



## 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, May 15, 2025**

### Agenda

1. Introductions
2. Announcements
3. Housekeeping
  - a. Reschedule June ARG meeting
4. Fisheries Update
  - a. CDFW
  - b. CFS
  - c. PSMFC
5. Operations Forecast
  - a. SMUD
  - b. PCWA
6. Central Valley Operations
7. Discussion
8. Water Temperature Modeling Platform (WTMP), Part 4
9. Next Monthly Meeting:
  - a. Thursday, June 19, 1:30-3:30pm

**Provisional Data Subject to Revision**

## Nimbus Fish Hatchery

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

- Nimbus released approximately 890,000 Chinook Salmon smolts into the LAR at Sunrise Boat Launch on May 1st.
  - Including 233 with acoustic tags to study outmigration timing
- [CalFishTrack-Central Valley Enhanced Acoustic Tagging Project](#)



## Lower American River Spawning and Stranding Surveys

No spawning surveys occurred in May, as no steelhead redds were observed during the previous two surveys (Table 1).

A total of 29 steelhead redds observed in the 2025 season.

### Steelhead redd counts through April 3, 2025

Table 1. 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 <sup>1</sup>	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	2
Mar 19 - 21	0	0	0	0	0
Apr 2 - 3	0	0	1	0	1
Total	29	10	2	2	43

<sup>1</sup> Redd measurements unable to be collected due to angler activity, thus remained classified as 'unknown.'

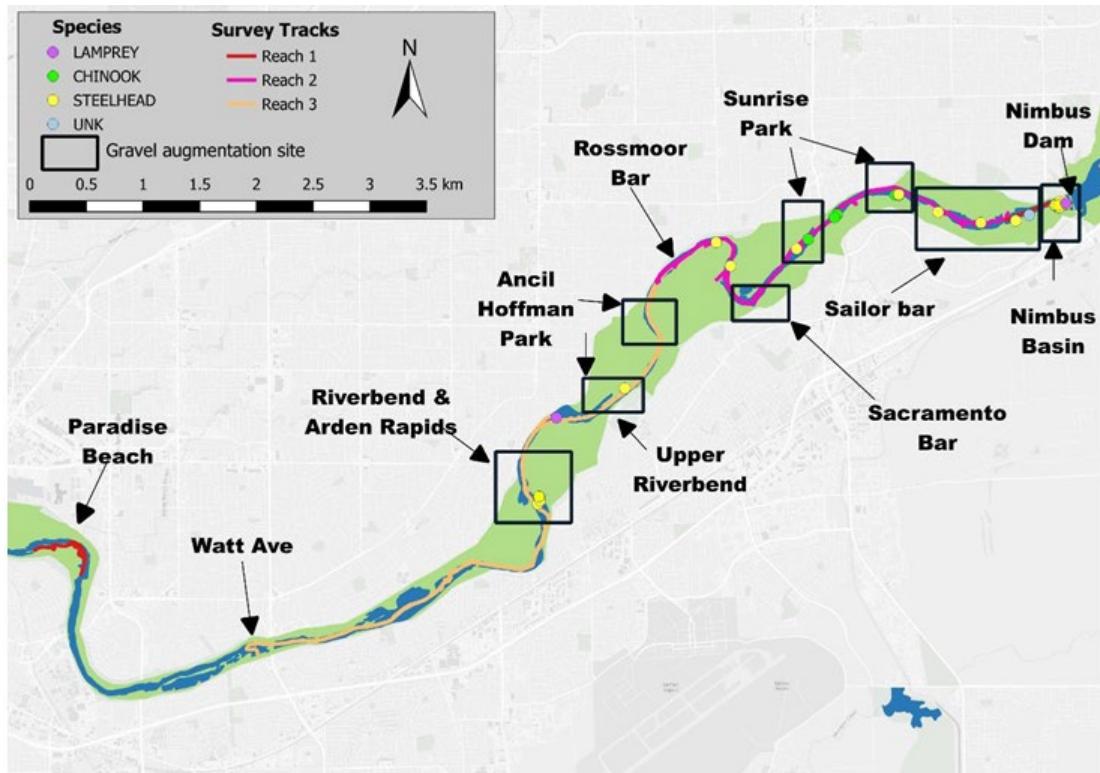


Figure 1. Locations of New Redds along the Lower American River

Figure 1 is a map showing locations of new redds identified during the 7 January through 3 April 2025 steelhead spawning surveys along the Lower American River. The gravel augmentation boxes represent general areas where gravel augmentation has occurred.

Stranding surveys April 21 through May 1, 2025

Table 2. Salmonids and environmental conditions in isolated pools during the 21 April and 1 May 2025 stranding survey. Chinook, Steelhead, and Unidentified Salmonids numbers are a visual estimate only of species rescued.

Location River Mile	Date	Chinook	Steelhead	Unidentified Salmonids	Total Pool Area (m <sup>2</sup> )	Rescued?	Density (# fish/m <sup>2</sup> )	Temp °C	DO (mg/L)
Lower Sunrise side channel (19)	21 April	44	46	0	136	Y	0.66	15	10.9
Lower Sunrise side channel (19)	1 May	10	2	0	1	Y	0.12	N/A	N/A
River Bend side channel (13)	1 May	1 (100)	(1)	0	12	Y(N)	17	15.7	4.07
TOTAL	-	56 (100)	48 (1)	0	917	-	-	-	-

\*Pool too shallow for temperature and dissolved oxygen measurements



Figure 2. Location of stranding pools observed on the Lower American River on 21 April and 1 May 2025.

Figure 2 is two satellite images of Lower Sunrise, and River Bend. A red box shows an isolated pool with stranded salmonids on April 21. A yellow box shows an isolated pool with stranded juvenile salmonids on April 28.

