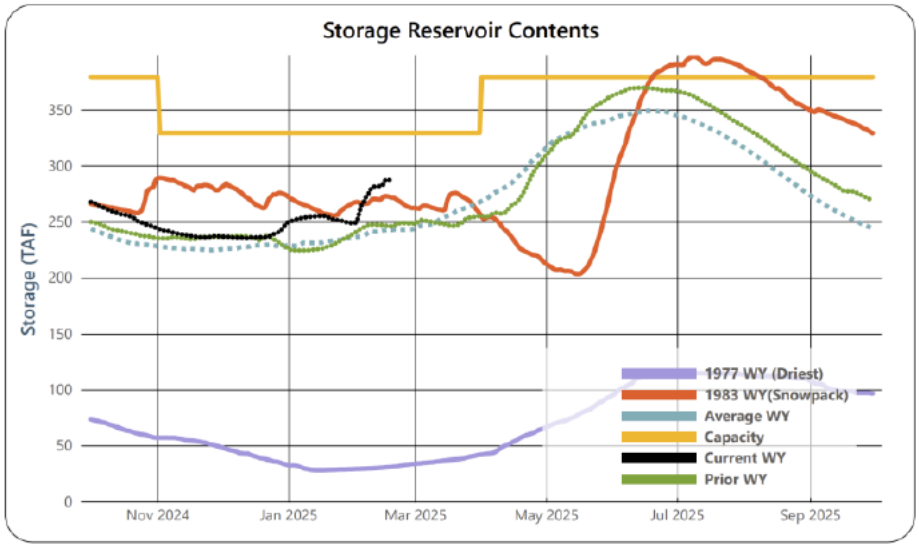

Figure 9. Storage Reservoir Contents

Figure 9 is a line graph of SMUD storage reservoir contents for November 2024 to September 2025. It includes data from the driest water year (1977), 1983's water year snowpack, average, current, and prior water year. The total capacity of the reservoir network is also shown.

Table 8. SMUD Storage Reservoirs

Reservoir	Hist. Avg (Acre-ft)	Hist. Avg (% full)	Current Acre-ft	Current % Full	Prior Year Acre-ft	Prior Year % Full	Capacity Acre-ft	Winter Acre-ft
Union Valley Reservoir	190,451	71%	207,279	77.8%	175,673	66%	266,370	225,046
Ice House Reservoir	28,562	66%	28,287	65.0%	29,760	68%	43,500	34,855
Loon Lake Reservoir	40,896	59%	39,532	57.0%	40,535	58%	69,310	69,310
Total Reservoir Storage	259,909	69%	275,116	72.6%	245,968	65%	379,180	329,211

Chili Bar Releases into the South Fork American River

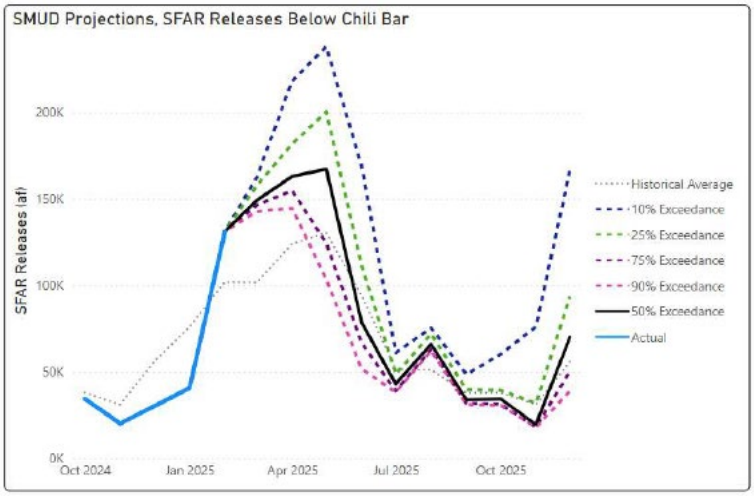

Figure 10. SMUD Projections, Chili Bar releases into the South Fork American River. Projections based on forecast from March 20, 2025.

Figure 10 is a line graph of observed and projected releases below Chili Bar from October 2024 to October 2025. The graph includes a last 10-year average, actual prior water year data, and projections of 90%, 75%, 50%, 25%, and 10% likelihood.

Table 9. Chili Bar releases into the South Fork American River

Type (Actual or Forecast)	Year	Date	Daily Mean Release Rate (cfs)	Monthly Total Release (acre-ft)	Monthly Total Release (90% Exceedance)	Monthly Total Release (10% Exceedance)
Actual	2024	October	560	34,393	34,393	34,393
Actual	2024	November	338	20,076	20,076	20,076
Actual	2024	December	491	30,134	30,134	30,134
Actual	2025	January	662	40,627	40,627	40,627
Actual	2025	February	2,367	131,227	131,227	131,227
Forecast	2025	March	2,430	149,180	142,783	162,526
Forecast	2025	April	2,745	163,037	144,659	218,179
Forecast	2025	May	2,724	167,201	103,410	238,154
Forecast	2025	June	1,323	78,607	51,750	169,225
Forecast	2025	July	701	43,006	38,212	61,045
Forecast	2025	August	1,076	66,022	62,197	75,461
Forecast	2025	September	570	33,847	31,193	48,563
Forecast	2025	October	560	34,352	30,662	60,104
Forecast	2025	November	328	19,467	17,991	76,098

Type (Actual or Forecast)	Year	Date	Daily Mean Release Rate (cfs)	Monthly Total Release (acre-ft)	Monthly Total Release (90% Exceedance)	Monthly Total Release (10% Exceedance)
Forecast	2025	December	1,143	70,132	38,952	166,788

PCWA MFP Operations Overview for American River Operations Group (Real Time Data as of March 20, 2025)

- French Meadows Storage = 76,000 AF of 136, 405 AF = 56% Capacity
    - MFAR above FM Inflow (R24) = 7-day AVG~115 cfs
- Hell Hole Storage = 111,000 AF of 207,590 AF = 53% Capacity
    - Five Lakes Inflow (R23) = 7-day AVG~50 cfs
    - Rubicon Inflow (R22) = 7-day AVG~180 cfs
- Combined Storage (FM+HH) = 187,000 AF/342,590 AF = 55% Capacity; ~104% of 15 YR AVG
- MFAR @ R11: 7-day average~2,000 cfs
- NFAR@ARPS: 7-day average~4,400 cfs
- Currently operating MFP in storage conservation mode
- Combined storage for the last 14 days => +1,000 TAF
- Combined storage on 3/20/24 = 171 TAF; 95% AVG

