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, May 21, 2026

Agenda

1. Introductions
2. Announcements
3. Operations Forecast
    a. SMUD
    b. PCWA
4. Central Valley Operations
    a. Discussion on Draft 2026 Temperature Management Plan
5. Fisheries Update
    a. CDFW
    b. CFS
6. Next Meetings:
    a. Regular Monthly ARG Meeting – Thursday, June 18, 1:30-3:30pm

American River Group - SMUD Update

Data Current as of 05/18/2026

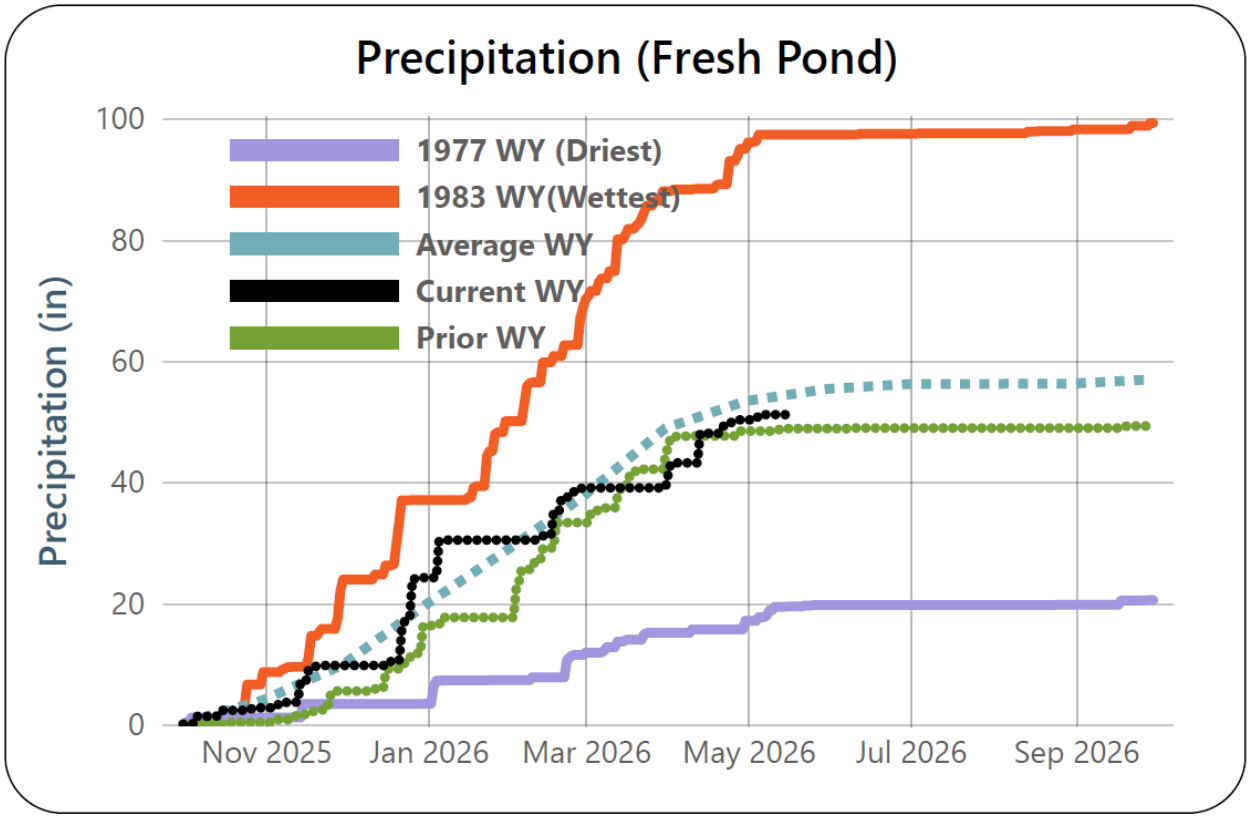

Figure 1. Fresh Pond Precipitation

Figure 1 is a line graph of fresh pond precipitation in inches for October 2025 – September 2026. 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 93.8% of the average to date and 89.8% of the water year average.

Table 1. Fresh Pond Precipitation

Month	Current Water Year	Historical Average	% of Historical Average
October	2.70	3.99	68%
November	7.00	5.87	119%
December	14.50	9.88	147%
January	6.20	9.16	68%
February	8.55	8.70	98%
March	0.08	11.28	1%

Month	Current Water Year	Historical Average	% of Historical Average
April	11.21	4.46	251%
May	0.87	2.02	43%
June	0.00	0.78	0%
July	0.00	0.04	0%
August	0.00	0.04	0%
September	0.00	0.72	0%
Total	51.11	56.94	90%

* Month to date total, full month historical average.

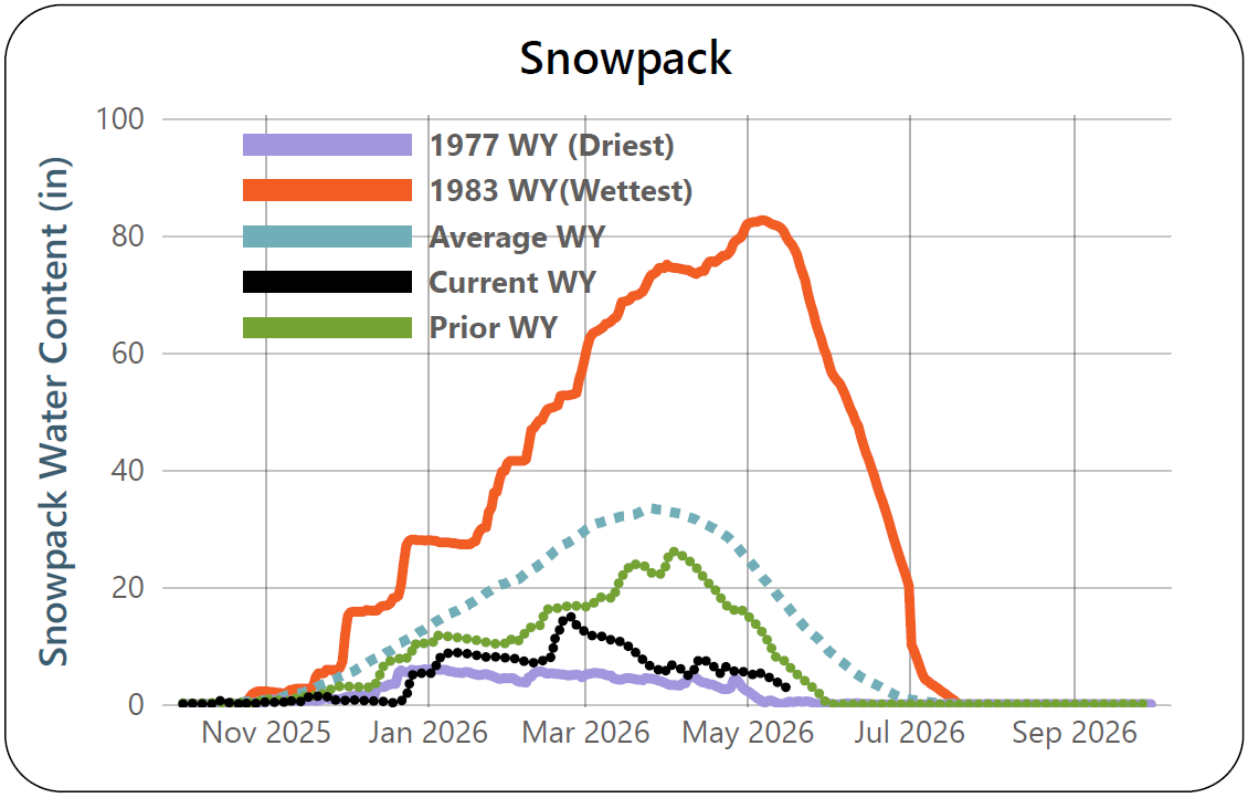

Figure 2. Snowpack

Figure 2 is a line graph of snowpack water content in inches for October 2025- September 2026. 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 15.2% of average to date and 6.0% of the April 1 average.

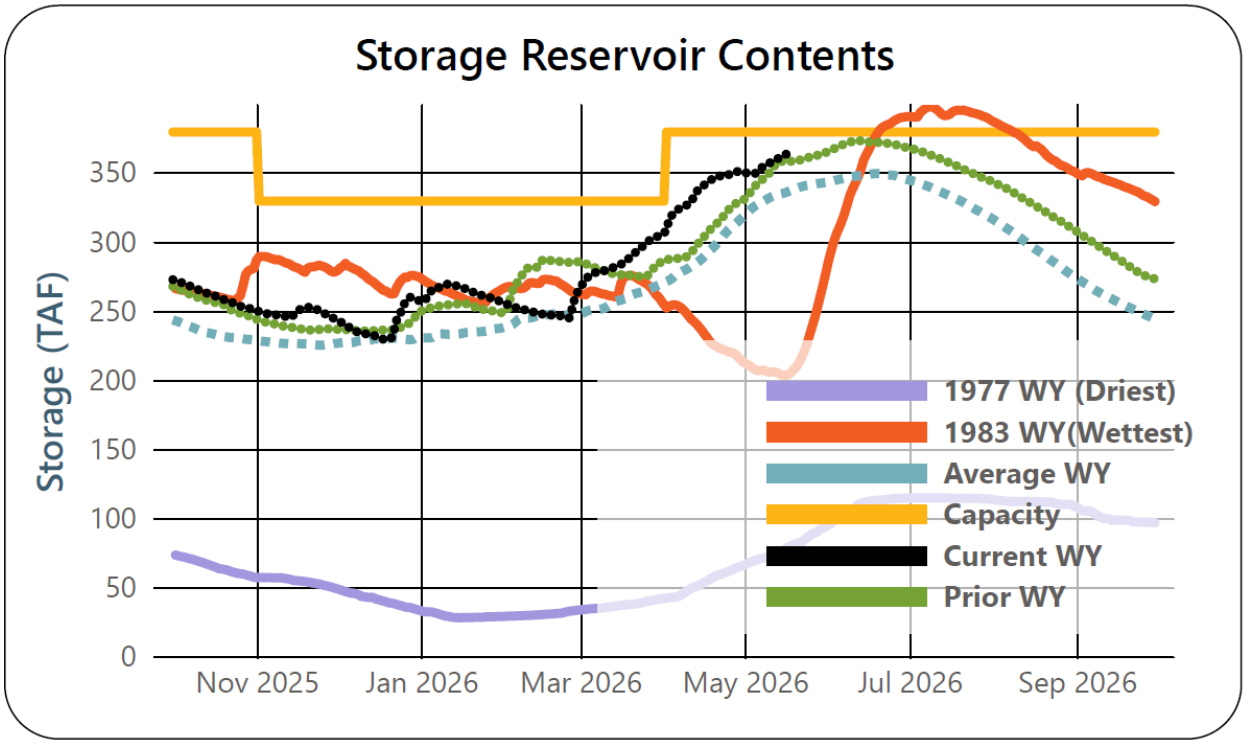

Figure 3. Storage Reservoir Contents

Figure 3 is a line graph of SMUD storage reservoir contents for October 2025 through September 2026. 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	67,214	97.0%	59,715	86%	59,624	86%
Ice House Reservoir	43,500	38,581	88.7%	41,433	95%	37,935	87%
Union Valley Reservoir	266,370	258,435	97.0%	256,622	96%	244,030	92%
Total Reservoir Storage	379,180	364,230	96.1%	357,769	94%	341,589	90%

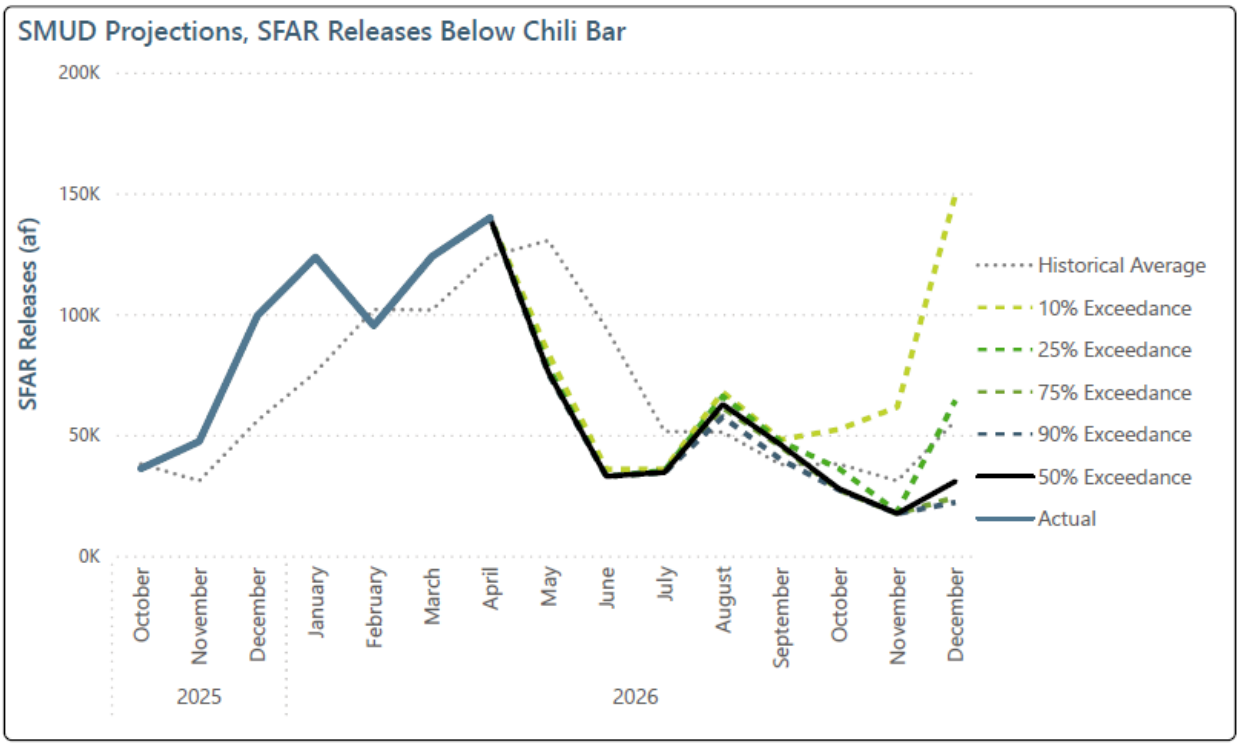

Figure 4. Chili Bar releases into the South Fork American River. Projections based on forecast from May 18, 2026.

Figure 4 is a line graph of observed and projected releases below Chili Bar from October 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% exceedance 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)
Actual	Oct-25	589	36,150	36,150	36,150
Actual	Nov-25	797	47,329	47,329	47,329
Actual	Dec-25	1,619	99,405	99,405	99,405
Actual	Jan-26	2,013	123,558	123,558	123,558
Actual	Feb-26	1,718	95,255	95,255	95,255
Actual	Mar-26	2,017	123,809	123,809	123,809

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)
Actual	Apr-26	2,355	139,898	139,898	139,898
Forecast	May-26	1,240	76,113	75,536	83,759
Forecast	Jun-26	554	32,911	32,911	35,901
Forecast	Jul-26	563	34,576	34,447	35,820
Forecast	Aug-26	1,021	62,666	57,484	67,722
Forecast	Sep-26	773	45,912	39,843	48,098
Forecast	Oct-26	452	27,746	27,277	52,307
Forecast	Nov-26	294	17,471	17,471	61,530
Forecast	Dec-26	502	30,819	22,105	149,367

PCWA MFP Operations Overview for American River Operations Group (Real Time Data as of November 15, 2023)

- French Meadows Storage = 127,000 AF of 136,405 AF = 93% Capacity
    - MFAR above FM Inflow (R24) =7-day AVG ~130 cfs
        - 30 day AVG 210 fs; Peak = 500 cfs (4/25)
- Hell Hole Storage = 199,000 AF of 207,590 AF = 96% Capacity
    - Five Lakes Inflow (R23) = 7-day AVG ~80 cfs
        - 30 day AVG 600 cfs; Peak = 1,225 cfs (4/27)
    - Rubicon Inflow (R22) = 7-day AVG ~ 110 cfs
        - 30 day AVG 190 cfs; Peak = 500 cfs (5/4)
- Combined Storage (FM+HH) = 326,000 AF/342,590 AF = 95% Capacity; 122% of Historical AVG (66’-25’)
- MFAR @ R11: 7-day AVG ~830 cfs
- NFAR @ ARPS: 7-day AVG ~3000 cfs
- Combined Carryover Storage flow on 12/19/25 @ 157,542 AF
- Combined storage for the last 30 days => +600 AF
    - March 2026 Combined MFP Inflow = 56,838 AF
    - April 2026 Combined MFP Inflow = 59,827 AF
    - May 2026 Combined MFP Inflow to date = 24,931 AF
- Currently in a planned annual maintenance for French Meads PH through 5/31

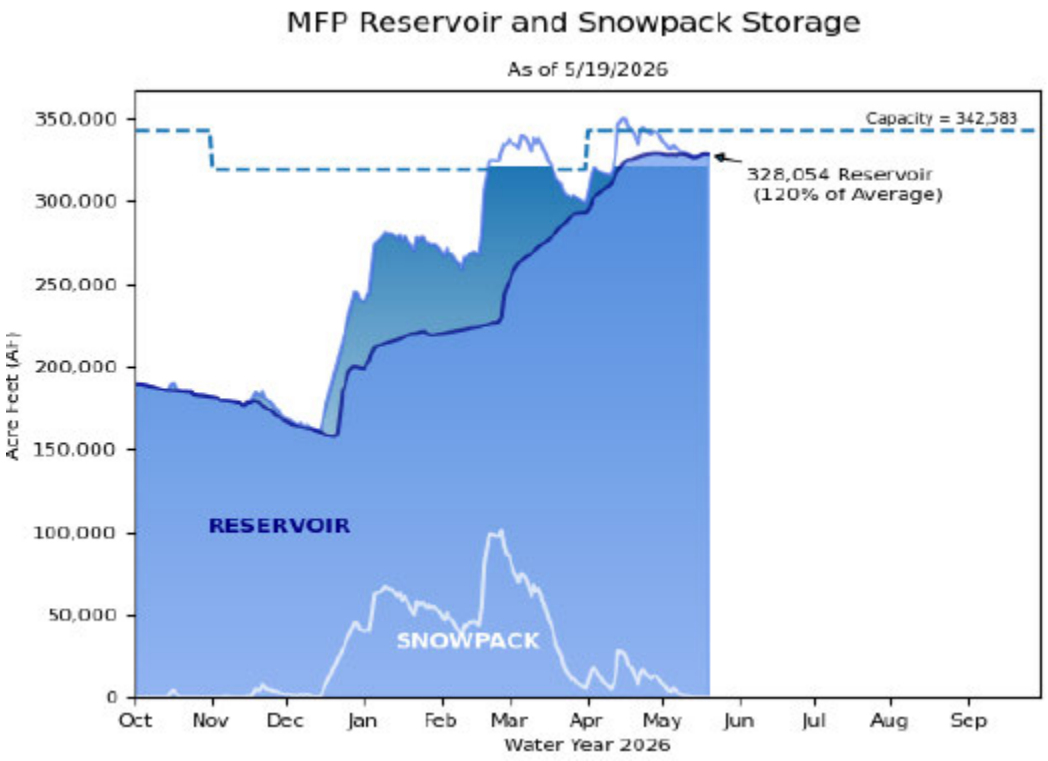

Figure 5. MFP Reservoir and Snowpack Storage as of 5/19/2026

Figure 5 shows reservoir and snowpack storage in acre-feet for Water Year 2026, from October through September, with a dashed line marking reservoir capacity at 342,583 acre-feet. Reservoir storage declines slightly through December before rising sharply in January and February, remaining near capacity through May and ending at 328,054 acre-feet (120% of average). Snowpack builds to a peak of approximately 90,000 acre-feet in March before melting out by late May.

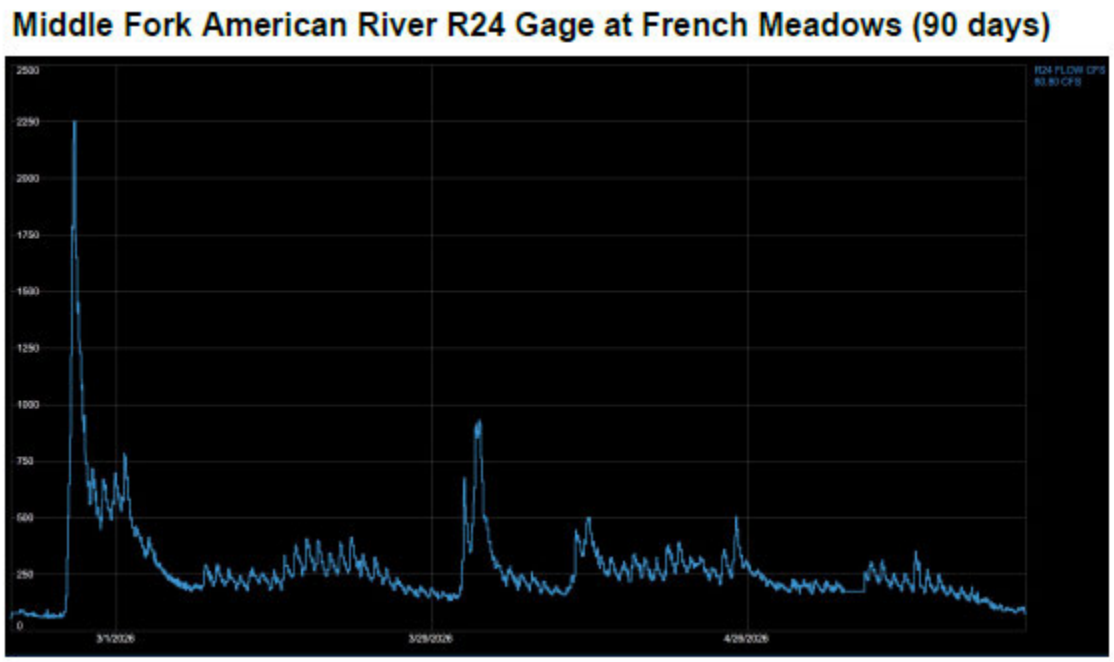

Figure 6. Middle Fork American River R24 Gage at French Meadows (90 days).

Figure 6 shows streamflow in cubic feet per second (CFS) at the R24 gage from approximately late February through late April 2026. Flow spikes sharply to a peak of approximately 2,300 CFS in early March, followed by a series of smaller daily fluctuating peaks ranging between roughly 600–900 CFS through mid-to-late March, coinciding with a secondary spike near 1,150 CFS around March 20. Flows then gradually decline through April, settling into a diurnal snowmelt pattern with daily peaks decreasing from around 700 CFS to below 250 CFS by late April.

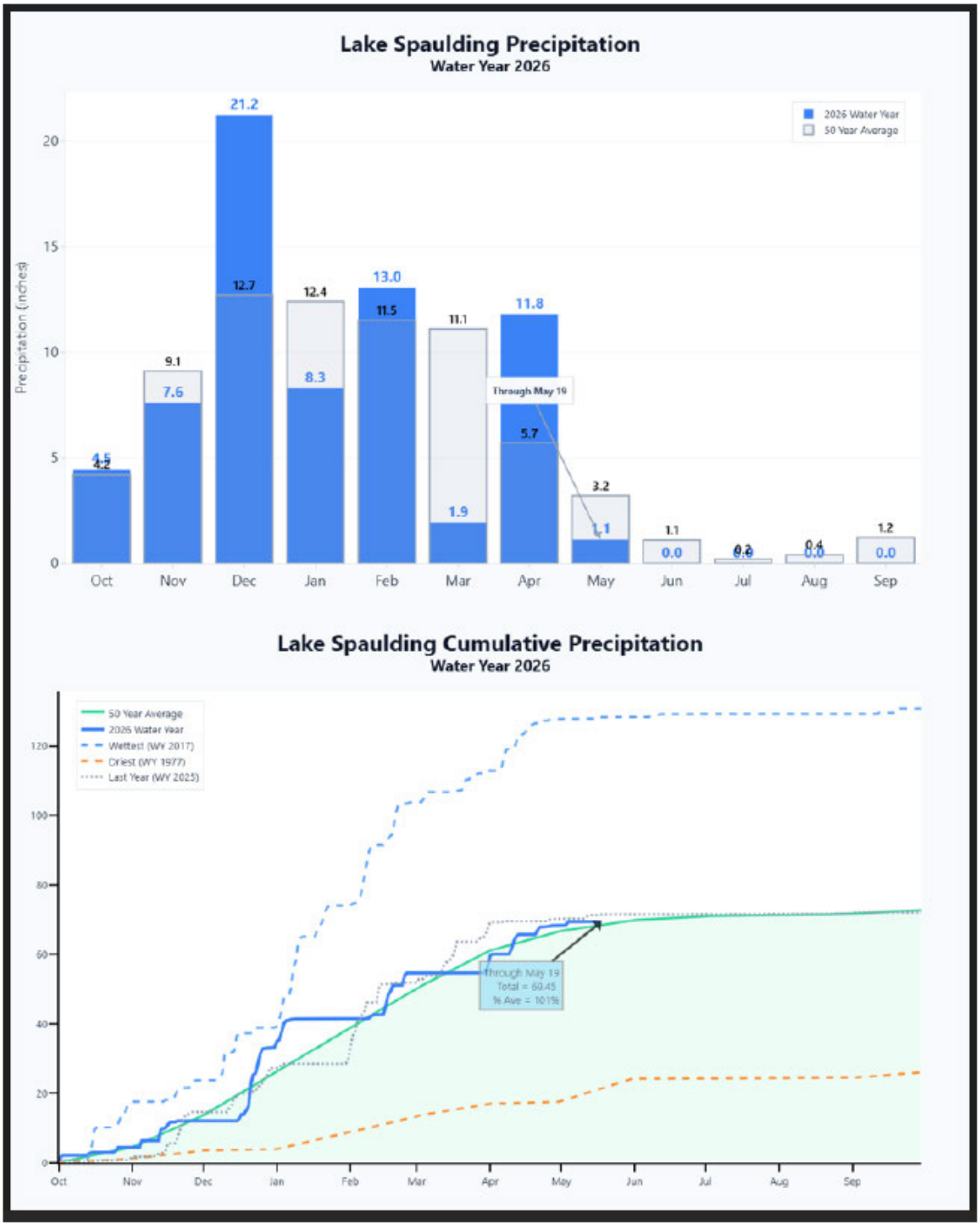

Figure 7. Lake Spaulding Precipitation, Water Year 2026.

Figure 7 has two graphs. The first is a bar graph showing total precipitation over time, comparing the 2026 water year to the 50-year average by month. The second is a line graph comparing cumulative precipitation with the 50-year average, the 2026 water year, the wettest water year, the driest water year, and the last water year. Totals through May 19 are 60.45 inches with a 50-year average of 59.85 inches (101% of average).

Table 4. Reservoir Releases in Cubic Feet/Second

Reservoir	Dam	WY 2025	WY 2026	15 Yr Median
Trinity	Lewiston	1,486	1,010	1,592
Sacramento	Keswick	8,957	10,005	8,700
Feather	Oroville (SWP)	1,700	1,050	2,500
American	Nimbus	3,485	2,551	2,551
Stanislaus	Goodwin	1,202	2,207	1,202
San Joaquin	Friant	569	510	534

Table 5. Storage in Major Reservoirs in Thousands of Acre-Feet

Reservoir	Capacity	15 Yr Avg	WY 2025	WY 2026	% of 15 Yr Avg
Trinity	2,448	1,752	2,241	2,184	125
Shasta	4,552	3,632	4,295	4,066	112
Folsom	977	797	924	950	119
New Melones	2,420	1,530	1,962	1,854	121
Fed. San Luis	966	623	696	764	123
Total North CVP	11,363	8,333	10,118	9,818	118
Millerton	521	371	456	502	135
Oroville (SWP)	3,425	2,738	3,394	3,383	124

Table 6. Accumulated Inflow for Water Year to Date in Thousands of Acre-Feet

Reservoir	Current WY 2026	WY 1977	WY 1983	15 Yr Avg	% of 15 Yr Avg
Trinity	1,014	145	1,684	907	112
Shasta	4,018	1,729	8,805	3,883	103
Folsom	2,009	255	4,639	1,956	103
New Melones	601	N/A	1,474	667	90
Millerton	982	124	2,155	861	114

Table 7. Accumulated Precipitation for Water Year to Date in Inches

Reservoir	Current WY 2026	WY 1977	WY 1983	Average (N Years)	% of Average	Last 24 Hours
Trinity at Fish Hatchery	29.80	12.06	54.59	28.86 (66)	103	0.00
Sacramento at Shasta Dam	65.81	15.49	112.07	56.76 (71)	116	0.00
American at Blue Canyon	59.36	15.64	103.28	61.97 (52)	96	0.00
Stanislaus at New Melones	27.91	N/A	45.33	26.03 (49)	107	0.00
San Joaquin at Huntington Lk	31.21	15.70	80.80	38.21 (53)	82	0.00

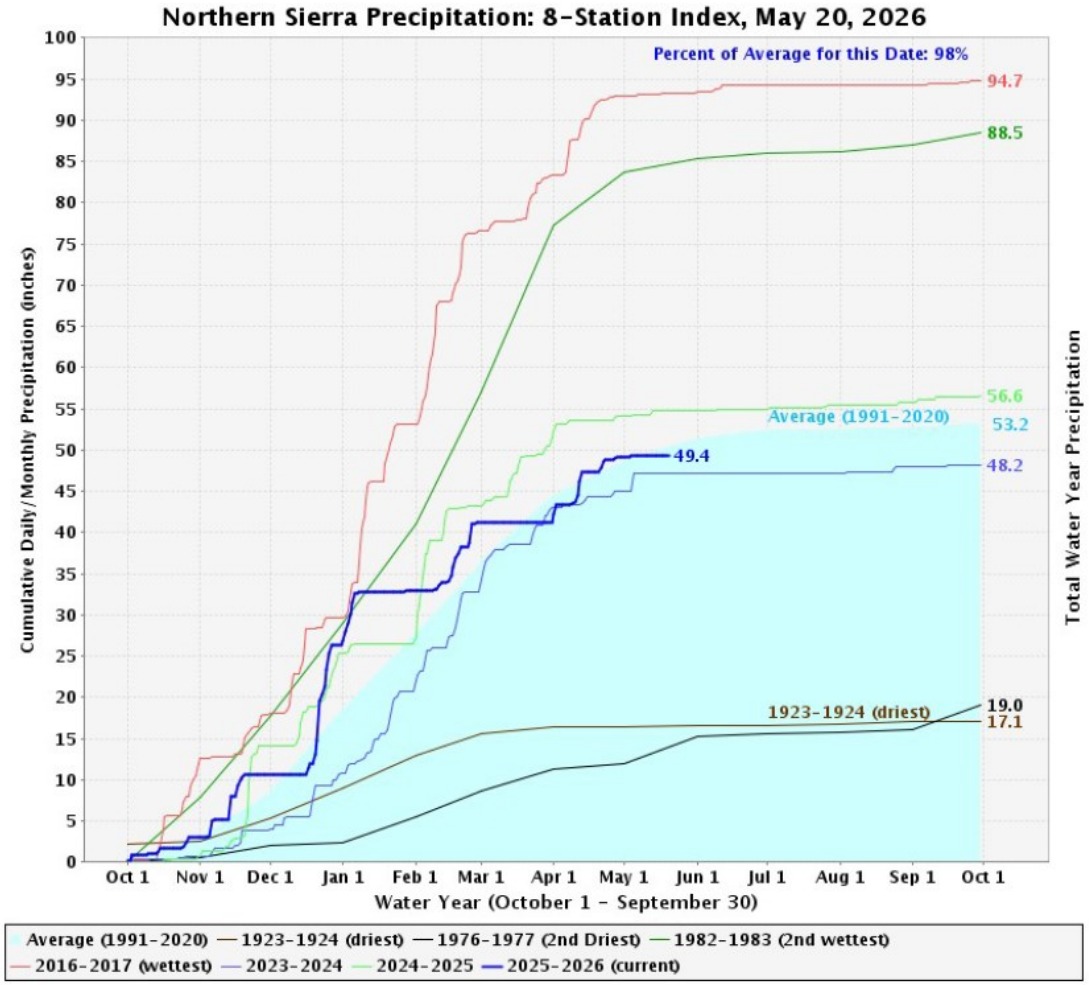

Figure 8. Total and Daily/Monthly Precipitation for Water Year 2026

Figure 8 is a graph depicting total year precipitation and cumulative daily/monthly precipitation in inches for the Northern Sierra 8-Station Index. The average for 1991–2020 is shown as a shaded blue area (53.2 inches), 2016–2017 daily precipitation is the wettest at 94.7 inches, daily precipitation for 1982–1983 is the 2nd wettest at 88.5 inches, 2024–2025 daily precipitation is at 56.6 inches, 2023–2024 daily precipitation is at 48.2 inches, the current water year (2025–2026) is at 49.4 inches (98% of average for this date), 1976–1977 (2nd driest) is at 19.0 inches, and 1923–1924 (driest) is at 17.1 inches.

