BUREAU OF RECLAMATION

American River Group

1:30 PM – 3:30 PM
Conference Line: +1 (321) 209-6143; Access Code: 596 336 817#
Webinar: Join Microsoft Teams Meeting
Meeting ID: 265 797 031 228 5
Passcode: qL9ru3cH

Thursday, September 18, 2025

Agenda

1. Introductions
2. Announcements
3. Housekeeping
4. Fisheries Update
    a. CDFW
    b. CFS
    c. American River DO
5. Operations Forecast
    a. SMUD
    b. PCWA
6. Central Valley Operations
7. Discussion
    a. Nimbus DO Objective
    b. Power Bypass SDM Update
    c. WTMP Update

8. Next Meetings:
    a. Power Bypass SDM Meeting – September 22, 2025
    b. Regular Monthly ARG Meeting - Thursday, October 16, 1:30-3:30

American River Group SMUD Update – Data Current as of 9/15/2025

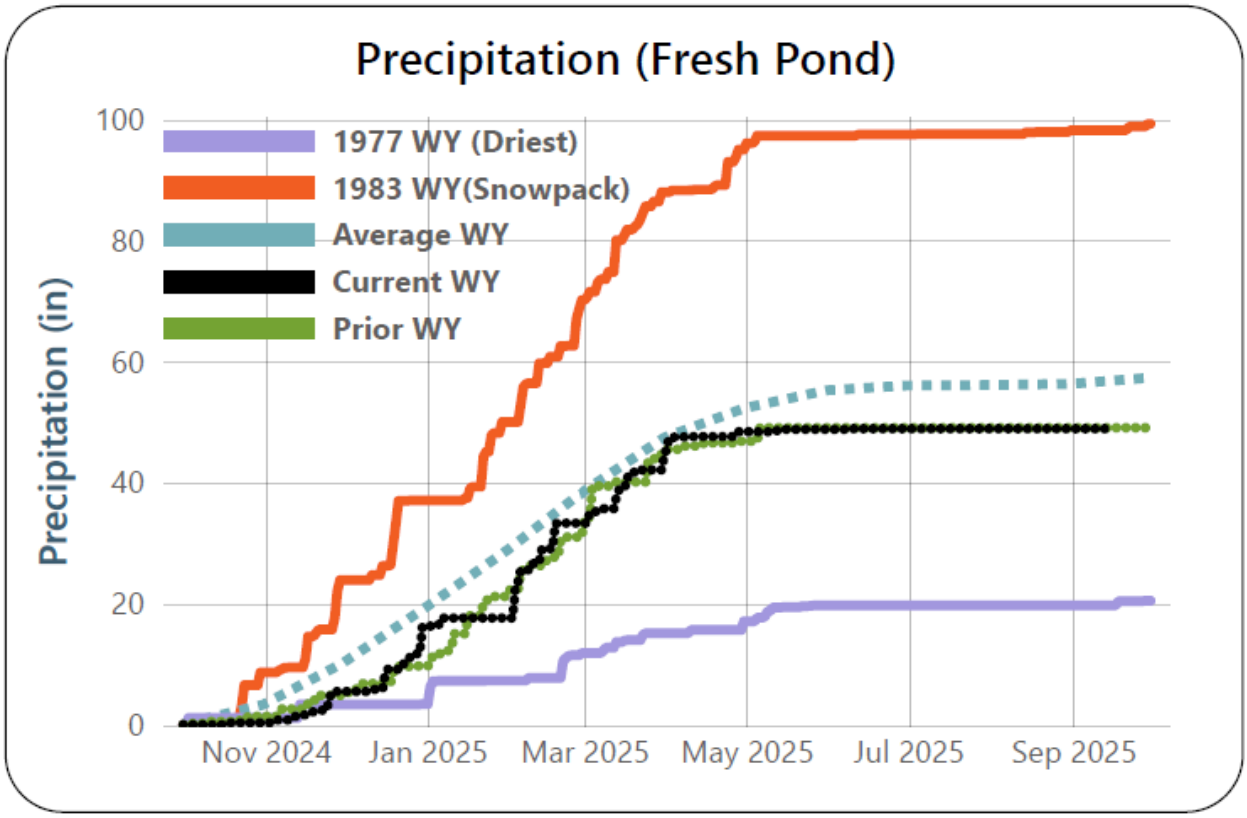

Figure 1. Fresh Pond Precipitation

Figure 1 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. The current precipitation is 86.1% average to date and 85.3 water year average percentage.

Table 1. 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%

Month	Current Water Year	Historical Average	% of Historical Average
June	0.10	0.79	13%
July	0.00	0.08	0%
August	0.00	0.20	0%
September	0.00	1.02	0%
Total	48.89	57.32	85%

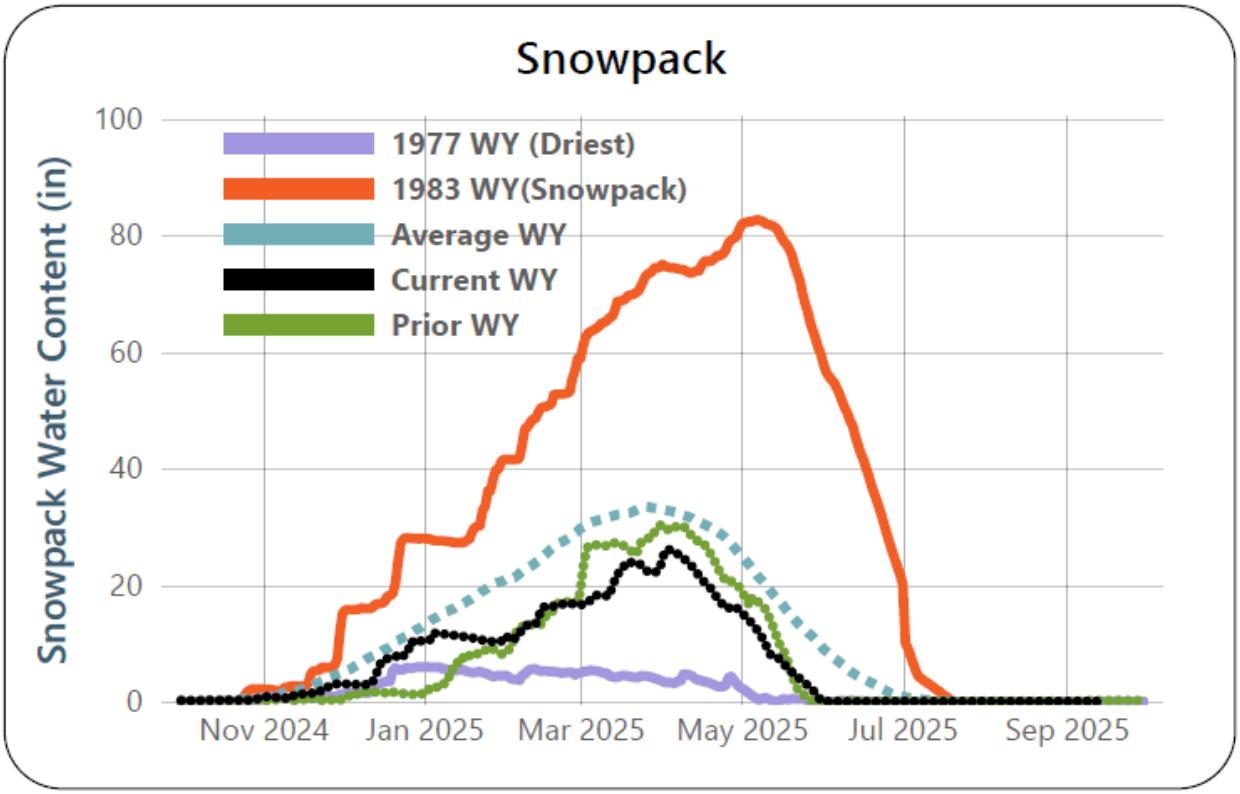

Figure 2. September 2025 Snowpack

Figure 2 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 0.0% average to date with a 0.1% April 1 average.