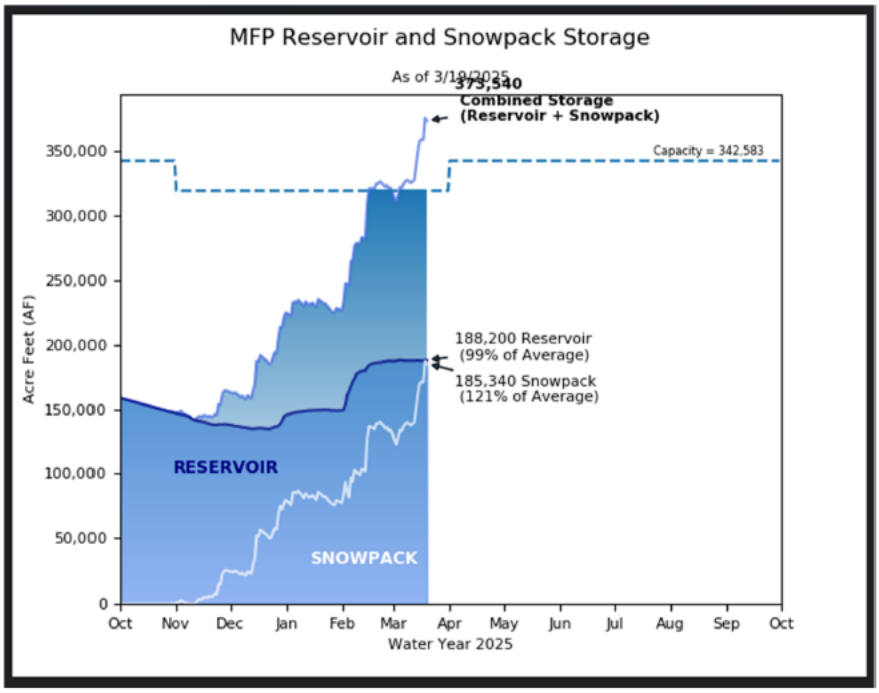

Figure 11. MFP Reservoir and Snowpack Storage as of March 19, 2025

Figure 11 is a bar graph showing the MFP Reservoir and Snowpack Storage (acre feet (AF)) for Water Year 2025. As of March 19, 2025, the combined storage (Reservoir and Snowpack) is 373,540 AF, whereas capacity is 342, 583 AF.

SNODAS:

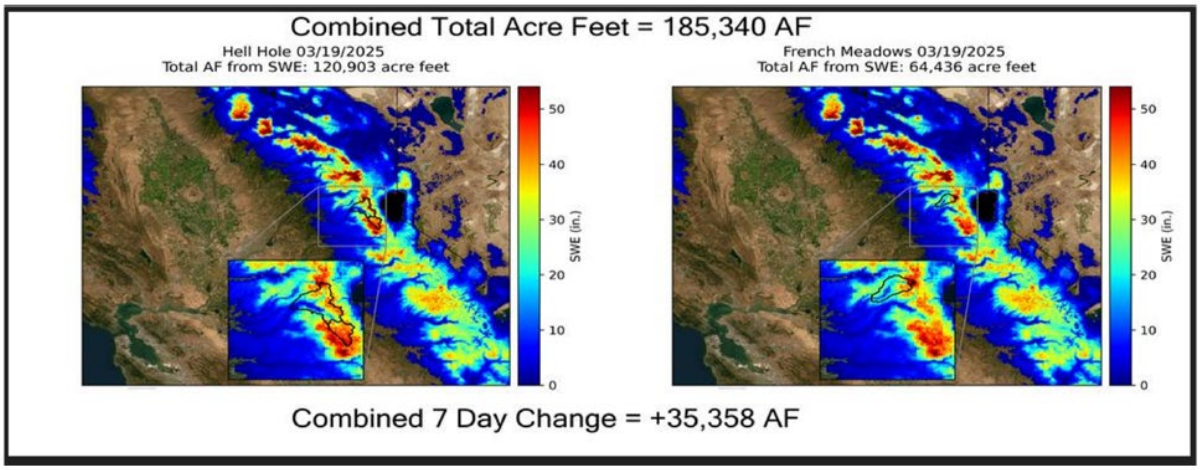

Figure 12. Combined Total Acre Feet and 7 Day Storage Change at Hell Hole and French Meadows on March 19, 2025.

Figure 12 is two heat maps. They show the combined total storage at Hell Hole (120,903 AF) and French Meadows (64,436 AF). The total combined seven day change is +35,358 AF.

CDEC:

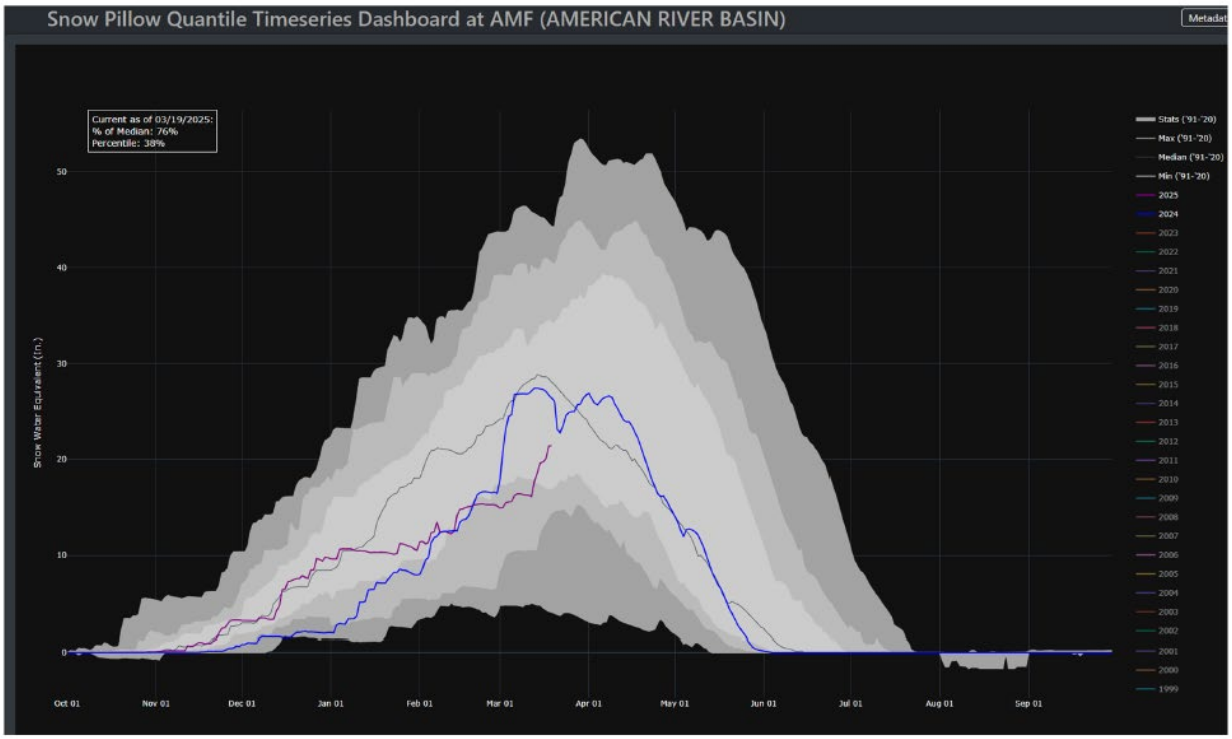

Figure 13. Snow Pillow Quantile Timeseries Dashboard at the American River Basin

Figure 13 is a line graph showing the snow water equivalent (inches) from October 1, 2024, to September 2025. The graph also plots each water year from 1999 to 2025. As of March 19, 2025, the % of median for water year 2025 is 76%, which is in the 38th percentile.