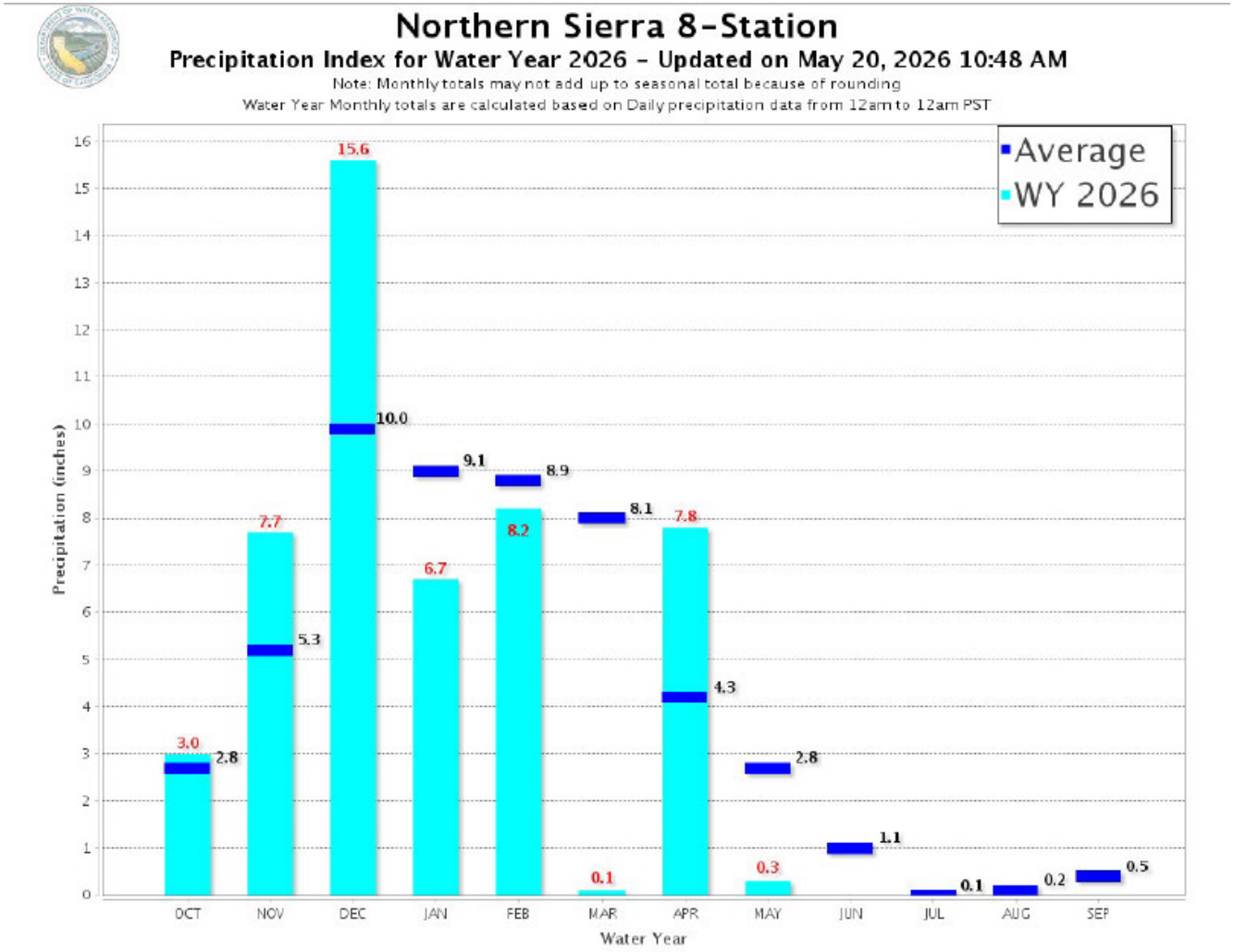

Figure 9. Northern Sierra 8-Station Precipitation Index

Figure 9 displays monthly precipitation totals for Water Year (WY) 2026 compared to the long-term average for the Northern Sierra 8-Station Index. Bars show observed WY 2026 precipitation through May, while markers indicate the historical average by month. The figure shows above-average precipitation in October through February, with March considerably below the historical average at 0.1 inches against a 8.1-inch average, while April and May also fell below average.

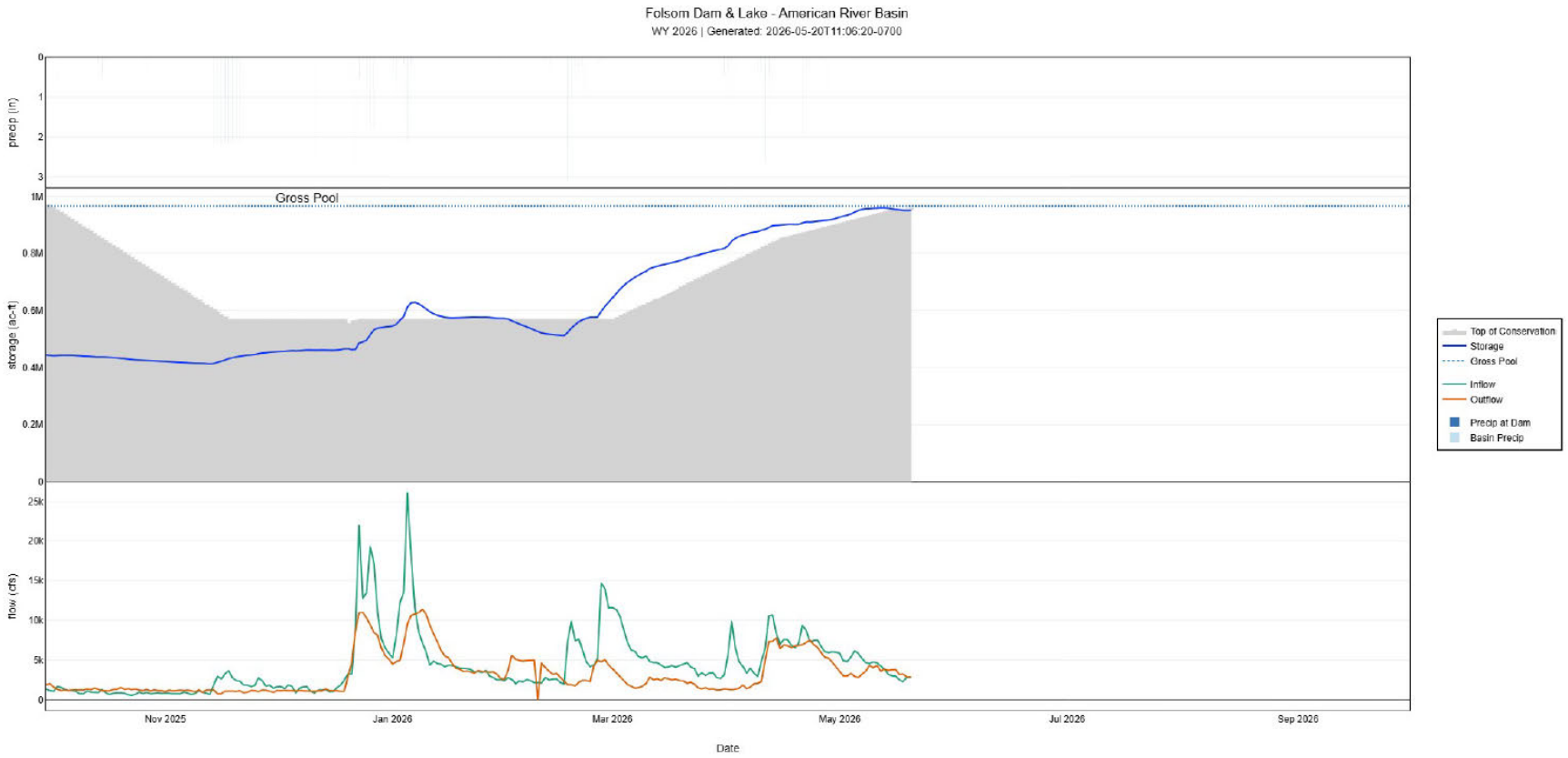

Figure 10. Folsom Damn and Lake Flow, Storage, and Precipitation Totals

Figure 10 shows precipitation, storage, and flow data for Folsom Dam and Lake on the American River Basin for Water Year 2026. Storage (blue line) begins near 450,000 acre-feet, fluctuates through winter, then climbs steadily from March through May to reach gross pool capacity by mid-May. Inflow (teal) spikes above outflow (orange) during high-flow events, peaking above 25,000 cfs in early January and near 15,000 cfs in early March.

Table 8. April 2026 | Folsom Lake Daily Operations | Run Date: 05/10/2026

Day	Elev	Storage (1000 Acre-Feet) in Lake	Storage (1000 Acre-Feet) Change	Computed * Inflow C.F.S.	Release - C.F.S. River Power	Release - C.F.S. River Spill	Release - C.F.S. River Outlet	Pumping Plant	Evap. - C.F.S.	Evap. - Inches	Precip Inches
N/A	N/A	817.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	451.97	825.8	8.5	5,606	1,223	0	0	112	0	0.00	0.32
2	453.60	842.8	17.0	9,894	1,176	0	0	106	55	0.16	0.07
3	454.57	853.0	10.2	6,536	1,224	0	0	127	56	0.16	0.00
4	455.19	859.5	6.5	4,810	1,334	0	0	128	56	0.16	0.00
5	455.62	864.1	4.5	4,218	1,699	0	0	150	77	0.22	0.00
6	455.97	867.8	3.7	3,368	1,278	0	0	140	84	0.24	0.00
7	456.40	872.3	4.6	3,983	1,466	0	0	150	63	0.18	0.00
8	456.63	874.8	2.4	3,323	1,888	0	0	140	63	0.18	0.00
9	456.79	876.5	1.7	2,918	1,909	0	0	151	0	0.00	0.38
10	457.27	881.6	5.1	4,889	2,182	0	0	127	0	0.00	0.38
11	457.55	884.6	3.0	6,504	4,889	0	0	106	0	0.00	2.62
12	458.15	891.0	6.4	10,563	7,206	0	0	120	0	0.00	0.44
13	458.75	897.4	6.4	10,661	5,945	1,305	0	118	43	0.12	0.02
14	458.85	898.5	1.1	8,365	6,420	1,243	0	106	54	0.15	0.00
15	458.94	899.5	1.0	6,984	4,840	1,512	0	81	64	0.18	0.00

Day	Elev	Storage (1000 Acre-Feet) in Lake	Storage (1000 Acre-Feet) Change	Computed * Inflow C.F.S.	Release - C.F.S. River Power	Release - C.F.S. River Spill	Release - C.F.S. River Outlet	Pumping Plant	Evap. - C.F.S.	Evap. - Inches	Precip Inches
16	459.05	900.7	1.2	7,616	5,335	1,486	0	91	107	0.30	0.00
17	459.17	902.0	1.3	7,558	6,682	0	0	116	107	0.30	0.00
18	459.21	902.4	0.4	6,851	4,725	1,719	0	117	72	0.20	0.00
19	459.15	901.7	-0.6	6,544	5,219	1,444	0	122	86	0.24	0.00
20	459.19	902.2	0.4	7,136	6,700	4	0	128	86	0.24	0.00
21	459.64	907.0	4.9	9,388	6,838	0	0	99	0	0.00	1.98
22	459.93	910.2	3.1	8,777	5,081	2,026	0	91	0	0.00	0.27
23	459.89	909.7	-0.4	7,318	4,790	2,645	0	101	0	0.00	0.27
24	459.98	910.7	1.0	7,469	5,934	880	0	111	54	0.15	0.00
25	460.14	912.4	1.7	7,524	6,496	0	0	110	43	0.12	0.00
26	460.28	914.0	1.5	6,716	4,758	1,066	0	104	22	0.06	0.07
27	460.39	915.2	1.2	6,036	4,154	1,125	0	108	47	0.13	0.00
28	460.50	916.4	1.2	5,920	4,189	949	0	115	65	0.18	0.00
29	460.72	918.7	2.4	6,028	4,261	371	0	116	76	0.21	0.00
30	461.04	922.2	3.5	5,975	4,018	0	0	128	76	0.21	0.00
Totals	N/A	N/A	104.9	199,478	123,859	17,775	0	3,519	1,456	4.09	6.82
Acre-Feet	N/A	N/A	104,900	395,665	245,674	35,257	0	6,980	2,888	N/A	N/A

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

Summary: Release (acre-feet)

Power	245,674
Spill	35,257
Outlet	0
Pumping Plant	6,980
Total Releases	287,911

Summary: Precipitation (Month/Inches)

This month	6.82
October 1, 2025 to date	38.35

Table 9. May 2026 | Folsom Lake Daily Operations | Run Date: 05/20/2026

Day	Elev	Storage (1000 Acre-Feet) in Lake	Storage (1000 Acre-Feet) Change	Computed * Inflow C.F.S.	Release - C.F.S. River Power	Release - C.F.S. River Spill	Release - C.F.S. River Outlet	Pumping Plant	Evap. - C.F.S.	Evap. - Inches	Precip Inches
N/A	N/A	922.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	461.44	926.6	4.4	5,851	3,451	0	0	123	76	0.21	0.00
2	461.78	930.3	3.7	4,939	2,873	0	0	133	62	0.17	0.00
3	462.10	933.8	3.5	4,822	2,873	0	0	126	58	0.16	0.00
4	462.47	937.9	4.1	5,413	3,192	0	0	116	58	0.16	0.00
5	463.05	944.2	6.4	6,146	2,831	0	0	104	0	0.00	0.05
6	463.59	950.2	6.0	5,821	2,057	617	0	103	40	0.11	0.00
7	463.94	954.0	3.9	5,216	3,117	0	0	112	40	0.11	0.00
8	464.12	956.0	2.0	4,671	2,736	717	0	136	77	0.21	0.00
9	464.15	956.4	0.3	4,585	4,195	0	0	134	88	0.24	0.00
10	464.26	957.6	1.2	4,756	3,235	673	0	145	88	0.24	0.00
11	464.31	958.2	0.6	4,657	4,119	15	0	155	88	0.24	0.00
12	464.40	959.1	1.0	4,227	3,445	0	0	154	125	0.34	0.00
13	464.38	958.9	-0.2	3,860	2,963	772	0	142	95	0.26	0.00
14	464.27	957.7	-1.2	3,182	3,161	382	0	155	99	0.27	0.00
15	464.11	955.9	-1.8	3,004	3,081	553	0	151	114	0.31	0.00

Day	Elev	Storage (1000 Acre-Feet) in Lake	Storage (1000 Acre-Feet) Change	Computed * Inflow C.F.S.	Release - C.F.S. River Power	Release - C.F.S. River Spill	Release - C.F.S. River Outlet	Pumping Plant	Evap. - C.F.S.	Evap. - Inches	Precip Inches
16	463.94	954.0	-1.9	2,962	2,767	870	0	153	121	0.33	0.00
17	463.79	952.4	-1.7	2,504	2,748	265	0	171	154	0.42	0.00
18	463.59	950.2	-2.2	2,273	3,073	0	0	160	153	0.42	0.00
19	463.56	949.9	-0.3	2,803	2,720	0	0	148	102	0.28	0.00
Totals	N/A	N/A	27.8	81,692	58,637	4,864	0	2,621	1,638	4.48	0.05
Acre-Feet	N/A	N/A	27,800	162,036	116,306	9,648	0	5,199	3,249	N/A	N/A

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

Summary: Release (acre-feet)

Power	116,306
Spill	9,648
Outlet	0
Pumping Plant	5,199
Total Releases	131,153

Summary: Precipitation (Month/Inches)

This month	0.05
October 1, 2025 to date	38.40

Table 10. April 2026 | Lake Natoma Daily Operations | Run Date: 05/10/2026

Day	Elev	Storage (Acre-Feet) in Lake	Storage (Acre-Feet) Change	Computed * Inflow C.F.S.	Release - C.F.S. Folsom South	Release - C.F.S. Power	Release - C.F.S. Spill	Release - C.F.S. Hatchery	Evap. - C.F.S. (1)
N/A	N/A	7,620	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	123.19	7,880	260	1,292	24	1,097	0	40	0
2	123.22	7,894	14	1,171	19	1,103	0	40	2
3	123.30	7,932	38	1,182	14	1,107	0	40	2
4	122.89	7,742	-190	1,310	25	1,280	59	40	2
5	123.32	7,941	199	1,609	25	1,441	0	40	3
6	122.23	7,445	-496	1,267	25	1,449	0	40	3
7	121.80	7,257	-188	1,416	25	911	533	40	2
8	122.87	7,733	476	1,752	25	1,445	0	40	2
9	122.86	7,728	-5	1,839	25	1,777	0	40	0
10	123.62	8,082	354	2,174	25	1,931	0	40	0
11	124.07	8,296	214	4,995	13	3,786	1,048	40	0
12	123.88	8,205	-91	7,230	0	4,987	2,249	40	0
13	123.27	7,918	-287	7,104	0	4,996	2,211	40	2
14	123.94	8,233	315	7,402	0	4,521	2,680	40	2
15	122.81	7,706	-527	6,267	0	4,099	2,392	40	2
16	123.63	8,087	381	6,648	0	4,110	2,302	40	4

Day	Elev	Storage (Acre-Feet) in Lake	Storage (Acre-Feet) Change	Computed * Inflow C.F.S.	Release - C.F.S. Folsom South	Release - C.F.S. Power	Release - C.F.S. Spill	Release - C.F.S. Hatchery	Evap. - C.F.S. (1)
17	123.70	8,120	33	6,515	0	4,234	2,220	40	4
18	123.48	8,017	-103	6,411	0	3,404	3,016	40	3
19	123.87	8,200	183	6,597	0	3,882	2,580	40	3
20	124.12	8,321	121	6,629	0	4,989	1,536	40	3
21	124.50	8,511	190	7,277	0	4,928	2,213	40	0
22	124.14	8,331	-180	7,410	0	4,474	2,987	40	0
23	124.62	8,571	240	7,559	0	3,646	3,752	40	0
24	124.39	8,456	-115	6,916	0	4,695	2,237	40	2
25	124.24	8,381	-75	6,537	6	5,022	1,505	40	2
26	123.42	7,988	-393	5,911	10	3,745	2,313	40	1
27	122.70	7,656	-332	5,335	33	2,634	2,793	40	2
28	123.36	7,960	304	5,202	36	3,385	1,586	40	2
29	123.96	8,242	282	4,686	30	3,346	1,125	40	3
30	124.46	8,491	249	4,168	30	3,969	0	40	3
Totals	N/A	N/A	871	141,811	390	96,393	43,337	1,200	54
Acre-Feet	N/A	N/A	871	281,282	774	191,196	85,959	2,380	107

* Computed inflow is sum of change in storage, releases, and evaporation.
(1) Evaporation records taken from Folsom Pan.

Summary: Release (acre-feet)

Power	191,196
Spill	85,959
Folsom South Canal	774
Hatchery	2,380
Total Releases	280,309

Table 11. May 2026 | Lake Natoma Daily Operations | Run Date: 05/20/2026

Day	Elev	Storage (Acre-Feet) in Lake	Storage (Acre-Feet) Change	Computed * Inflow C.F.S.	Release - C.F.S. Folsom South	Release - C.F.S. Power	Release - C.F.S. Spill	Release - C.F.S. Hatchery	Evap. - C.F.S. (1)
N/A	N/A	8,491	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	124.46	8,491	0	3,598	33	3,522	0	40	3
2	123.88	8,205	-286	3,002	35	2,937	132	40	2
3	123.54	8,045	-160	2,995	35	2,691	308	40	2
4	124.57	8,546	501	3,341	35	3,011	0	40	2
5	124.54	8,531	-15	3,068	35	3,001	0	40	0
6	123.82	8,176	-355	2,896	35	2,999	0	40	1
7	124.29	8,406	230	3,172	43	2,438	534	40	1
8	123.00	7,791	-615	3,493	50	2,387	1,323	40	3
9	123.50	8,026	235	4,139	50	3,363	565	40	3
10	123.01	7,796	-230	3,887	37	2,575	1,348	40	3
11	123.63	8,087	291	4,110	30	3,890	0	40	3
12	122.98	7,782	-305	3,394	30	3,009	465	40	4
13	123.49	8,021	239	3,644	30	2,532	919	40	3
14	123.42	7,988	-33	3,489	30	2,604	829	40	3
15	123.50	8,026	38	3,511	30	2,284	1,134	40	4
16	123.63	8,087	61	3,507	30	2,119	1,283	40	4

Day	Elev	Storage (Acre-Feet) in Lake	Storage (Acre-Feet) Change	Computed * Inflow C.F.S.	Release - C.F.S. Folsom South	Release - C.F.S. Power	Release - C.F.S. Spill	Release - C.F.S. Hatchery	Evap. - C.F.S. (1)
17	123.04	7,810	-277	2,876	30	1,853	1,088	40	5
18	123.03	7,805	-5	2,986	32	1,692	1,220	40	5
19	123.47	8,012	207	2,699	40	2,479	32	40	4
Totals	N/A	N/A	-479	63,807	670	51,386	11,180	760	55
Acre-Feet	N/A	N/A	-479	126,561	1,329	101,924	22,176	1,507	109

* Computed inflow is sum of change in storage, releases, and evaporation.
(1) Evaporation records taken from Folsom Pan.

Summary: Release (acre-feet)

Power	101,924
Spill	22,176
Folsom South Canal	1,329
Hatchery	1,507
Total Releases	126,936

Table 12. Isobath 05/01–05/16 (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
Apr	53.4	53.0	52.7	54.2	55.3	56.3	59.8	4698	N/A	N/A	N/A	N/A
05/01	56.1	52.9	52.5	54.6	56.2	57.4	66.5	3562	927	A39	A1	A61
05/02	56.7	53.6	52.6	54.3	55.6	56.7	60.8	3109	930	A24	A20	A56
05/03	56.6	53.1	52.6	54.4	55.5	56.4	60.9	3039	934	A20	A25	A55
05/04	54.9	52.4	53.1	54.3	54.8	55.4	55.9	3051	938	A1	A41	A58
05/05	53.2	53.2	52.8	53.5	54.8	55.7	58.4	3041	944	A1	A25	A74
05/06	53.1	53.7	54.0	54.5	55.7	56.7	64.6	3039	950	A1	A36	A63
05/07	56.0	55.5	52.7	55.0	57.1	58.4	65.1	3012	954	A1	A30	A69
05/08	58.4	56.8	53.8	55.1	56.6	58.1	64.3	3750	956	A50	A45	A4
05/09	59.9	57.8	52.9	55.6	57.3	58.6	69.1	3968	956	A44	A14	A42
05/10	60.2	58.1	54.0	55.2	56.8	58.2	70.1	3963	958	A50	A1	A49
05/11	60.9	59.4	53.1	55.8	57.4	58.7	73.2	3930	958	A50	A0	A50
05/12	61.4	60.7	53.1	55.1	57.1	58.6	69.9	3514	959	A36	A11	A53
05/13	61.4	61.5	54.7	55.5	57.1	58.3	67.5	3491	959	A51	A24	A26
05/14	62.9	62.6	54.0	56.4	57.9	59.0	70.5	3473	958	A54	A45	A1
05/15	63.9	63.0	54.4	56.5	58.0	59.4	73.9	3458	956	A54	A45	A1
05/16	63.4	62.8	55.1	56.7	58.1	59.2	68.8	3442	954	A52	A48	A1
May	58.7	57.3	53.4	55.2	56.6	57.8	66.2	3428	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	Release (CFS) Nimbus	Storage (TAF) Folsom	USP/LP Unit 1	USP/ LP Unit 2	USP/LP Unit 3
N/A	N/A	N/A	N/A	N/A	N/A	N/A	Total AF	108777	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
X = Exceedances
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

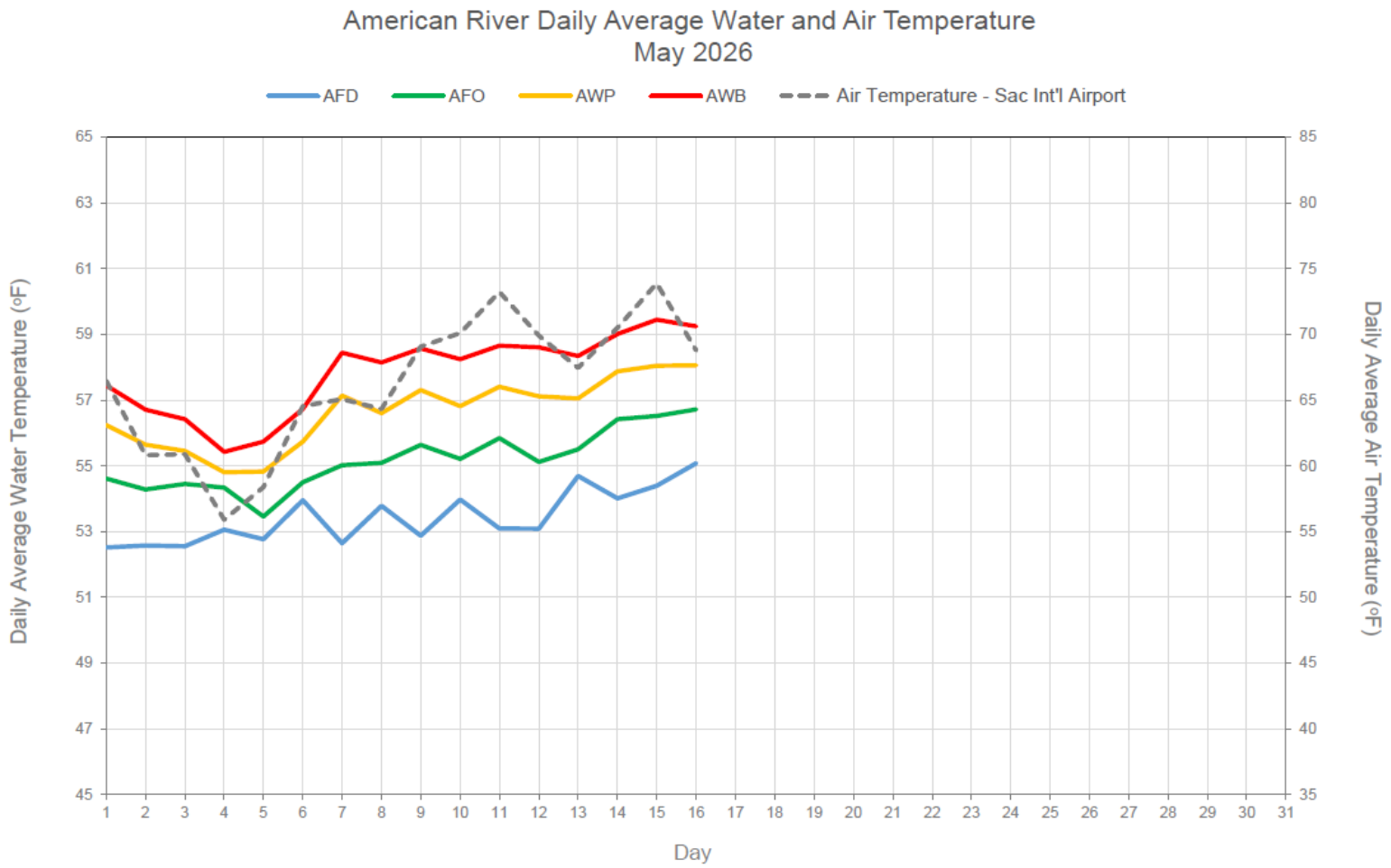

Figure 11. American River Daily Average Water and Air Temperatures

Figure 11 is a line graph comparing daily average water and air temperatures for the first 16 days of May 2026 at the American River. Water temperature from the AFD sensor is shown in light blue, AFO sensor in green, AWP in yellow, and AWB in red, with air temperature at Sacramento International Airport shown in dashed gray. AWB tracks highest among the water temperature sensors, rising from approximately 57.5°F to a peak near 59°F, followed by AWP, AFO, and AFD in descending order. Air temperature fluctuates more sharply than water temperature, dipping to a low near 57°F around Day 4–5 before rising to peaks near 74°F around Days 11 and 15.