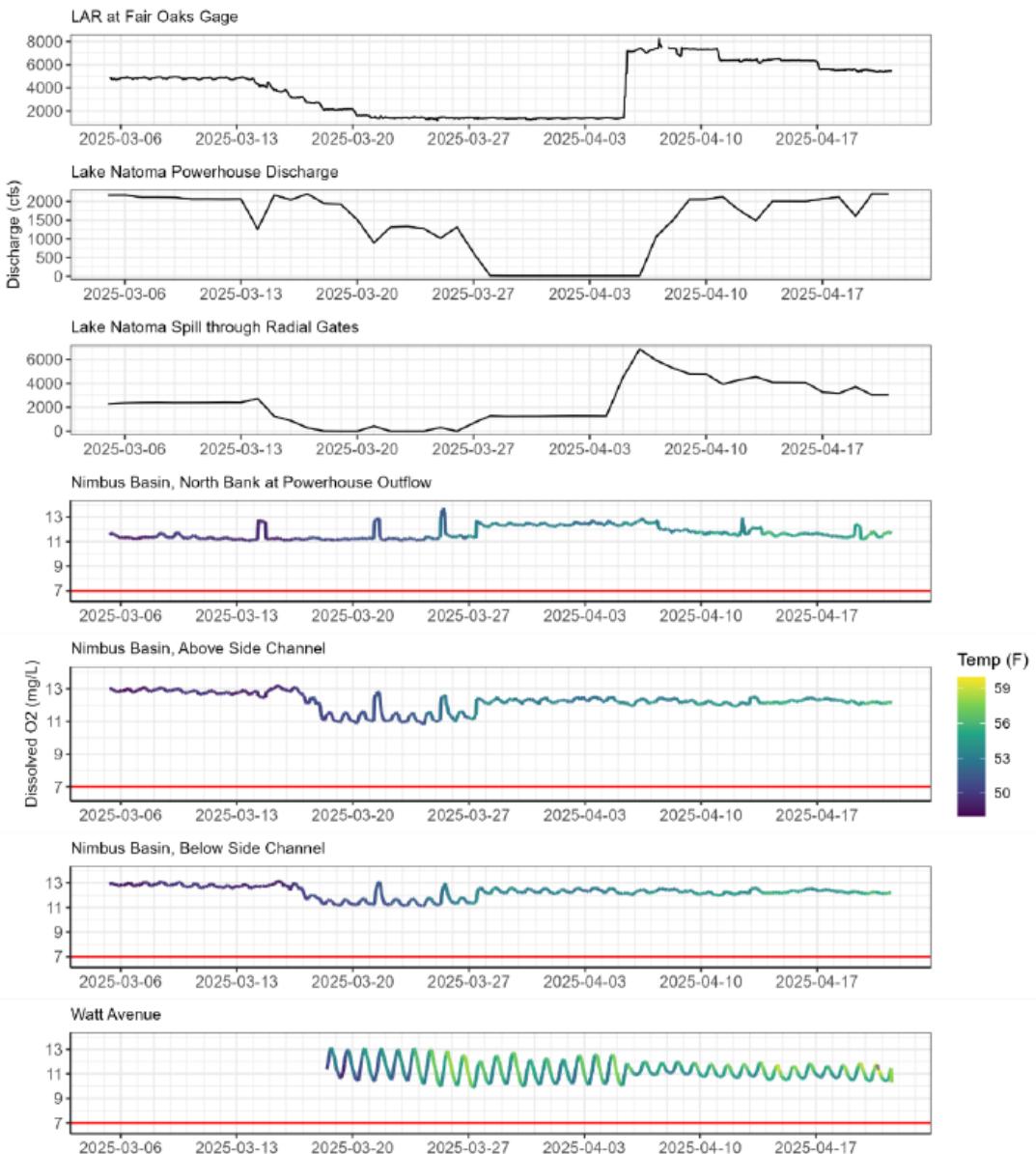


Figure 3. Dissolved Oxygen Monitoring

Figure 3 is a series of line graphs that show discharged and dissolved oxygen data from Lower American River loggers from 5 Mar 2025 to 21 April 2025.

### Snorkel Surveys

CFS began snorkel surveys at Nimbus Basin, Lower Sailor, Ancil Hoffman, Upper River Bend and the new River Bend side channels (and associated main channel control sites) on 28 Feb and 3-4 March 2025. The second survey occurred 25-27 March, and the third survey occurred on 22-24 April.

Higher numbers of juvenile salmon were observed in all sites during the March surveys compared to the April surveys, which occurred after the high flows in April. Observations

continue to indicate heavy utilization of woody structures in restored project sites, particularly Upper River Bend and River Bend side channels.

The next survey is scheduled next week, 20-22 May.

## PSMFC - Updated 5/13/25

### RST Operations:

- No sampling occurred on 5/10 and 5/11 for weekend shutdowns as a result of the increase of river recreationalist.
- RSTs are expected to be continuously operated 5 days per week (M-F) for the duration of the sampling season.

Table 3. Unmarked Juvenile Chinook Salmon (length-at-date):

Fall	Late Fall	Spring	Winter
132,869	252	42	17

Table 4. Unmarked O. mykiss (life stage):

Fry	Parr	Smolt	Adult
101	25	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.

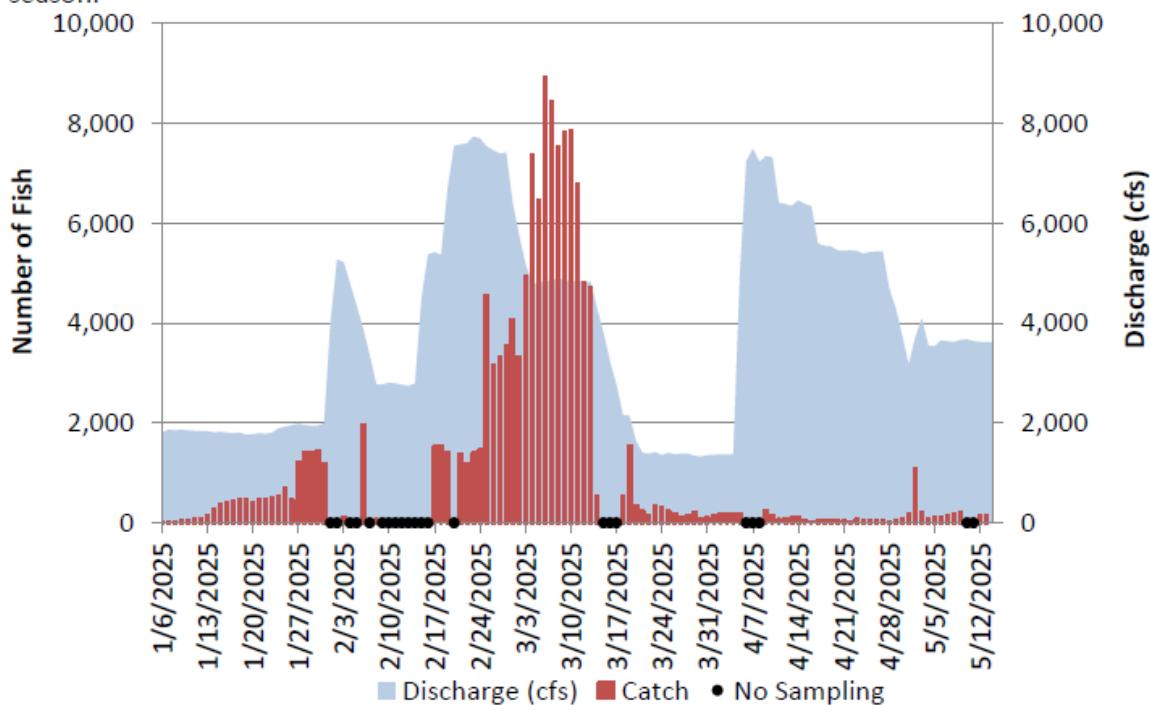


Figure 4. Lower American River RSTs at Watt Avenue – Daily catch of unmarked Chinook Salmon and daily average discharge at Fair Oaks during the 2025 Lower American River rotary screw trap sampling season.

Figure 4 is a bar graph that compares number of fish (0-10,000) and discharge (0-10,000 cfs) over dates January 6, 2025, to May 12, 2025.

**Lower American River RSTs at Watt Avenue:**

Daily catch of unmarked Chinook Salmon and daily average discharge at Fair Oaks from April 1st to May 13th during the 2025 Lower American River rotary screw trap sampling season.