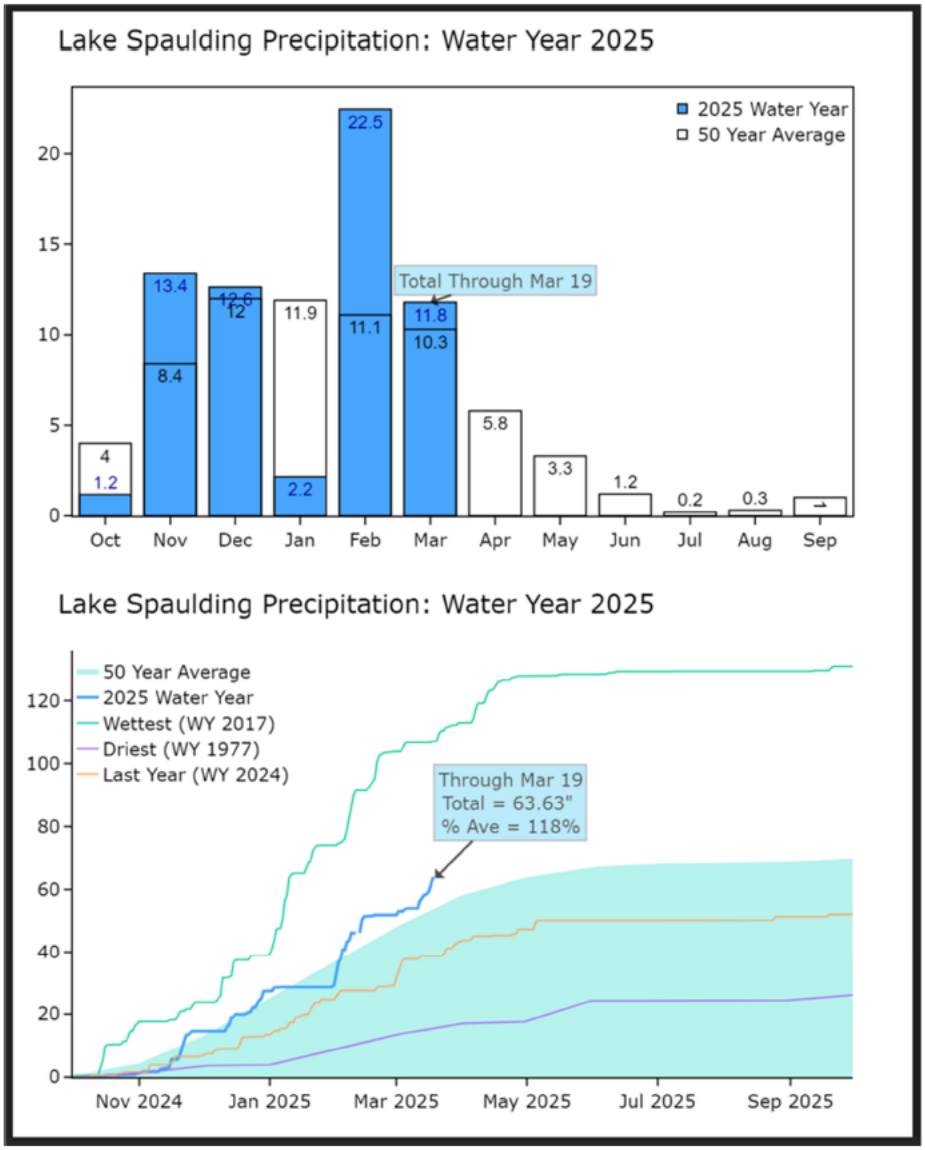

Figure 14. Lake Spaulding Precipitation: Water Year 2025

Figure 14 consists of two graphs that show the precipitation levels in Lake Spaulding as a bar graph and a line graph.

The bar graph shows the precipitation totals and the 50-year average in percent from October 2024 to September 2025. The total through March 19, 2025, is 11.8 with a 50-year average of 10.3.

The second graph is a line graph showing the precipitation totals and the 50-year average from November 2024 to September 2025. The total through March 19, 2025, is 63.63 inches, which is 118% of the 50-year average.