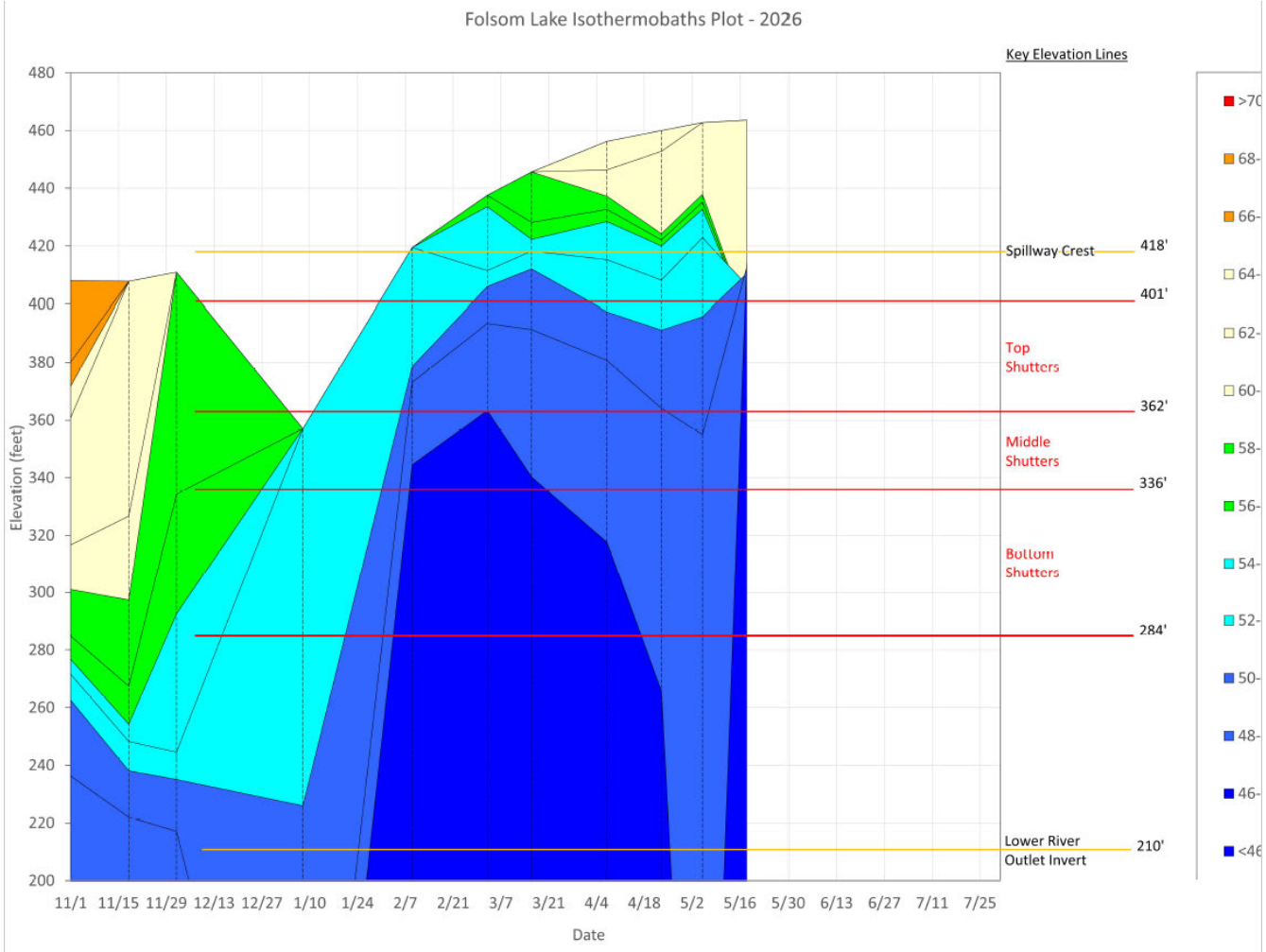

Figure 12. Isobath Plot 11/01 – 05/16

Figure 12 is an isothermobath plot for Folsom Lake from November 2025 through May 2026, showing water temperature by elevation over time, with key elevation lines marked for Spillway Crest (418'), Top Shutters (401'), Middle Shutters (362'), Bottom Shutters (336'), and Lower River Outlet Invert (210'). Elevation declines through December before rising sharply from January through March, reaching near the Spillway Crest by February and holding through mid-May, while warmer temperature bands expand toward the surface as the season progresses.

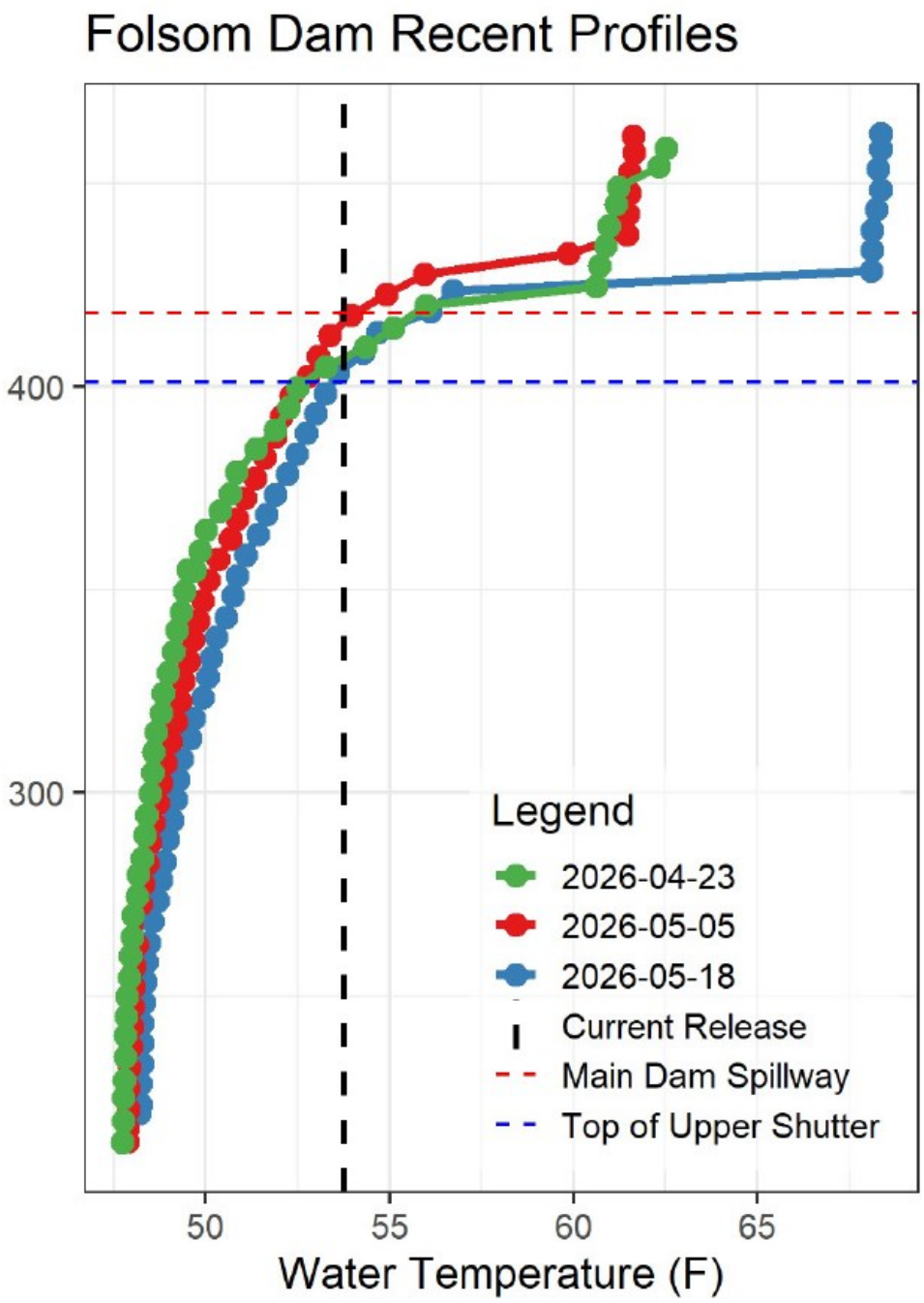

Figure 13. Folsom Dam Recent Profiles.

Figure 13 shows water temperature profiles by elevation at Folsom Dam for three recent dates: April 23, 2026 (green), May 5, 2026 (red), and May 18, 2026 (blue). Reference lines mark the current release temperature (dashed black, approximately 53.5°F), the Main Dam Spillway elevation (dashed red, approximately 418 feet), and the Top of Upper Shutter elevation (dashed blue, approximately 401 feet). All three profiles show a similar pattern, with water temperature increasing steadily with elevation from approximately 47°F near the bottom to around 55–60°F near the spillway elevation, then rising sharply above that point, with the May 18 profile reaching the warmest surface temperatures near 68°F.

American River B120 – Water Year Full Natural Flow Forecasts

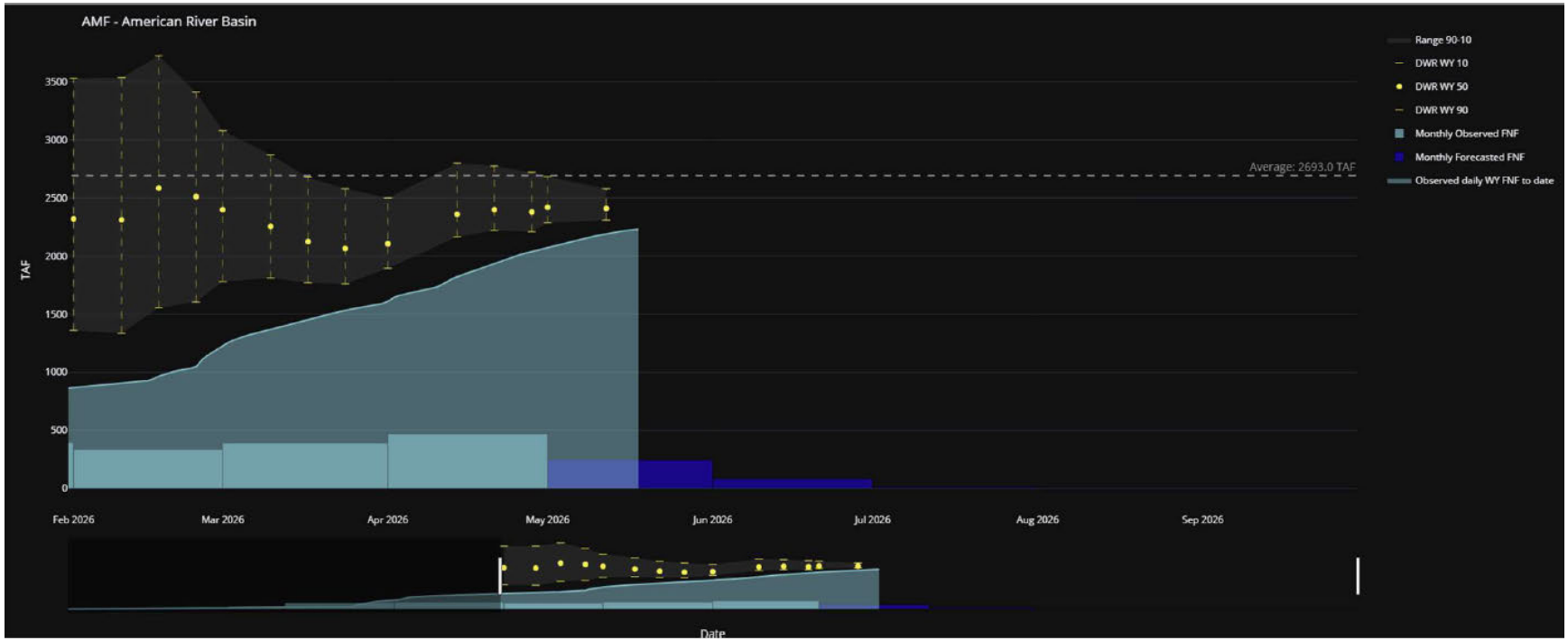

Figure 14. American River B120 — Water Year Full Natural Flow Forecasts.

Figure 14 shows cumulative full natural flow (FNF) in thousand acre-feet (TAF) for the American River Basin from February through September 2026, with a shaded 90-10 forecast range, DWR WY 10/50/90 reference lines, and a long-term average of 2,693.0 TAF (dashed line). Cumulative observed FNF (teal area) rises from approximately 850 TAF in February to about 2,250 TAF by mid-May, tracking below the long-term average throughout.

American River B120 – April - July Full Natural Flow Forecasts

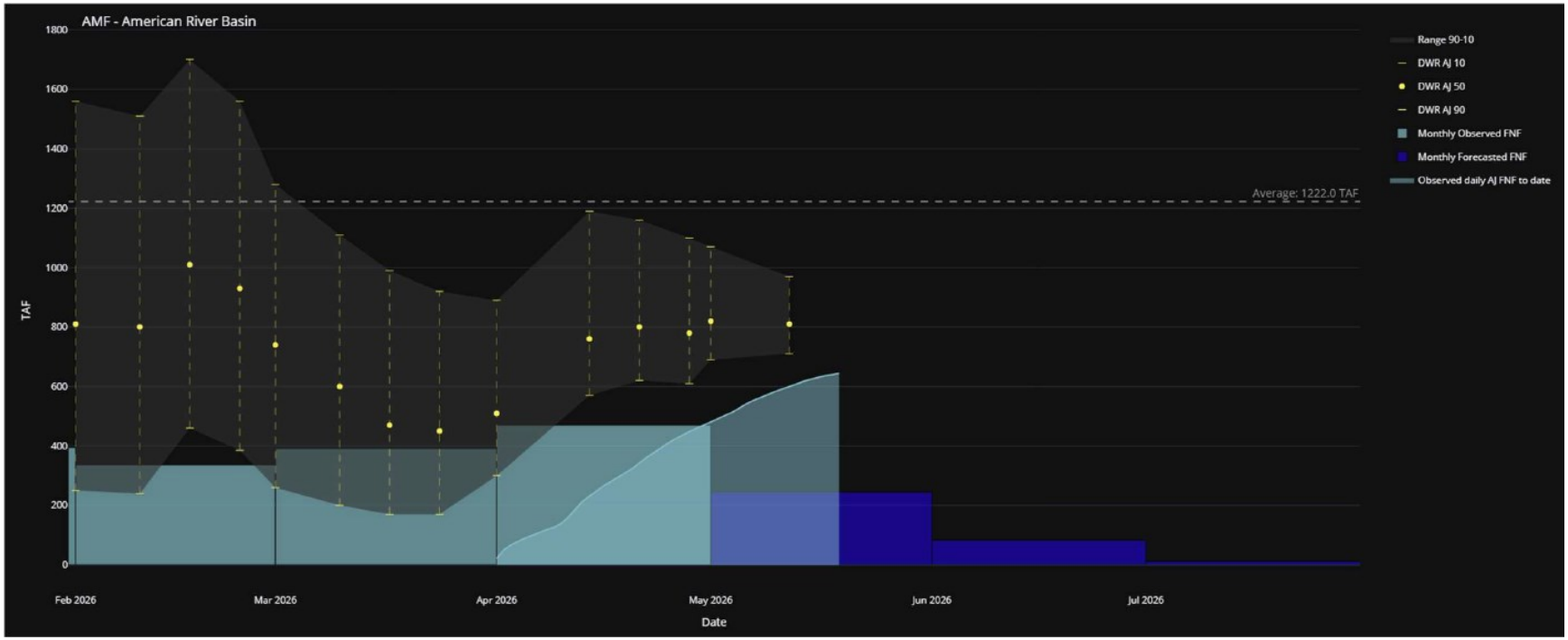

Figure 15. American River B120 — April–July Full Natural Flow Forecasts.

Figure 15 shows cumulative April–July full natural flow (FNF) in thousand acre-feet (TAF) for the American River Basin from February through July 2026, with a shaded 90-10 forecast range, DWR AJ 10/50/90 reference lines, and a long-term average of 1,222.0 TAF (dashed line). Cumulative observed FNF (teal area) rises from approximately 250 TAF in February to about 630 TAF by mid-May, tracking near the lower portion of the forecast range and below the long-term average throughout, while monthly forecasted FNF (dark blue bars) declines from May through July.

Table 13. American River Baseflow Table – WY 2026

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 Jan and Feb)	RDPB-based MRR for steelhead (applicable Feb to May)	Controlling MRR (cfs)	Actual Average Monthly Nimbus releases[2] (cfs)
October	May ARI[3] (50% exceedance)	0	1,614	992	N/A	N/A	992	1,079
November	May ARI[3] (50% exceedance)	0	1,614	992	N/A	N/A	992	1,071
December	May ARI[3] (50% exceedance)	159	1,614	992	N/A	N/A	992	3,638
January	Jan SRI (90% exceedance)	445	13.4 (SRI)	992	992	N/A	992	5,743
February	Feb ARI (90% exceedance)	515	915	673	694	635	694	3,832
March	March ARI (90% exceedance)	572	1,265	1,063	NA	635	1,063	1,959
April	April ARI (90% exceedance)	796	1,321	986	NA	635	986	4,698
May	May ARI (90% exceedance)	N/A	1,488	1,082	NA	635	1,082	3,376[4]
June	May ARI[3] (90% exceedance)	N/A	N/A	1,082	N/A	N/A	1,082	N/A
July	May ARI[3] (90% exceedance)	N/A	N/A	1,595	N/A	N/A	1,595	N/A
August	May ARI[3] (90% exceedance)	N/A	N/A	1,595	N/A	N/A	1,595	N/A
September	May ARI[3] (90% exceedance)	N/A	N/A	1,595	N/A	N/A	1,595	N/A

Table 14. American River Baseflow Table – WY 2027

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 Jan and Feb)	RDPB-based MRR for steelhead (applicable Feb to May)	Controlling MRR (cfs)	Actual Average Monthly Nimbus releases[2] (cfs)
October	May ARI[3] (90% exceedance)	N/A	N/A	795	N/A	N/A	795	N/A
November	May ARI[3] (90% exceedance)	N/A	N/A	795	N/A	N/A	795	N/A
December	May ARI[3] (90% exceedance)	N/A	N/A	795	N/A	N/A	795	N/A

1 Cumulative flood management release
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.
4 Accumulated spill/release as of 5/19/26

90% exceedance starting January 2025 (2024 ROD)

MRR=Minimum Release Requirement
RDPA=Redd Dewatering Protective Adjustment
ARI=American River Index
SRI=Sacramento River Index
N/A = Not Applicable

Draft March 2026 Outlook

50% Inflow/Runoff Exceedance Hydrology

Table 15. Federal End of the Month Storage/Elevation (TAF/Feet) – April 1st 50%

Facility	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Folsom Storage	959	940	774	443	342	277	294	328	380	471	564	753	NA
Folsom Elevation	464	463	447	409	394	383	386	392	400	413	424	445	NA

Table 16. Federal End of the Month Storage/Elevation (TAF/Feet) – May 1st 50%

Facility	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Folsom Storage	NA	949	842	540	396	293	282	283	304	395	488	677	820
Folsom Elevation	NA	463	454	421	403	386	384	384	388	402	415	437	451

Table 17. Monthly River Release (TAF/cfs) – April 1st 50%

Facility	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Cumulative (TAF)	283	184	246	393	171	121	64	59	61	61	139	123	NA
Average Flow (cfs)	4750	3000	4142	6396	2788	2042	1039	1000	1000	1000	2500	2000	NA

Table 18. Monthly River Release (TAF/cfs) – May 1st 50%

Facility	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Cumulative (TAF)	NA	184	202	372	215	166	92	92	92	61	139	123	283
Average Flow (cfs)	NA	3000	3400	6057	3501	2785	1500	1552	1500	1000	2500	2000	4750

90% Inflow/Runoff Exceedance Hydrology

Table 19. Federal End of the Month Storage/Elevation (TAF/Feet) – April 1st 90%

Facility	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Folsom (TAF)	965	897	750	509	358	300	292	287	291	305	364	486	NA
Folsom Elevation	465	459	444	418	397	387	386	385	386	388	398	415	NA

Table 20. Federal End of the Month Storage/Elevation (TAF/Feet) – May 1st 90%

Facility	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Folsom (TAF)	NA	935	827	503	327	276	269	262	266	280	338	462	515
Folsom Elevation	NA	462	452	417	392	383	381	380	381	384	394	412	418

Table 21. Monthly River Release (TAF/cfs) – April 1st 90%

Facility	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
American (TAF)	277	168	204	287	201	95	50	48	49	49	44	50	NA
American (cfs)	4650	2725	3431	4676	3262	1600	807	800	800	800	800	811	NA

Table 22. Monthly River Release (TAF/cfs) – May 1st 90%

Facility	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
American (TAF)	NA	191	179	378	237	101	49	50	49	49	44	49	113
American (cfs)	NA	3100	3008	6142	3859	1704	801	835	800	800	801	800	1907

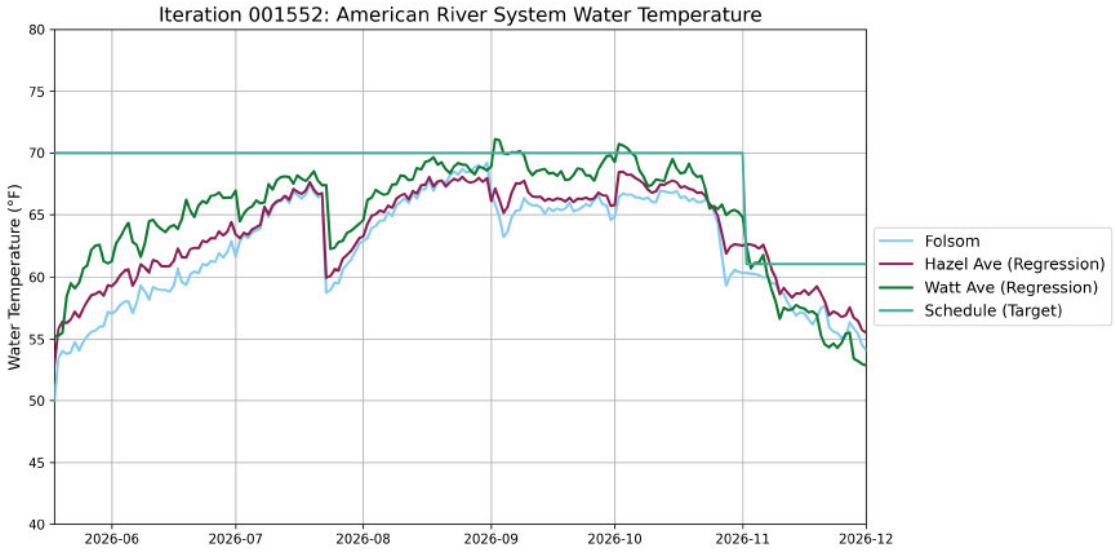

Figure 16. Iteration 001552: American River System Water Temperature.

Figure 16 shows modeled daily water temperature in degrees Fahrenheit for the American River system from June through December 2026, comparing Folsom, Hazel Ave (Regression), and Watt Ave (Regression) against a target schedule. All three rise from the low 50s°F in June to a peak near 68–70°F by September, with Watt Ave warmest and Folsom coolest. The target schedule holds at 70°F through late October, then steps down to 61°F, as temperatures decline sharply to the mid-50s°F by December.

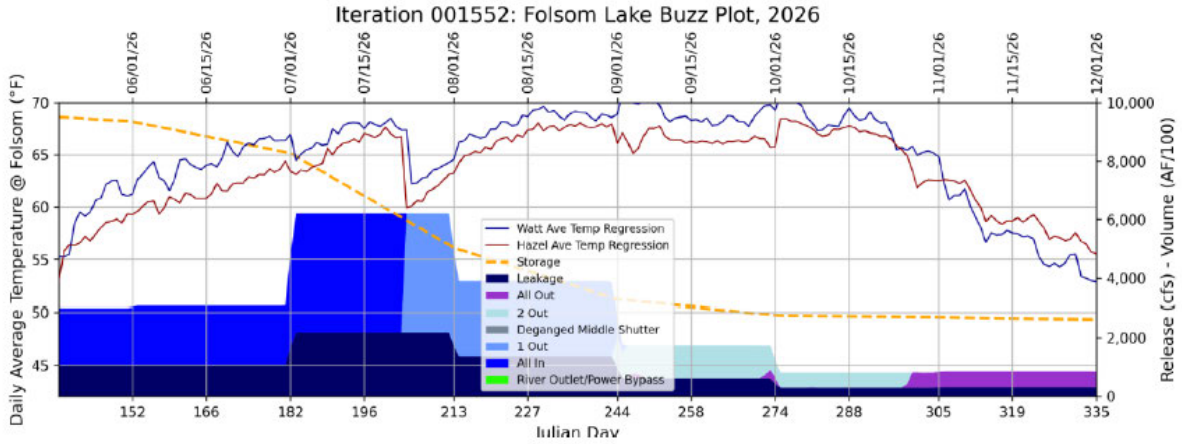

Figure 17. Iteration 001552: Folsom Lake Buzz Plot, 2026.

Figure 17 shows daily average water temperature at Folsom, storage volume, and release from June through December 2026, comparing Watt Ave and Hazel Ave temperature regressions against storage and shutter configuration. Both temperature lines rise from the upper 50s°F to a peak near 70°F by August, dip briefly in late July, then decline to the mid-50s°F by December. Storage declines steadily from roughly 10,000 AF/100 in June to about 2,500 AF/100 by November, while shutter operations shift from "All In"/"1 Out" in summer to "Deganged Middle Shutter"/"2 Out" by fall.

Table 1. Monthly targets for ATSP schedules using 2020 meteorology and the draft May 1st 90% operations and May 5th Folsom Lake Profile (ATSP 51) as included in the Draft TMP, compared to the selected ATSP schedules using the same 2020 meteorology and the final May 90% CVP operations and May 18th Folsom Lake profile (ATSP 55)

ATSP	May	June	July	Aug	Sep	Oct	Nov
51	70	70	70	70	70	70	61
55	69	69	70	70	70	69	60

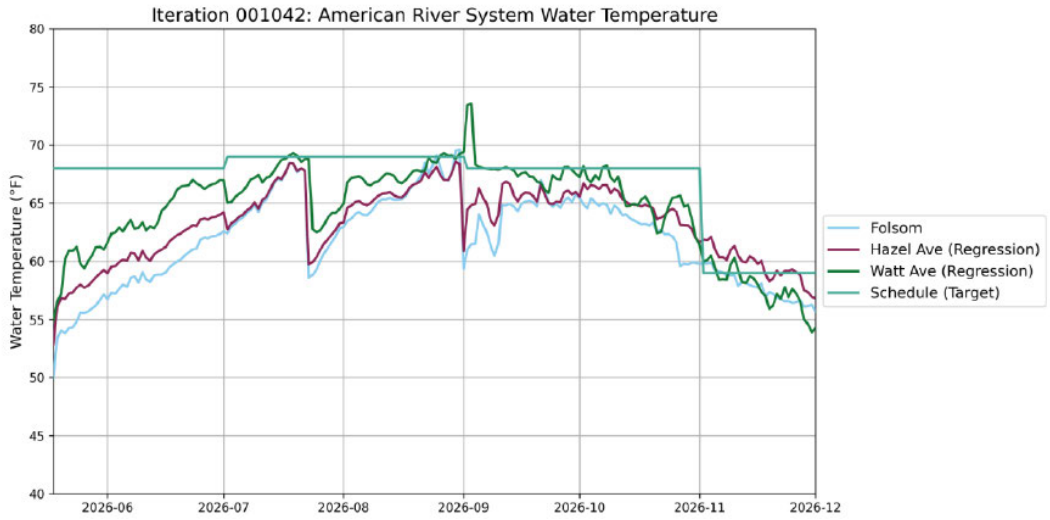

Figure 18. Iteration 001042: American River System Water Temperature.

Figure 18 shows modeled daily water temperature in degrees Fahrenheit for the American River system from June through December 2026, comparing Folsom, Hazel Ave (Regression), and Watt Ave (Regression) against a target schedule. All three rise from approximately 50–56°F in late May to the mid-60s°F by July, with Watt Ave warmest and Folsom coolest throughout. The target schedule steps up to 68°F in early July and holds through late October before stepping down to approximately 58°F. A sharp spike in Watt Ave occurs near early September, reaching approximately 73.5°F, before temperatures decline gradually to the mid-50s°F by December.

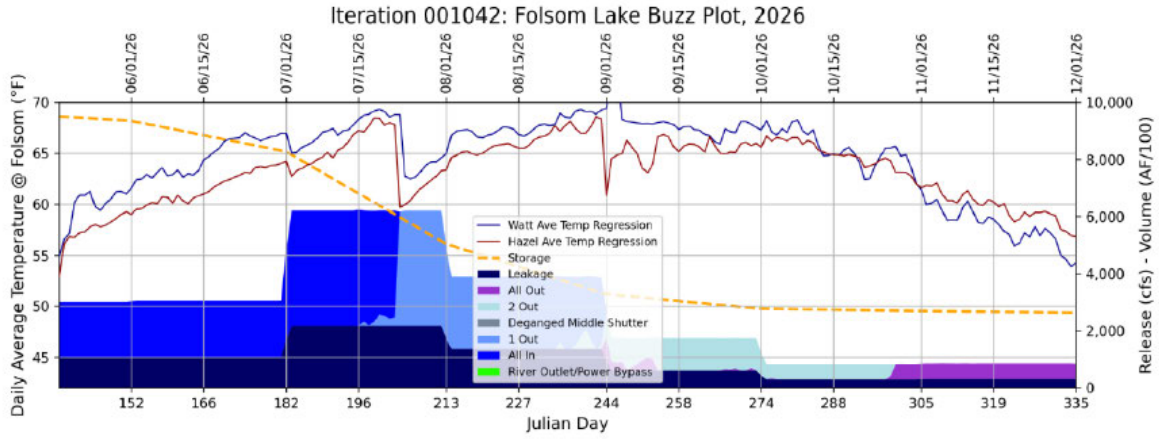

Figure 19. Iteration 001042: Folsom Lake Buzz Plot, 2026.