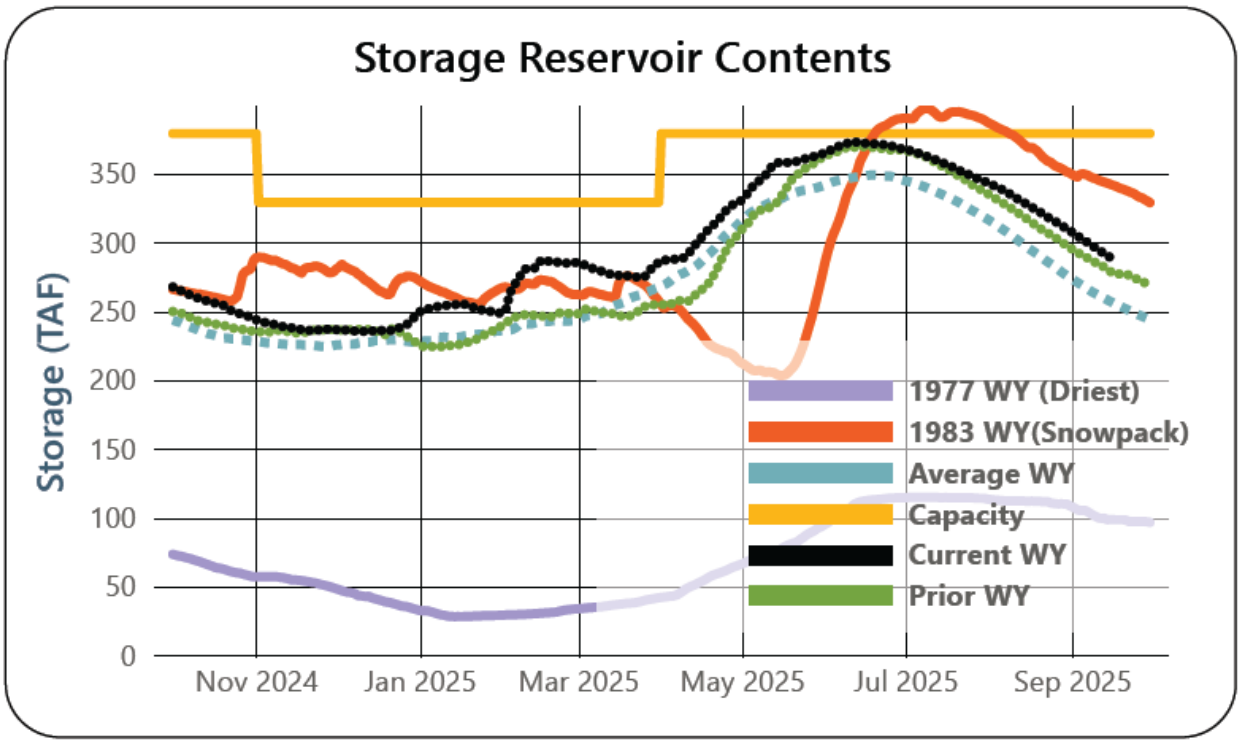

Figure 3. Storage Reservoir Contents

Figure 3 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 2. SMUD Storage Reservoirs

Reservoir	Capacity Acre-ft	Current Acre-ft	Current % Full	Prior Year Acre-ft	Prior Year % Full	Hist. Avg (Acre-ft)	Hist. Avg (% full)
Loon Lake Reservoir	69,310	49,814	71.9%	49,162	71%	45,160	65%
Ice House Reservoir	43,500	33,239	76.4%	33,545	77%	30,248	70%
Union Valley Reservoir	266,370	205,708	77.2%	197,218	74%	183,451	69%
Total Reservoir Storage	379,180	288,761	76.2%	279,925	74%	258,859	68%

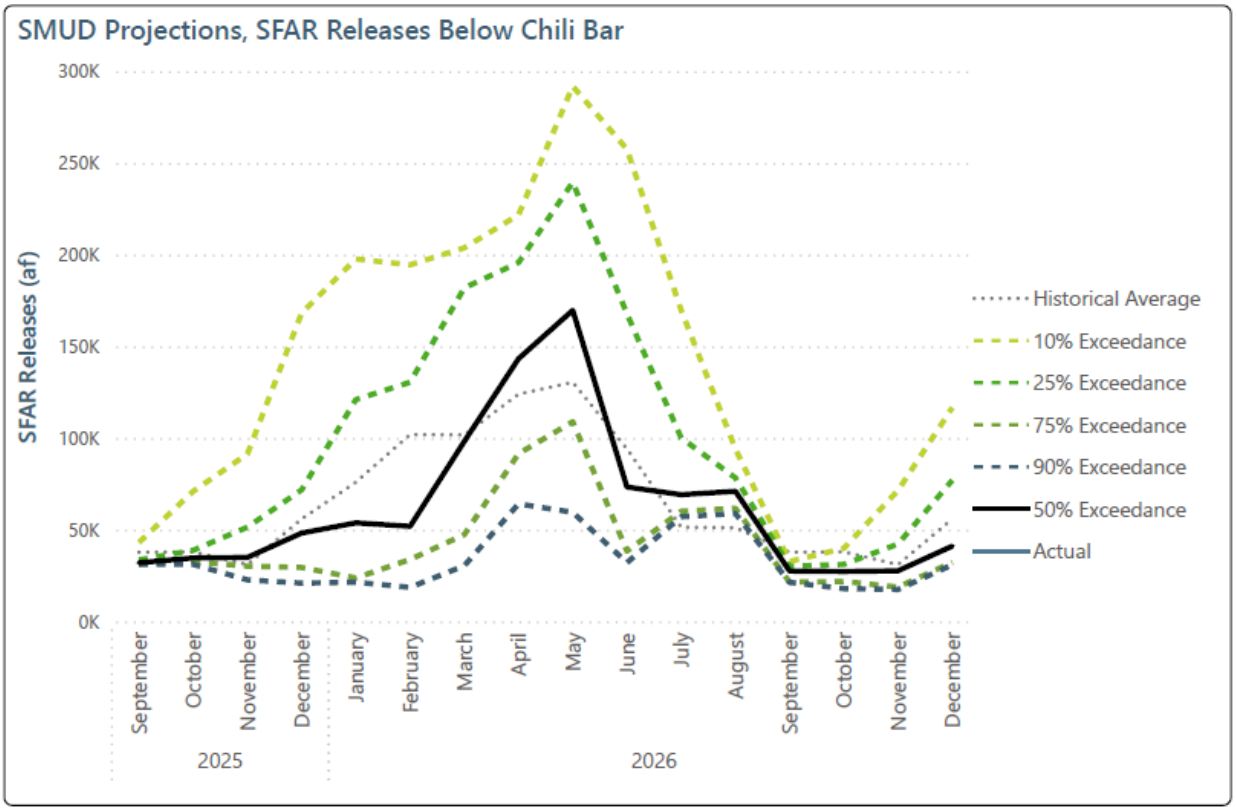

Figure 4. Chili Bar releases into the South Fork American River

Figure 4 is a line graph of observed and projected releases below Chili Bar from September 2025 to December 2026. The graph includes a last 10-year average, actual prior water year data, and projections of 90%, 75%, 50%, 25%, and 10% likelihood.

Table 3. Chili Bar releases into the South Fork American River

Type (Actual or Forecast	Date	Daily Mean Release Rate (cfs)	Monthly Total Release (acre-ft)	Monthly Total Release (90% Exceedance)	Monthly Total Release (10% Exceedance)
Forecast	Sep-25	771	32,043	31,229	43,112
Forecast	Oct-25	564	34,645	31,160	71,002
Forecast	Nov-25	588	34,951	22,680	91,355
Forecast	Dec-25	785	48,211	20,918	168,166
Forecast	Jan-26	876	53,795	21,438	197,678
Forecast	Feb-26	936	51,879	18,594	194,455
Forecast	Mar-26	1,600	98,193	30,405	203,740
Forecast	Apr-26	2,412	143,297	64,131	221,716
Forecast	May-26	2,765	169,700	59,535	291,874
Forecast	Jun-26	1,234	73,324	32,062	257,521
Forecast	Jul-26	1,127	69,157	57,088	169,790

Type (Actual or Forecast	Date	Daily Mean Release Rate (cfs)	Monthly Total Release (acre-ft)	Monthly Total Release (90% Exceedance)	Monthly Total Release (10% Exceedance)
Forecast	Aug-26	1,157	70,997	58,880	94,164
Forecast	Sep-26	463	27,529	21,333	32,715
Forecast	Oct-26	444	27,277	17,898	39,901
Forecast	Nov-26	466	27,659	17,471	71,490
Forecast	Dec-26	669	41,090	30,897	116,594

PCWA MFP Operations Overview for American River Group

Real Time Data as of September 18, 2025

- French Meadows Storage = 87,000 AF of 136,405 AF = 63% Capacity
    - MFAR above FM Inflow (R24) =7-day AVG ~5 cfs
- Hell Hole Storage = 117,000 AF of 207,590 AF = 56% Capacity
    - Five Lakes Inflow (R23) = 7-day AVG ~2 cfs
    - Rubicon Inflow (R22) = 7-day AVG ~3 cfs
- Combined Storage (FM+HH) = 204,000 AF/342,590 AF = 60% Capacity; ~100% of Historical AVG
- MFAR @ R11: 7-day daily average ~600 cfs
- NFAR @ ARPS: 7-day daily average ~635 cfs
- Combined storage for the last 14 days => -15,000 AF
- Combined storage on 9/18/24 = 182 TAF; 89% of HISTORICAL AVG
- The MFP will be offline for annual maintenance starting October 1st and returning back online October 31st, 2025 - FERC minimum instream flows will be maintained in the MFP for the duration of the annual maintenance.
- The minimum instream flow for Middle Fork American below Afterbay will be at or above 165 cfs for the duration of outage. This equates to approximately 10,000 AF.