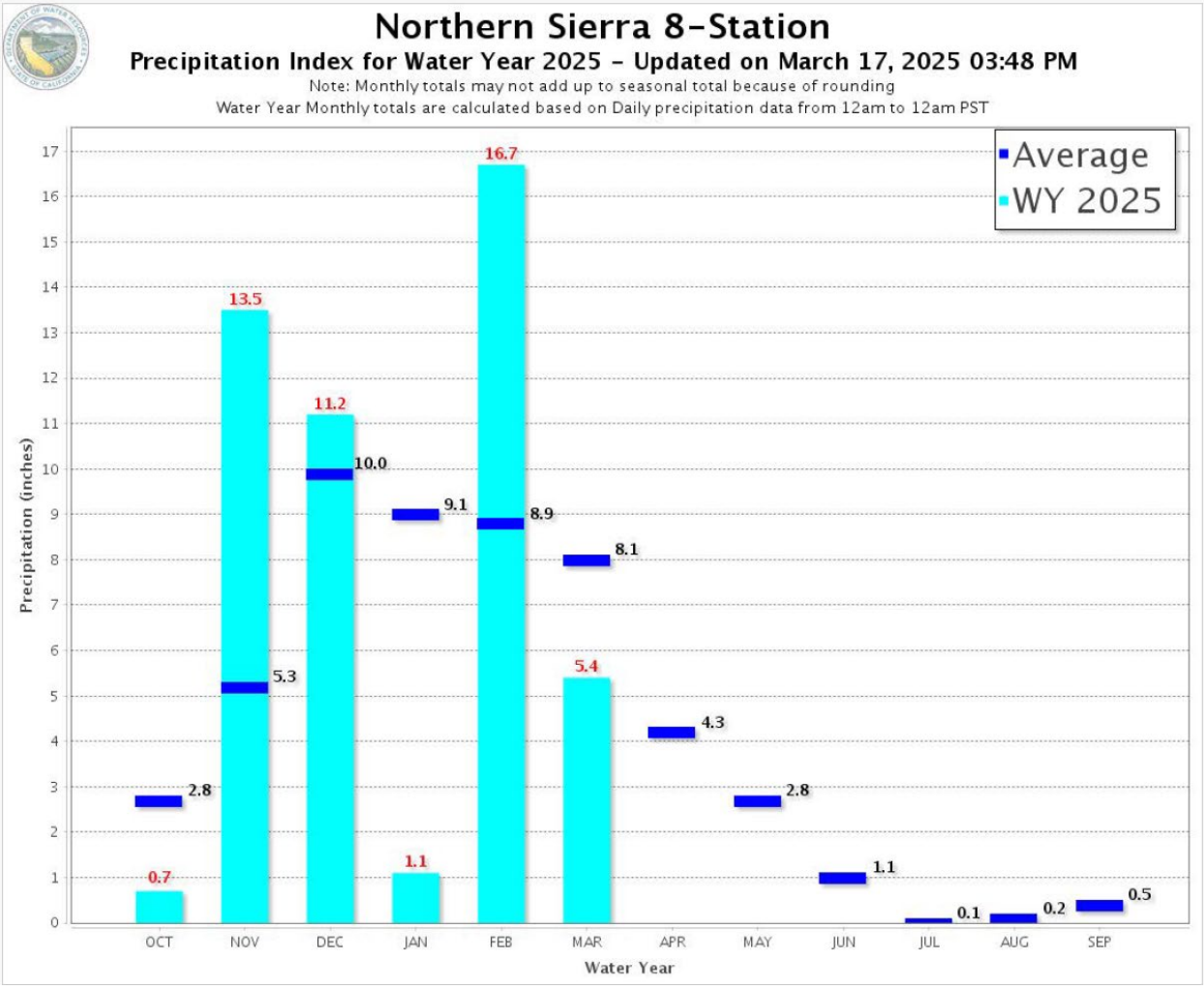

Figure 15. Northern Sierra – 8 Station. Precipitation Index for Water Year 2025, updated March 17, 2025, at 3:48 PM.

Figure 15 is a bar graph showing the average precipitation for each month, and the recorded Water Year 2025 precipitation. October 2024, January 2025, and March 2025 thus far have been below their monthly average, whereas November 2024, December 2024, and February 2025 were above their monthly averages.

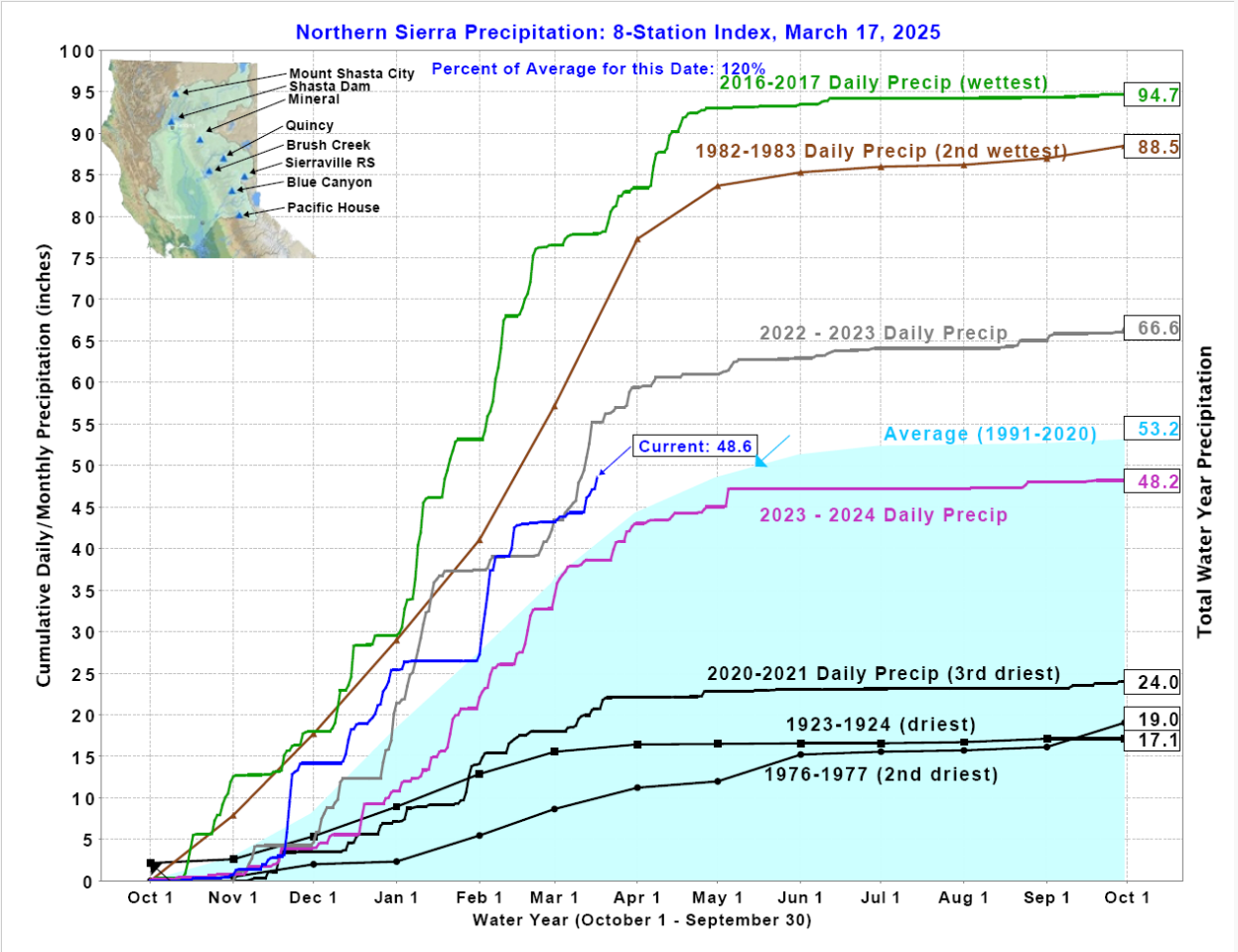

Figure 16. Northern Sierra Precipitation: 8-Station Index, March 17, 2025

Figure 16 is a line graph comparing the cumulative daily and monthly precipitation (inches) from October 2024 to October 2025. The line graph compares the total water year precipitation of the 1976-1977 (2nd driest, 1923 -1924 (direst), 2020 – 2021 (3rd driest), 2023 – 2024 daily precipitation, 2022- 2023 daily precipitation, 1982-1983 daily precipitation (2nd wettest), and 2015 -2017 (wettest). The current water year (2025) has a total water year precipitation of 48.6.