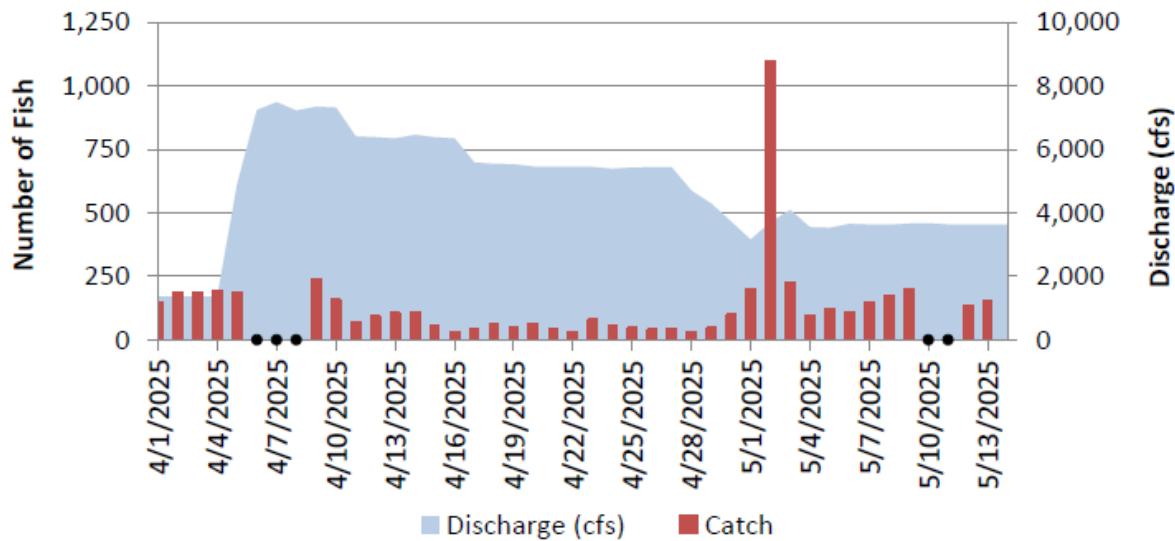


Figure 5. Lower American River RSTs at Watt Avenue – Daily catch of unmarked Chinook Salmon and daily average discharge at Fair Oaks from April 1<sup>st</sup> to May 13<sup>th</sup> during the 2025 Lower American River rotary screw trap sampling season.

Figure 5 is a bar graph that compares number of fish (0-1,250) and discharge (0-10,000) over dates 4/1/2025-5/13/2025.

**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.

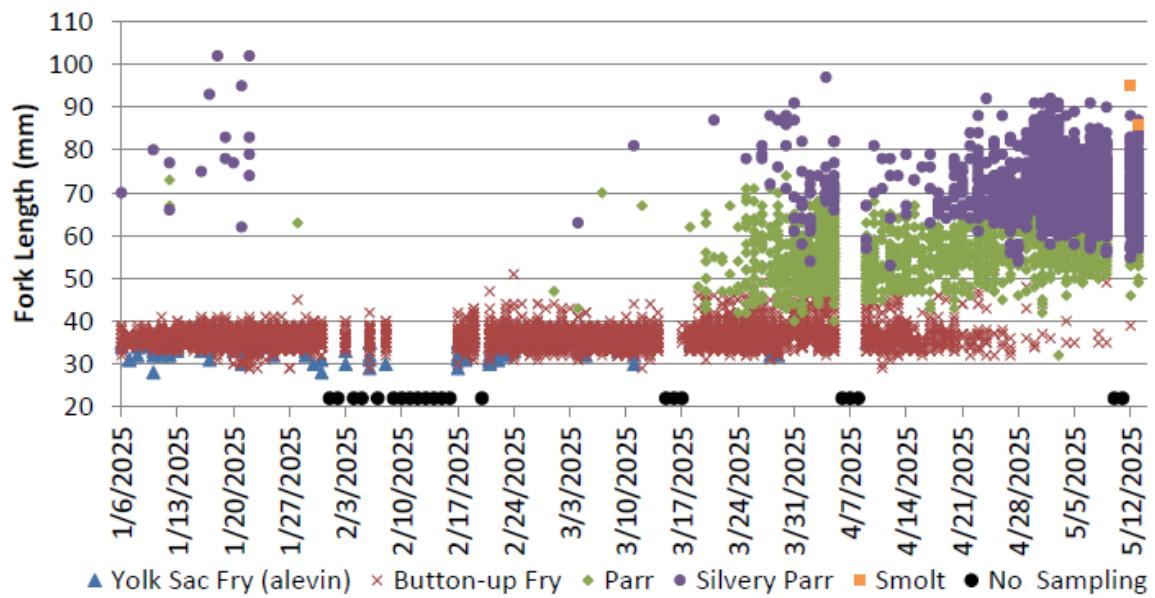


Figure 6. Lower American River RSTs at Watt Avenue – Daily fork length distribution by life stage of unmarked Chinook Salmon measured during the 2025 lower American River rotary screw trap sampling season.

Figure 6 is a scatter plot that compares fork length (mm) (20-110) over dates 1/6/2025-5/12/2025.

Visit [Lower American River RST CalFish Webpage](#) for more information.

## SMUD Upper American River Project Update 5/13/2025

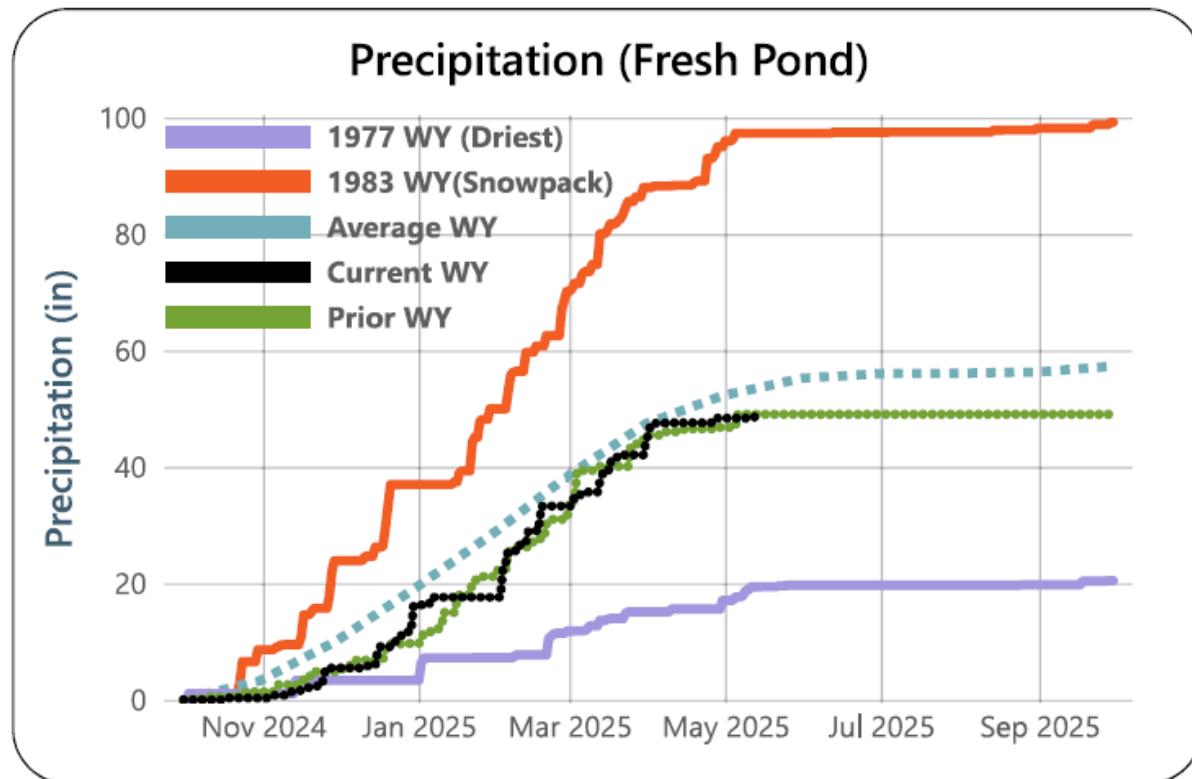


Figure 7. Fresh Pond Precipitation

Figure 7 is a line graph showing precipitation (mm) 0-100 compared to months November 2024 – September 2025. The graph shows data for the average, current, and prior water year, in addition to 1977 (driest) and 1983 (snowpack). Precipitation is 91.2% average-to-date, and 85.1% water year average.