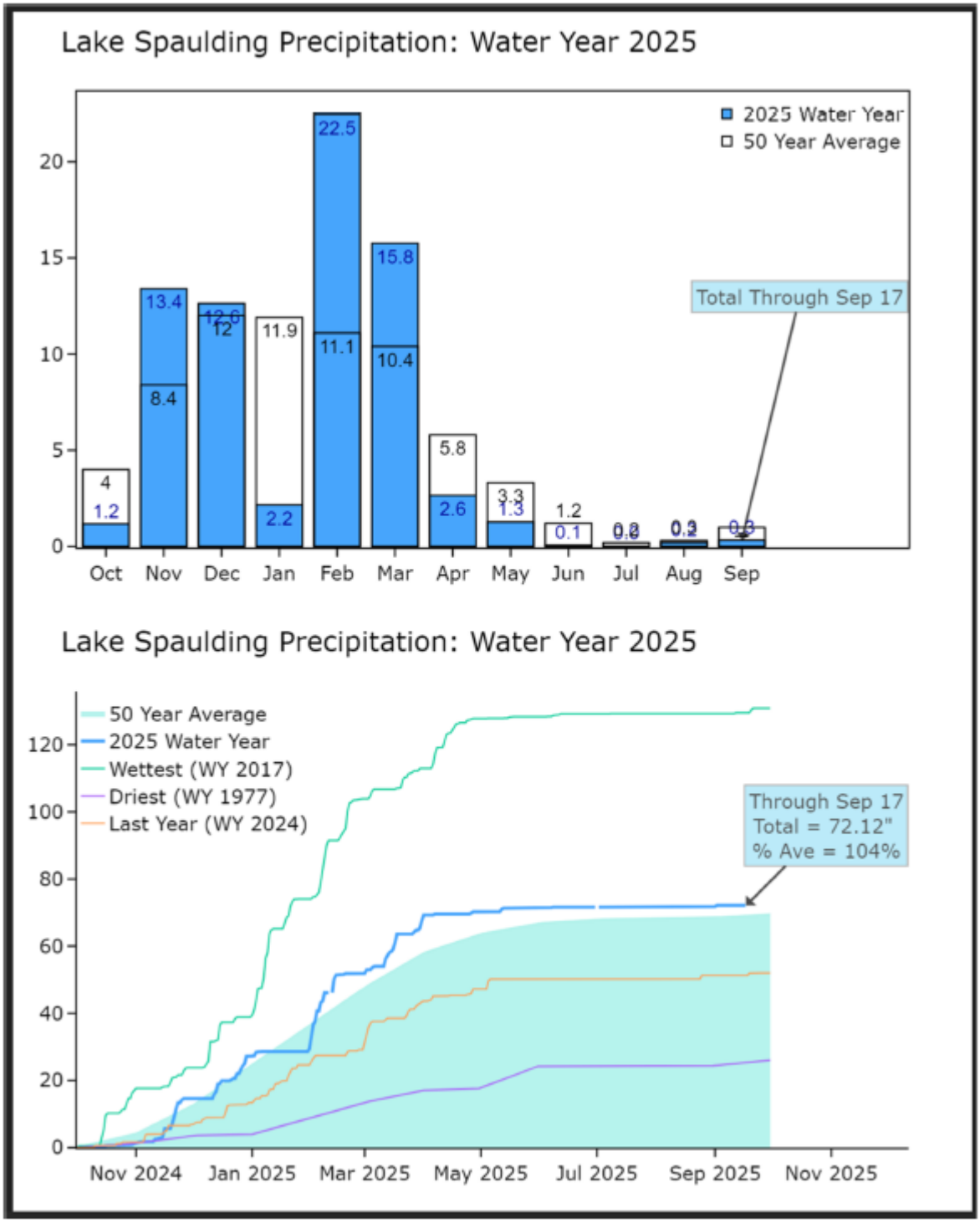

Figure 5. Lake Spaulding Precipitation: Water Year 2025

Figure 5 has two graphs. The first is a bar graph showing total precipitation over time. The second is a line graph comparing the total precipitation with the 50-year average, the 2024 water year, the wettest water year, the driest water year, and the last water year. Totals through June 18th is a total of 71.58 inches 105% of average.

Bureau of Reclamation
Historical Archive and Report Database
Daily CVP Water Supply
September 16, 2025 | Run Date: 09/17/2025

Reservoir Releases in Cubic Feet/Second

Reservoir	Dam	WY 2024	WY 2025	15 Yr Median
Trinity	Lewiston	469	431	702
Sacramento	Keswick	8,186	7,617	7,617
Feather	Oroville(SWP)	9,000	4,729	4,729
American	Nimbus	1,779	1,693	1,877
Stanislaus	Goodwin	254	205	254
San Joaquin	Friant	411	239	350

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	1,390	1,767	1,880	135
Shasta	4,552	2,495	2,870	2,749	110
Folsom	977	477	476	457	96
New Melones	2,420	1,354	1,838	1,632	121
Fed. San Luis	966	334	405	245	73
Total North CVP	11,363	6,050	7,356	6,963	115
Millerton	521	275	257	239	87
Oroville (SWP)	3,425	1,788	2,087	2,195	123

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	1,623	211	2,876	1,105	147
Shasta	6,614	2,493	10,660	4,822	137
Folsom	2,260	347	6,469	2,649	85
New Melones	670	N/A	2,724	1,050	64
Millerton	1,207	353	4,605	1,663	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	36.48	12.52	56.67	30.58 (-65)	119	0.00
Sacramento at Shasta Dam	67.76	18.30	114.50	59.49 (-70)	114	0.00

Reservoir	Current WY 2025	WY 1977	WY 1983	Average (N Years)	% of Average	Last 24 Hours
American at Blue Canyon	69.66	16.91	104.10	64.4 (-51)	108	0.00
Stanislaus at New Melones	19.58	N/A	46.38	26.77 (-48)	73	0.00
San Joaquin at Huntington Lk	29.71	17.50	83.20	40.16 (-52)	74	0.00

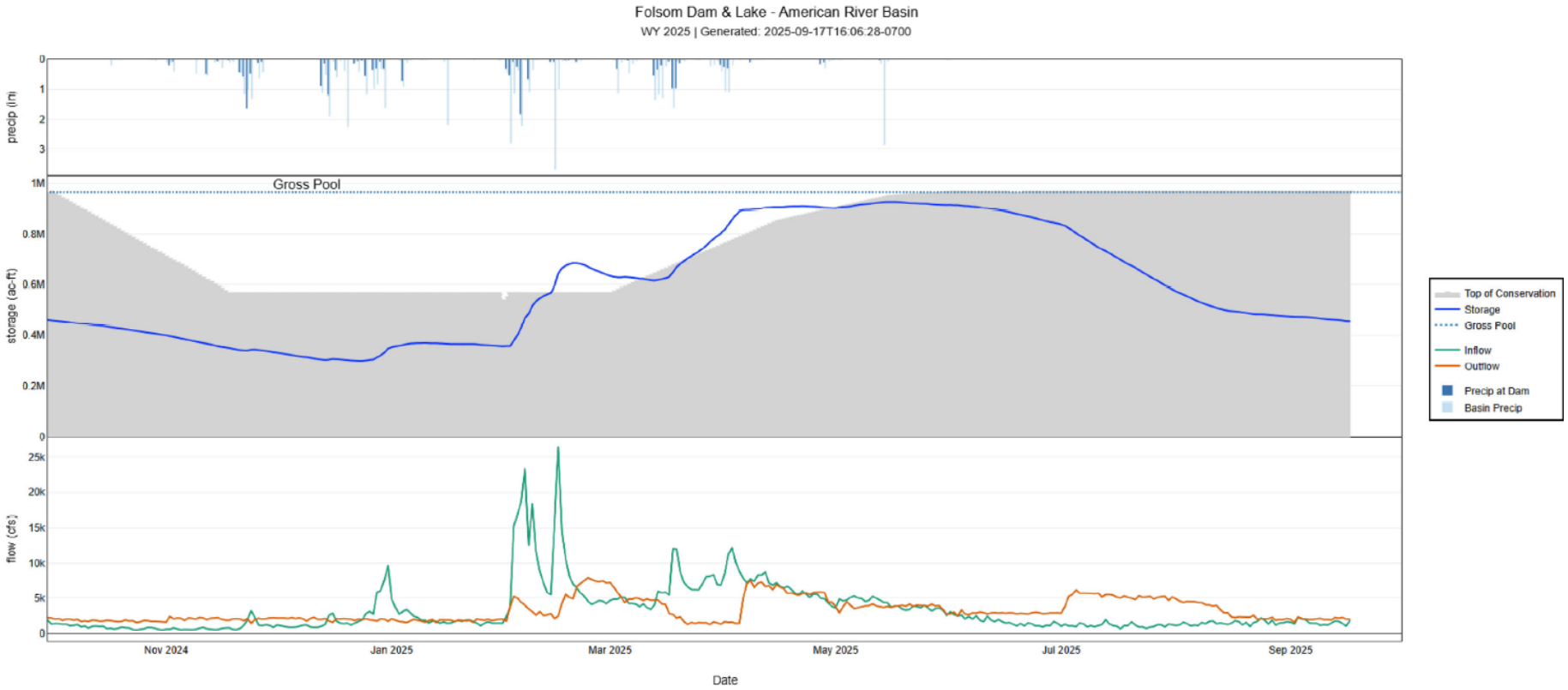

Figure 6. Folsom Dam and Lake Flow, Storage, and Precipitation Totals

Figure 6 is a graph that compares the flow, storage, and precipitation over time for the American River Basin.