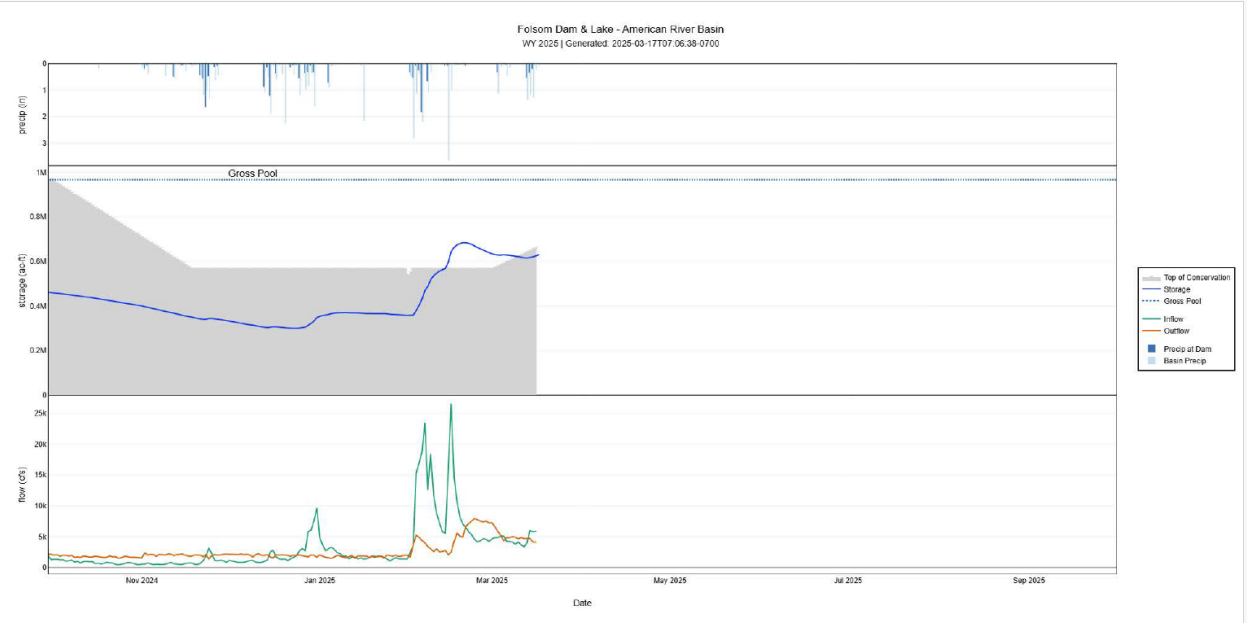

Figure 17. Folsom Dam & Lake – American River Basin WY 2024

Figure 17 is a graph that compares the flow, storage, and precipitation over time for the American River Basin.

Bureau of Reclamation
Historical Archive and Report Database
Daily CVP Water Supply
March 16, 2025| Run Date: 3/17/2025

Reservoir Releases in Cubic Feet/Second

Reservoir	Dam	WY 2024	WY 2025	15 Yr Median
Trinity	Lewiston	307	1,986	311
Sacramento	Keswick	9,711	6,172	4,648
Feather	Oroville (SWP)	10,000	10,000	2,500
American	Nimbus	4,918	2,965	2,089
Stanislaus	Goodwin	1,505	602	336
San Joaquin	Friant	526	912	400

Storage in Major Reservoirs in Thousands of Acre-Feet

Reservoir	Capacity	15 Yr Avg	WY 2024	WY 2025	% of 15 Yr Avg
Trinity	2,448	1,604	1,862	2,028	126
Shasta	4,552	3,280	3,911	3,803	116
Folsom	977	553	645	629	114
New Melones	2,420	1,523	2,005	1,955	128
Fed. San Luis	966	680	963	758	111
Total North CVP	11,363	7,641	9,386	9,173	120
Millerton	521	306	361	317	104
Oroville (SWP)	3,425	2,401	3,004	2,911	121

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

Reservoir	Current WY 2025	WY 1977	WY 1983	15 Yr Avg	% of 15 Yr Avg
Trinity	844	66	1,089	497	170
Shasta	4,109	1,279	6,020	2,665	154
Folsom	1,067	181	3,071	1,227	87
New Melones	251	N/A	1,001	410	61
Millerton	326	104	1,396	445	73

Accumulated Precipitation for Water Year to Date in Inches

Reservoir	Current WY 2025	WY 1977	WY 1983	Average (N Years)	% of Average	Last 24 Hours
Trinity at Fish Hatchery	30.64	8.64	44.80	25.35 (65)	126	0.11
Sacramento at Shasta Dam	59.35	9.65	89.31	47.15 (70)	126	0.75
American at Blue Canyon	57.97	13.80	84.50	50.61 (51)	115	0.00
Stanislaus at New Melones	16.17	N/A	36.67	21.11 (48)	77	0.01
San Joaquin at Huntington Lk	24.02	9.40	66.10	30.54 (52)	79	0.00

February 2025 | Folsom Lake Daily Operations | Run Date: 3/17/2025

Day	Elev	Storage (1000 Acre-Feet) in Lake	Storage (1000 Acre-Feet) Change	Compu-ted* Inflow C.F.S.	Release - C.F.S. River Power	Release - C.F.S. River Spill	Release - C.F.S. River Outlet	Pump-ing Plant	Evap. - C.F.S.	Evap. - Inches	Precip Inches
N/A	N/A	633.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	431.83	630.1	-3.5	4,876	6,492	0	0	138	30	0.10	0.00
2	431.61	628.1	-2.0	4,851	5,591	175	0	87	0	0.00	0.32
3	431.60	628.0	-0.1	5,152	4,875	223	0	84	15	0.05	0.00
4	431.76	629.5	1.4	5,099	3,999	286	0	70	15	0.05	0.00
5	431.63	628.3	-1.2	4,253	4,772	0	0	73	0	0.00	0.03
6	431.49	627.0	-1.3	4,226	4,770	11	0	65	18	0.06	0.00
7	431.28	625.1	-1.9	4,143	4,653	322	0	79	45	0.15	0.00
8	431.02	622.8	-2.3	3,762	4,329	502	0	76	39	0.13	0.00
9	430.90	621.7	-1.1	4,167	4,322	271	0	78	39	0.13	0.00
10	430.62	619.2	-2.5	3,653	4,799	0	0	80	39	0.13	0.00
11	430.32	616.5	-2.7	3,375	4,623	0	0	72	36	0.12	0.00
12	430.16	615.1	-1.4	3,987	4,645	0	0	65	0	0.00	0.54
13	430.44	617.6	2.5	5,990	4,664	0	0	61	0	0.00	0.34
14	430.80	620.8	3.2	5,799	4,105	0	0	67	0	0.00	0.20
15	431.19	624.3	3.5	5,878	4,022	0	0	71	15	0.05	0.00
16	431.76	629.5	5.2	5,444	2,731	3	0	81	33	0.11	0.07
Totals	N/A	N/A	-4.2	74,655	73,392	1,793	0	1,247	324	1.08	1.50
Acre-Feet	N/A	N/A	-4,200	148,078	145,573	3,556	0	2,473	643	N/A	N/A

* Computed inflow is the sum of change in storage, releases, pumping, and evaporation

Summary: Release (acre-feet)

Power	145,573
Spill	3,556
Outlet	0
Pumping Plant	2,473
Total Releases	151,603

Summary: Precipitation (Month/Inches)