Figure 19 shows daily average water temperature at Folsom, storage volume, and release from June through December 2026 (Julian Day 152–335), comparing Watt Ave and Hazel Ave temperature regressions against storage and shutter configuration. Both temperature lines rise from approximately 58–68°F in June to a peak near 69°F by mid-July, dip sharply near Julian Day 244 (early September), then decline gradually to the mid-50s°F by December. Storage declines steadily from roughly 10,000 AF/100 in June to about 2,500 AF/100 by November. Shutter operations shift from "All In"/"1 Out" in summer to "Deganged Middle Shutter"/"2 Out" in fall, with "All Out" appearing in late fall.

Table 2. Monthly targets for ATSP schedules using 2017 meteorology and the draft May 1st 90% operations and May 5th Folsom Lake Profile (ATSP 39) as included in the Draft TMP, compared to the selected ATSP schedules using the same 2017 meteorology and the final May 90% CVP operations and May 18th Folsom Lake profile (ATSP 43)

ATSP	May	June	July	Aug	Sep	Oct	Nov
39	68	68	68	68	68	66	59
43	68	68	69	69	68	68	59

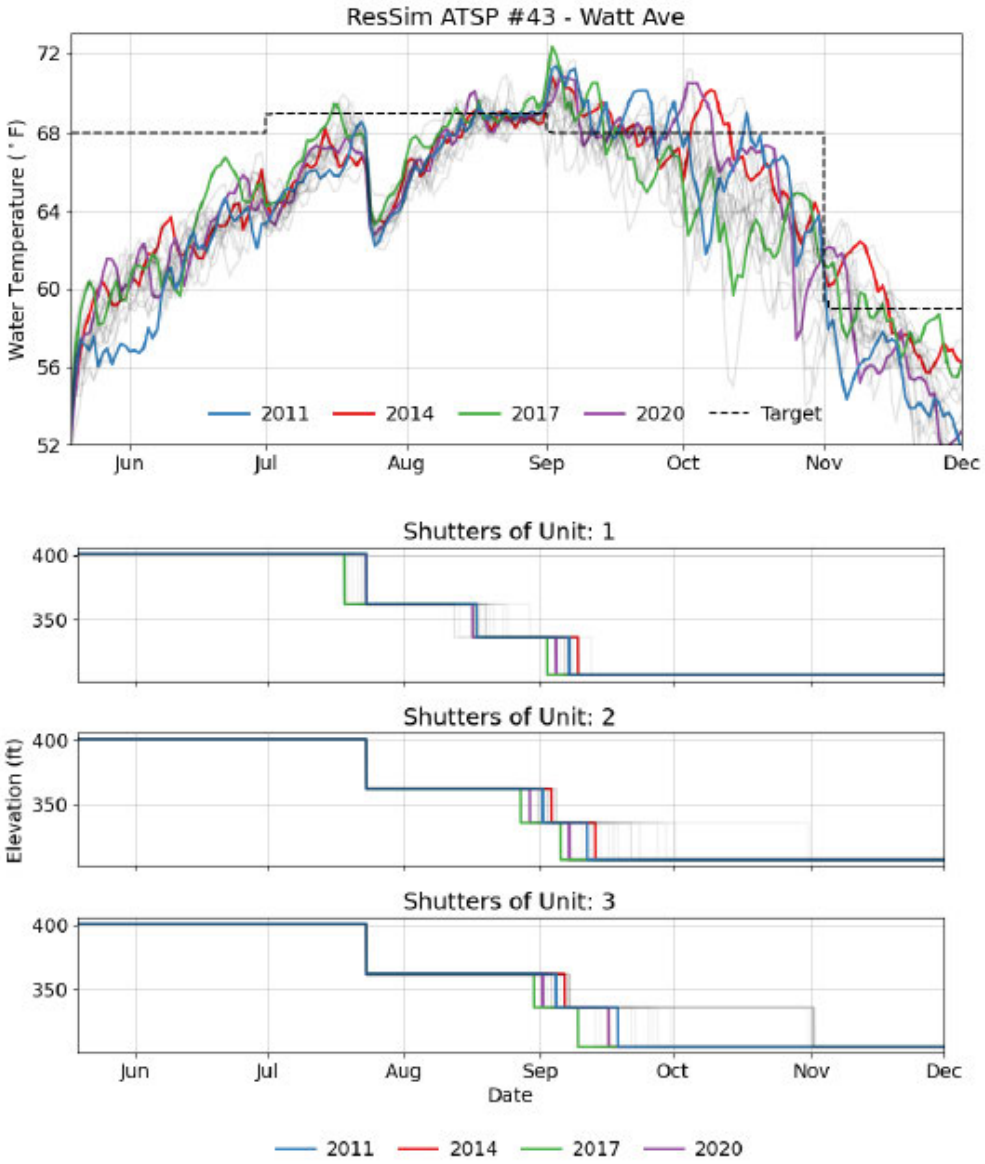

Figure 20. ResSim ATSP #43 - Watt Ave.

Figure 20 shows modeled water temperature and shutter operations at Watt Ave from June through December, with individual gray lines representing many simulation traces and four highlighted years (2011, 2014, 2017, 2020) shown in blue, red, green, and purple. The top panel displays water temperature in degrees Fahrenheit, with a dashed target line holding at approximately 68°F from late July through late October before stepping down to roughly 59°F. Temperatures across highlighted years rise from the mid-50s°F in June to a peak near 68–72°F in August and September, then decline to the mid-50s°F by December, generally tracking near or below the target. The three lower panels show shutter elevation in feet for Units 1, 2, and 3, each starting at 400 feet and stepping down in stages through summer and fall, reaching minimum elevations near 300–320 feet by October and remaining there through November.

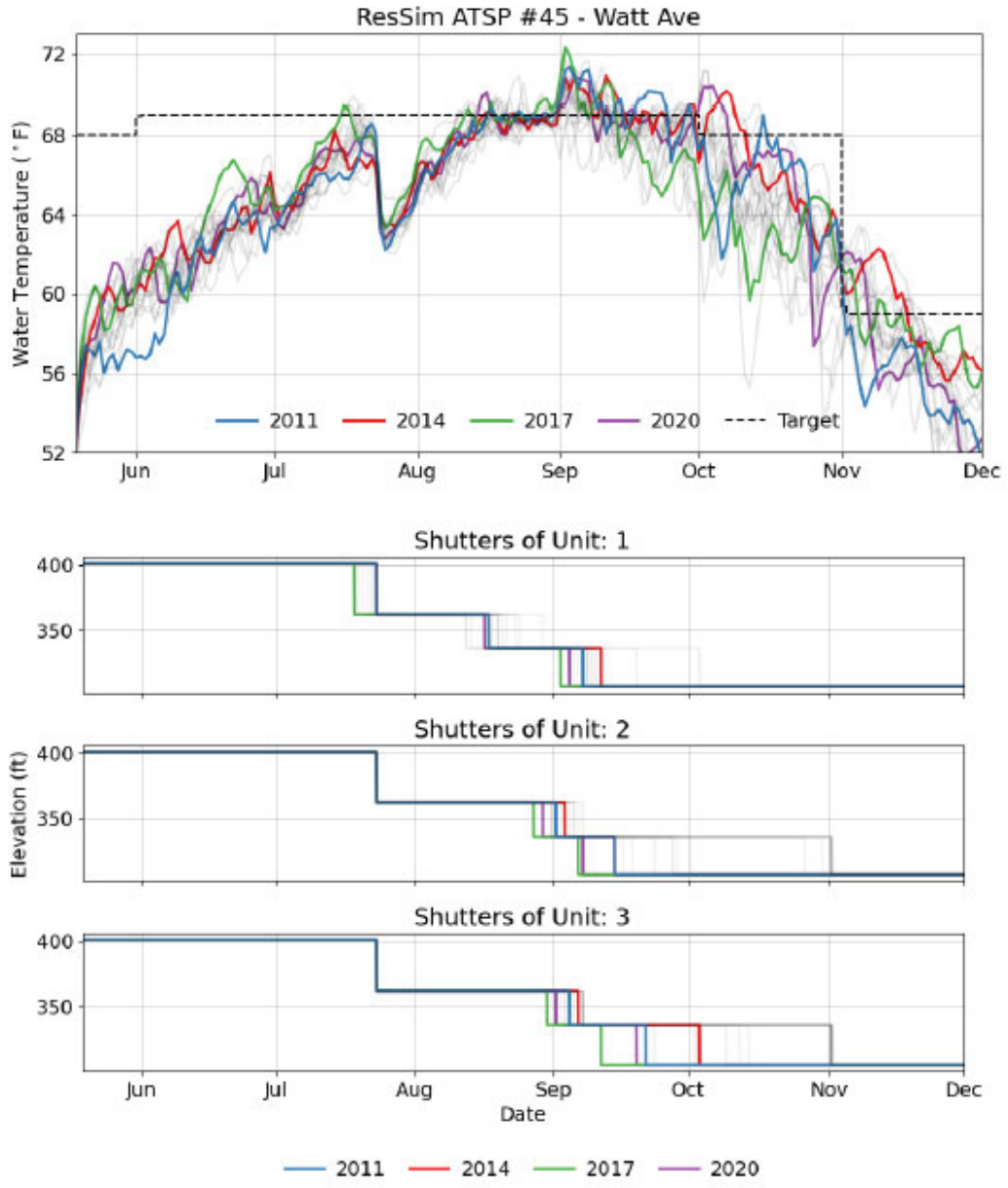

Figure 21. ResSim Meteorological Sensitivity Testing — ATSP 45: Watt Ave.

Figure 21 shows modeled water temperature and shutter operations at Watt Ave from June through December under ATSP 45, with individual gray lines representing many simulation traces and four highlighted years (2011, 2014, 2017, 2020) shown in blue, red, green, and purple. The top panel displays water temperature in degrees Fahrenheit, with a dashed target line holding near 69°F from late July through late October before stepping down to roughly 59°F. Temperatures across highlighted years rise from the mid-50s°F in June to a peak near 68–72°F in August and September, then decline to the mid-50s°F by December, with 2014 tracking notably warmer than other years through October and November. The three lower panels show shutter elevation in feet for Units 1, 2, and 3, each starting at 400 feet and stepping down in stages through summer and fall, reaching minimum elevations near 300–320 feet by October and remaining there through November.

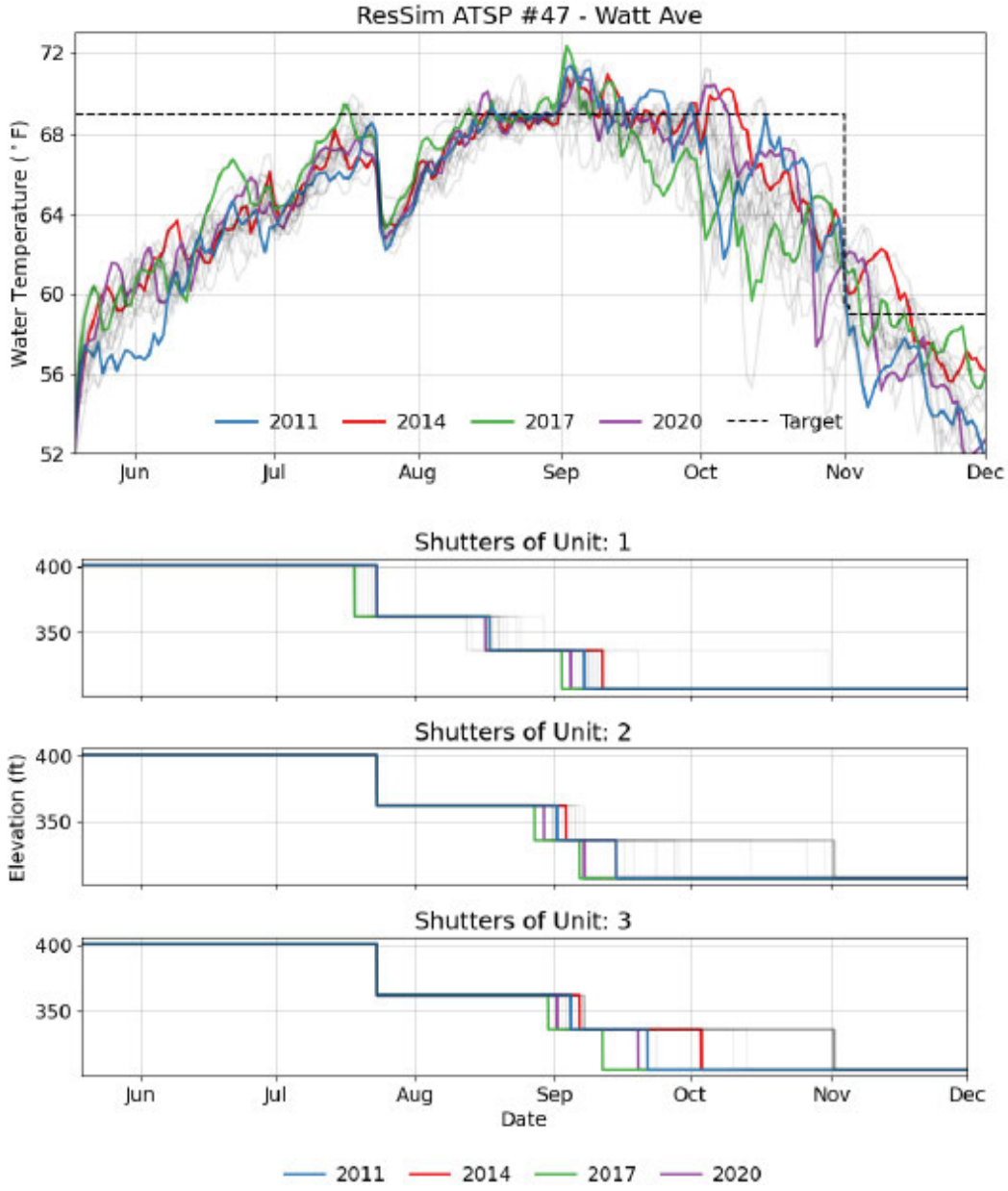

Figure 22. ResSim ATSP #47 - Watt Ave.

Figure 22 shows modeled water temperature and shutter operations at Watt Ave from June through December under ATSP 47, with individual gray lines representing many simulation traces and four highlighted years (2011, 2014, 2017, 2020) shown in blue, red, green, and purple. The top panel displays water temperature in degrees Fahrenheit, with a dashed target line holding near 69°F from late July through late October before stepping down to roughly 59°F. Temperatures across highlighted years rise from the mid-50s°F in June to a peak near 68–72°F in August and September, then decline to the mid-50s°F by December, generally tracking near or below the target. The three lower panels show shutter elevation in feet for Units 1, 2, and 3, each starting at 400 feet and stepping down in stages through summer and fall, reaching minimum elevations near 300–320 feet by October and remaining there through November.

CE-QUAL-W2 –Sensitivity at ATSP 43

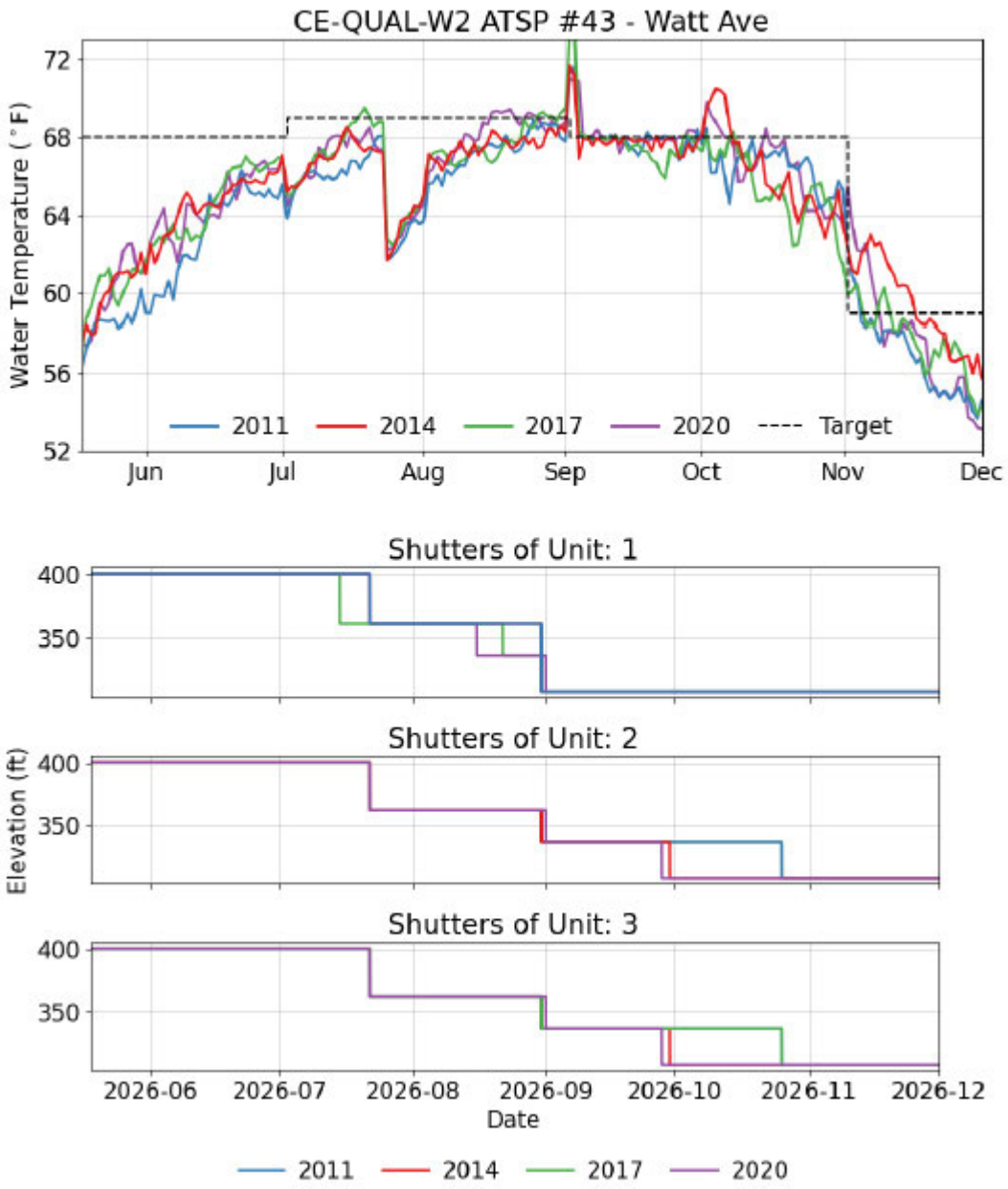

Figure 23. CE-QUAL-W2 ATSP #43 - Watt Ave.

Figure 23 shows modeled water temperature and shutter operations at Watt Ave from June through December 2026 under ATSP 43, with four highlighted years (2011, 2014, 2017, 2020) shown in blue, red, green, and purple. The top panel displays water temperature in degrees Fahrenheit, with a dashed target line holding near 68°F from late July through late October before stepping down to roughly 59°F. Temperatures across highlighted years rise from the mid-50s°F in June to a peak near 68–72°F in late August and September, then decline to the mid-50s°F by December, generally tracking near the target. The three lower panels show shutter elevation in feet for Units 1, 2, and 3, with each year following a distinct stepped schedule rather than a shared trace, starting at 400 feet and stepping down at different times across years, reaching minimum elevations near 300–320 feet by October–November.

CE-QUAL-W2 –Sensitivity at ATSP 45 (Proposed Schedule)

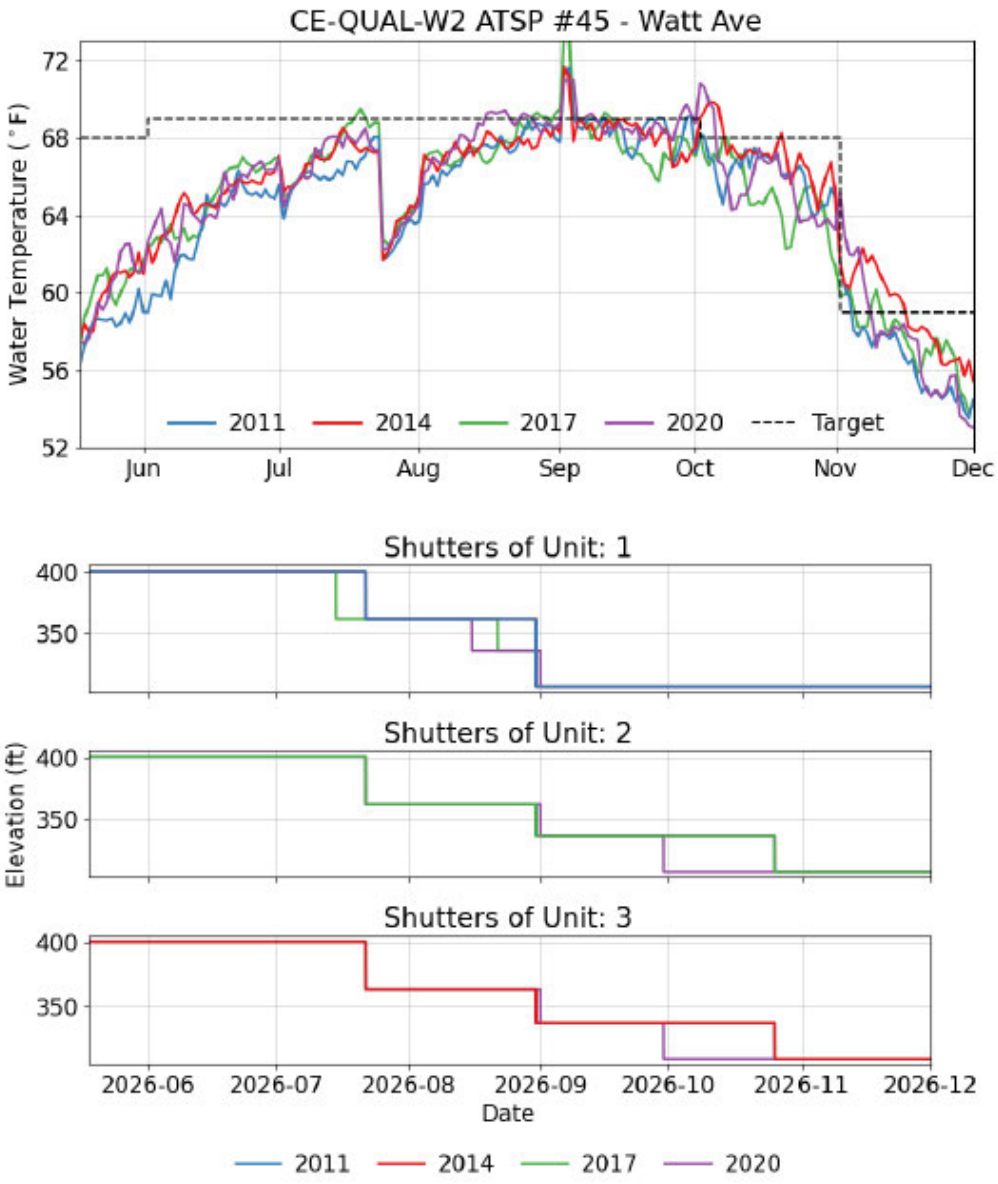

Figure 24. CE-QUAL-W2 ATSP #45 - Watt Ave.

Figure 24 shows modeled water temperature and shutter operations at Watt Ave from June through December 2026 under ATSP 45, with four highlighted years (2011, 2014, 2017, 2020) shown in blue, red, green, and purple. The top panel displays water temperature in degrees Fahrenheit, with a dashed target line holding near 69°F from late July through late October before stepping down to roughly 59°F. Temperatures across highlighted years rise from the mid-50s°F in June to a peak near 68–72°F in late August and September, then decline to the mid-50s°F by December, with 2014 tracking notably warmer than other years through October and November. The three lower panels show shutter elevation in feet for Units 1, 2, and 3, with each year following a distinct stepped schedule rather than a shared trace, starting at 400 feet and stepping down at different times across years, reaching minimum elevations near 300–340 feet by October–November.

Figure 25. CE-QUAL-W2 ATSP #51 - Watt Ave.

Figure 25 shows modeled water temperature and shutter operations at Watt Ave from June through December 2026 under ATSP 51, with four highlighted years (2011, 2014, 2017, 2020) shown in blue, red, green, and purple. The top panel displays water temperature in degrees Fahrenheit, with a dashed target line holding near 70°F from July through late October before stepping down to 60°F. Temperatures across highlighted years rise from the upper 50s°F in June to a peak near 68–73°F in late August and September, then decline to the low-to-mid 50s°F by December, generally tracking near or slightly below the target. The three lower panels show shutter elevation in feet for Units 1, 2, and 3, with each year following a distinct stepped schedule rather than a shared trace, starting at 400 feet and stepping down at different times across years, reaching minimum elevations near 300–320 feet by late October.

BUREAU OF RECLAMATION

2026 Draft American River Temperature Management Plan

Executive Summary

This Draft Temperature Management Plan (TMP) describes how the U.S. Bureau of Reclamation (Reclamation) proposes to operate Folsom Reservoir and the Temperature Control Shutters (TCS) on Folsom Dam for the 2026 temperature management season (typically May through November). The Draft TMP utilizes data from various sources including Reclamation's conservative inflow exceedance hydrology outlook of Central Valley Project (CVP) operations, recent reservoir temperature profiles, and historical meteorological forecasts. Based on a Draft May 1st 90% exceedance hydrology operations outlook, and a suite of water temperature modeling using historical meteorology from Water Years 2001 - 2020, at this time Reclamation is tentatively proposing an Automated Temperature Selection Procedure (ATSP) schedule 45, which corresponds to Watt Avenue targets of: 68°F in May, 69°F in June – September, 68°F in October, and 59°F in November.

This Draft TMP will be updated with the Final May 1st 90% exceedance hydrology, additional Folsom Lake temperature profiles expected mid-May and early June, as well as with feedback and discussions at the May 21 America River Group (ARG) meeting. The information within the Final TMP to be completed by June 15th will be revisited each month as part of the ARG, or, if needed, based on emerging conditions via ad-hoc ARG meetings. Reclamation anticipates supporting an evaluation of a potential cold-water power bypass in the fall. This Draft TMP for the American River has been developed consistent with the 2025 Record of Decision (ROD) on the Coordinated Long-Term Operation of the Central Valley Project and State Water Project (LTO) (Reclamation 2025).

Background

Articulated in the 2025 ROD on the LTO (Reclamation 2025), Reclamation develops annually a TMP using modeling tools and the Automated Temperature Selection Procedure (ATSP), with the objective to support steelhead rearing during the summer and Chinook salmon spawning in the fall. The TMP guides temperature management operations for May through November. The TMP contains (1) forecasts of hydrology and storage; and (2) a modeling run or runs, using those forecasts, demonstrating what temperature compliance schedule can reasonably be attained. This information is presented to the American River Group (ARG) for feedback and technical input.

Additionally, following the 2025 ROD on the LTO (Reclamation 2025), during a year where the lower American River has temperatures unsuitable for rearing or spawning. Reclamation may modify the ATSP as follows:

- For Schedule 28 or higher (greater than 65°F at Watt Avenue Bridge, May through September), the TMP may consider a temperature location at Hazel Avenue.
- For greater than 65°F at Hazel Avenue bridge for May through September, the TMP will include an evaluation of whether modified Folsom operations could support an improved temperature schedule (e.g. an alternate release schedule over the summer).
- For greater than 68°F at Hazel Avenue for May through September, the TMP will include an evaluation of whether modified Folsom operations could support an improved temperature schedule (e.g. an alternate release schedule over the summer) and evaluate a power bypass during the summer and/or fall.
- For greater than 56°F at Hazel Avenue in November, the TMP will evaluate a power bypass in the fall, with the evaluation likely to occur in August and September.

Current Conditions Summary

Water Year 2026 (October 1st, 2025 through September 30th , 2026) began with Folsom Lake storage at 442 thousand acre-feet (TAF). In December, the 50% exceedance of Department of Water Resources' B120 Forecast projected an "Above Normal" water year type for the Sacramento Valley Water Year Type Index (SVI). This water year type classification would hold though March until April where the SVI would decrease to "Below Normal".

In late December, high forecasted inflows into Folsom prompted early storage management actions. At this time, daily average inflows reached up to almost 22,000 cfs on December 22nd, with another storm early January seeing peak daily average inflow of 26,000 cfs on January 4th. Over the period of these storms from mid-December through mid-January Folsom releases varied in the range of 1,000 cfs to 11,000 cfs. With this combination of releases and inflows, Folsom Dam entered the Flood Control Space on January 2nd and would remain there until January 31st.

Another set of storms occurred during late February with daily average inflows into Folsom Lake approaching 10,000 cfs in the first wave on February 17th, and 15,000 cfs in the second wave on February 25th. During this event Folsom Lake encroached into the Flood Control Space on February 20th and has remained encroached to present as Reclamation operates in close coordination with the US Army Corps of Engineers. A time series of Folsom Lake conditions compared to recent years is shown in Figure 1.

Over the month of March, during very dry conditions, much of the already poor snowpack in the American melted as minimal cloud cover and high temperatures saw increased radiative and sensible heat transfer into the snowpack. During March, Snowpack in the American River Basin quantified by Snow Water Equivalent (SWE) went from approximately 406 TAF on March 1st, to 37 TAF. Late April showers would create a periodic increase to this

snowpack, as well as increased inflows resulting in increased releases from Folsom Dam. The full seasonal evolution of the snowpack in the American River Basin compared to recent years is shown in Figure 2.