September 2025 | Folsom Lake Daily Operations | Run Date: 09/17/2025

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	475.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	413.31	474.9	-0.7	1,305	1,350	0	0	213	91	0.35	0.00
2	413.26	474.5	-0.4	2,210	2,123	0	0	192	90	0.35	0.00
3	413.22	474.2	-0.3	2,014	1,874	0	0	205	90	0.35	0.00
4	413.18	473.9	-0.3	1,941	1,810	0	0	196	90	0.35	0.00
5	413.04	472.8	-1.1	1,450	1,735	0	0	197	62	0.24	0.00
6	412.88	471.6	-1.2	1,381	1,728	0	0	208	62	0.24	0.00
7	412.70	470.2	-1.4	1,397	1,821	0	0	209	59	0.23	0.00
8	412.42	468.1	-2.1	1,098	1,900	0	0	206	69	0.27	0.00
9	412.22	466.5	-1.5	1,198	1,718	0	0	200	49	0.19	0.00
10	412.00	464.9	-1.7	1,144	1,736	0	0	206	48	0.19	0.00
11	411.87	463.9	-1.0	1,420	1,672	0	0	195	48	0.19	0.00
12	411.73	462.8	-1.1	1,724	1,995	0	0	209	53	0.21	0.00
13	411.60	461.8	-1.0	1,681	1,890	0	0	228	58	0.23	0.00
14	411.36	460.0	-1.8	1,364	1,992	0	0	226	61	0.24	0.00
15	411.08	457.9	-2.1	1,002	1,785	0	0	221	63	0.25	0.00
16	411.01	457.4	-0.5	1,777	1,732	0	0	228	83	0.33	0.00
Totals	N/A	N/A	-18.2	24,106	28,861	0	0	3,339	1,076	4.21	0.00
Acre-Feet	N/A	N/A	-18,200	47,814	57,246	0	0	6,623	2,134	N/A	N/A

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

Summary: Release (acre-feet)

Power	57,246
Spill	0
Outlet	0
Pumping Plant	6,623
Total Releases	63,869

Summary: Precipitation (Month/Inches)

This month	0.00
October 1, 2024 to date	17.90

Isobath 08/18–09/16 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	Release (CFS) Nimbus	Storage (TAF) Folsom	USP/LP Unit 1	USP/ LP Unit 2	USP/LP Unit 3
08/18	62.5	64.5	60.9	65.2	66.9	67.9	70.6	2005	492	M68	T0	T32
08/19	62.4	64.2	60.4	63.7	66.0	67.6	73.0	2001	490	M73	T0	T27
08/20	62.9	65.8	60.7	63.6	65.7	67.1	77.6	2002	488	M75	T0	T25
08/21	62.5	66.6	61.1	63.7	66.2	67.8	81.5	2001	485	M70	T0	T30
08/22	61.6	65.1	61.3	63.3	65.8	67.4	82.5	1718	485	M69	T0	T31
08/23	61.0	63.2	61.8	63.5	66.2	67.9	81.9	1676	485	M63	T0	T37
08/24	61.7	63.1	61.6	64.3	66.5	67.9	77.0	1686	484	M69	T0	T30
08/25	62.5	64.9	61.5	64.4	66.9	68.5	77.9	1690	482	M73	T0	T26
08/26	61.6	63.1	60.8	64.4	66.6	68.2	76.6	1713	481	B91	M0	M8
08/27	60.1	64.6	60.7	64.1	66.5	68.0	76.6	1719	480	B95	M0	M4
08/28	61.3	66.2	58.5	63.9	66.0	67.5	76.1	1710	479	O64	M0	M35
08/29	61.3	64.5	58.8	63.7	66.2	67.7	76.2	1711	478	O31	M0	M69
08/30	61.7	63.2	59.2	63.0	65.7	67.4	79.6	1704	477	O28	M0	M71
08/31	62.0	63.0	59.3	62.2	65.1	67.0	83.4	1693	476	O30	M0	M70
09/01	62.2	63.5	58.5	62.3	64.7	66.5	81.8	1697	475	O46	M0	M53
09/02	61.8	60.8	56.0	62.2	64.7	66.2	78.4	1698	474	O70	M0	M30
09/03	59.8	61.3	61.2	60.2	63.3	65.6	77.2	1696	474	O16	M0	M84

Date	MDT, Water NFA	MDT, Water ARP	MDT, Water AFD[1]	MDT, Water AFO	MDT, Water AWP	MDT, Water AWB	MDT, Air, CSU	Release (CFS) Nimbus	Storage (TAF) Folsom	USP/LP Unit 1	USP/ LP Unit 2	USP/LP Unit 3
09/04	60.5	62.1	61.4	61.7	63.7	64.9	72.0	1694	474	O13	M1	M85
09/05	60.9	62.4	62.9	62.8	64.4	65.5	69.6	1702	473	O2	M2	M96
09/06	61.4	62.5	63.1	63.3	65.0	66.2	69.6	1693	472	O1	M2	M98
09/07	61.2	61.9	62.1	64.6	65.9	66.7	71.2	1695	470	O12	M2	M87
09/08	61.4	62.2	62.0	64.5	66.5	67.8	72.3	1681	468	O15	M1	M84
09/09	63.2	60.8	62.3	64.2	65.7	67.0	70.2	1700	467	O13	M1	M85
09/10	63.1	61.1	63.0	64.0	65.4	66.2	68.7	1703	465	O14	M1	M84
09/11	62.7	61.0	62.7	64.2	65.8	66.8	69.9	1704	464	O12	M2	M87
09/12	63.9	59.4	61.4	64.0	65.9	67.2	72.8	1686	463	O24	M1	M74
09/13	63.3	59.8	62.8	64.1	66.1	67.3	71.5	1681	462	O12	M2	M86
09/14	62.9	60.7	63.0	64.4	66.0	67.1	72.0	1680	460	O13	M2	M86
09/15	61.9	61.1	62.2	64.8	66.4	67.6	73.4	1692	458	O21	M2	M77
09/16	61.9	59.6	61.8	64.7	66.7	68.0	76.0	1693	457	O30	M2	M69

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 spill

Daily Averaged Temperatures from 08/18/2025 – 09/16/2025 for the Lower American River

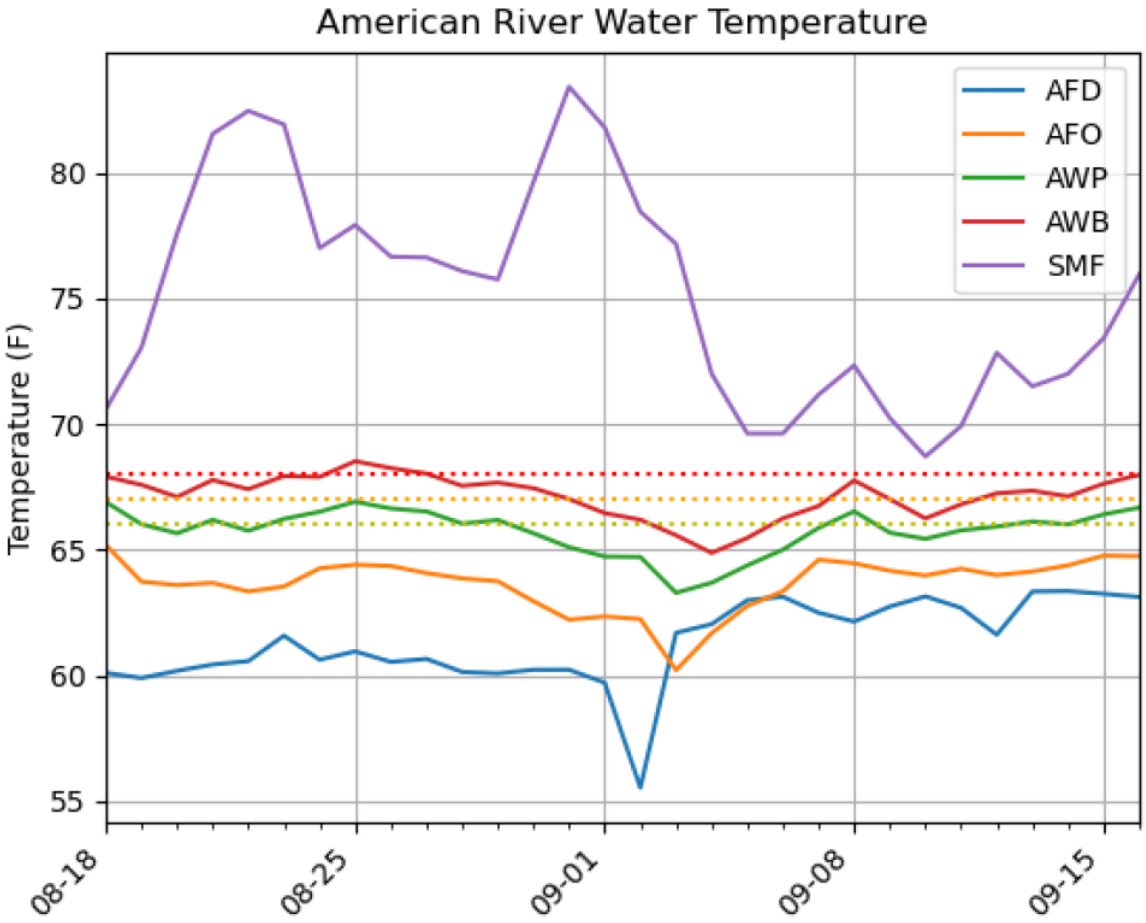

Figure 7. American River Daily Average Water and Air Temperatures

Figure 7 is a line graph comparing daily average water and air temperatures for days of the month (generalized). Temperatures from the AFD sensor is shown in light blue, AFO sensor in orange, AWP in green, and AWB in red. The air temperature at Sacramento International Airport in a purple line.