This month	1.50
October 1, 2024 to date	14.73

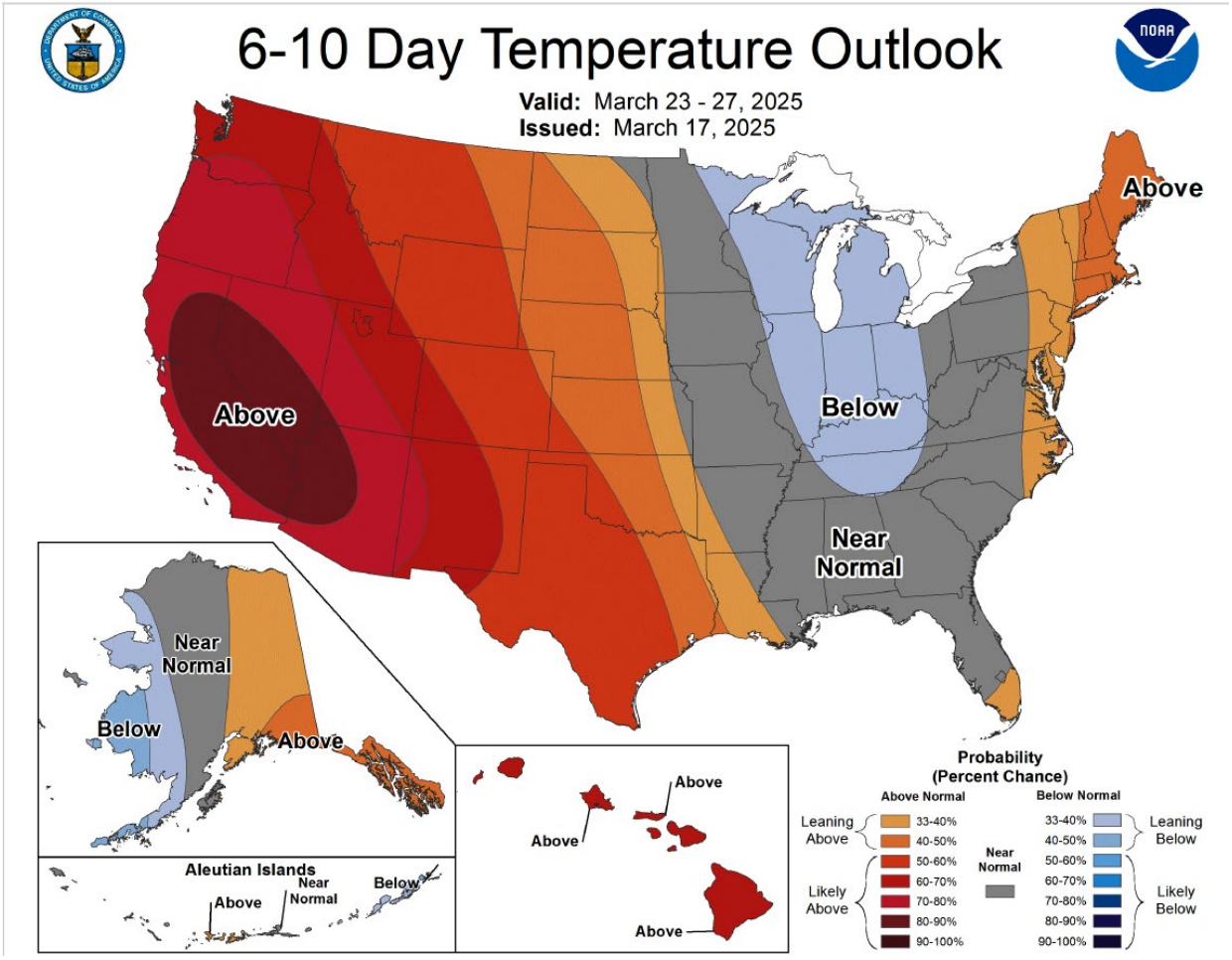

Figure 18. 6-10 Day Temperature Outlook for March 23 – 27, 2025, Issued March 17, 2025

Figure 18 is a temperature map of the United States showing California as having above normal temperatures.

Isobath 03/01-3/31 (Mean Daily Temperature, Release, Storage, Unit Shutter Position/Load Percentage

MDT = Mean Daily Temperature (°F)
USP/LP = Unit Shutter Position/Load Percentage

Date	MDT, Water NFA	MDT, Water ARP	MDT, Water AFD[1]	MDT, Water AFO	MDT, Water AWP	MDT Water AWB	MDT, Air, CSU	Diss. Oxygen (mg/L) AFO	Diss. Oxygen (mg/L) AWP	Release (CFS) Nimbus	Storage (TAF) Folsom	USP/ LP Unit 1	USP/ LP Unit 2	USP/ LP Unit 3
Feb	46.5	45.8	47.7	48.0	48.6	48.8	52.1	N/A	N/A	4838	N/A	N/A	N/A	N/A
03/01	48.9	46.6	47.9	48.3	48.9	49.3	55.0	N/A	N/A	6197	630	M 36	B 28	M 36
03/02	48.9	46.9	48.1	48.3	48.9	49.2	50.1	N/A	N/A	5514	628	M 37	B 37	M 26
03/03	48.0	46.8	48.3	48.3	49.1	49.3	50.2	N/A	N/A	4867	628	M 38	B 38	M 24
03/04	47.2	46.1	48.4	48.7	49.4	49.7	53.3	N/A	N/A	4506	629	M 43	B 15	M 42
03/05	47.0	45.5	48.1	48.7	49.2	49.3	52.0	N/A	N/A	4502	628	M 38	B 24	M 38
03/06	46.8	45.5	48.3	48.1	48.6	48.9	48.1	N/A	N/A	4569	627	M 47	B 29	M 24
03/07	46.5	45.4	49.0	48.5	49.0	49.3	51.4	N/A	N/A	4547	625	M 42	B 28	M 29
03/08	46.6	45.5	48.8	49.4	50.0	50.3	52.7	N/A	N/A	4559	623	M 42	B 29	M 29
03/09	? 47.0	? 46.0	? 47.7	? 49.5	? 50.4	? 50.8	? 55.0	N/A	N/A	4536	622	M 39	B 28	M 33
03/10	47.0	45.8	48..5	49.5	50.3	50.7	55.0	N/A	N/A	4495	619	M 38	B 27	M 35
03/11	47.8	46.4	48.4	49.2	50.0	50.6	55.1	N/A	N/A	4505	617	M 38	B 28	M 35
03/12	48.0	45.8	48.4	49.1	49.7	50.1	52.9	N/A	N/A	4517	615	M 45	B 27	M 27
03/13	47.0	46.3	49.0	48.7	49.2	49.6	48.9	N/A	N/A	4512	618	M 46	B 30	M 24
03/14	45.3	45.5	48.7	48.9	49.1	49.1	46.0	N/A	N/A	4027	621	M 30	B 53	M 17
03/15	45.2	46.1	49.0	48.7	49.4	49.8	51.0	N/A	N/A	3477	624	M 42	B 28	M 30
03/16	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
03/17	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