Table 5. 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	11.00	9.27	119%
April	4.10	4.84	85%
May	0.40	2.97	13%
June	0.00	0.79	0%
July	0.00	0.08	0%

Month	Current Water Year	Historical Average	% of Historical Average
August	0.00	0.20	0%
September	0.00	1.02	0%
Total	48.79	57.32	85%

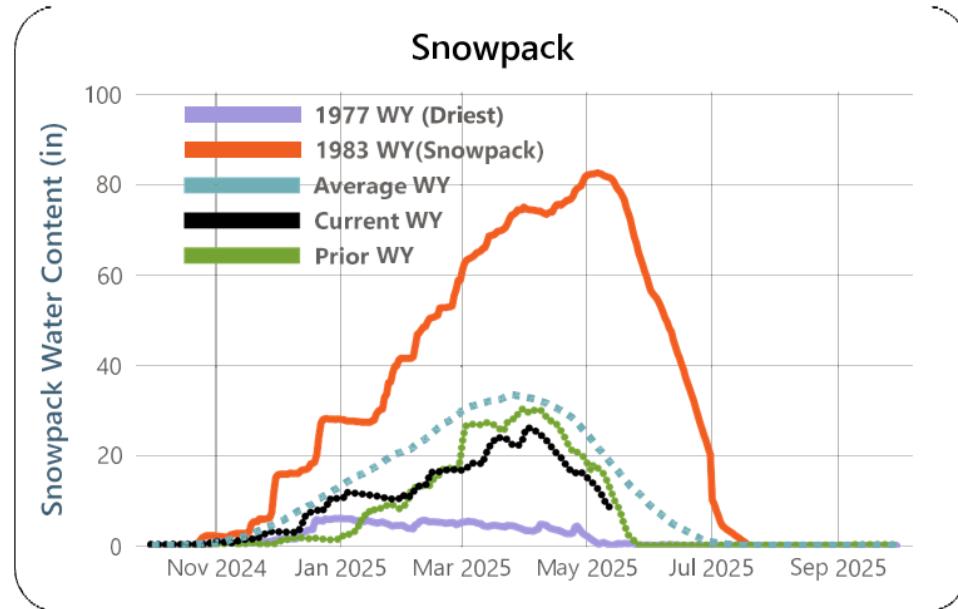


Figure 8. Snowpack Water Content

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 (1977), 1983's water year snowpack, average, current, and prior water year. Runoff into the storage reservoir basins is 46.7% average-to-date and 21.6% of April 1 average.

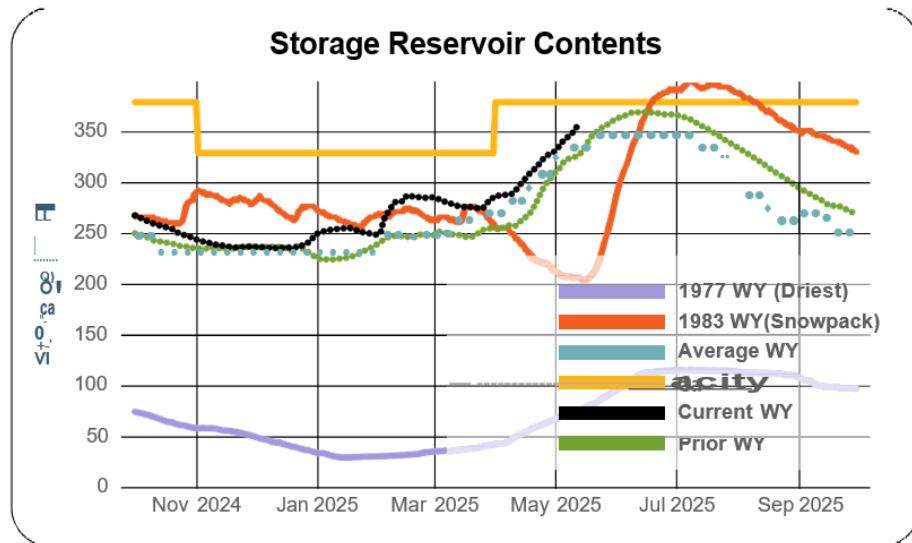


Figure 9. Storage Reservoir Contents

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, and the average, current, and prior water year. The average water year capacity of the reservoir network is also shown.

Table 6. SMUD Storage Reservoirs

Reservoir	Capacity Acre-ft	Current Acre-ft	Current % Full	Prior Year Acre-ft	Prior Year % Full	Historical Avg Acre-ft	Historical Avg % Full
Loon Lake Reservoir	69,310	58,580	84.5%	51,256	74%	56,260	81%
Ice House Reservoir	43,500	40,884	94.0%	36,139	83%	36,976	85%
Union Valley Reservoir	266,370	257,834	96.8%	239,108	90%	239,769	90%
Total Reservoir Storage	379,180	357,298	94.2%	326,503	86%	333,005	88%