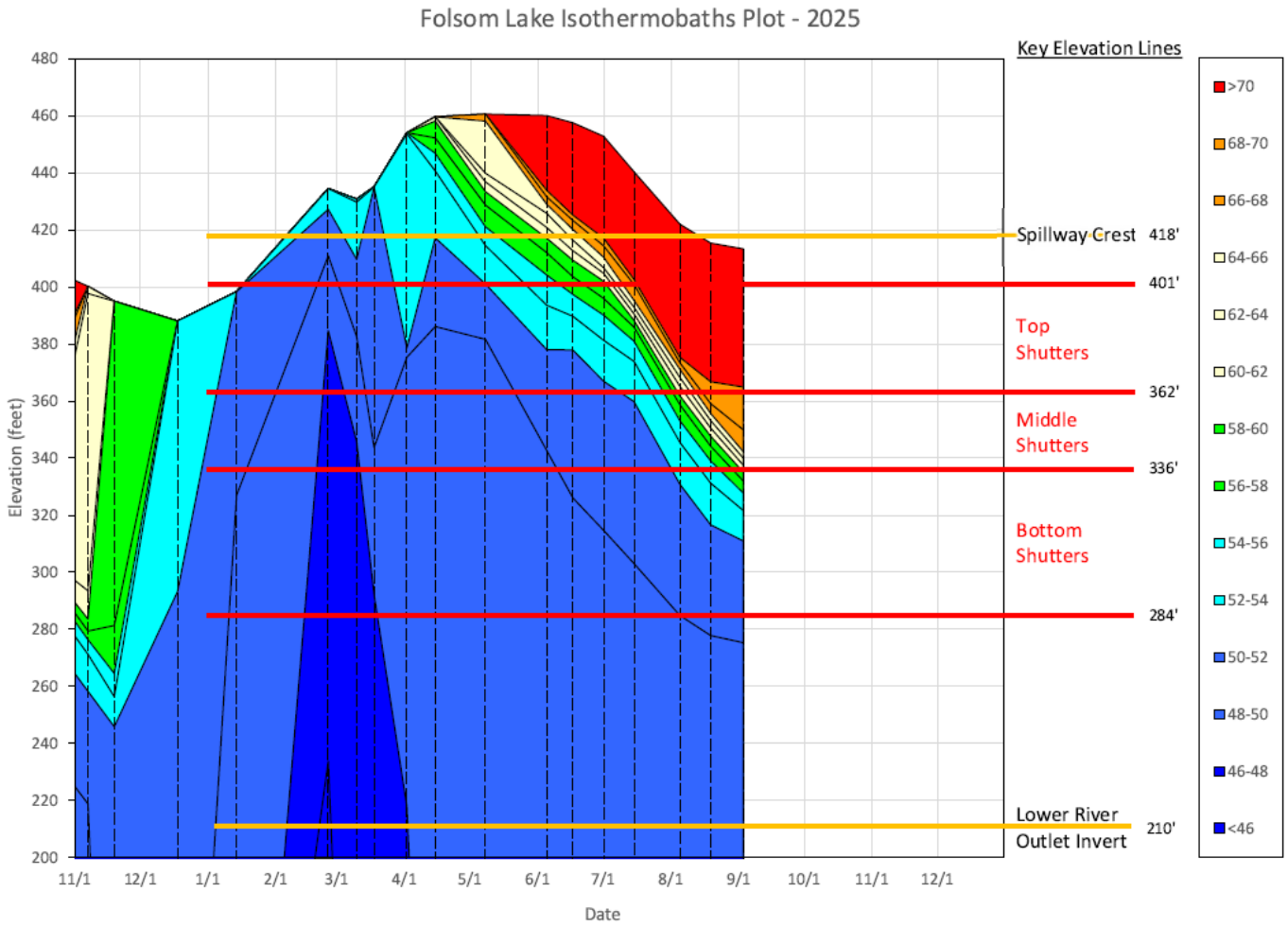

Figure 8. Folsom Lake Isothermobaths Plot

Figure 8 is a shaded chart of the Folsom Lake Isothermobaths plot for 2025 from November 1st to September 1st. The temperature of the water is depicting through different colors with the spillway crest, top, middle, and bottom shutters, and lower river outlet inverts are shown by horizontal lines.

Table 4. American River Baseflow Table

Month	Index Used for Index-based MRR	Flood Mgmt (TAF)[1]	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 (cfs)	Actual Average Monthly Nimbus release[2] (cfs)
October	May ARI[3] (50% exceedance)	0	2329	1,500	N/A	N/A	1,500	1,545
November	May ARI[3] (50% exceedance)	0	2329	2,000	N/A	N/A	2,000	1,997
December	May ARI[3] (50% exceedance)	0	2329	2,000	N/A	N/A	2,000	2,027
January	January SRI (90% exceedance)	4	13.6 (SRI)	1,750	1,400	N/A	1,750	1,761
February	February ARI (90% exceedance)	200	1,276	1,074	1,215	1,400	1,400	4,838
March	March ARI (90% exceedance)	293	1,510	1,306	N/A	1,215	1,306	3,075
April	April ARI (90% exceedance)	528	1,897	1,319	N/A	1,215	1,319	5,085
May	May ARI (90% exceedance)	586	1,672	1,215	N/A	1,215	1,215	3,428
June	May ARI[3] (90% exceedance)	586	1,614	1,155	N/A	N/A	1,155	2,463
July	May ARI[3] (90% exceedance)	586	1,614	1,636	N/A	N/A	1,636	4,769
August	May ARI[3] (90% exceedance)	586	1,614	1,636	N/A	N/A	1,636	2,609
September	May ARI[3] (90% exceedance)	586	1,614	1,636	N/A	N/A	1,636	N/A

[1] Cumulative flood management releases
[2] Average of daily releases over the month from sum of Power, Spill, and Hatchery flows DailyOperationsNAT
[3] 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.

90% exceedance starting January 2025 (2024 ROD)

MRR=Minimum Release Requirement

RDPA=Redd Dewatering Protective Adjustment

ARI=American River Index

SRI=Sacramento River

NA = Not applicable

Comparison to Historical Folsom Conditions (WY1961 – Present)

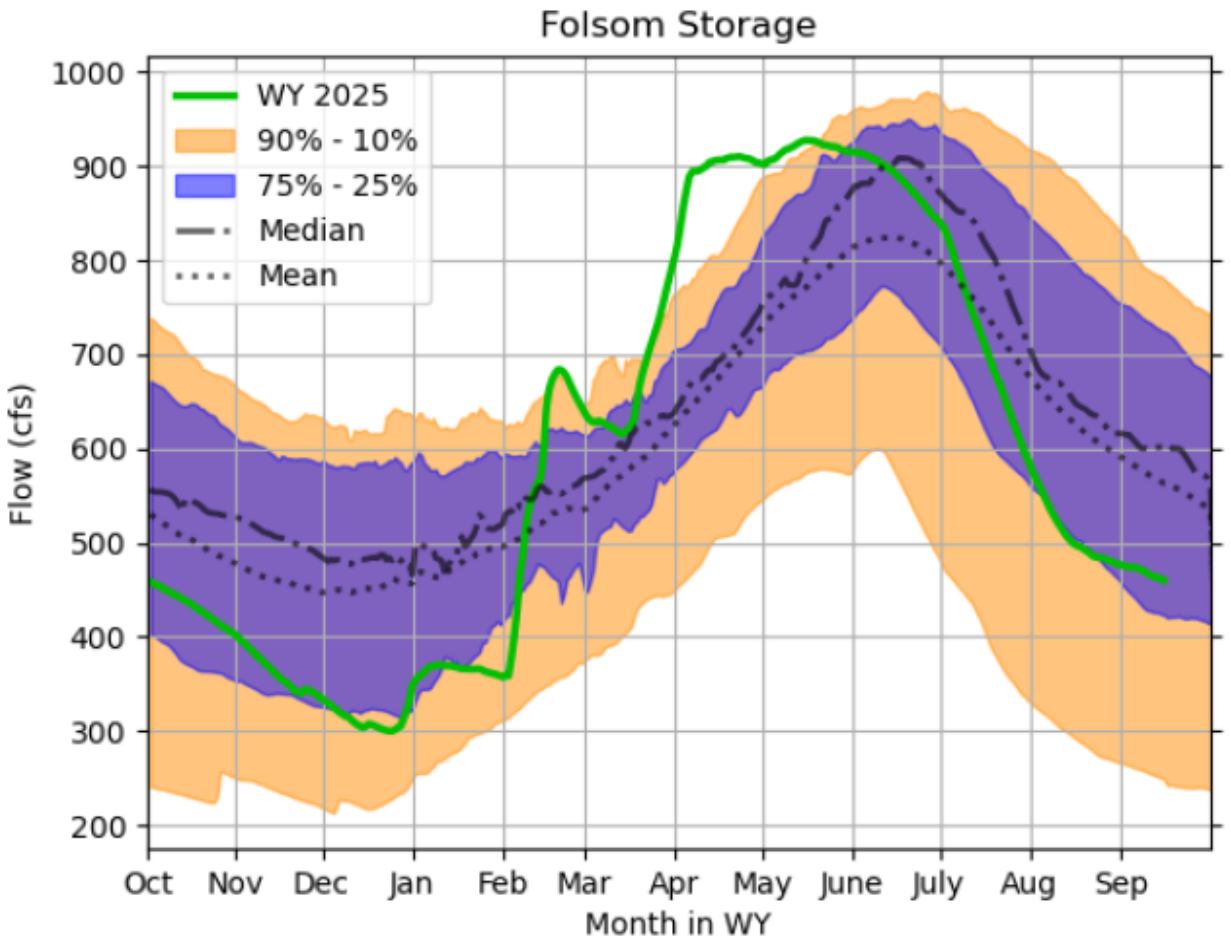

Figure 9. Folsom Storage

Figure 9 is a line graph showing the current storage at Folsom Lake October to September. Water Year 2025 storage is shown in a green line depicting the flows on the y-axis. Water Year 2025 storage starts at ~450 cfs in October declining to about 200 cfs in mid- to late-December. Flows increase in February to ~675 cfs before dipping to 625 in mid March. The flows then sharply increase to over 900 cfs in mid April. The median and mean flows from Water Year 1961 to present are shown by dashed and dotted lines, respectively.