Date	MDT, Water NFA	MDT, Water ARP	MDT, Water AFD[1]	MDT, Water AFO	MDT, Water AWP	MDT Water AWB	MDT, Air, CSU	Diss. Oxygen (mg/L) AFO	Diss. Oxygen (mg/L) AWP	Release (CFS) Nimbus	Storage (TAF) Folsom	USP/ LP Unit 1	USP/ LP Unit 2	USP/ LP Unit 3
03/18	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
03/19	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
03/20	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
03/21	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
03/22	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
03/23	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
03/24	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
03/25	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
03/26	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
03/27	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
03/28	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
03/29	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
03/30	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
03/31	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
Mar	47.2	46.0	48.4	48.8	49.4	49.7	51.8	N/A	N/A	4622	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	137513	N/A	N/A	N/A	N/A

Legend:
? = 1-9 hours of data missing
! = 10 or more hours of data missing
= Station out of service

Monthly Averages

A = All Shutters Lowered
T = Top Shutter Raised
M = Middle Shutter Raised
B = Bottom Shutter Raised
O = Unit Outage

Notes:

[1] AFD is a weighted average based on hourly flow values, including generation, bypass and spi

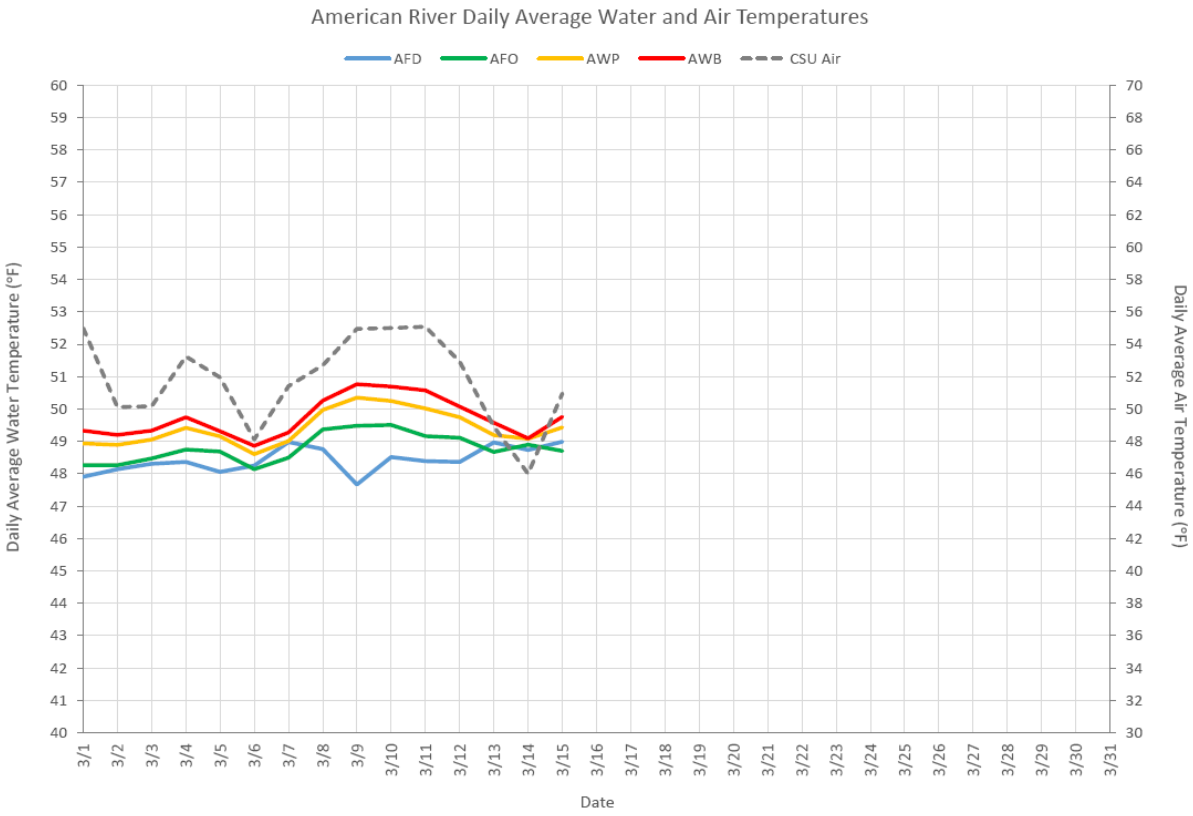

Figure 19. American River Daily Average Water and Air Temperatures (February 2025)

Figure 19 is a graph that compares time to the daily average water and air temperatures for the month of March 2025. The lines on the graph demonstrate the categories of the Isobath February Table including the NFA, ARP, AFD, AFO, AWP, AWB, and CSU.