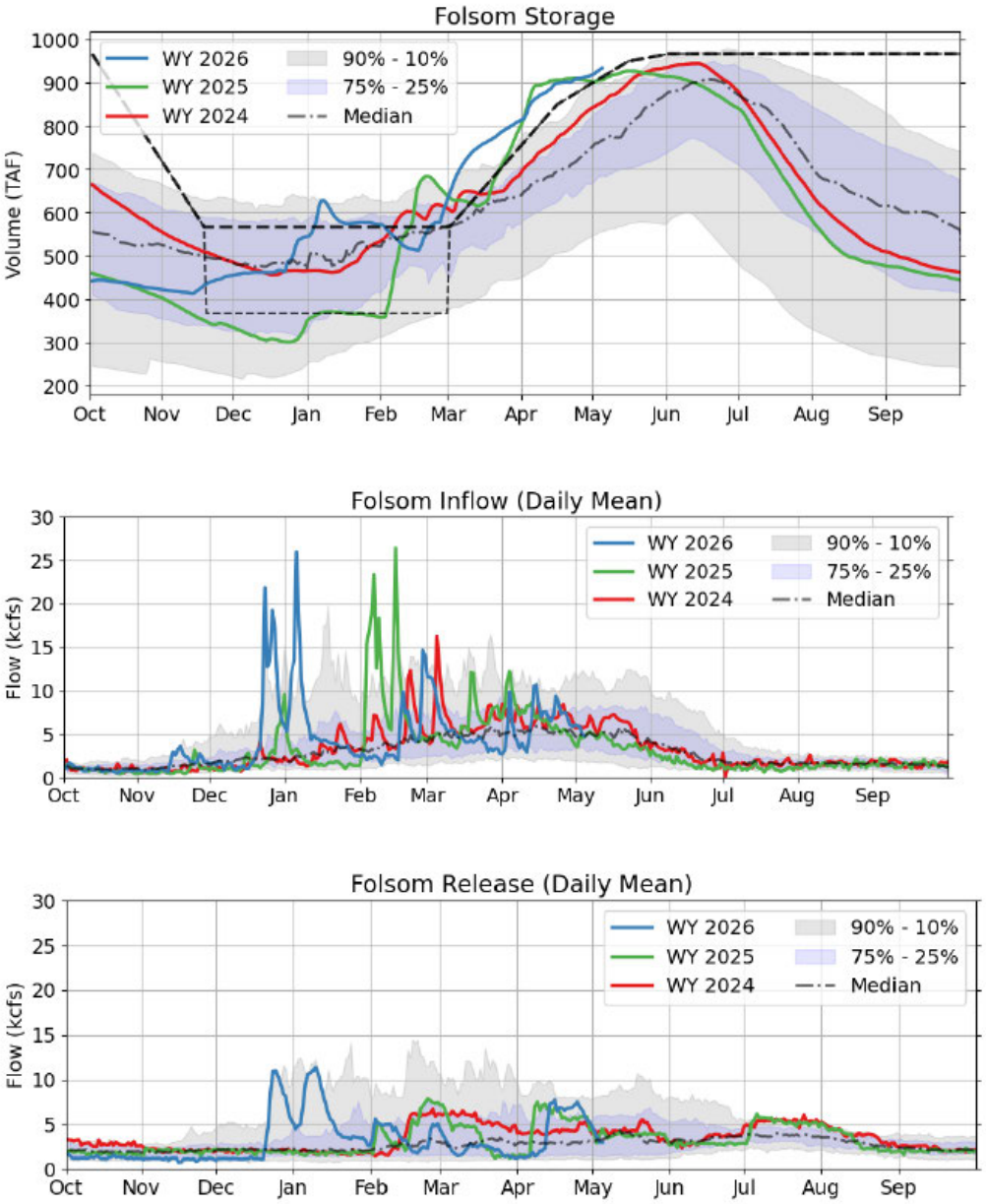

Figure 1. Timeseries of Folsom Storage (top), Inflow (middle), and Releases (bottom) for 2026, 2025, and 2024 water years with historical exceedances and median conditions since 1961. In the Storage plot, the dashed black lines represent the Normal Top of Conservation with the bottom and top of the Forecast Based Conditional Storage space from mid-November – March.

Figure 1 shows three stacked time series compare Folsom Reservoir storage, inflow, and releases for water years 2026, 2025, and 2024 with historical variability and median conditions since 1961. Storage in all three years increased through winter and spring to near-full conditions by early summer before declining seasonally. Inflows were marked by episodic winter and spring peaks, while releases generally increased during runoff periods and decreased through late summer. Shaded bands show historical exceedance ranges and dashed lines show median conditions and storage operating targets.

Despite the average to above average precipitation to date for most of California, the Water Year 2026 season so far has been characterized by a large fraction of precipitation falling as rain instead of snow and accelerated melt conditions during a historically warm and dry March. As a result, Folsom Storage is currently above average for this time of year at 950 TAF as of May 7th, 2026 (123% of 15 yr average). This storage is above the normal Top of Conservation line and is possible due to persistent coordination with the US Army Corps of Engineers since the start of Encroachment on February 20 to balance safe management of the flood space with above normal storage given the below normal snowpack in the basin.

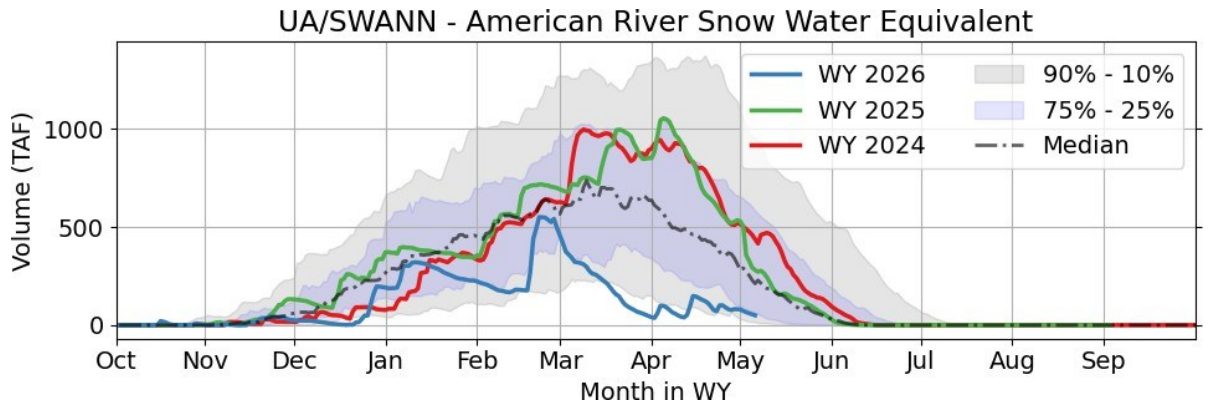

Figure 2. American River Basin Snow Water Equivalent from the UA/SWANN for 2026, 2025, and 2024 water years with historical exceedances and median conditions since October 1st, 1982.

Figure 2 shows time series of American River snow water equivalent for water years 2026, 2025, and 2024 compared with historical variability and median conditions. Snowpack accumulated through winter, peaked during March and April, and melted to near zero by early summer. Water year 2026 peaked earlier and at substantially lower values than 2024 and 2025, while the latter years reached snowpack volumes near or above the historical median. Shaded bands show historical exceedance ranges and the dashed line shows the median.

This juxtaposition between high lake storage and low snowpack is expected to pose an obstacle for the Water Year 2026 Temperature Management. Maintaining high Folsom Storage so far this year has contributed to storage of a cold-water pool comparable to recent years such as 2024, and 2025 as shown in Figure 3. Though comparable conditions within the reservoir are noticeable, a lack of snowpack is expected to limit any further cold-water inflows into the reservoir through the summer and fall resulting in quicker usage of the existing cold-water pool. A detailed evolution of this year's cold-water pool is also shown in the isothermobath of Figure 4.

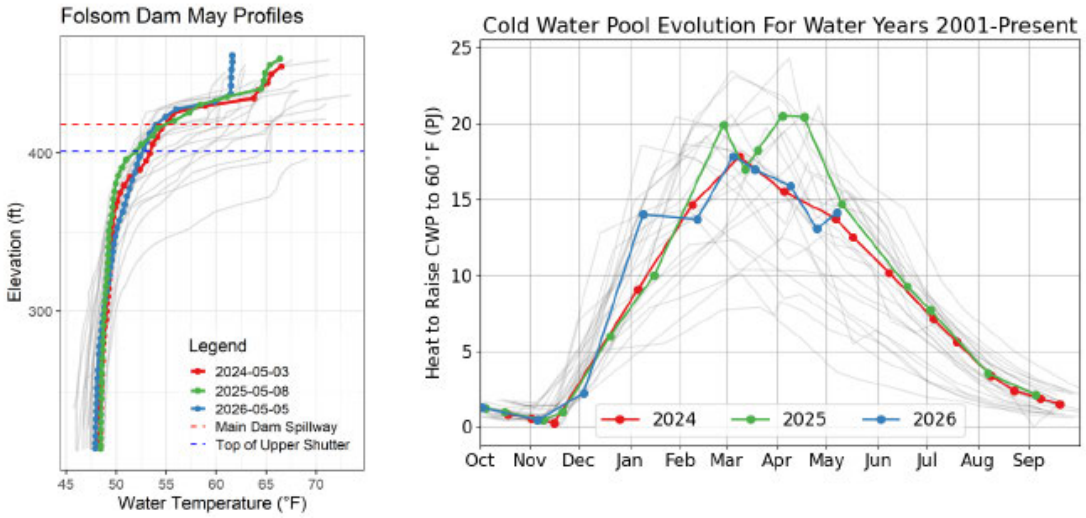

Figure 3. Historical early-May Profiles since 2001 with colored lines indicating the current and most recent years and others as faint gray lines (left) and Spaghetti plot showing the Cold-Water Content in Peta-Joules for the same period (right).

Figure 3 depicts two panels summarizing reservoir thermal conditions since 2001. The left panel compares early-May temperature profiles at Folsom Dam, showing recent years against historical profiles and indicating spillway and top-of-power intake elevations. The right panel shows the seasonal evolution of cold-water pool heat content, with recent years following the historical range and peaking in spring before declining through summer.

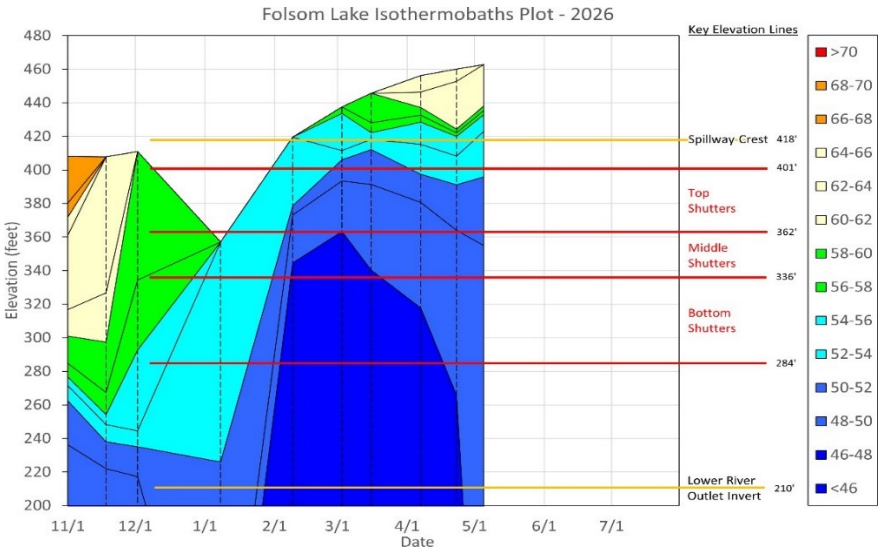

Figure 4: Isothermobath plot of Folsom Lake from 11/1 through 5/5.

Figure 4 is a time–depth plot showing the evolution of temperature zones in Folsom Lake during water year 2026. Cooler water occupied deeper elevations while warmer water developed near the surface through spring. Horizontal lines indicate the spillway crest, outlet shutter elevations, and lower river outlet invert, illustrating the relationship between reservoir stratification and release structures.

Temperature Control Shutters

On January 5th a request was issued for the installation of the bottom and middle TCS for all units (units 1, 2 and 3) at Folsom Dam. On January 8th the Bottom and Middle Shutters were installed on units 2 and 3. On January 9th the Bottom and Middle Shutters were installed on Unit 3.

On March 5th, a request was issued for the installation of the upper TCS for all units (units 1, 2, and 3). On March 17th the Upper TCS was installed on all units (units 1, 2, and 3). A request for the Upper TCS was delayed until the Top of Conservation line was approximately equal to the storage required for using the upper shutters (~623 TAF at Elevation 431) as ongoing potential for storms may have required storage to be drawn down below the head requirement needed for releases. Table 1 outlines the dates of installation of each shutter.

Table 1. Temperature Control Shutter Installation Dates for each Hydropower Unit.

Shutter	Unit 1	Unit 2	Unit 3
Lower Installation	January 9th	January 8th	January 8th
Middle Installation	January 9th	January 8th	January 8th
Upper Installation	March 17th	March 17th	March 17th

Water Temperature Strategy, Results, and Discussion

Results presented here are derived from numerical simulation models. All models are simplifications of complex physical systems subject to structural uncertainty, parameter uncertainty, and errors in boundary condition data. Model outputs should not be interpreted as precise predictions or relied upon as the sole basis for operational or regulatory decisions without independent validation and expert judgment. Specifically, the CE-QUAL-W2 and ResSim simulations include an automated TCS gate selection algorithm that adjusts Folsom Dam TCS configurations to minimize deviation from a prescribed downstream temperature target. This algorithm may achieve temperature targets with greater consistency than is attainable in real-world operations. Therefore, simulation results are intended to evaluate the relative merit of alternative strategies, not to guarantee achievable outcomes.

For the results in this Draft TMP, a draft May 1st CVP outlook (Table 2) was used alongside the May 5th, 2026, Profile (Figure 3). The draft May 1st CVP outlook releases and storage are shown in Table 2. These forecasted operations, and subsequent modeling, will be updated with the final May 1st 90% outlook when available. A mid-May and early-June profile are expected to be included in updates for the May 21st ARG and the Final TMP respectively.

Table 2. Monthly forecasted operations for Folsom and Nimbus reservoir releases and storage estimates from a draft May 1st 90% exceedance forecast.

Operations Information	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Folsom Releases (TAF)*[1]	191	204	326	197	119	50	48	49
Nimbus Releases (cfs)	3100	3431	5300	3200	2000	807	800	800
Folsom End-of-Month Storage (TAF)	908	774	503	368	300	291	287	291

[1] *includes demands, evaporation, and river releases
TAF = thousand acre-feet
cfs = cubic feet per second

Using these inputs, to first identify a possible ATSP schedule, the WTMP CE-QUAL-W2 model was used in iterative mode using the 2020 and 2017 Meteorological conditions. This iterative run seeks the lowest ATSP scheduled run such that no more than 3 days of continuous exceedance occur. For the warmer 2020 Meteorological conditions, ATSP schedule number 51 was selected. For the cooler 2017 Meteorological conditions, ATSP schedule number 39 was selected. The output from these iterative runs is shown in Appendix A. Selected monthly temperature targets for schedules 39, 45, and 51 are shown in Table 3.

Table 3. Maximum daily water temperature, by month, for ATSP schedules 39, 45 and 48.

Month	Schedule 39	Schedule 45	Schedule 51
May	68° F	68° F	69° F
June	68° F	69° F	70° F
July	68° F	69° F	70° F
August	68° F	69° F	70° F
September	68° F	69° F	70° F
October	66° F	68° F	70° F
November	59° F	59° F	60° F

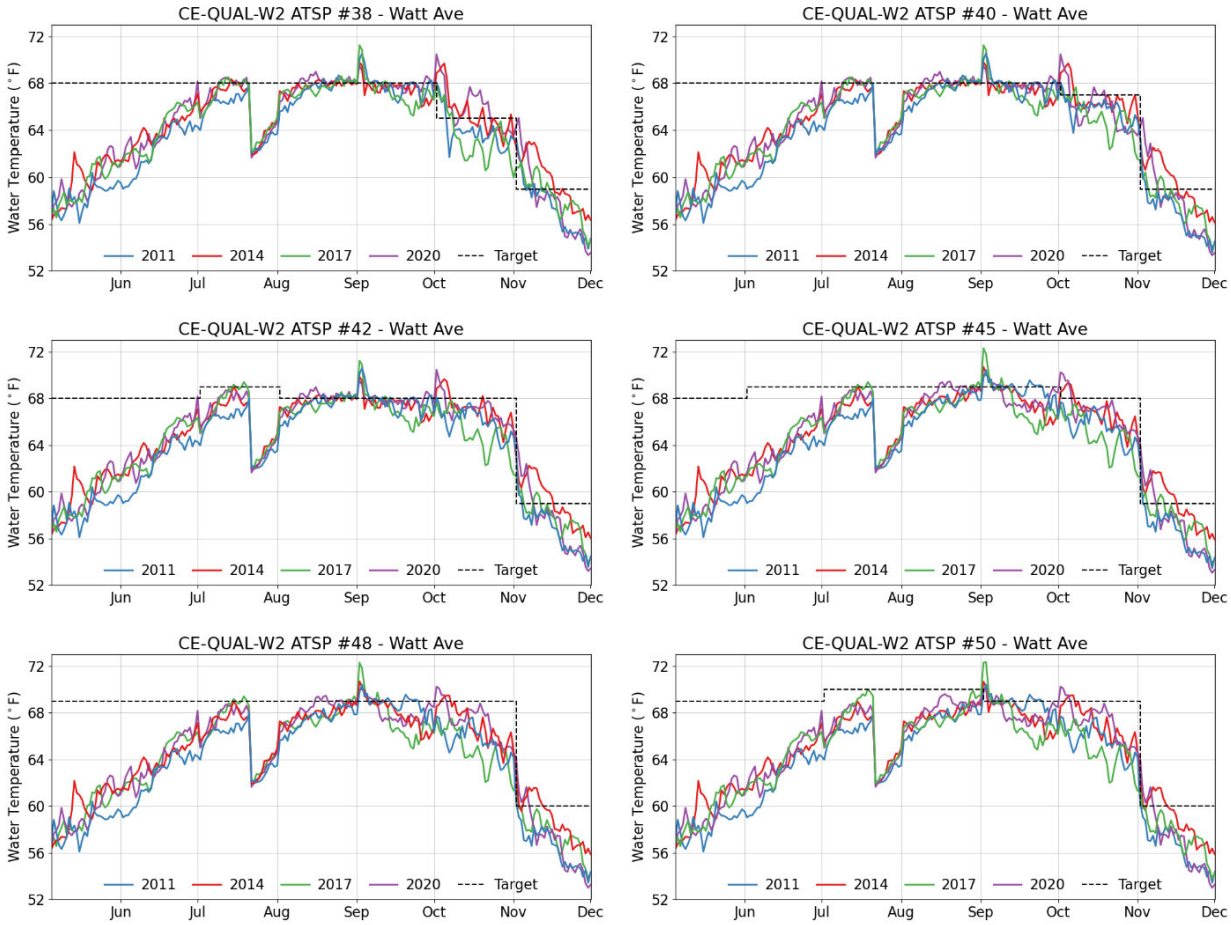

Figure 5. CE-QUAL-W2 model runs for ATSPs 38, 40, 42, 45, 48 and 50 using meteorological conditions from 2011, 2014, 2017, and 2020.

Figure 5 depicts six time series compare modeled water temperatures at Watt Avenue for six CE-QUAL-W2 scenarios against historical years 2011, 2014, 2017, and 2020. Temperatures increased through summer, peaked near 68–70°F in late summer, and declined through fall, generally tracking historical conditions and target temperature ranges indicated by dashed lines.

From these schedules, Reclamation explored the performance of a variety of meteorological conditions (2001 through 2020) at ATSP Schedule numbers 38, 40, 42, 45, 48 and 50 using ResSim to explore the sensitivity of temperature performance in regards to meteorological uncertainty. The CE-QUAL-W2 iterative model outputs as well as the ResSim Ensemble runs are included in Appendix A. Informed by the larger ensemble of ResSim modeling, CE-QUAL-W2 Model runs for 2011, 2014, 2017 and 2020 meteorological conditions were run at ATSP schedules 38, 40, 42, 45, 48 and 50 to validate potential temperature management scenarios as shown in Figure 5.

Within all modeling runs there are several persistent notable features. First, all model runs are characterized by a steady increase in temperature from the model start data (May 5th , 2026) through July at which point temperatures stabilize to the target until lake elevation 431' (Folsom Storage ~622 TAF) is reached and the Upper TCS must be removed at which point a sharp drop in water temperatures is observed in mid-July. From here temperatures again steadily increase back to the temperature target through August. At the start of September, a spike in temperature is observed in the model run in part due to the model's representation of monthly flow changes. From Table 2, the monthly flows are projected to reduce from 3200 cfs in August to 2000 cfs in September. In the model, this reduction occurs instantaneously, however in real-time operations the fastest this ramp-down could occur would be 500 cfs a day and would be accompanied by simultaneous changes in the shutter operations and blending if needed. As a result, the magnitude of the exceedance in the model runs for the start of September is expected to be overstated compared to real-time operations due to flow and shutter operations.

In conclusion, for this Water Year 2026 Draft TMP, Reclamation is tentatively proposing to operate to the more conservative ATSP schedule 45 based on the modeling results. This Draft will be updated with the final May 1st 90% exceedance hydrology, additional Folsom Lake Profiles expected mid-May and early June, as well as with feedback on this Draft Plan and Discussions at the May 21st ARG. The information within the Final TMP to be delivered by June 15th will be revisited each month as part of the ARG, or, if needed, based on emerging conditions via ad-hoc ARG meetings. Reclamation anticipates supporting an evaluation of a potential cold-water power bypass in the fall.

Appendix A – Additional Model Results

Iterative 2020 – CE-QUAL-W2 – Schedule 51

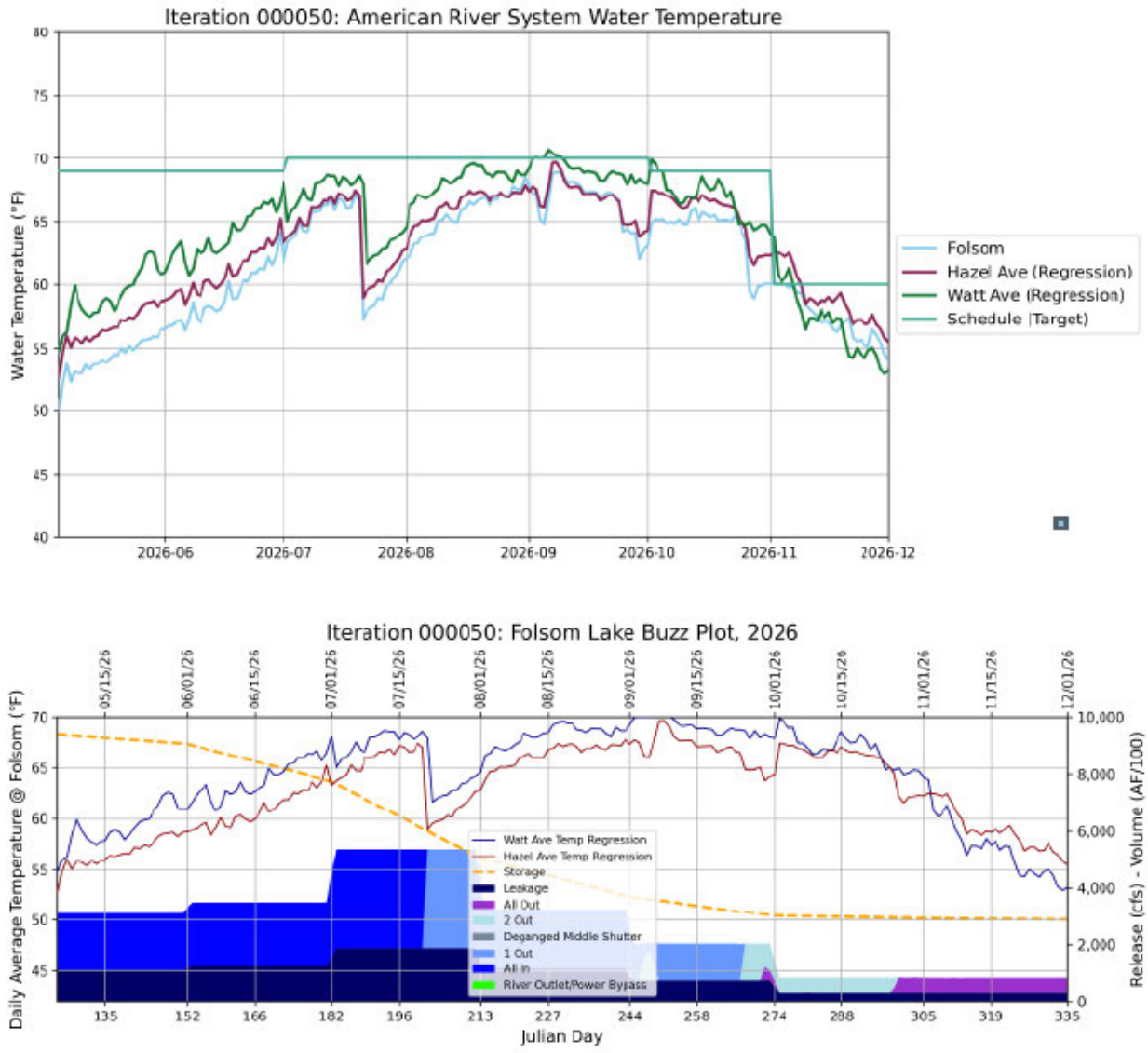

Figure 6. CE-QUAL-W2 Schedule 51 Temperature and Reservoir Operations Results for 2026

Figure 6 depicts two panels summarizing CE-QUAL-W2 Schedule 51 results for 2026. The upper panel shows modeled water temperatures at Folsom, Hazel Avenue, and Watt Avenue relative to target temperatures, with warming through summer and cooling in late fall. The lower panel combines temperatures with reservoir storage and outlet operations, showing seasonal changes in storage, releases, and outlet use.

Iterative 2017 – CE-QUAL-W2 – Schedule 39

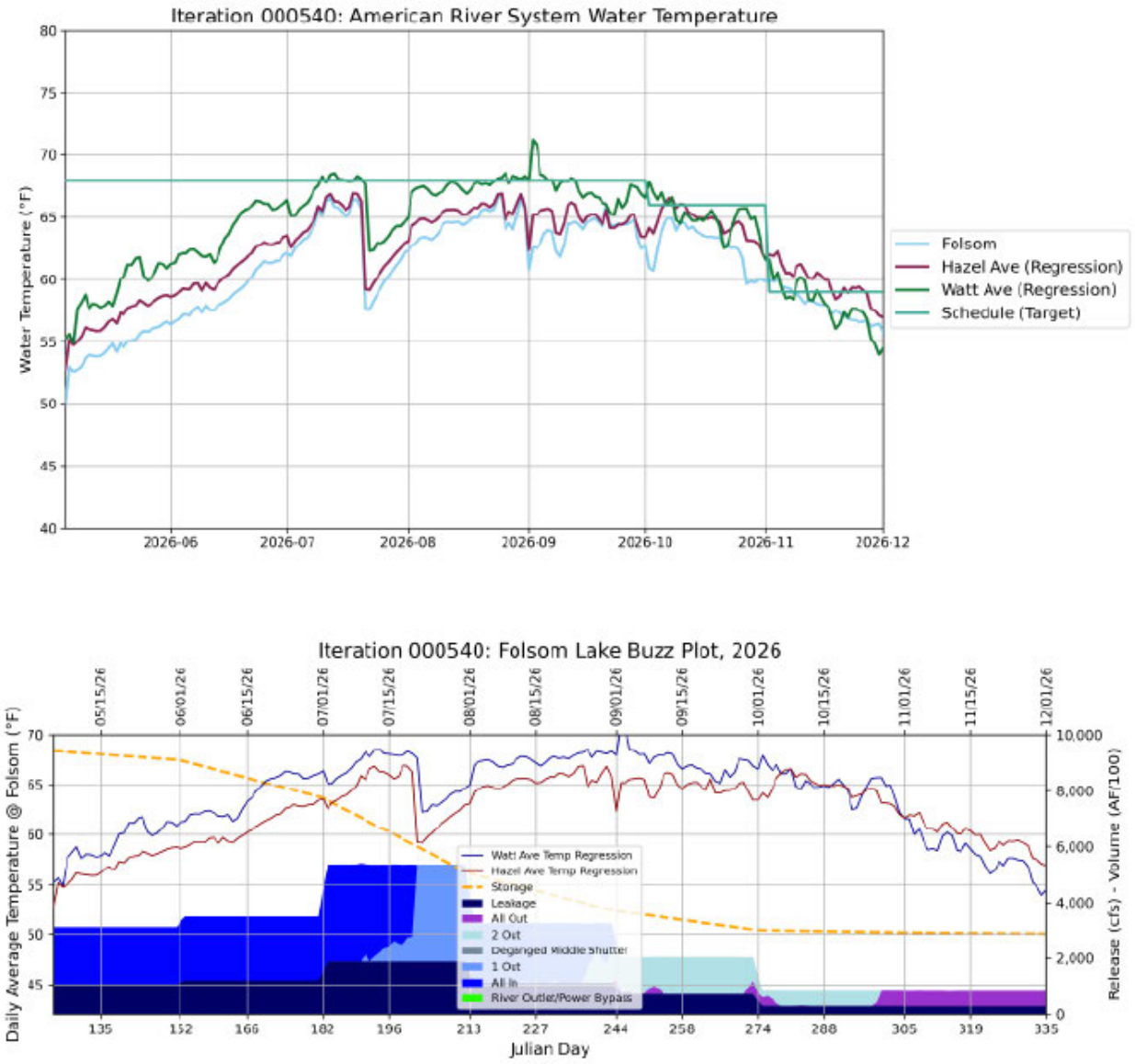

Figure 7. CE-QUAL-W2 Schedule 540 Temperature and Reservoir Operations Results for 2026

Figure 7 shows two panels summarizing CE-QUAL-W2 Schedule 540 results for 2026. The upper panel shows modeled water temperatures at Folsom, Hazel Avenue, and Watt Avenue relative to target temperatures, with warming through summer and cooling in late fall. The lower panel combines temperatures with reservoir storage and outlet operations, showing seasonal changes in storage, releases, and outlet use.