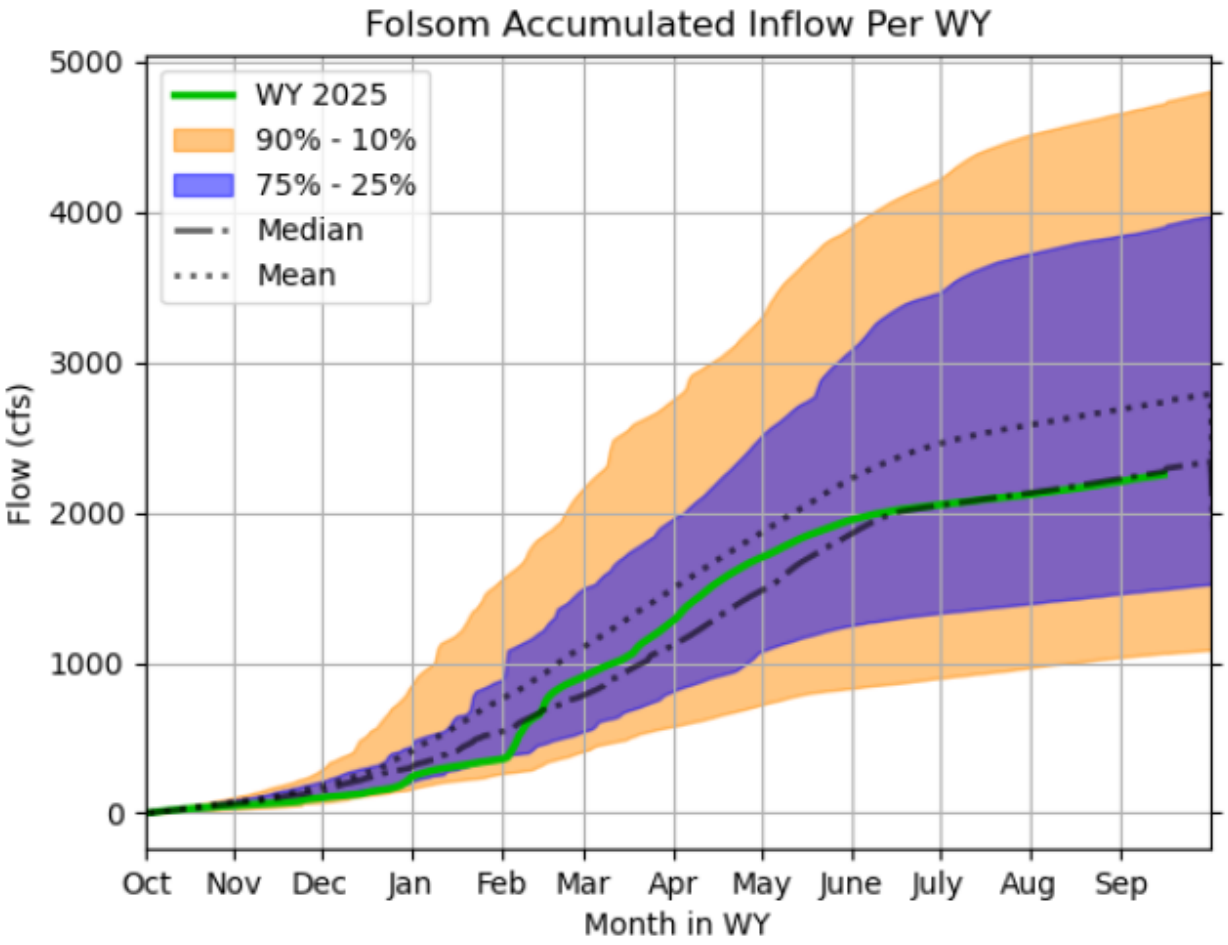

Figure 10. Folsom Accumulated Inflow Per Water Year

Figure 10 is a line graph showing the accumulated inflow per Water Year at Folsom Lake. The current Water Year accumulation is shown in a green line with sharp peaks in February and a top flow of ~2,250 cfs. The median and mean flow accumulation from previous Water Years is shown in a dotted and dashed line, the median has a similar pattern to the current Water Year flow accumulation, while the mean is ~500cfs higher July-September. The 90% - 10% and 75% - 25% are shown through orange and purple shading.

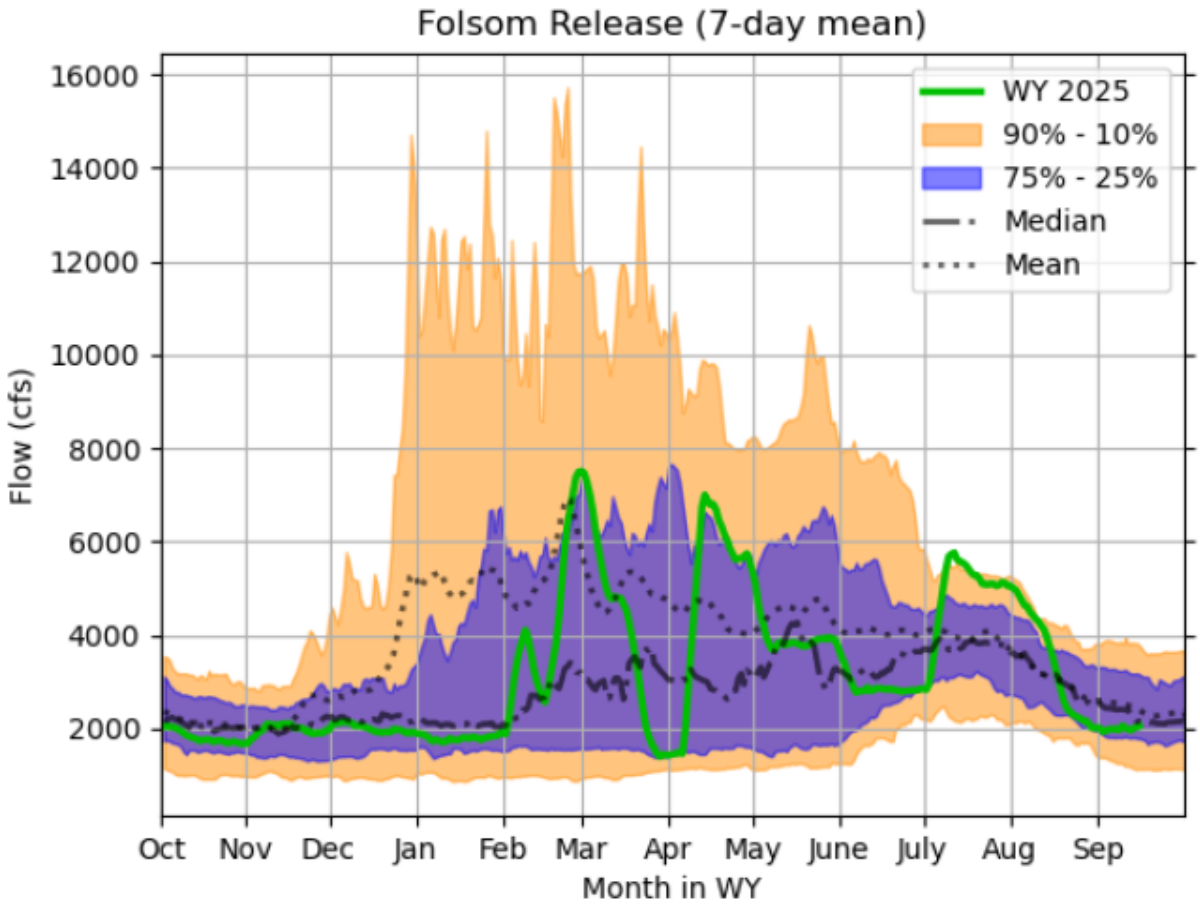

Figure 11. Folsom Release 7-Day Mean

Figure 11 is a line graph showing the 7-day mean release at Folsom Dam. The current Water Year release is shown in a green line with sharp peaks starting in February with a top release of ~7,750 cfs in March. The median and mean release from previous Water Years is shown in a dotted and dashed line. The 90% - 10% and 75% - 25% are shown through orange and purple shading.