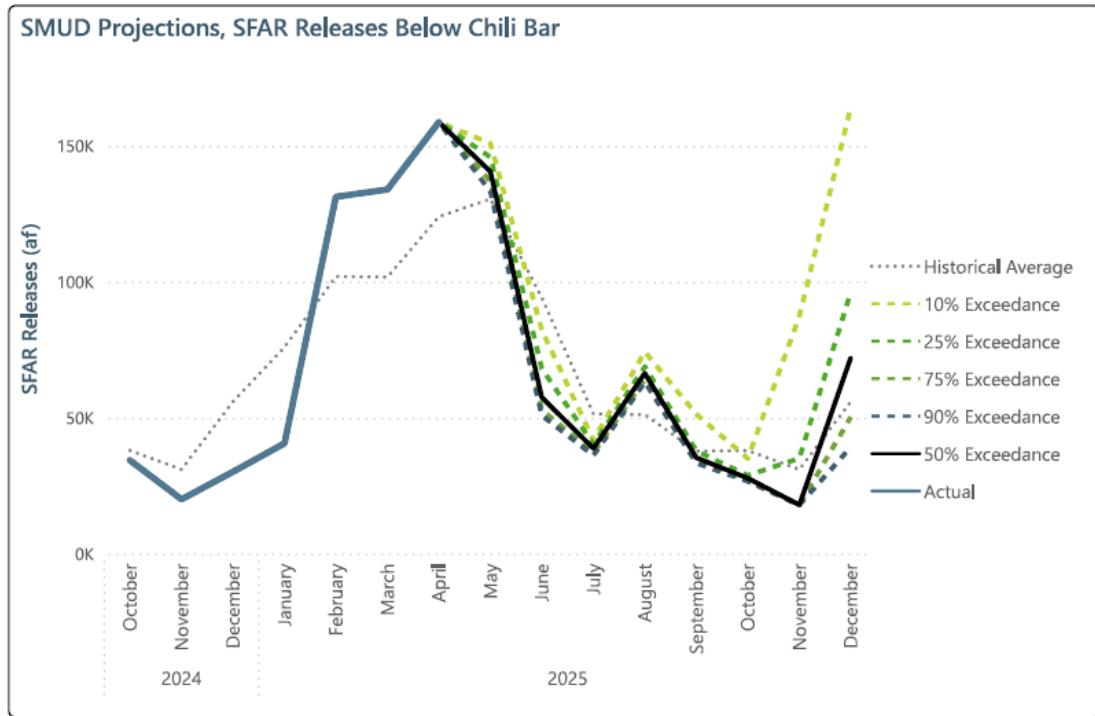


Figure 10. SMUD Projections, SFAR Releases Below Chili Bar

Figure 10 is a line graph of SFAR releases (af) over months October 2024 to December 2025. Lines are shown for historical average, 10% exceedance, 25% exceedance, 75% exceedance, 90% exceedance, 50% exceedance, and actual.

Table 7. SFAR Releases Below Chili Bar

Type (Actual or Forecast)	Year	Month	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
Actual	2025	March	2,182	133,937	133,937	133,937
Actual	2025	April	2,671	158,666	158,666	158,666
Forecast	2025	May	2,289	140,528	133,176	150,874
Forecast	2025	June	968	57,477	50,822	82,160
Forecast	2025	July	632	38,781	36,193	41,815

Type (Actual or Forecast)	Year	Month	Daily Mean Release Rate (cfs)	Monthly Total Release (acre-ft)	Monthly Total Release (90% Exceedance)	Monthly Total Release (10% Exceedance)
Forecast	2025	August	1,082	66,406	63,094	74,211
Forecast	2025	September	594	35,289	33,315	51,304
Forecast	2025	October	454	27,847	26,667	35,066
Forecast	2025	November	303	17,991	17,991	87,353
Forecast	2025	December	1,173	71,986	39,228	164,097

Reservoir Releases in Cubic Feet/Second

Reservoir	Dam	WY 2024	WY 2025	15 Yr Median
Trinity	Lewiston	3,795	1,897	2,580
Sacramento	Keswick	9,485	14,021	9,018
Feather	Oroville (SWP)	9,000	1,700	2,500
American	Nimbus	3,895	3,511	3,511
Stanislaus	Goodwin	1,198	1,525	1,525
San Joaquin	Friant	1,379	541	541

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	1,754	2,075	2,238	128
Shasta	4,552	3,682	4,372	4,346	118
Folsom	977	770	889	924	120
New Melones	2,420	1,546	2,059	1,985	128
Fed. San Luis	966	661	829	765	116
Total North CVP	11,363	8,413	10,224	10,258	122
Millerton	521	334	504	455	136
Oroville (SWP)	3,425	2,762	3,516	3,359	122

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	1,370	135	1,590	863	159
Shasta	5,563	1,669	8,577	3,856	144
Folsom	1,820	241	4,471	1,961	93
New Melones	423	N/A	1,401	665	64
Millerton	671	122	2,070	827	81

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	34.56	12.06	54.59	28.56 (65)	121	0.00
Sacramento at Shasta Dam	64.55	15.23	112.07	56.02 (70)	115	0.00
American at Blue Canyon	57.97	15.64	103.28	60.84 (51)	95	0.00
Stanislaus at New Melones	19.53	N/A	45.33	25.66 (48)	76	0.00
San Joaquin at Huntington Lk	29.14	14.30	80.80	37.86 (52)	77	0.00

May 2025 | Folsom Lake Daily Operations

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	901.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	459.48	905.3	3.7	4,852	711	2,036	0	172	82	0.23	0.00
2	459.62	906.8	1.5	4,610	1,586	1,999	0	169	93	0.26	0.00
3	459.65	907.1	0.3	4,730	2,542	1,775	0	171	79	0.22	0.00
4	459.84	909.2	2.1	5,106	2,336	1,470	0	172	93	0.26	0.00
5	460.15	912.6	3.4	5,319	1,475	1,828	0	173	151	0.42	0.00
6	460.38	915.1	2.5	5,033	1,533	1,909	0	181	151	0.42	0.00
7	460.59	917.3	2.3	4,968	2,654	888	0	198	79	0.22	0.00
8	460.69	918.4	1.1	4,511	3,667	19	0	194	83	0.23	0.00
9	460.81	919.7	1.3	4,690	3,741	0	0	195	97	0.27	0.00
10	460.99	921.7	2.0	5,268	3,960	0	0	208	115	0.32	0.00
11	461.17	923.6	2.0	5,014	3,688	0	0	205	130	0.36	0.00
12	461.33	925.4	1.7	4,693	3,550	38	0	178	47	0.13	0.02
Totals	N/A	N/A	23.9	58,794	31,443	11,962	0	2,216	1,200	3.34	0.02
Acre- Feet	N/A	N/A	23,900	116,618	62,367	23,727	0	4,395	2,380	N/A	N/A

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

Summary: Release (acre-feet)

Power	62,367
Spill	23,727
Outlet	0
Pumping Plant	4,395
Total Releases	90,489

Summary: Precipitation (Month/Inches)

This month 0.02

October 1, 2024 to date 17.90

Isobath 05/01-05/31 (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 AFD1	MDT, Water AFO	MDT, Water AWP	MDT Water AWB	MDT, Air, CSU	Diss. Oxygen (mg/L) AFO	Diss. Oxygen (mg/L) AWP	Release (CFS) Nimb us	Storage (TAF) Folso m	USP/LP Unit 1	USP/LP Unit 2	USP/LP Unit 3
Apr	48.2	47.3	49.2	50.2	51.3	51.9	54.2	N/A	N/A	3075	N/A	N/A	N/A	N/A
05/01	57.5	54.0	55.1	58.0	59.7	60.5	66.1	N/A	N/A	3218	905	M 3	B 4	A 93
05/02	57.9	54.3	53.5	57.5	59.0	60.2	60.6	N/A	N/A	3699	907	M 2	B 1	A 97
05/03	57.4	54.8	53.4	56.0	57.4	58.5	61.6	N/A	N/A	4034	907	M 1	B 1	A 98
05/04	56.8	54.6	53.8	55.9	57.2	58.0	65.1	N/A	N/A	3515	909	M 1	B 1	A 98
05/05	56.5	55.0	54.8	56.3	57.6	58.5	72.4	N/A	N/A	3461	913	M 2	B 2	A 97
05/06	55.9	55.1	54.5	56.7	58.3	59.2	71.1	N/A	N/A	3497	915	A 2	A 1	A 97
05/07	56.3	55.0	53.0	56.6	58.2	59.3	62.4	N/A	N/A	3445	917	A 1	A 27	A 72
05/08	57.3	55.6	52.3	55.8	57.7	59.1	68.6	N/A	N/A	3441	918	A 1	A 44	A 55
05/09	58.6	55.8	52.1	54.7	56.8	58.3	74.8	N/A	N/A	3518	920	A 17	A 37	A 46
05/10	59.7	55.9	52.2	54.3	56.3	57.7	75.2	N/A	N/A	3584	922	A 56	A 0	A 43
05/11	59.6	56.0	52.3	54.4	55.8	57.0	64.5	N/A	N/A	3511	924	A 49	A 1	A 50
05/12	58.2	54.9	52.6	54.3	55.4	56.3	58.3	N/A	N/A	3496	925	A 63	A 1	A 36