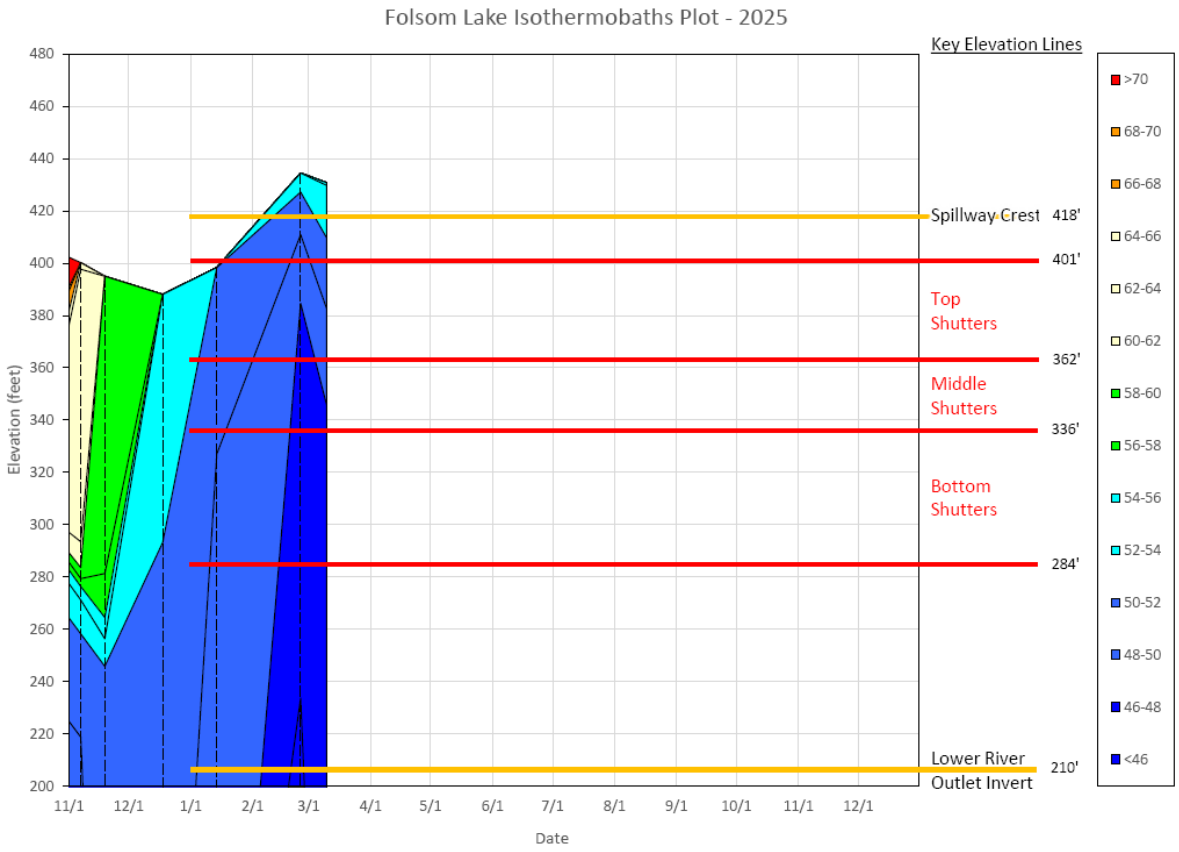

Figure 20. Folsom Lake Isothermobaths Plot -2025

Figure 20 is an Isobath Plot for the month of November to mid-January 2025 showing Spillway Crest, Top Shutters, Middle Shutters, Bottom Shutters, and Lower River Outlet Invert.

DRAFT March 2025 Outlook

50% Inflow/Runoff Exceedance Hydrology - Storages

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

Facility	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
Folsom Storage	634	753	893	962	964	767	584	536	493	467	457	487	583
Folsom Elevation	N/A	445	458	465	465	446	427	421	416	412	411	415	427

Table 11. Monthly River Releases (TAF/cfs)

Facility	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
American TAF	N/A	203	178	252	149	289	269	120	123	119	123	123	167
American cfs	N/A	3300	3000	4100	2503	4675	4381	2009	2000	2000	2000	2000	3000

90% Inflow/Runoff Exceedance Hydrology - Storages

Table 12. Federal End of the Month Storage/Elevation (TAF/Feet)

Facility	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
Folsom Storage	634	753	791	837	809	588	466	428	376	330	301	287	320
Folsom Elevation	N/A	445	449	453	450	427	412	407	400	392	387	385	391

Table 13. Monthly River Releases (TAF/cfs)

Facility	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
American TAF	N/A	203	145	109	104	277	184	89	92	89	92	77	69
American cfs	N/A	3300	2431	1768	1750	4500	3000	1500	1507	1501	1500	1250	1250

Table 14. WY 2025 American River Baseflow Table

Month	Index Used for Index-based MRR	Flood Mgmt (TAF)	ARI or SRI	Index Based MRR (cfs)	RDPB-based MRR for fall-run Chinook salmon (applicable in Jun and Feb)	RDPB-based MRR for steelhead (applicable Feb to May)	Controlling MRR	Actual Average Monthly Nimbus releases[1]
October	May ARI[2] (50% exceedance)	0	2,329	1,500 cfs	Not applicable	Not applicable	1,500 cfs	1,545 cfs
November	May ARI[2] (50% exceedance)	0	2,329	2,000 cfs	Not applicable	Not applicable	2,000 cfs	1,997 cfs
December	May ARI[2] (50% exceedance)	0	2,329	2,000 cfs	Not applicable	Not applicable	2,000 cfs	2,027 cfs
January	January SRI (90% exceedance)	0	13.6 (SRI)	1,750 cfs	1,400	Not applicable	1,750 cfs	1,761 cfs
February	February ARI (90% exceedance)	171	1,320	1,118 cfs	1,215	1,400	1,400 cfs	N/A
March	March ARI (90% exceedance)	N/A	1,539	N/A	Not applicable	950	1,334	N/A
April	May ARI (90% exceedance)	N/A	N/A	N/A	Not applicable	N/A	N/A	N/A
May	May ARI[2] (90% exceedance)	N/A	N/A	N/A	Not applicable	N/A	N/A	N/A
June	May ARI[2] (90% exceedance)	N/A	N/A	N/A	Not applicable	Not applicable	N/A	N/A
July	May ARI[2] (90% exceedance)	N/A	N/A	N/A	Not applicable	Not applicable	N/A	N/A

Month	Index Used for Index-based MRR	Flood Mgmt (TAF)	ARI or SRI	Index Based MRR (cfs)	RDPB-based MRR for fall-run Chinook salmon (applicable in Jun and Feb)	RDPB-based MRR for steelhead (applicable Feb to May)	Controlling MRR	Actual Average Monthly Nimbus releases[1]
August	May ARI[2] (90% exceedance)	N/A	N/A	N/A	Not applicable	Not applicable	N/A	N/A
September	May ARI[2] (90% exceedance)	N/A	N/A	N/A	Not applicable	Not applicable	N/A	N/A

MRR= Minimum Release Requirements; RDPA= Redd Dewatering Protective Adjustment; ARI= American River Index; SRI= Sacramento River Index

[1] Average of daily release over the month from sum of Power, Spill, and Hatchery flows (DailyOperationsNAT).
[2] B120 Forecasts are usually provided January through May. The May ARI would also be used for June-September of the current water year and October through December of the next water year unless there is an update to the ARI after May.

BUREAU OF RECLAMATION

American River Spring Pulse Flow

American River Group

March 20, 2025

Minimum Required Release Calc

- Excerpt 2017 FMS
  - "The ARI is a measure of the unimpaired inflow to Folsom Reservoir minus the amount of "spill" water that could not be captured at Folsom Reservoir (unimpaired runoff minus spill flows)."

- Post 2019 WCM
  - Clarification of "spill": Water that is above the MRR and unable to be captured due to flood management actions. Note that Delta conditions, use of particular gates, and TOC thresholds are not surrogates for "spill". Reclamation will provide flood management volumes for ARI calculations.

LTO BA: Proposed Action (12/2024)

- 3.6.4 Spring Pulse Flows
- Spring pulse flow addresses stressors on outmigration cues to increase emigration rates and move juveniles downstream. Reclamation will implement a spring pulse in years that the MRR for March (based on the March forecast) is between 1,000 cfs and 1,500 cfs, as described in the ARMFS. The peak flow of the pulse flow would be 3 times the March MRR, even if implemented in April or May, but no higher than 4,000 cfs and lasting two days. Following two days at the peak flow, Nimbus releases would be decreased at no more than 500 cfs per day and no more than 100 cfs per hour. Changes in Nimbus releases would occur at night, if possible. The American River Group will provide technical input on shaping Spring Pulse Flow volumes, with the final timing determined by CDFW, FWS, and NMFS. Reclamation, through the ARG, will develop a pulse flow schedule.
- Reclamation, through the ARG, may facilitate an additional spring pulse flow event if water is made available from nonCVP sources, or if there is flexibility to shape planned releases in a more variable schedule.

Request Spring Pulse Flow Schedule

Criteria:

- Starting date/time
- Maximum Release: 4,000 cfs
- Duration: 2 days