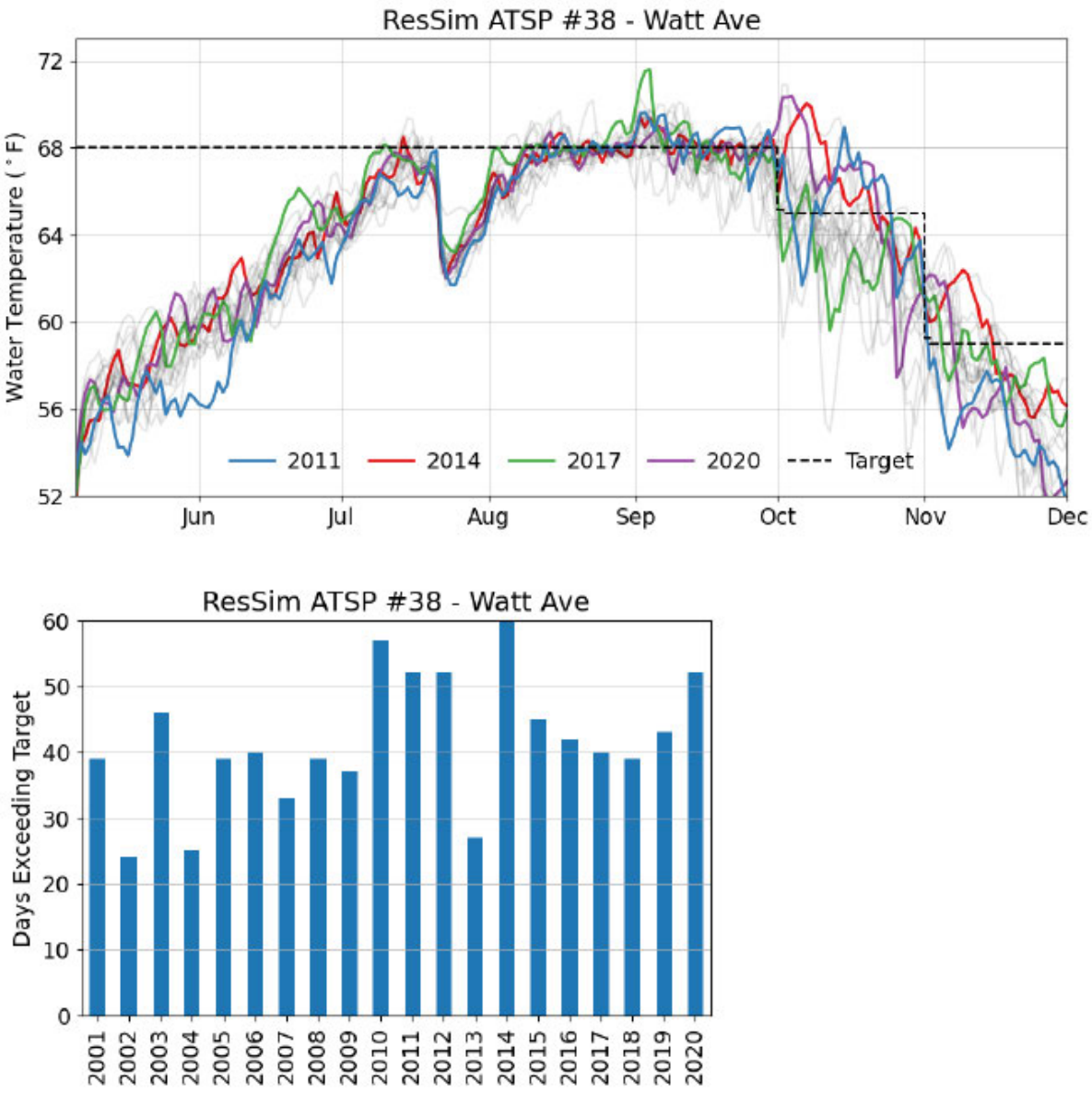

Figure 8 ResSim ATSP #38 Water Temperature Performance at Watt Avenue

Figure 8 shows two panels summarizing ResSim ATSP #38 performance at Watt Avenue. The upper panel compares modeled water temperatures for historical years 2011, 2014, 2017, and 2020 with target temperatures, showing warming through summer and cooling through late fall. The lower panel shows the number of days target temperatures were exceeded for water years 2001–2020, with annual totals ranging from about 20 to 60 days.

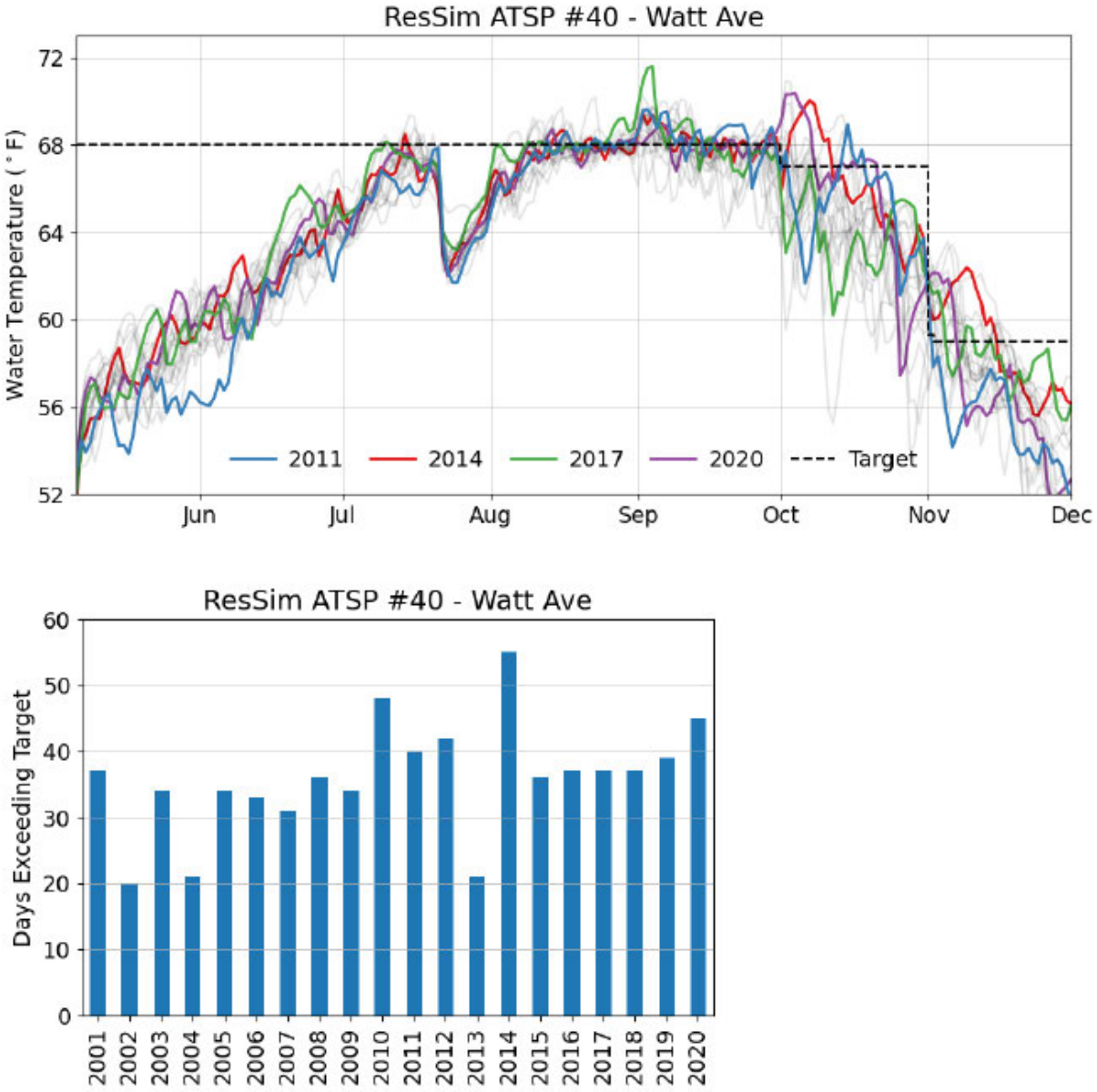

Figure 9. ResSim ATSP #40 Water Temperature Performance at Watt Avenue

Figure 9 shows two panels summarizing ResSim ATSP #40 performance at Watt Avenue. The upper panel compares modeled water temperatures for historical years 2011, 2014, 2017, and 2020 with target temperatures, showing warming through summer and cooling through late fall. The lower panel shows the number of days target temperatures were exceeded for water years 2001–2020, with annual totals ranging from about 20 to 55 days.

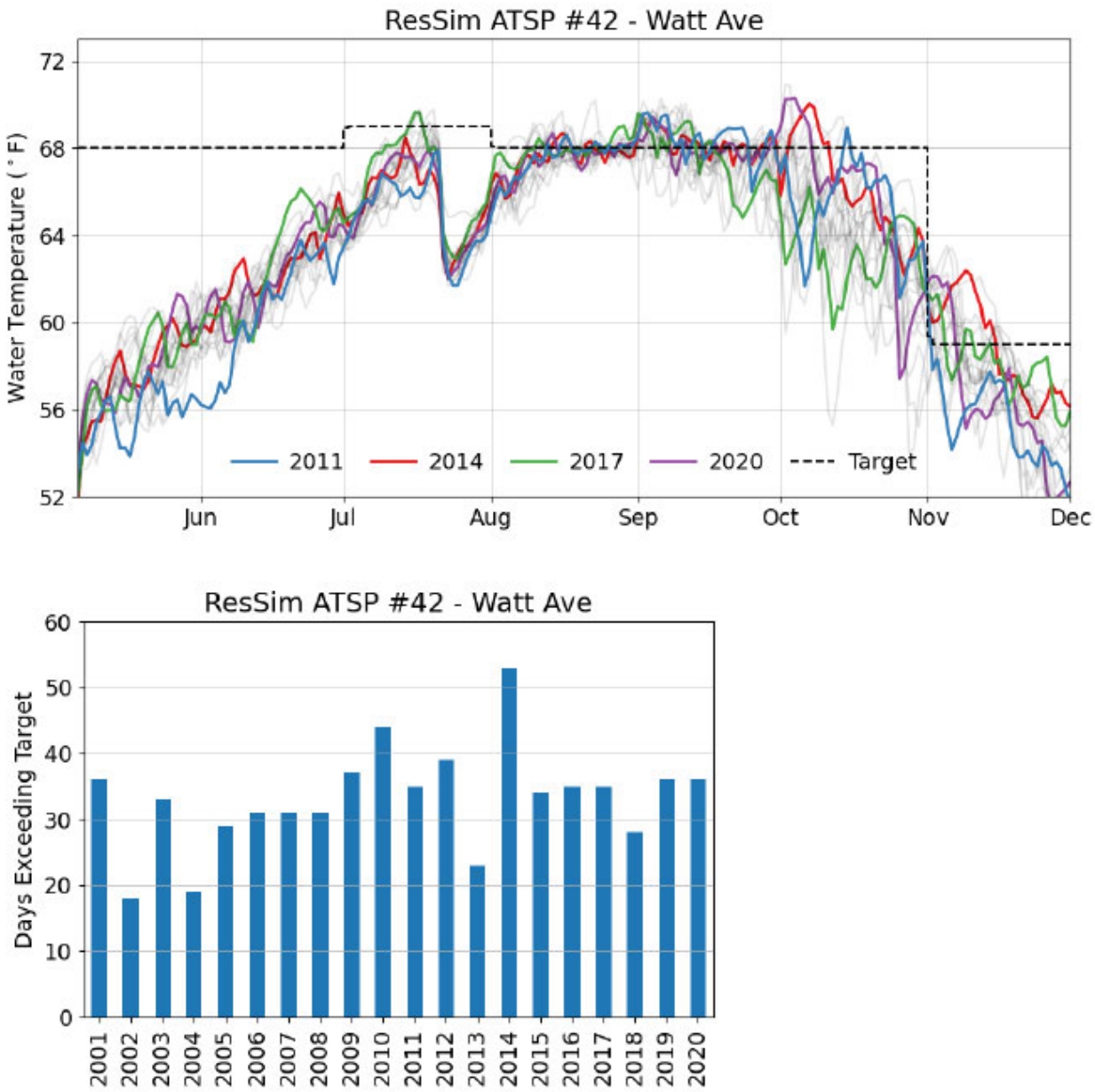

Figure 10. ResSim ATSP #42 Water Temperature Performance at Watt Avenue

Figure 10 shows two panels summarizing ResSim ATSP #42 performance at Watt Avenue. The upper panel compares modeled water temperatures for historical years 2011, 2014, 2017, and 2020 with target temperatures, showing warming through summer and cooling through late fall. The lower panel shows the number of days target temperatures were exceeded for water years 2001–2020, with annual totals ranging from about 20 to 50 days.

ATSP 45 - ResSim

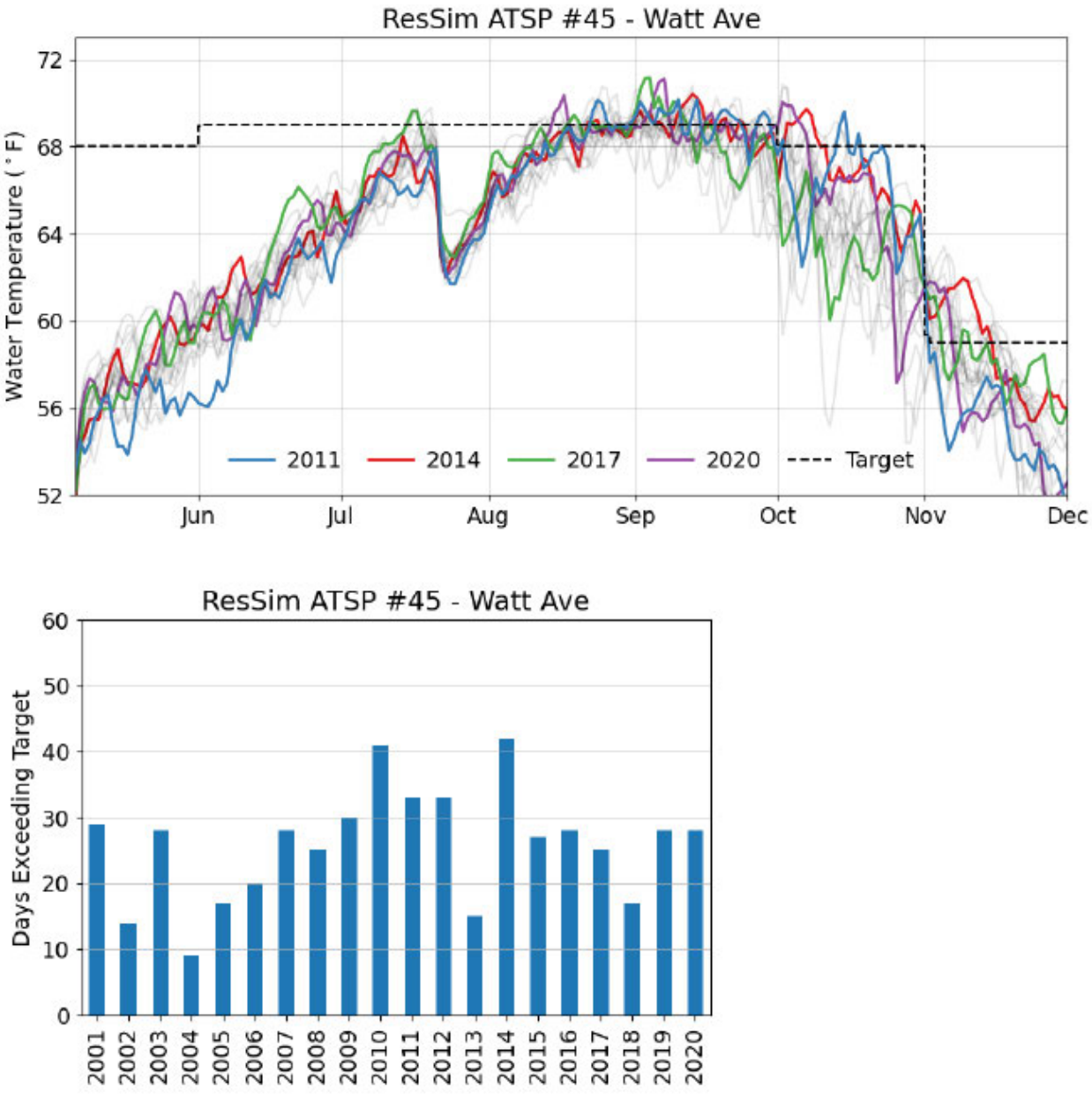

Figure 11. ResSim ATSP #45 Water Temperature Performance at Watt Avenue

Figure 11 shows two panels summarizing ResSim ATSP #45 performance at Watt Avenue. The upper panel compares modeled water temperatures for historical years 2011, 2014, 2017, and 2020 with target temperatures, showing warming through summer and cooling through late fall. The lower panel shows the number of days target temperatures were exceeded for water years 2001–2020, with annual totals ranging from about 10 to 40 days.

ATSP 48 - ResSim

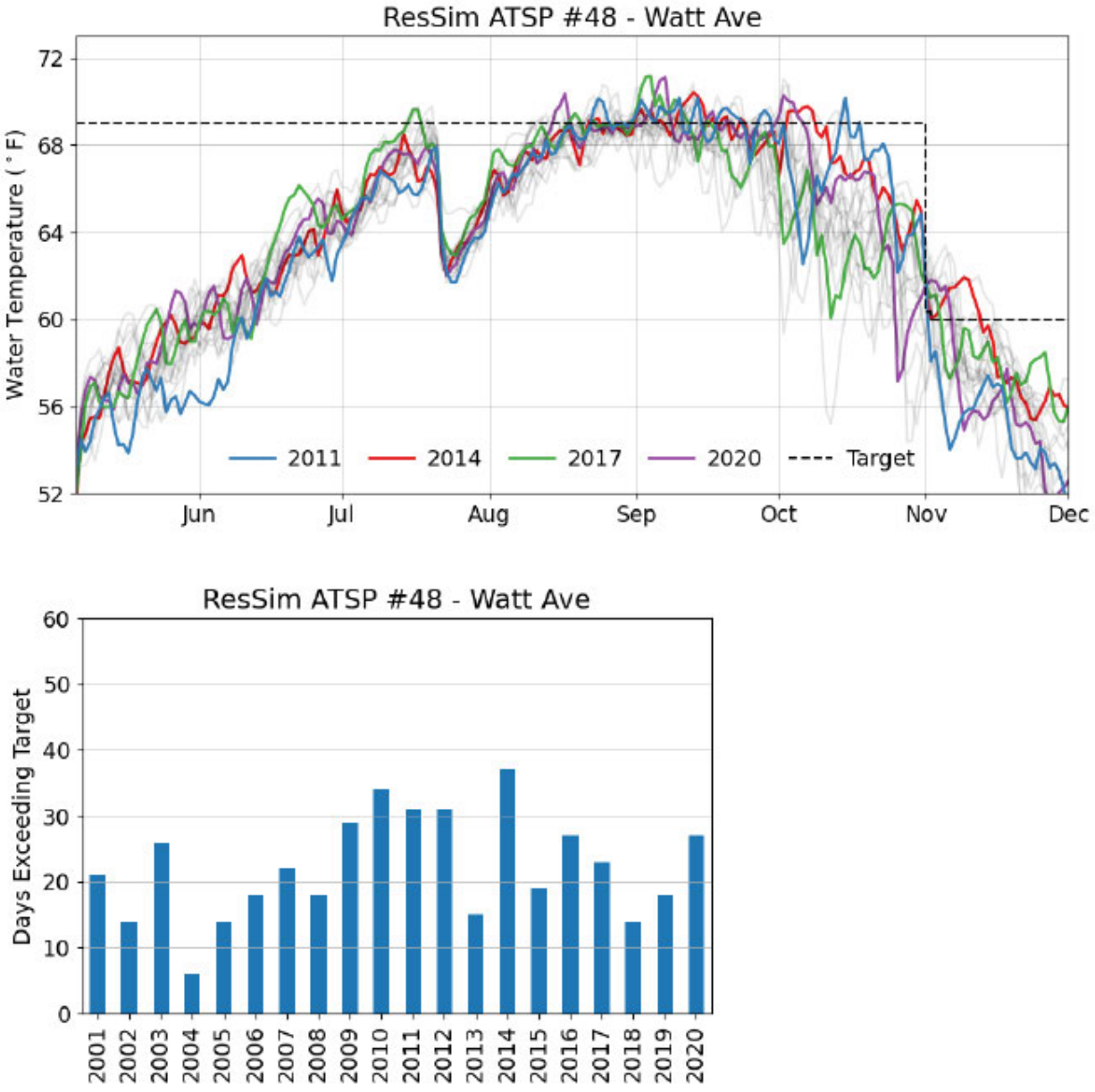

Figure 12. ResSim ATSP #48 Water Temperature Performance at Watt Avenue

Figure 12 shows two panels summarizing ResSim ATSP #48 performance at Watt Avenue. The upper panel compares modeled water temperatures for historical years 2011, 2014, 2017, and 2020 with target temperatures, showing warming through summer and cooling through late fall. The lower panel shows the number of days target temperatures were exceeded for water years 2001–2020, with annual totals ranging from about 5 to 40 days.

ATSP 50 - ResSim

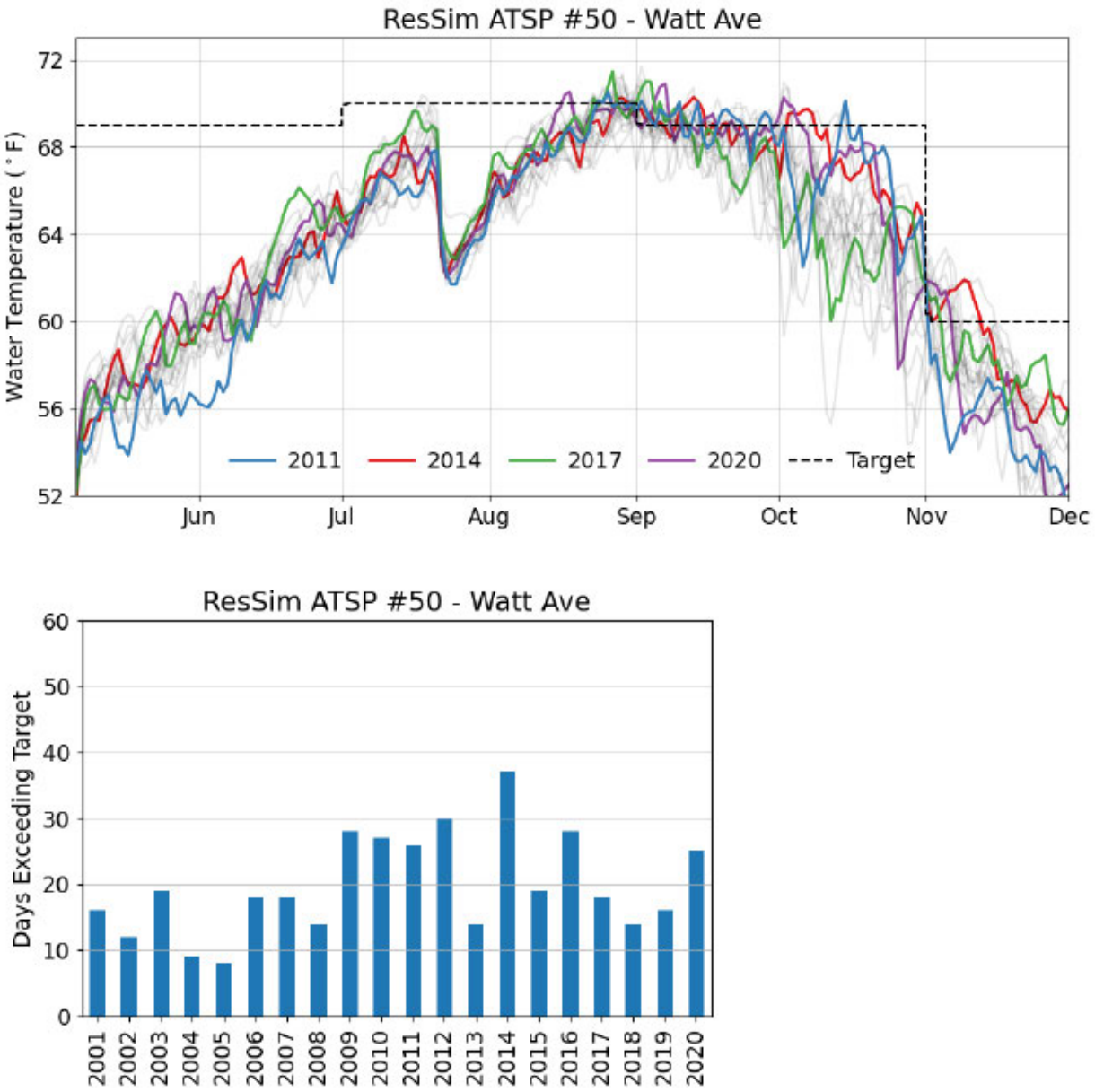

Figure 13. ResSim ATSP #50 Water Temperature Performance at Watt Avenue

Figure 13 shows two panels summarizing ResSim ATSP #50 performance at Watt Avenue. The upper panel compares modeled water temperatures for historical years 2011, 2014, 2017, and 2020 with target temperatures, showing warming through summer and cooling through late fall. The lower panel shows the number of days target temperatures were exceeded for water years 2001–2020, with annual totals ranging from about 10 to 40 days.

References

Bureau of Reclamation. 2025. Record of Decision on the Coordinated Long-Term Operation of the Central Valley Project and State Water Project. U.S. Department of Interior. https://www.usbr.gov/mp/bdo/cvp-wtmp.html

USBR WTMP Summary Report

Study: WTMP_American

Simulation: W2 Folsom FixedATSP-May_18th
Simulation Date: May 19, 2026 22:54

Report Date: May 20, 2026

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Introduction

This report presents an overview of temperature model results for the following conditions.
Project: WTMP_American

Simulation: W2 Folsom FixedATSP-May_18th

Analysis Period: 18 May 2026, 00:00 to 30 November 2026, 24:00

Models:

- Summary of Models: CeQualW2
- Iterations: CeQualW2

Simulation Date: May 19, 2026 22:54

Report Date: May 20, 2026

Summary of Models

Iteration Summary

Iteration and member number are used interchangeably. The last two digits of the iteration/member number correspond to the ATSP Schedule number.

Table 1. Iteration run information.

Member Number	Operations	Met Set	Temp Target
45	May_final	historic-2011	Folsom Iterative Target - ScheduleA
545	May_final	historic-2014	Folsom Iterative Target - ScheduleA
1045	May_final	historic-2017	Folsom Iterative Target - ScheduleA
1545	May_final	historic-2020	Folsom Iterative Target - ScheduleA

Folsom Lake Outflow Temperature Summary

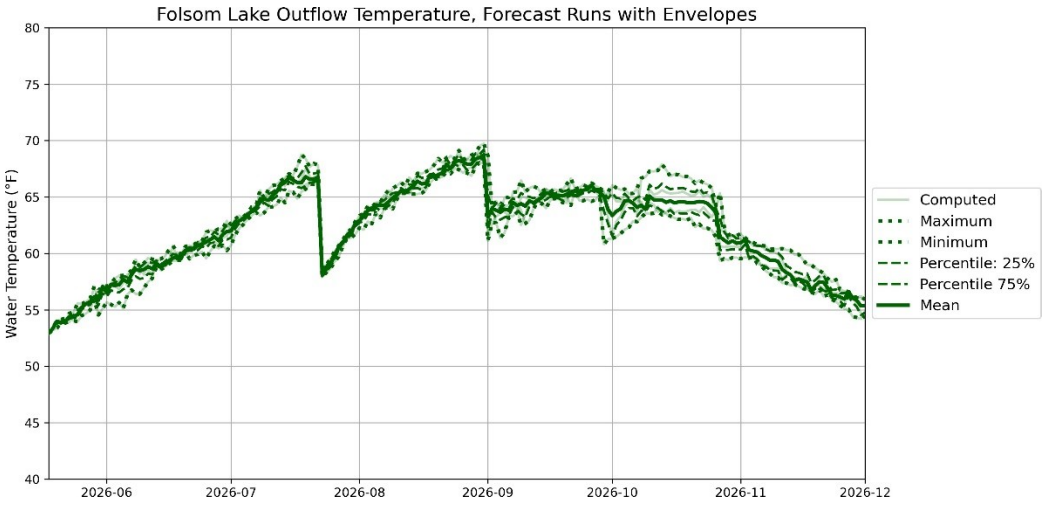

Figure 1. Folsom Lake outflow temperature, forecast runs (variable input) with percentile envelopes computed. CE-QUAL-W2.

Figure 1 shows forecasted Folsom Lake outflow temperatures from multiple model runs with variable inputs. The ensemble mean and percentile envelopes indicate warming through summer to peak temperatures near 70°F, followed by gradual cooling through late fall, with the spread among simulations increasing during autumn.

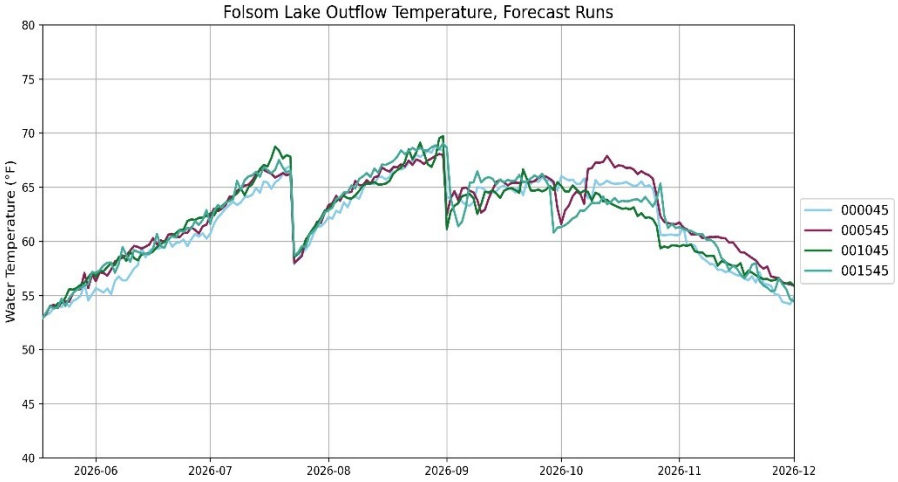

Figure 2. Folsom Lake outflow temperature, forecast run (variable input), by iteration. CE-QUAL-W2.