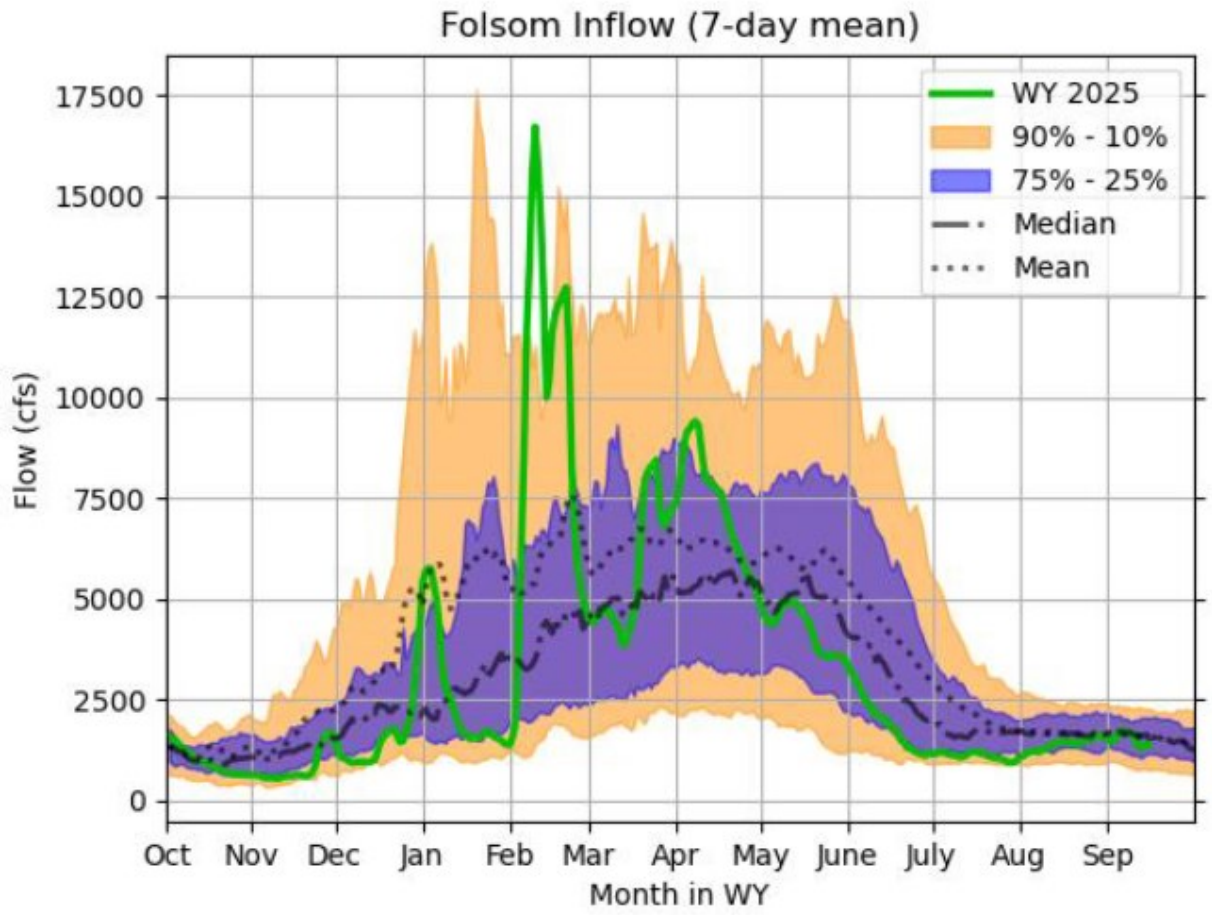

Figure 12. Folsom Inflow 7-Day Mean

Figure 12 is a line graph showing the 7-day mean inflow to Folsom Lake. The current Water Year release is shown in a green line with sharp peaks starting in February with a top inflow of ~17,000 cfs in February. The median and mean release from previous Water Years is shown in a dotted and dashed line. The 90% - 10% and 75% - 25% are shown through orange and purple shading.

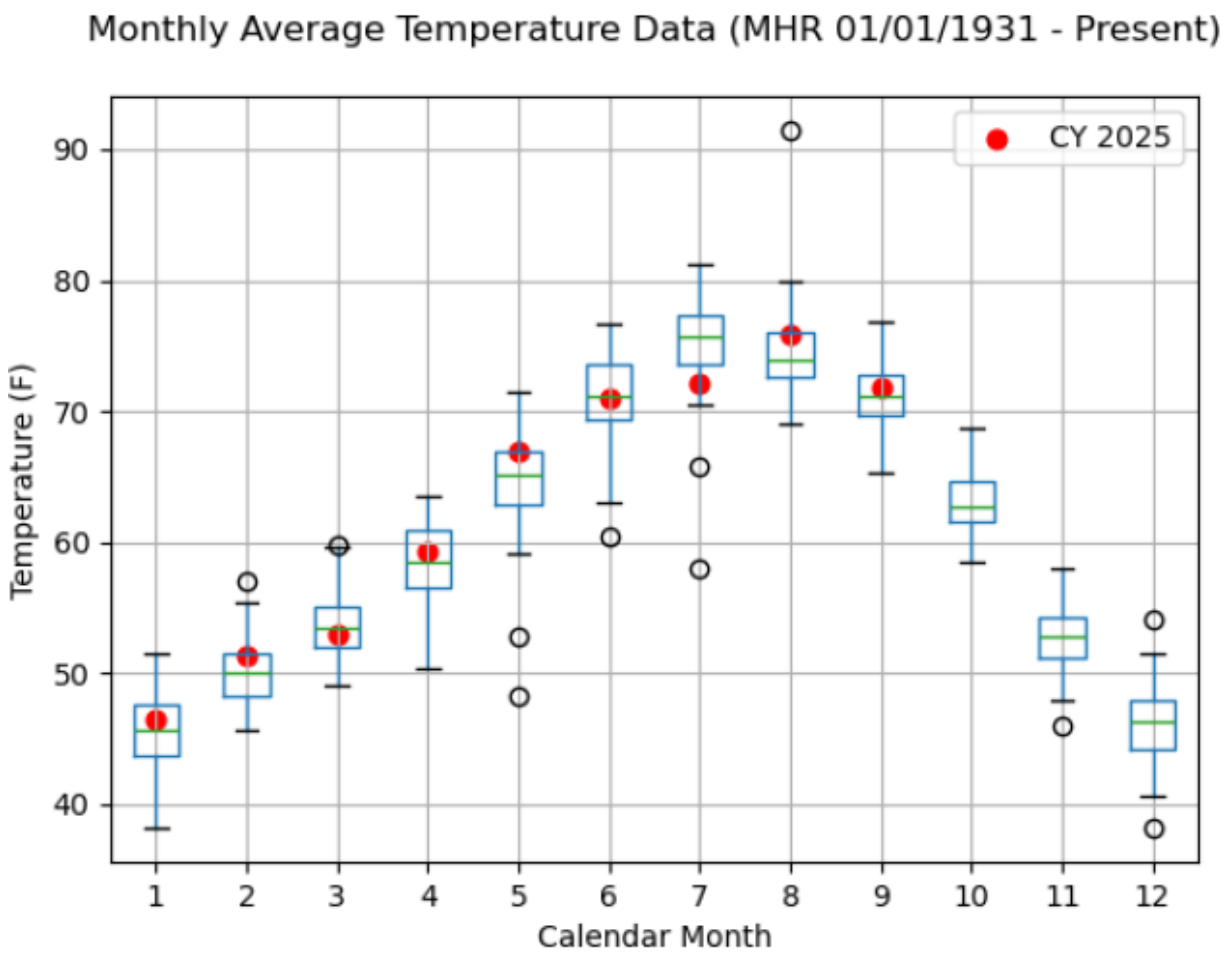

Figure 13. Monthly Average Temperature Data (MHR 01/01/1931 – Present

Figure 13 is a plot graph showing the monthly average temperature data from January 1st 1931 to present. Temperature in degrees Fahrenheit for calendar months (1 – 12). The highest temperature typically occurs in months 6-8 and is generally above 70 degrees.