	MDT, Water	MDT, Water	MDT, Water	MDT, Water	MDT, Water	MDT Water	MDT, Air,	Diss. Oxyge n (mg/L )	Diss. Oxyge n (mg/L )	Releas e (CFS) Nimb us	Storag e (TAF) Folso m	USP/L P Unit 1	USP/ LP Unit 2	USP/L P Unit 3
Date	NFA	ARP	AFD1	AFO	AWP	AWB	CSU	AFO	AWP					
05/13	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
05/14	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
05/15	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
05/16	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
05/17	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
05/18	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
05/19	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
05/20	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
05/21	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
05/22	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
05/23	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
05/24	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
05/25	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
05/26	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
05/27	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
05/28	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
05/29	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

	MDT, Water	MDT, Water	MDT, Water	MDT, Water	MDT, Water	MDT Water	MDT, Air, Water	Diss. Oxyge n (mg/L )	Diss. Oxyge n (mg/L )	Releas e (CFS)	Storag e (TAF)	USP/L P Unit	USP/ LP	USP/L P Unit
Date	NFA	ARP	AFD1	AFO	AWP	AWB	CSU	AFO	AWP	Nimb us	Folso m	1	Unit 2	3
05/30	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
05/31	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
May	57.6	55.1	53.3	55.9	57.5	58.5	66.7	N/A	N/A	3535	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	84136	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:

<sup>1</sup> AFD is a weighted average based on hourly flow values, including generation, bypass and spill

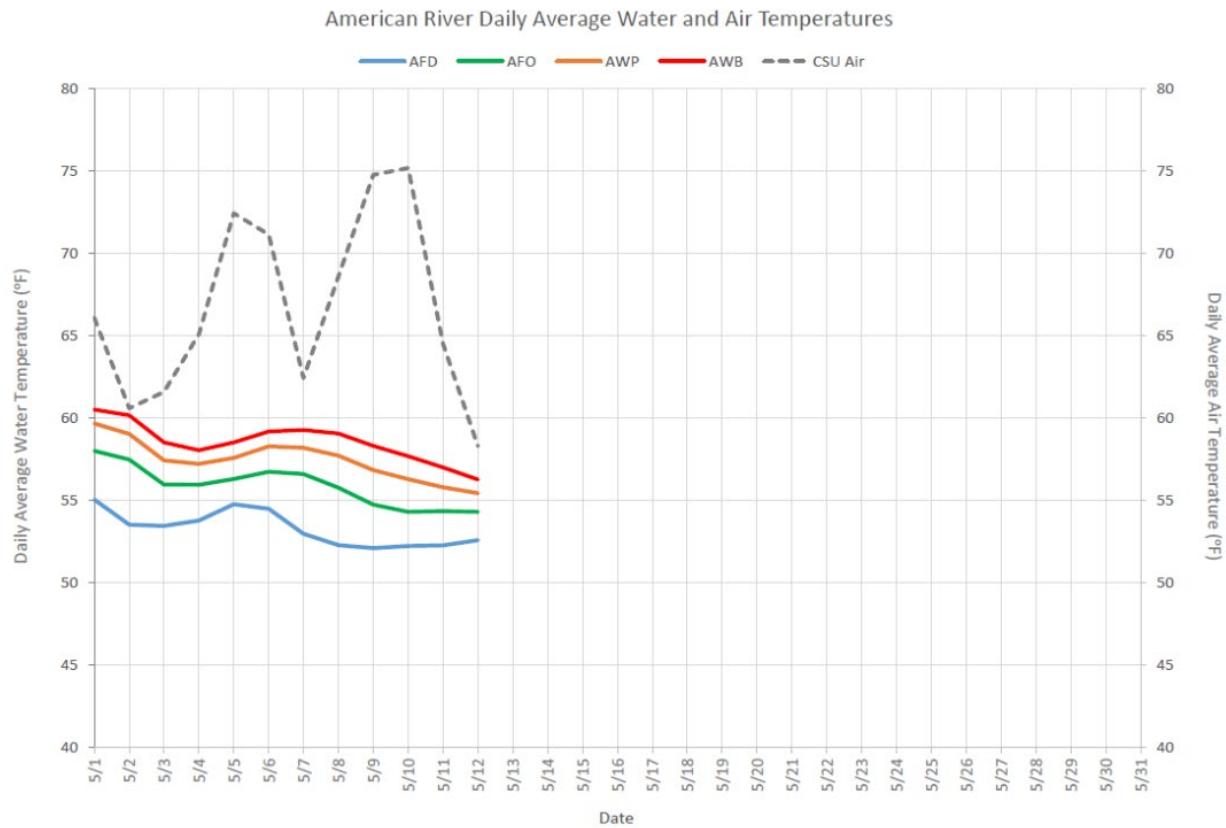


Figure 11. American River Daily Average Water and Air Temperatures

Figure 11 is a line graph depicting daily average water and air temperatures (40-80) in degrees Fahrenheit over dates 5/1 to 5/31. This graph shows data for AFD, AFO, AWP, AWB, and CSU Air.