Figure 2 shows forecasted Folsom Lake outflow temperatures for four model runs with variable inputs. All runs exhibit similar seasonal patterns, with temperatures rising through summer to near 70°F, fluctuating during early fall, and declining steadily through late fall.

Table 2. Folsom Lake outflow temperature, iteration statistical summary, May - Nov 2026 (°F). CE-QUAL-W2.

Iteration	Maximum	Mean	Minimum
000045	68.9	61.7	52.9
000545	68.1	62.5	52.9
001045	69.7	61.9	52.9
001545	69.0	62.2	52.9

American River at Hazel Avenue Bridge Temperature Summary

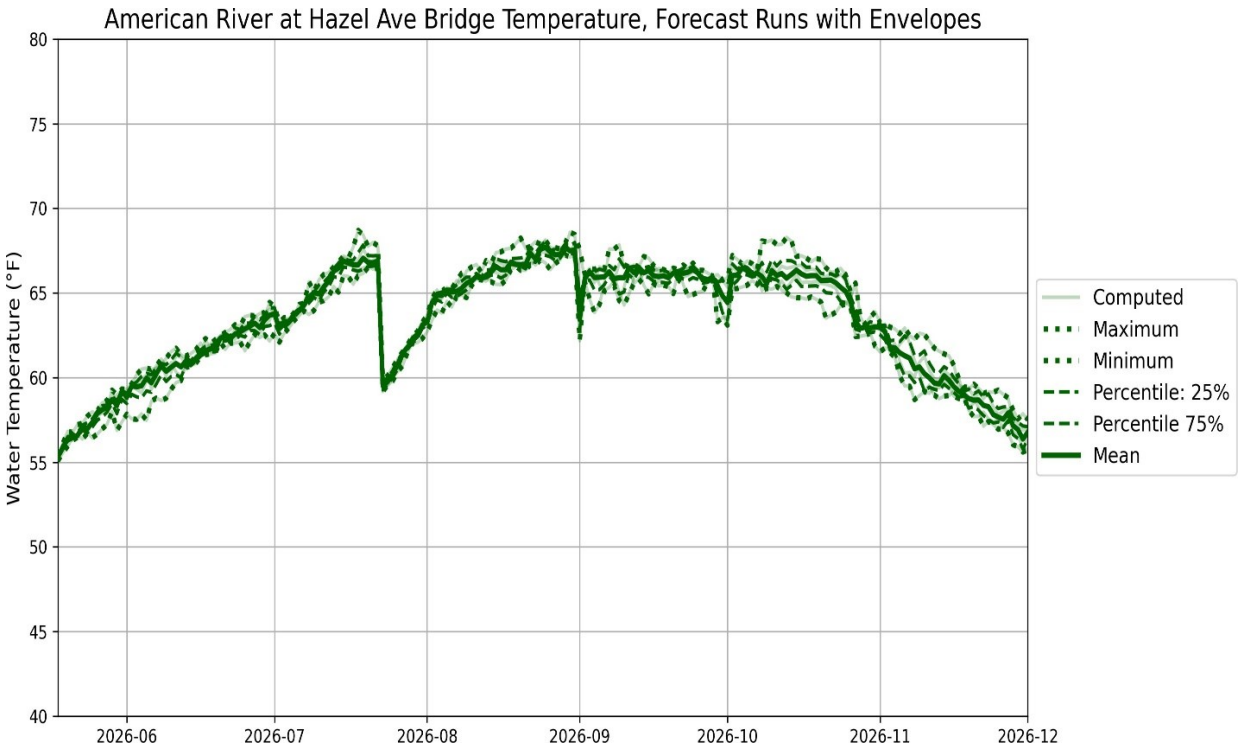

Figure 3. American River at Hazel Ave Bridge temperature, forecast runs (variable input) with percentile envelopes computed. CE-QUAL-W2.

Figure 3 shows forecasted water temperatures at the American River Hazel Avenue Bridge from multiple model runs with variable inputs. The ensemble mean and percentile envelopes indicate warming through summer to peak temperatures near 68°F, followed by gradual cooling through late fall, with greater variability among simulations during autumn.

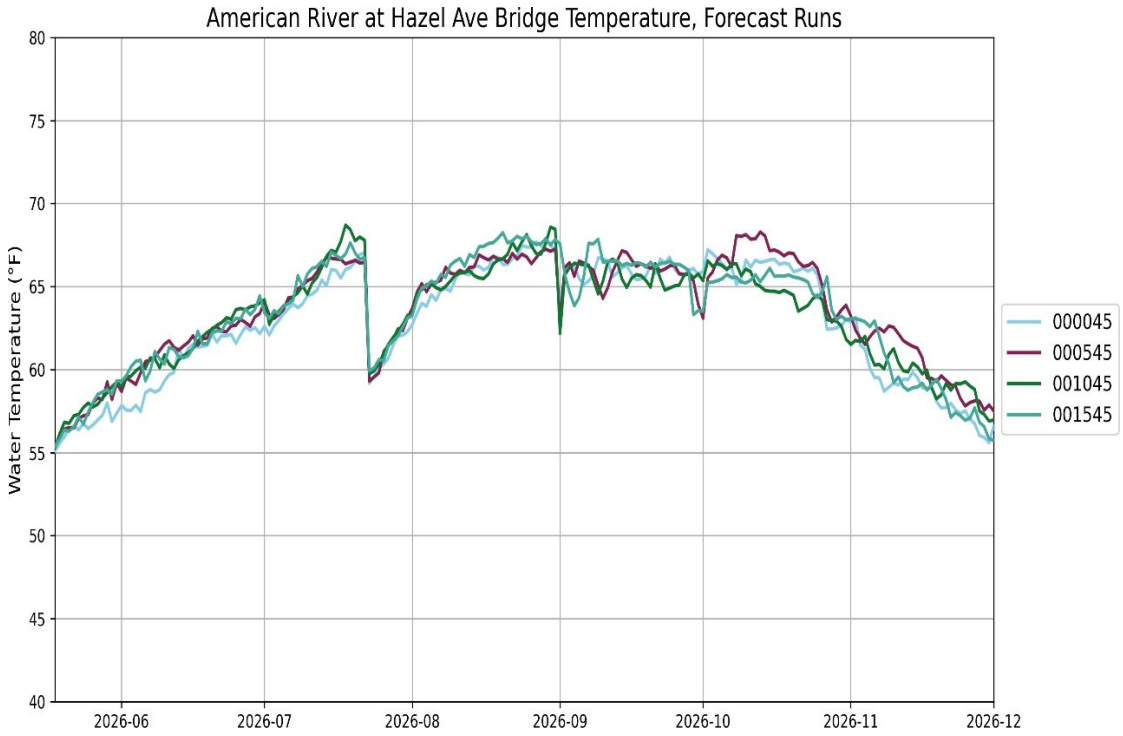

Figure 4. American River at Hazel Ave Bridge temperature, forecast runs (variable inputs) by iteration. CE-QUAL-W2.

Figure 4 shows forecasted water temperatures at the American River Hazel Avenue Bridge for four model runs with variable inputs. All runs follow similar seasonal patterns, with temperatures rising through summer to near 68°F, remaining relatively stable through early fall, and cooling steadily through late fall.

Table 3. American River at Hazel Ave Bridge temperature, iteration statistical summary, May - Nov 2026 (°F). CE-QUAL-W2.

Iteration	Maximum	Mean	Minimum
000045	67.9	62.9	55.1
000545	68.3	63.6	55.4
001045	68.7	63.3	55.3
001545	68.2	63.4	55.4

American River at Watt Ave Bridge Temperature Summary

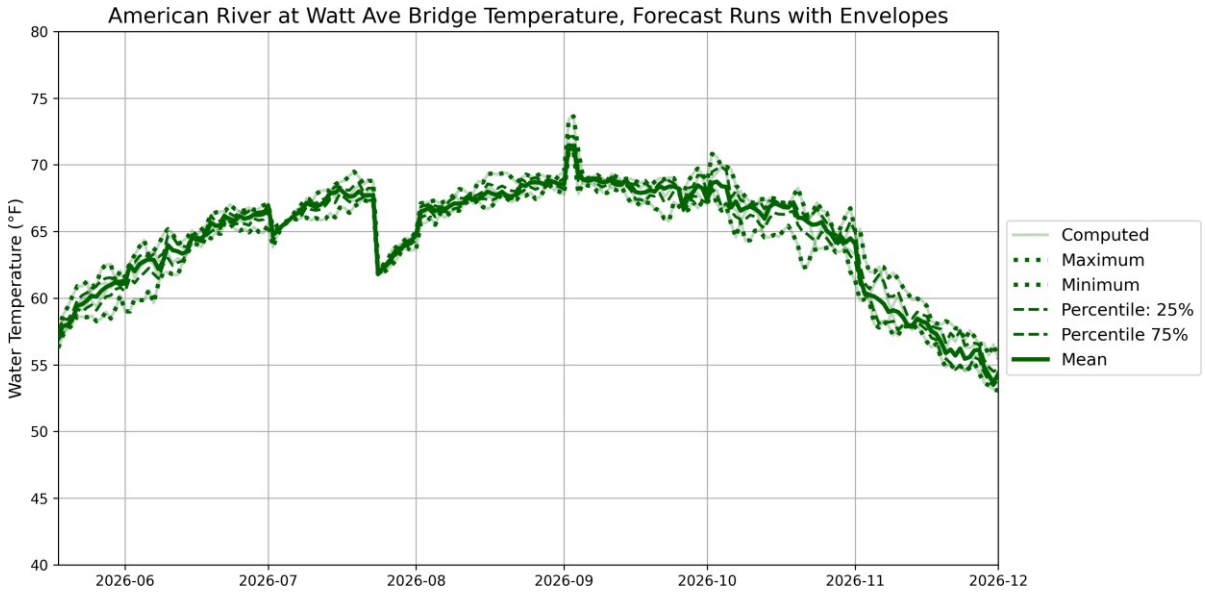

Figure 5. American River at Watt Ave Bridge temperature, forecast runs (variable input) with percentile envelopes computed. CE-QUAL-W2.

Figure 5 shows forecasted water temperatures at the American River Watt Avenue Bridge from multiple model runs with variable inputs. The ensemble mean and percentile envelopes indicate warming through summer to peak temperatures near 70°F, followed by gradual cooling through late fall, with increased variability among simulations during autumn.

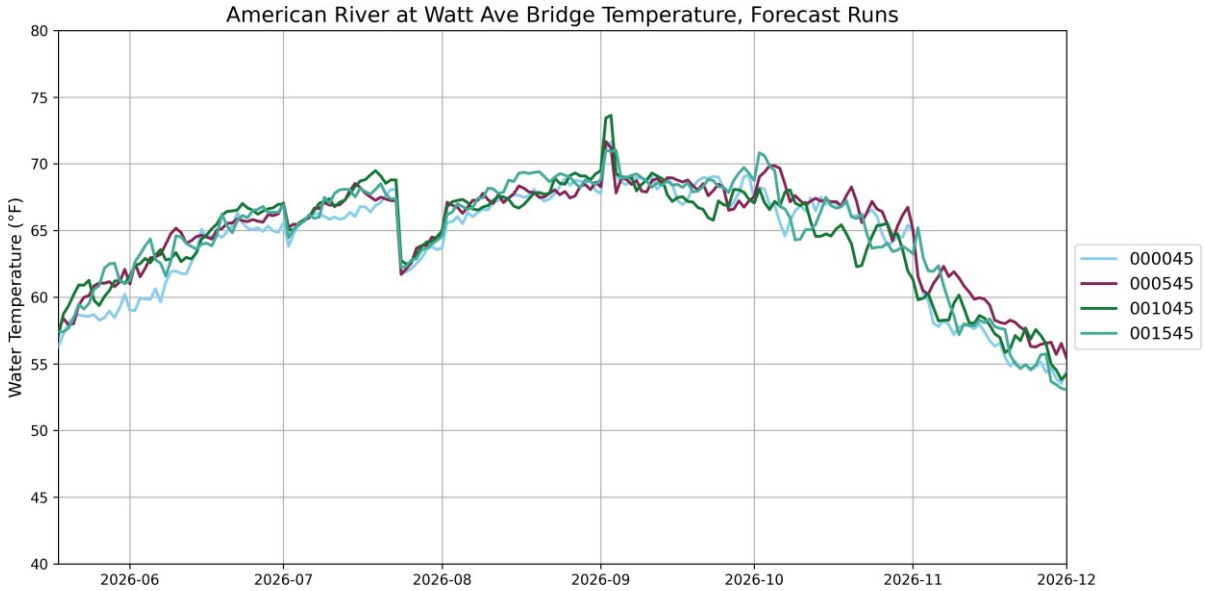

Figure 6. American River at Watt Ave Bridge temperature, forecast runs (variable input), by iteration. CE-QUAL-W2.

Figure 6 shows forecasted water temperatures at the American River Watt Avenue Bridge for four model runs with variable inputs. All runs exhibit similar seasonal patterns, with temperatures rising through summer to near 70°F, remaining relatively stable through early fall, and cooling steadily through late fall.

Table 4. American River at Watt Ave Bridge temperature, iteration statistical summary, May - Nov 2026 (°F). CE-QUAL-W2.

Iteration	Maximum	Mean	Minimum
000045	71.6	64.1	53.5
000545	71.7	65.1	55.5
001045	73.6	64.6	53.8
001545	71.0	64.8	53.1

Iterations

Iteration 000045: American River System Water Temperature Summary

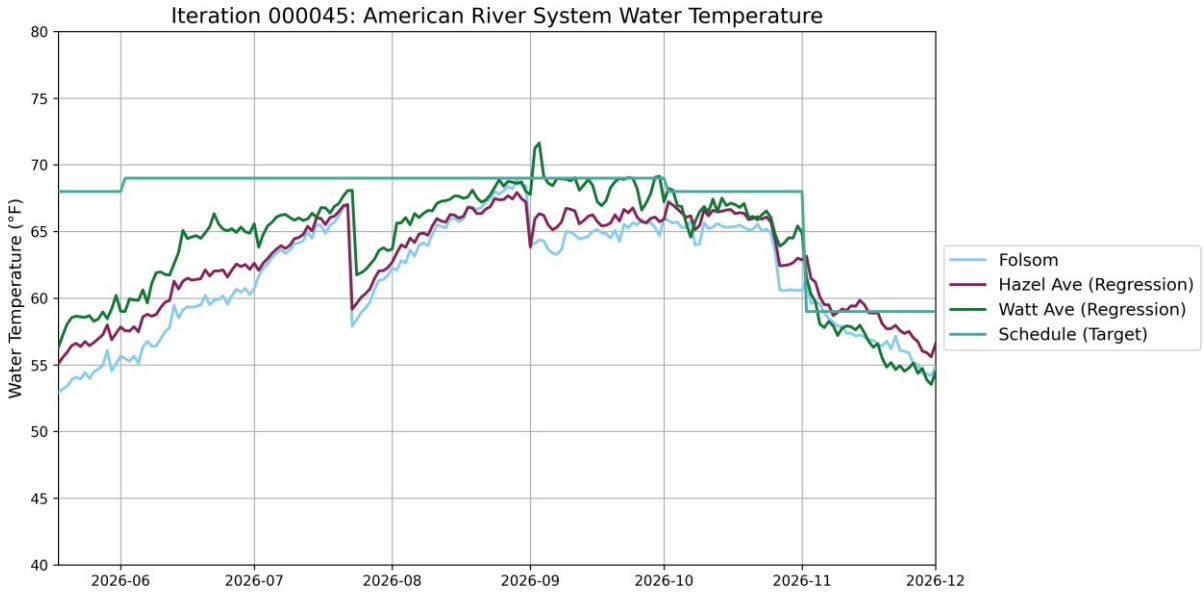

Figure 7. Iteration 000045: American River system water temperature, forecast 2026. CE-QUAL-W2.

Figure 7 shows modeled water temperatures at Folsom, Hazel Avenue, and Watt Avenue compared with target temperatures for a single forecast iteration. Temperatures rise through summer, briefly peak near 71°F in early September, remain near target levels through October, and decline through late fall.

Table 5. Iteration 000045: American River system water temperature statistical summary, May - Nov 2026 (°F). CE-QUAL-W2.

Location	Maximum	Mean	Minimum
Folsom	68.9	61.7	52.9
Hazel Ave (Regression)	67.9	62.9	55.1
Watt Ave (Regression)	71.6	64.1	53.5
Schedule (Target)	69.0	67.3	59.0

Table 6. Iteration 000045: American River system water temperature monthly average water temperature, 2026 (°F). CE-QUAL-W2.

Month	Folsom (°F)	Hazel Ave (°F)	Watt Ave (°F)	Schedule (Target) (°F)
Apr	nan	nan	nan	nan
May	54.3	56.6	58.4	68.0
Jun	58.4	60.5	63.1	69.0
Jul	63.0	63.6	65.4	69.0
Aug	65.8	65.9	67.2	69.0
Sep	64.7	65.9	68.6	69.0
Oct	64.5	65.6	66.2	68.0

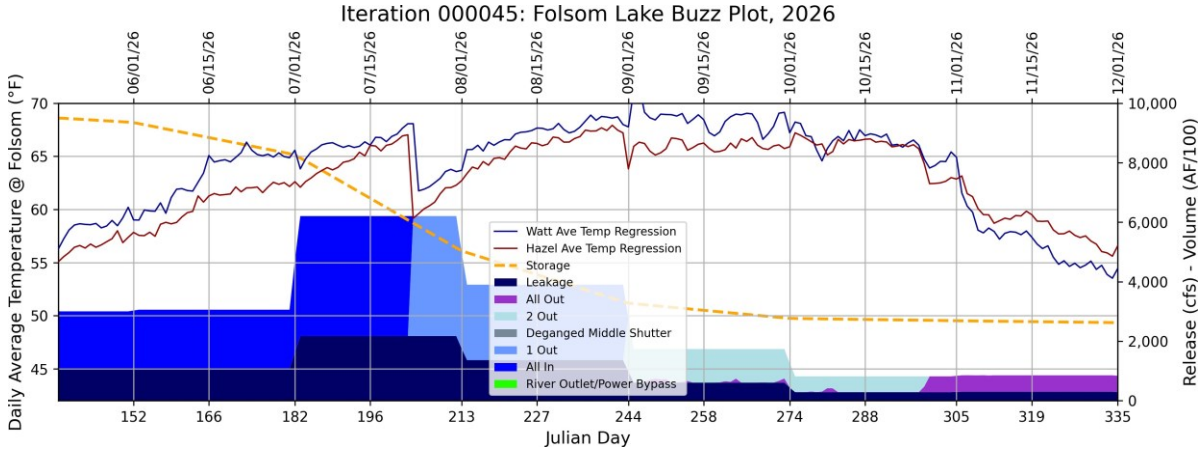

Figure 8. Iteration 000045: Folsom Lake Buzz Plot 2026. CE-QUAL-W2.

Figure 8 shows a 2026 buzz plot combining modeled temperatures at Hazel Avenue and Watt Avenue with reservoir storage and outlet operations. Temperatures increase through summer, remain near peak values into early fall, and decline through late fall, while storage decreases seasonally and outlet operations shift from higher releases and multiple outlets in summer to lower releases and fewer outlets later in the year.

Iteration 000545: American River System Water Temperature Summary

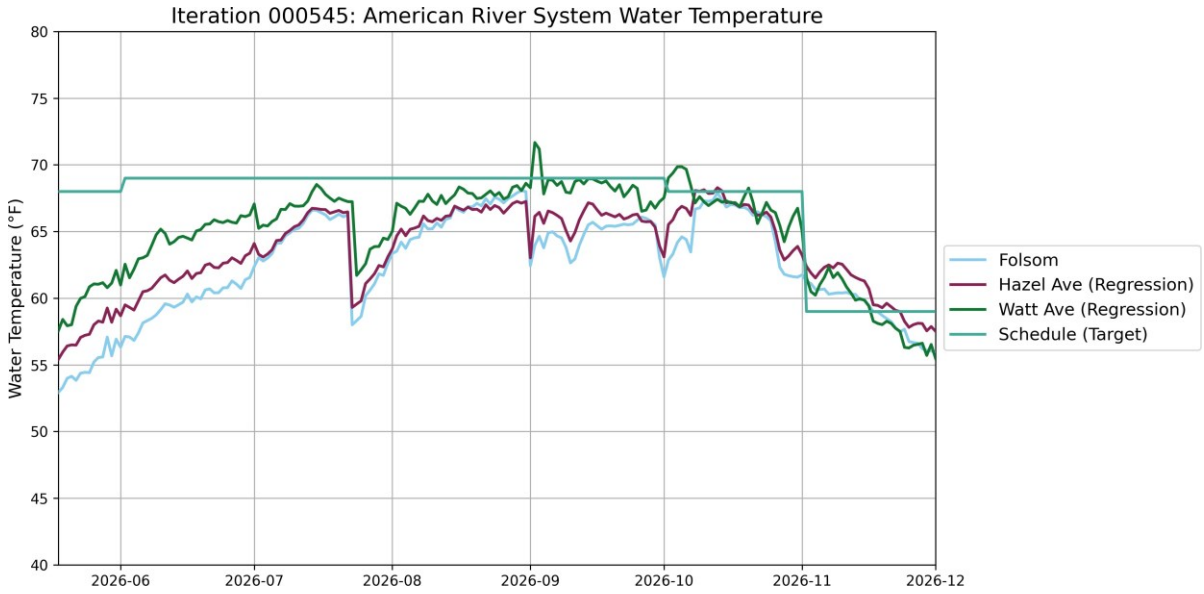

Figure 9. Iteration 000545: American River system water temperature, forecast 2026. CE-QUAL-W2.

Figure 9 shows modeled daily water temperature in degrees Fahrenheit for the American River system from June through December 2026, comparing Folsom, Hazel Ave (Regression), and Watt Ave (Regression) against a target schedule. All three rise from the mid-50s°F in June to the mid-to-upper 60s°F by July, with Watt Ave warmest and Folsom coolest. The target schedule holds near 68°F through late October before stepping down to approximately 59°F, with a brief spike in Watt Ave near 71.5°F in early September, followed by a gradual decline to the mid-to-upper 50s°F by December.

Table 7. Iteration 000545: American River system water temperature statistical summary, May - Nov 2026 (°F). CE-QUAL-W2.

Location	Maximum	Mean	Minimum
Folsom	68.1	62.5	52.9
Hazel Ave (Regression)	68.3	63.6	55.4
Watt Ave (Regression)	71.7	65.1	55.5
Schedule (Target)	69.0	67.3	59.0

Table 8. Iteration 000545: American River system water temperature monthly average water temperature, 2026 (°F). CE-QUAL-W2.

Month	Folsom (°F)	Hazel Ave (°F)	Watt Ave (°F)	Schedule (Target) (°F)
Apr	nan	nan	nan	nan
May	54.8	57.4	60.0	68.0
Jun	59.5	61.5	64.5	69.0
Jul	63.7	64.2	66.0	69.0
Aug	66.1	66.2	67.5	69.0
Sep	64.8	65.9	68.4	69.0
Oct	65.2	66.2	67.3	68.0

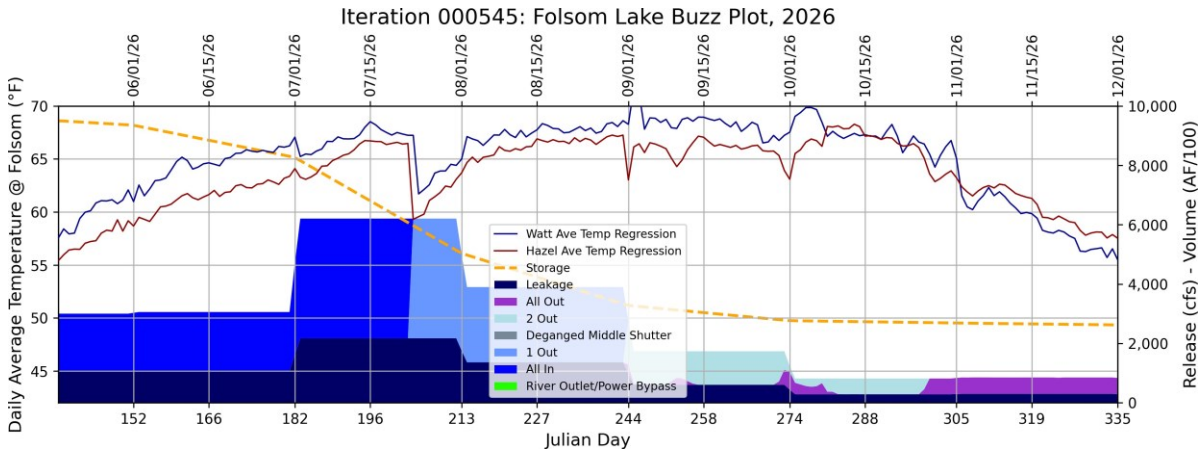

Figure 10. Iteration 000545: Folsom Lake Buzz Plot 2026. CE-QUAL-W2.

Figure 10 shows daily average water temperature at Folsom, storage volume, and release from June through December 2026 (Julian Day 152–335), comparing Watt Ave and Hazel Ave temperature regressions against storage and shutter configuration. Both temperature lines rise from the mid-50s°F in June to a peak near 68°F by mid-July, dip sharply near Julian Day 213, then decline gradually to the upper 50s°F by December. Storage declines steadily from roughly 9,500 AF/100 in June to about 2,500 AF/100 by November. Shutter operations shift from "All In"/"1 Out" in summer to "2 Out" in fall, with "All Out" appearing in late fall.

Iteration 001045: American River System Water Temperature Summary

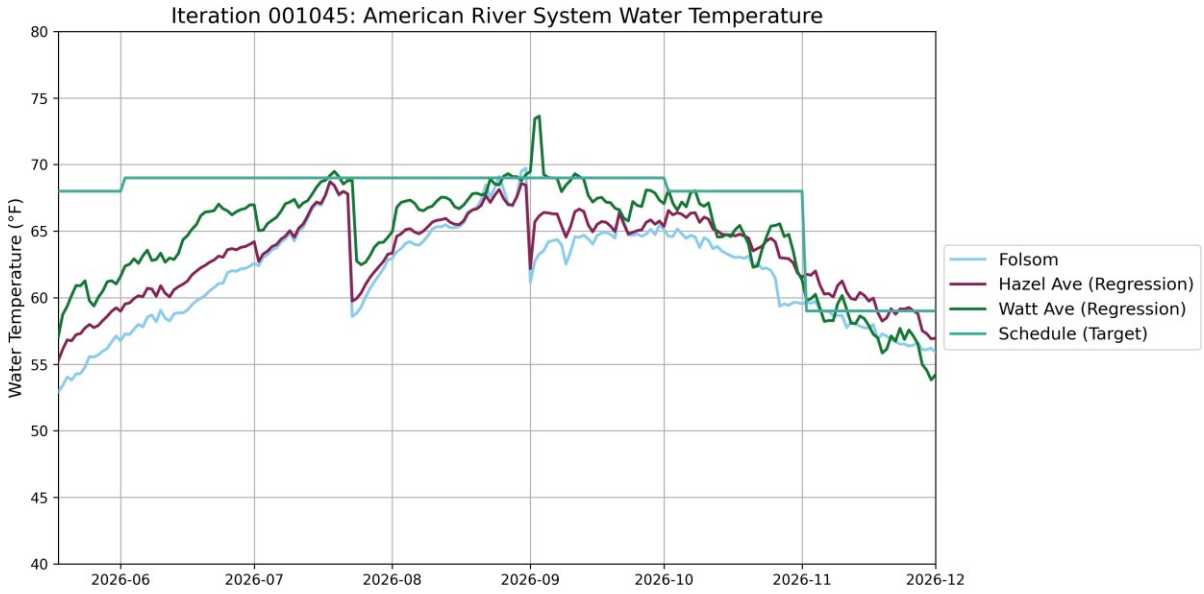

Figure 11. Iteration 001045: American River system water temperature, forecast 2026. CE-QUAL-W2.

Figure 11 shows modeled daily water temperature in degrees Fahrenheit for the American River system from June through December 2026, comparing Folsom, Hazel Ave (Regression), and Watt Ave (Regression) against a target schedule. All three rise from the mid-50s°F in June to the mid-60s°F by July, with Watt Ave warmest and Folsom coolest. The target schedule holds near 68°F through late October before stepping down to approximately 59°F, with a sharp spike in Watt Ave near 73.5°F in early September, followed by a gradual decline to the mid-50s°F by December.

Table 9. Iteration 001045: American River system water temperature statistical summary, May - Nov 2026 (°F). CE-QUAL-W2.

Location	Maximum	Mean	Minimum
Folsom	69.7	61.9	52.9
Hazel Ave (Regression)	68.7	63.3	55.3
Watt Ave (Regression)	73.6	64.6	53.8
Schedule (Target)	69.0	67.3	59.0

Table 10. Iteration 001045: American River system water temperature monthly average water temperature, 2026 (°F). CE-QUAL-W2.