Snowpack Product Comparison

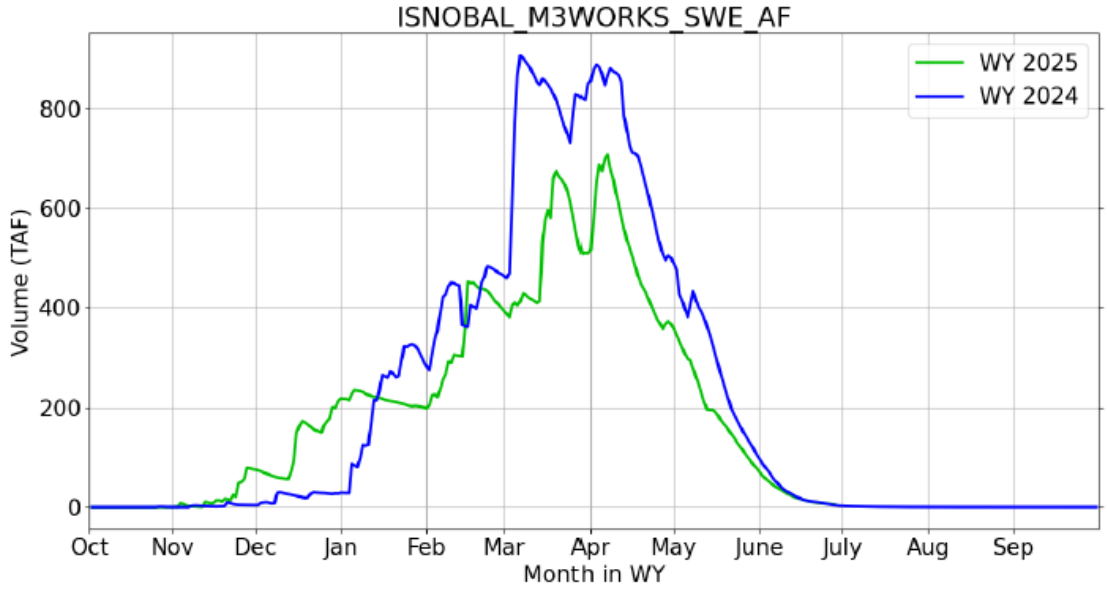

Figure 14. Snowpack Comparison WY 2024 and 2025.

Figure 14 is a line graph showing snowpack volume comparison in thousand-acre feet from October to September. Water Year 2024 production is shown in a blue line with a high of ~925 thousand-acre feet in early March and April. Water Year 2025 production is shown in green with a high of ~700 thousand-acre feet in mid-March and early April.

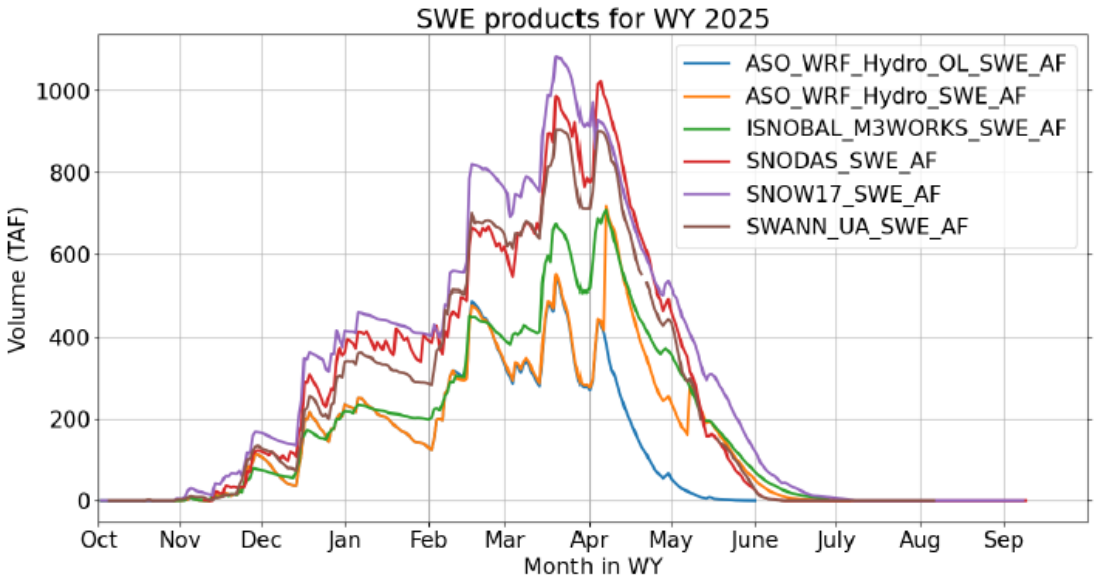

Figure 15. Snowpack Model Outputs

Figure 15 is a line graph depicting different hydrological modeling outputs for snowpack production in thousand-acre feet from October to September.

Draft July 2025 Outlook

50% Inflow/Runoff Exceedance Hydrology

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

Facility	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Folsom Storage	476	419	394	386	395	455	552	741	887	957	952	763	609
Folsom Elevation	N/A	406	402	401	402	411	423	444	458	464	464	446	429

Monthly River Release (TAF/cfs)

Facility	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
American TAF	N/A	101	105	101	105	92	167	123	280	393	226	307	198
American cfs	N/A	1700	1705	1700	1700	1500	3000	2000	4700	6400	3800	5002	3223

90% Inflow/Runoff Exceedance Hydrology

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

Facility	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Folsom Storage	476	419	382	351	343	344	391	502	645	755	678	584	471
Folsom Elevation	N/A	406	400	396	394	395	402	417	433	445	437	427	413

Monthly River Release (TAF/cfs)

Facility	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
American TAF	N/A	101	77	74	61	61	56	61	63	64	149	154	154
American cfs	N/A	1700	1250	1250	1000	1000	1000	1000	1065	1045	2502	2502	2500

Lower American River Dissolved oxygen monitoring

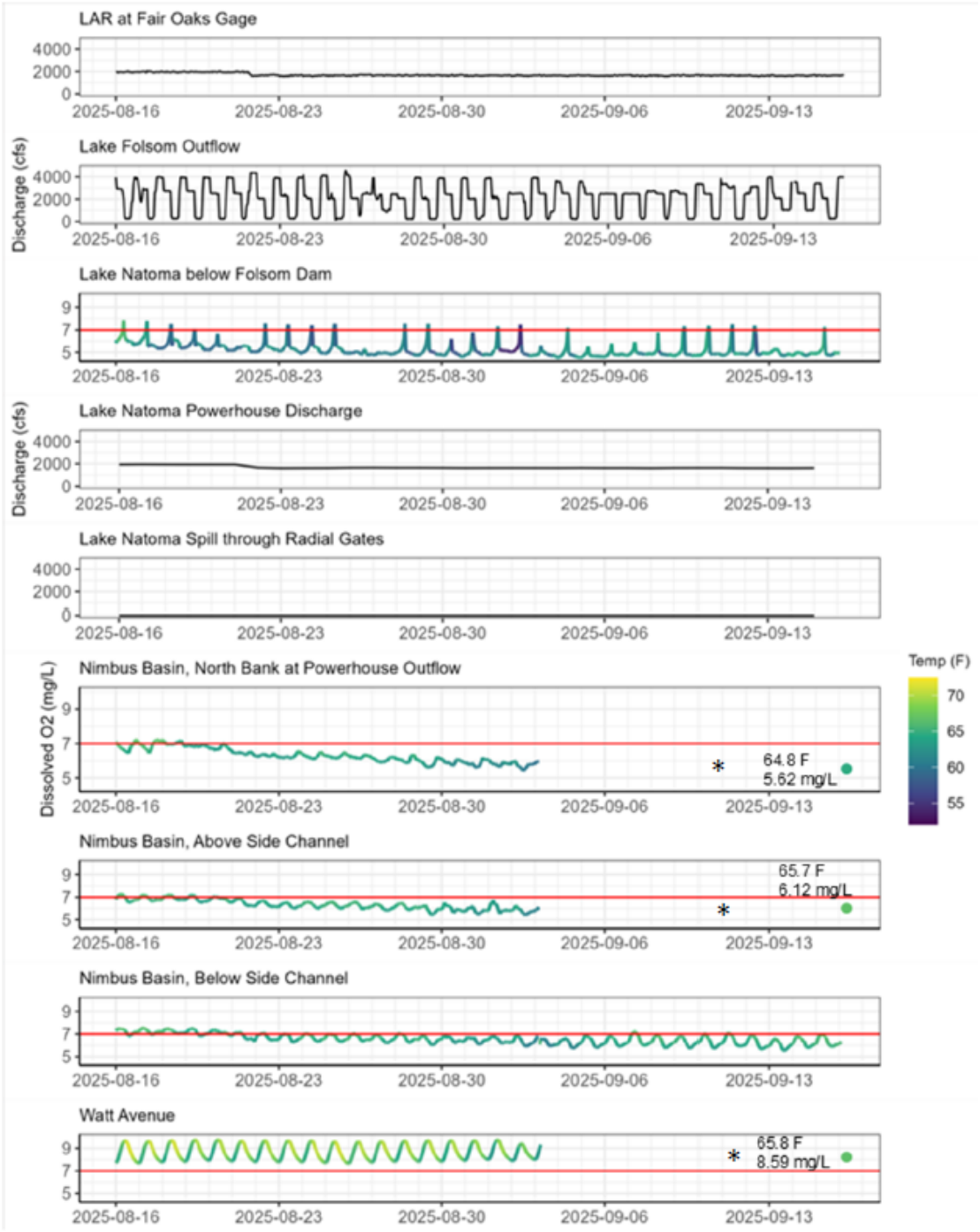

Figure 16. Dissolved oxygen through September 13 2025

Figure 16 is a series of line graphs. Each line graph is at different locations along the lower American River depicting discharge, dissolved oxygen gages, and temperature at the Fair Oaks Gage, Lake Natoma Powerhouse discharge and spill through radial gates, Nimbus basin outflow and above side channel dissolved oxygen.

* Logger data did not download properly on 9/16 from the Powerhouse Outflow, Above Side Channel, and Watt Avenue loggers, likely due to an issue with new sensor caps that were installed on 9/3. Grab sample was recorded in the field using handheld YSI DO meter and loggers were replaced on 9/17.

The next DO logger download is scheduled for 30 September 2025.