### Folsom Lake Isothermabaths Plot - 2025

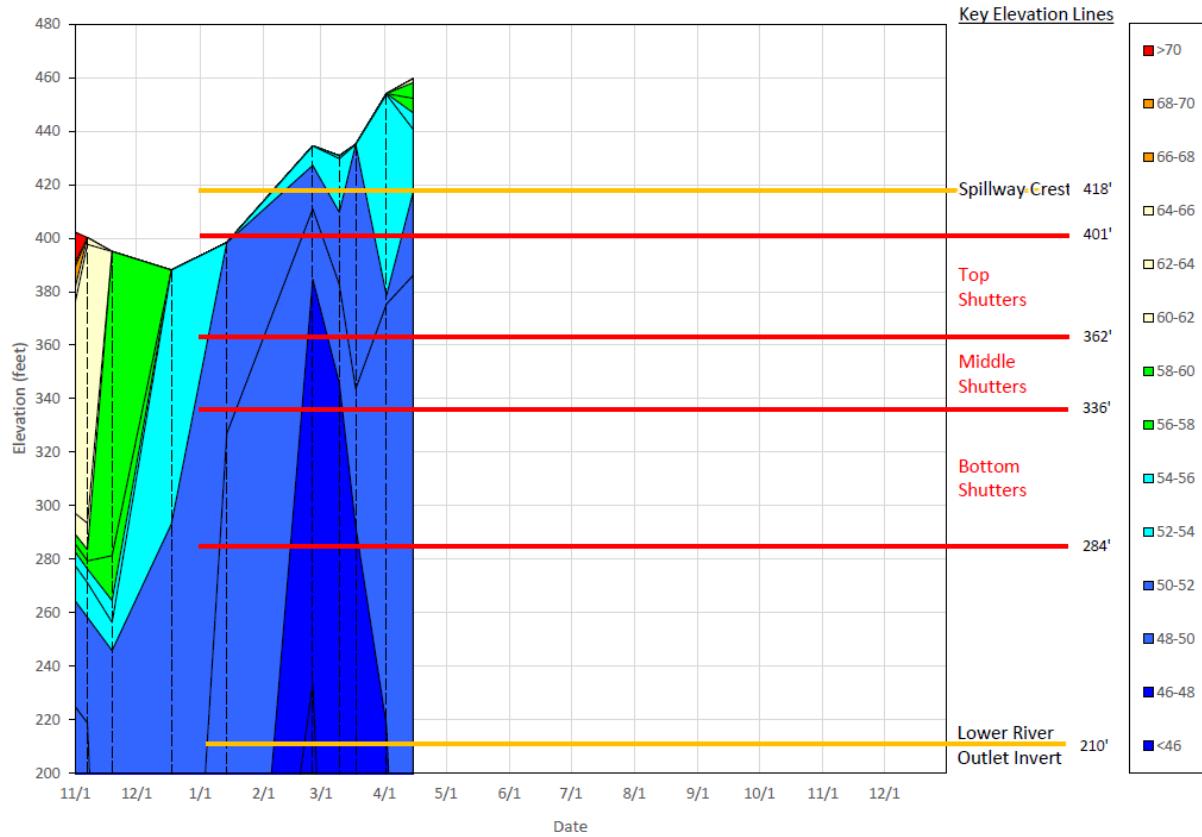


Figure 12. Folsom Lake Isothermabaths Plot – 2025

Figure 12 is a graph showing elevation (200-480 feet) over dates (11/1/24-12/1/25). The graph also shows Key Elevation lines, for Spillway Crest, Top Shutters, Middle Shutters, Bottom Shutters, and Lower River Outlet Invert.

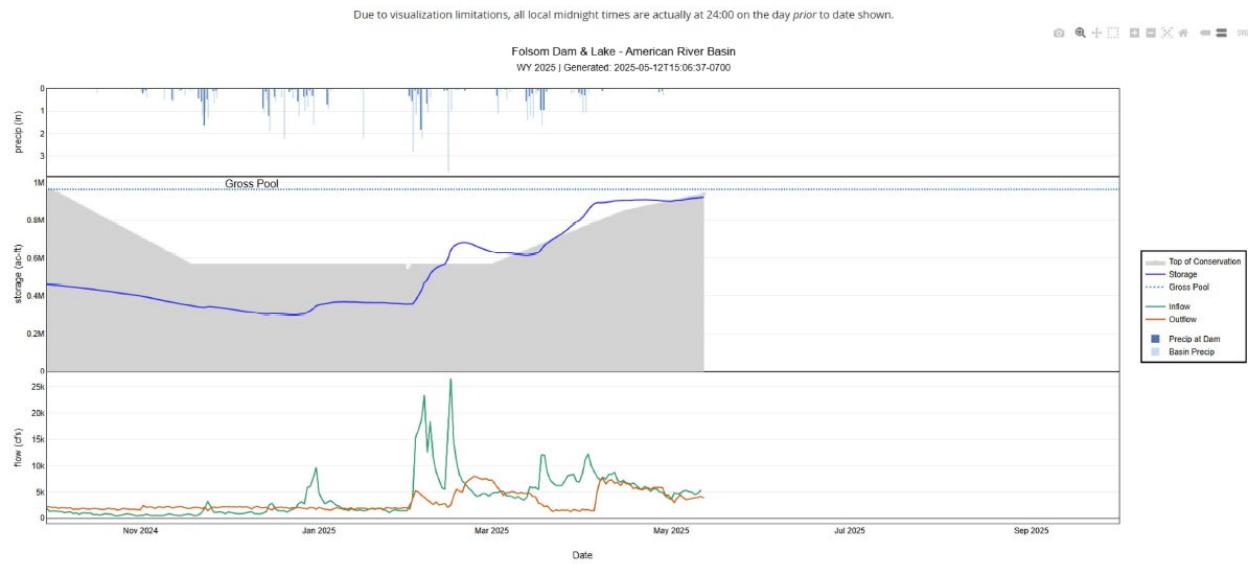


Figure 13. Folsom Dam & Lake – American Rivier Basin

Figure 13 shows 3 graphs depicting storage, gross pool, inflow, outflow, precipitation at dam, and basin precipitation over months November 2024 to September 2025.

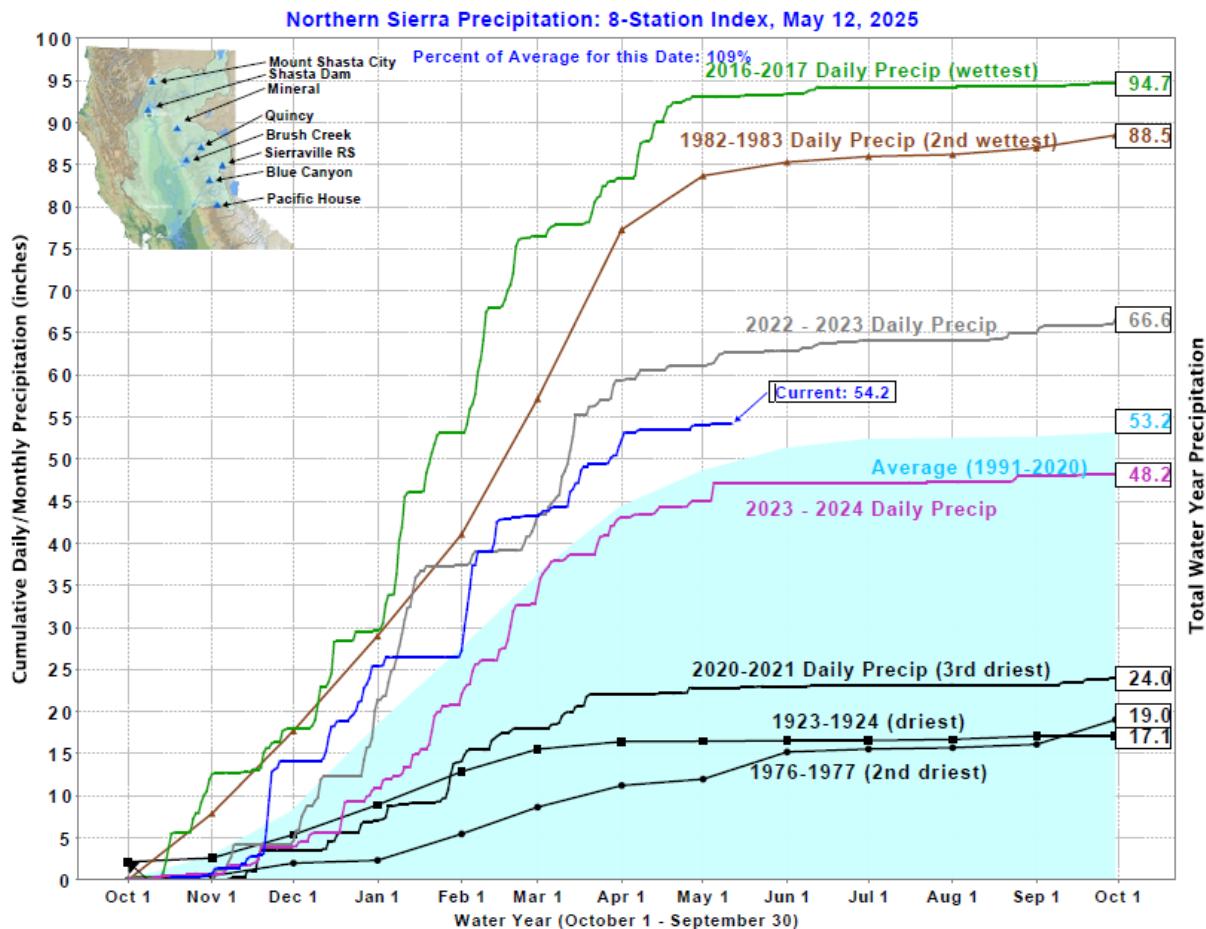


Figure 14. Northern Sierra Precipitation: 8-Station Index, May 12, 2025

Figure 14 shows a line graph precipitation at the Northern Sierra 8-station Index. The graph includes the current cumulative daily and monthly precipitation, 54.2 (109% average for this date), in inches, average for 1991-2020 (53.2), daily precipitation for 2016-2017 (94.7 wettest), 1982-1983 (88.5 2nd wettest), 2022-2023 (66.6), 2023-2024 (48.2), 2020-2021 (24.0 3rd driest), 1976-1977 (19.0 2nd driest), and 1923-1924 (17.1 driest).



## Northern Sierra 8-Station Precipitation Index for Water Year 2025 – Updated on May 13, 2025 08:48 AM

Note: Monthly totals may not add up to seasonal total because of rounding  
Water Year Monthly totals are calculated based on Daily precipitation data from 12am to 12am PST

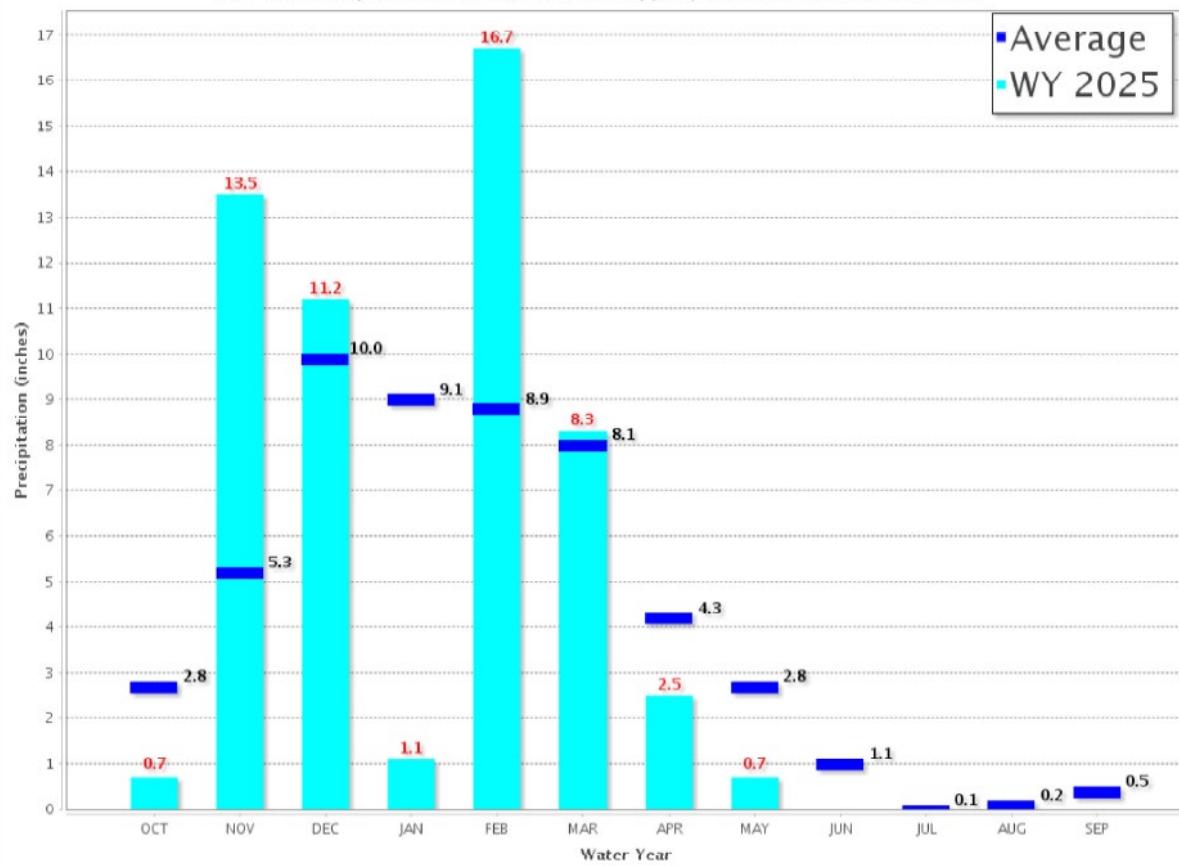


Figure 15. Northern Sierra 8-Station. Precipitation Index for Water Year 2025, updated May 13, 2025, at 8:48 AM.

Figure 15 is a bar graph showing the average precipitation (inches) over months (October – September).

Table 9. 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 Jan and Feb)	RDPB-based MRR for steelhead (applicable Feb through May)	Controlling MRR (cfs)	Actual Average Monthly Nimbus releases <sup>1</sup> (cfs)
October	May ARI <sup>2</sup> (50% exceedance)	0	2,329	1,500	N/A	N/A	1,500	1,545
November	May ARI <sup>2</sup> (50% exceedance)	0	2,329	2,000	N/A	N/A	2,000	1,997
December	May ARI <sup>2</sup> (50% exceedance)	0	2,329	2,000	N/A	N/A	2,000	2,027
January	January SRI (90% exceedance)	0	13.6 (SRI)	1,750	1,400	N/A	1,750	1,761
February	February ARI (90% exceedance)	171	1,320	1,118	1,215	1,400	1,400	4,838
March	March ARI (90% exceedance)	281	1,539	1,334	N/A	1,215	1,334	3,075
April	April ARI (90% exceedance)	483	1,909	1,326	N/A	1,215	1,326	5,085
May	May ARI <sup>2</sup> (90% exceedance)	N/A	1,717	1,215	N/A	1,215	1,215	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 Jan and Feb)	RDPB-based MRR for steelhead (applicable Feb through May)	Controlling MRR (cfs)	Actual Average Monthly Nimbus releases <sup>1</sup> (cfs)
June	May ARI <sup>2</sup> (90% exceedance)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
July	May ARI <sup>2</sup> (90% exceedance)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
August	May ARI <sup>2</sup> (90% exceedance)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
September	May ARI <sup>2</sup> (90% exceedance)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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

<sup>1</sup> Average of daily release over the month from sum of Power, Spill, and Hatchery flows ([DailyOperationsNAT](#)).

<sup>2</sup> 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.