Month	Folsom (°F)	Hazel Ave (°F)	Watt Ave (°F)	Schedule (Target) (°F)
Apr	nan	nan	nan	nan
May	55.0	57.6	60.1	68.0
Jun	59.6	61.6	64.6	69.0
Jul	64.1	64.5	66.4	69.0
Aug	66.0	66.2	67.6	69.0
Sep	64.4	65.5	68.2	69.0
Oct	62.9	64.8	65.4	68.0

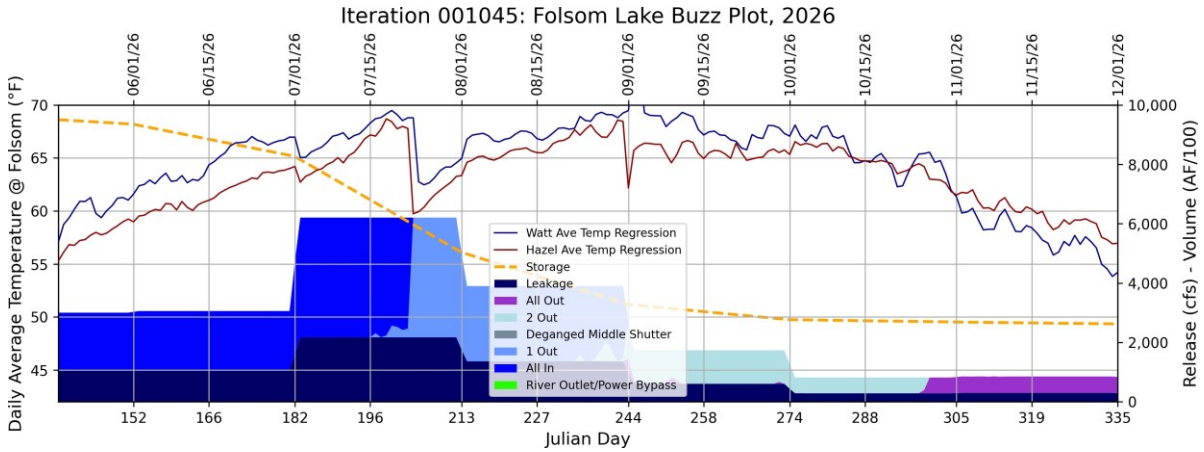

Figure 12. Iteration 001045: Folsom Lake Buzz Plot 2026. CE-QUAL-W2.

Figure 12 shows daily average water temperature at Folsom, storage volume, and release from June through December 2026 (Julian Day 152–335), comparing Watt Ave and Hazel Ave temperature regressions against storage and shutter configuration. Both temperature lines rise from the mid-50s°F in June to a peak near 68°F by mid-July, dip sharply near Julian Day 244 (early September), then decline gradually to the mid-50s°F by December. Storage declines steadily from roughly 9,500 AF/100 in June to about 2,500 AF/100 by November. Shutter operations shift from "All In"/"1 Out" in summer to "2 Out" in fall, with "All Out" appearing in late fall.

Iteration 001545: American River System Water Temperature Summary

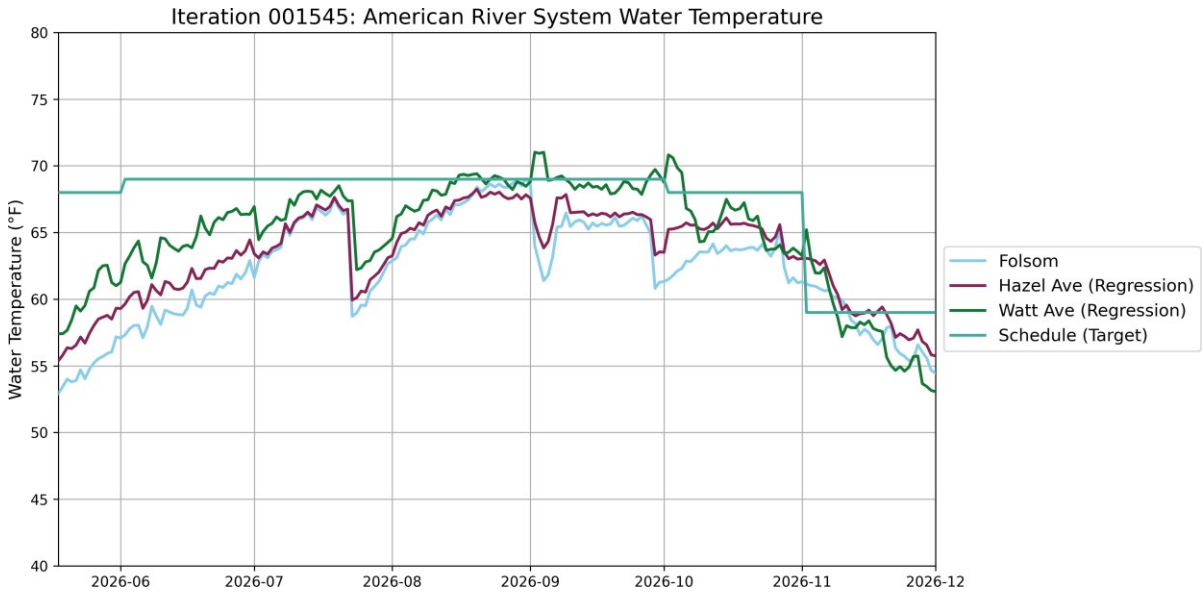

Figure 13. Iteration 001545: American River system water temperature, forecast 2026. CE-QUAL-W2.

Figure 13 shows modeled daily water temperature in degrees Fahrenheit for the American River system from June through December 2026, comparing Folsom, Hazel Ave (Regression), and Watt Ave (Regression) against a target schedule. All three rise from the mid-50s°F in June to the mid-to-upper 60s°F by July, with Watt Ave warmest and Folsom coolest. The target schedule holds near 68°F through late October before stepping down to approximately 59°F, with brief spikes in Watt Ave near 71°F in early September and early October, followed by a gradual decline to the mid-to-upper 50s°F by December.

Table 11. Iteration 001545: American River system water temperature statistical summary, May - Nov 2026 (°F). CE-QUAL-W2.

Location	Maximum	Mean	Minimum
Folsom	69.0	62.2	52.9
Hazel Ave (Regression)	68.2	63.4	55.4
Watt Ave (Regression)	71.0	64.8	53.1
Schedule (Target)	69.0	67.3	59.0

Table 12. Iteration 001545: American River system water temperature monthly average water temperature, 2026 (°F). CE-QUAL-W2.

Month	Folsom (°F)	Hazel Ave (°F)	Watt Ave (°F)	Schedule (Target) (°F)
Apr	nan	nan	nan	nan
May	54.8	57.4	60.0	68.0
Jun	59.6	61.6	64.5	69.0
Jul	63.9	64.3	66.1	69.0
Aug	66.7	66.8	68.1	69.0
Sep	65.0	66.1	68.9	69.0
Oct	63.1	65.1	66.0	68.0

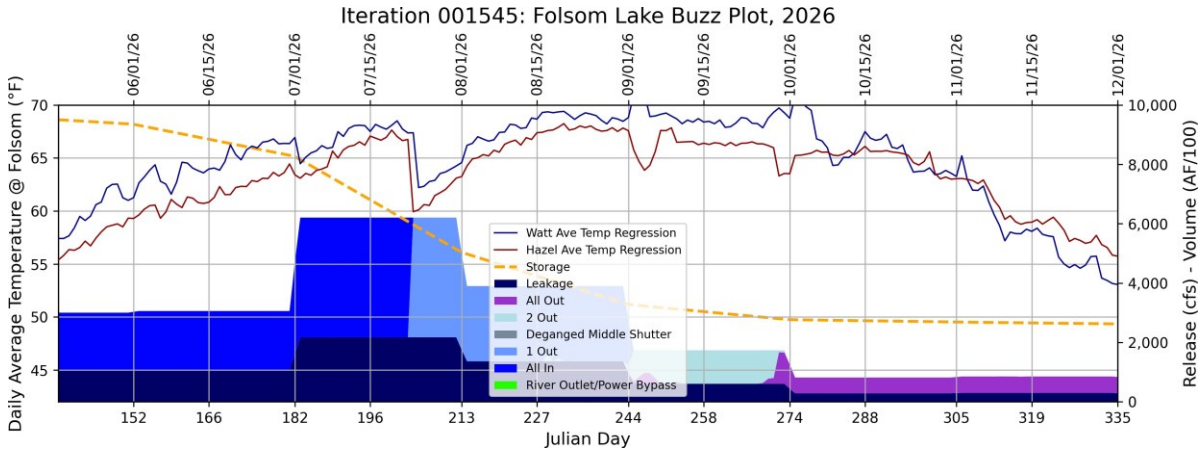

Figure 14. Iteration 001545: Folsom Lake Buzz Plot 2026. CE-QUAL-W2.

Figure 14 shows daily average water temperature at Folsom, storage volume, and release from June through December 2026 (Julian Day 152–335), comparing Watt Ave and Hazel Ave temperature regressions against storage and shutter configuration. Both temperature lines rise from the mid-50s°F in June to a peak near 68°F by mid-July, dip sharply near Julian Day 213, then decline gradually to the mid-50s°F by December. Storage declines steadily from roughly 9,500 AF/100 in June to about 2,500 AF/100 by November. Shutter operations shift from "All In"/"1 Out" in summer to "All Out" by late fall, persisting through the end of the period.

Lower American River Monitoring

Dissolved Oxygen Monitoring

Below is a summary of dissolved oxygen and temperature in the American River in relation to flow since the previous ARG meeting. The next logger download is scheduled for May 21.

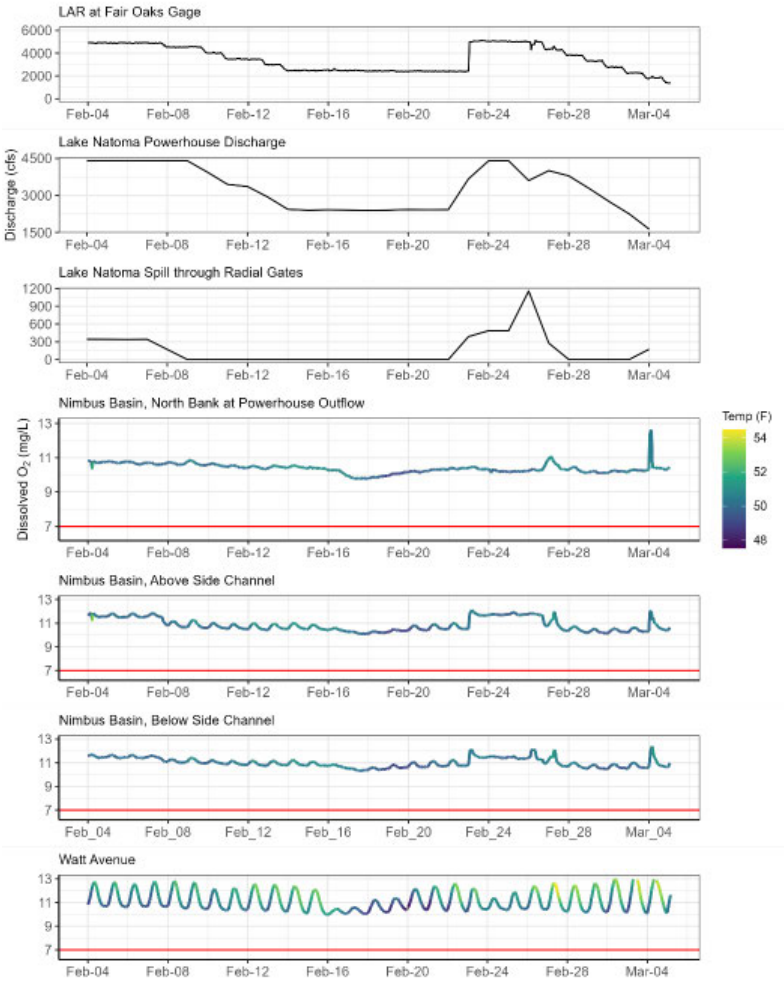

Figure 1. Discharge, temperature and dissolved oxygen dynamics at various locations in the Lower American River during the time when DO transects were conducted.

Figure 1 presents a series of line graphs showing discharge and dissolved oxygen (DO) conditions along the Lower American River from late March through late April 2026. Panels include LAR discharge at the Fair Oaks gage, Lake Natoma powerhouse discharge, spill through radial gates, and DO concentrations at multiple Nimbus Basin monitoring locations (north bank at powerhouse outflow, above side channel, below side channel, and Watt Avenue). Water temperature is indicated by color along the DO traces.

Snorkel Surveys

Snorkel surveys were conducted the week of February 23, March 23, April 13 and May 11 in several locations in the lower reaches of the river as part of Water Forum's WaterSmart restoration grant. Locations surveyed and observations are shown in the map below.

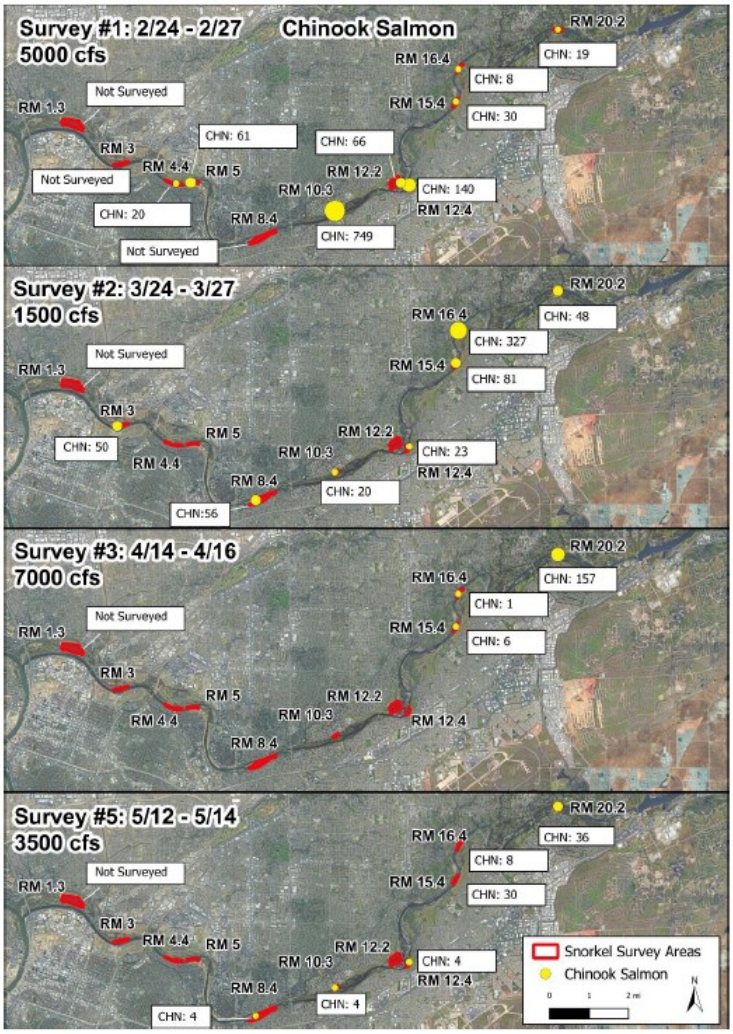

Figure 2. Map showing locations of snorkel surveys on the Lower American River.

Figure 2 shows four aerial maps depicting Chinook salmon snorkel survey results along the Lower American River, with red outlines marking snorkel survey areas at various river miles and yellow dots, sized by relative abundance, indicating Chinook salmon (CHN) counts. Survey #1 (Feb 24–27, 5,000 cfs) recorded the highest counts, including 749 fish near RM 8.4. Survey #2 (Mar 24–27, 1,500 cfs) peaked at 327 near RM 16.4. Survey #3 (Apr 14–16, 7,000 cfs) and Survey #5 (May 12–14, 3,500 cfs) recorded progressively lower counts, with most segments in the single digits to low tens.

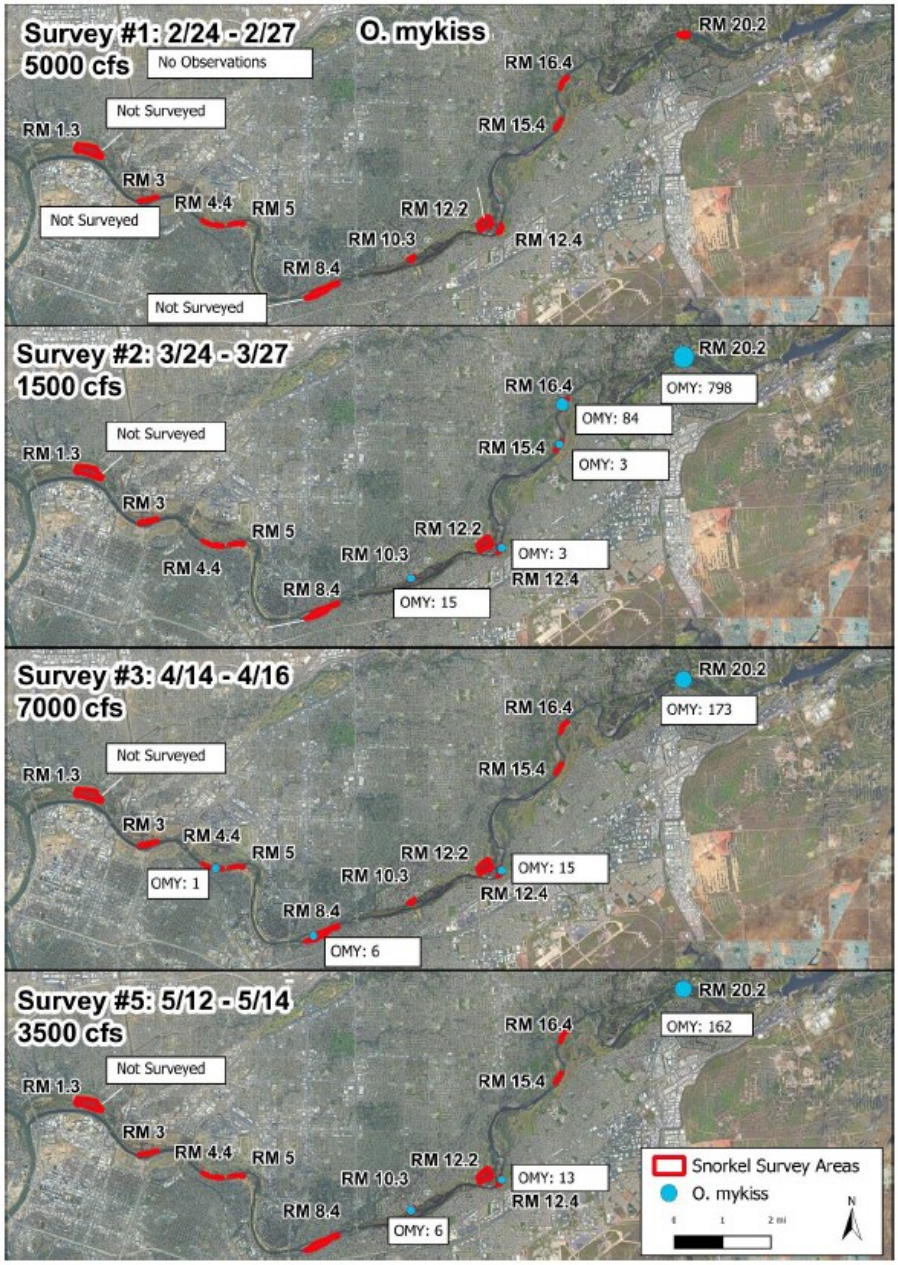

Figure 3. Map showing locations surveyed and Chinook Salmon observed during snorkel surveys through May 14 on the Lower American River

Figure 3 shows four aerial maps depicting O. mykiss snorkel survey results along the Lower American River, with red outlines marking snorkel survey areas at various river miles and blue dots, sized by relative abundance, indicating O. mykiss (OMY) counts. Survey #1 (Feb 24–27, 5,000 cfs) recorded no observations. Survey #2 (Mar 24–27, 1,500 cfs) recorded the highest counts, including 798 fish near RM 20.2. Survey #3 (Apr 14–16, 7,000 cfs) and Survey #5 (May 12–14, 3,500 cfs) recorded progressively lower counts near RM 20.2 (173 and 162, respectively), with most other surveyed segments in the single digits to low tens.

Steelhead Spawning and Stranding Surveys

Steelhead redd counts through April 16, 2026

Table 1. Steelhead and Chinook salmon redd counts during the 2026 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 20 - 22	9	1	0	0	10
Feb 3 - 4	15	0	0	1	16
Feb 18 - 20	9	0	0	0	9
Mar 3 - 5	1	0	0	0	1
Mar 17-19	5	0	9	0	14
Mar 30 – Apr 1	0	0	2	0	2
Apr 16 - 17	0	0	0	0	0
Total	39	1	11	1	52

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

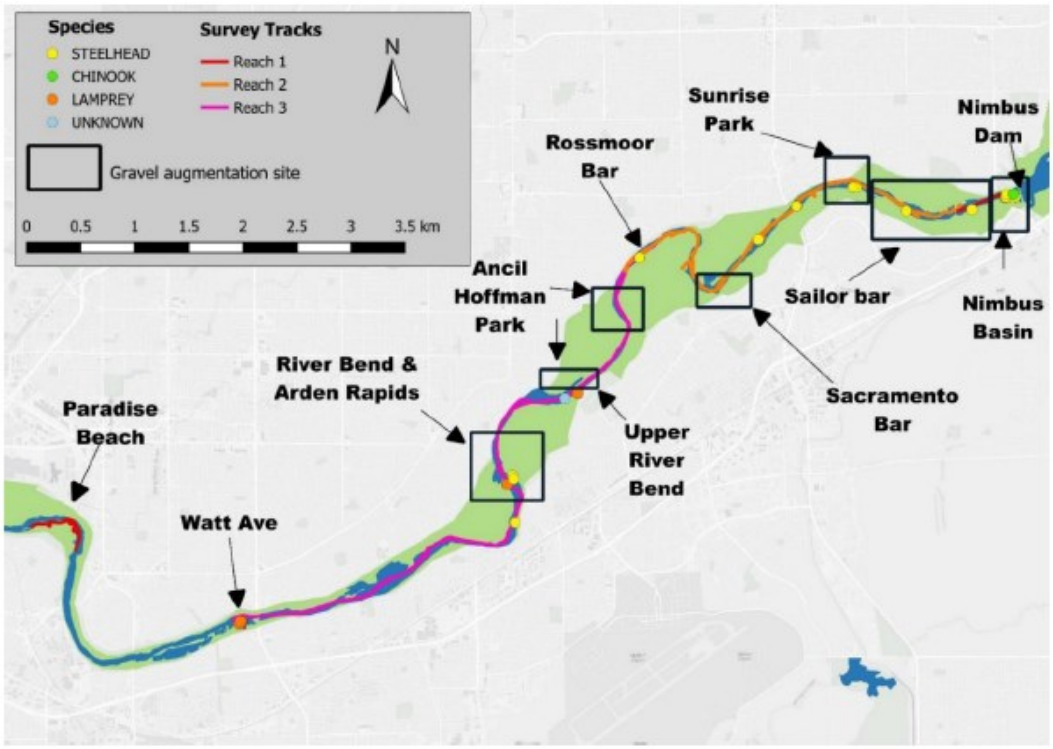

Figure 4. Locations of new redds identified during the 20 January through 16 April 2026 steelhead spawning surveys along the Lower American River. The gravel augmentation boxes represent general areas where gravel augmentation has occurred.

Figure 4 shows survey tracks along the Lower American River from Paradise Beach to Nimbus Dam, color-coded by reach (Reach 1, red; Reach 2, orange; Reach 3, magenta), with redd locations marked by species (Steelhead, yellow; Chinook, green; Lamprey, orange; Unknown, light blue) and black boxes indicating gravel augmentation sites at Rossmoor Bar, Ancil Hoffman Park, Sailor Bar, Sacramento Bar, and Nimbus Basin. Most observed redds, predominantly Steelhead, are concentrated between River Bend/Arden Rapids and Nimbus Dam, with a single Lamprey observation near Watt Avenue.

Spawning surveys have concluded for the 2026 season.

Stranding surveys through May 1, 2026

Table 2. Salmonids and environmental conditions in isolated pools observed through 1 May 2026.

Location (river mile)	Date	Chinook	O. mykiss	Unidentified Salmonids	Total Pool Area (m²)	Density (# fish/m²)	Temp (°C)	Dissolved Oxygen (mg/L)
Paradise Beach (5)	1/20/2026	20 *	0	0	NA	NA	NA	NA
Paradise Beach (5)	1/22/2026	141	0	0	167	0.84	11.9	12.2
Paradise Beach (5)1	1/22/2026	NA	NA	NA	402	NA	11.3	11.6
Paradise Beach (5)1	1/29/2026	69	0	0	9	7.8	8.4	4.1
Sailor Bar (22)	2/20/2026	113	0	0	32	3	7.1	10.8
Sailor Bar (22)	2/20/2026	61	0	0	31	2	7.8	8.1
Sailor Bar (22)	2/20/2026	102	0	0	86	1	10.4	9.2
Lower Sunrise (19)	2/20/2026	927	0	0	41	22	11.7	8.9
Lower Sunrise (19)	3/3/2026	185	0	0	45	4	15.4	8.13
Below River Bend side channel (13)	3/4/2026	113	0	0	105	1	17.7	11.87
Below River Bend (12)	3/4/2026	83	0	0	34	2	14.5	11.35
Paradise Beach (5)	3/16/2026	123 *	0	0	3	41	31.6	7.26
Below Rossmoor/Ancil Hoffman top (16)	3/26/2026	0	1	0	2	0	27.3	8.68
Nimbus Basin (22)	3/27/2026	90	200	0	85	3	14.3	7.55
Lower Sunrise side channel (19)	3/27/2026	11	41	0	256	0	16.5	3.73
Upper Sailor Bar, hatchery to boat ramp (22)	5/1/2026	13	24	0	83	0.45	14.2	5.5

Location (river mile)	Date	Chinook	O. mykiss	Unidentified Salmonids	Total Pool Area (m²)	Density (# fish/m²)	Temp (°C)	Dissolved Oxygen (mg/L)
Upper Sailor Bar, hatchery to boat ramp (22)	5/1/2026	1 *	1 *	0	NA	NA	NA	NA
Sailor Bar (22)	5/1/2026	0	1 *	0	NA	NA	NA	NA
TOTAL	NA	2052	268	0	NA	NA	NA	NA

* Mortalities due to pool desiccation.
[1] Pool revisited to perform rescues

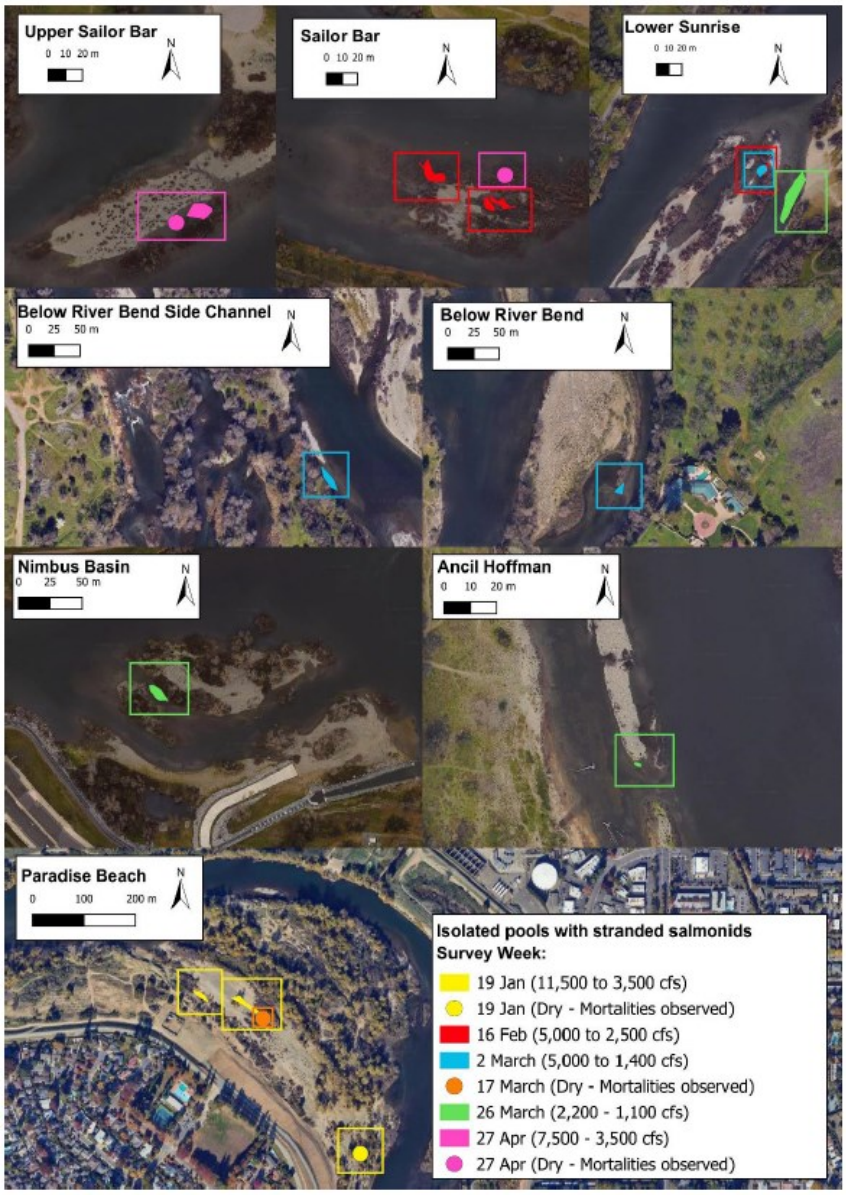

Figure 5. Location of the stranding pools observed on the Lower American River through 1 May 2026.

Figure 5 shows eight aerial close-up maps of isolated pools with stranded salmonids at locations along the Lower American River, including Upper Sailor Bar, Sailor Bar, Lower Sunrise, Below River Bend Side Channel, Below River Bend, Nimbus Basin, Ancil Hoffman, and Paradise Beach. Colored boxes and markers indicate pools by survey week and flow condition, ranging from 19 January (11,500–3,500 cfs) through 27 April (7,500–3,500 cfs), with several dates noting dry pools with observed mortalities. Sailor Bar and Paradise Beach show the most pool observations across multiple survey weeks.

Additional stranding surveys are scheduled for this week on May 21.

UPDATED 5/17/26

RST Operations

Cones were lowered on 4/6/26 for the 2026 sampling season.

Traps were raised between 4/11 – 4/13, 4/17, and 4/21 – 4/22 due to storms or heavy debris and due to staffing limitations. Traps were raised for the weekends beginning 4/18.

RSTs are expected to be continuously operated 5 days per week (M-F) for the remainder of the sampling season.

Unmarked Juvenile Chinook Salmon (length-at-date)

Fall	Late Fall	Spring	Winter
502	14	47	1

Unmarked O. mykiss (life stage)

Fry	Parr	Smolt	Adult
9	64	0	0

Lower American River RSTs at Watt Avenue

Daily catch of unmarked Chinook Salmon and daily average discharge at Fair Oaks during the 2026 Lower American River rotary screw trap sampling season.

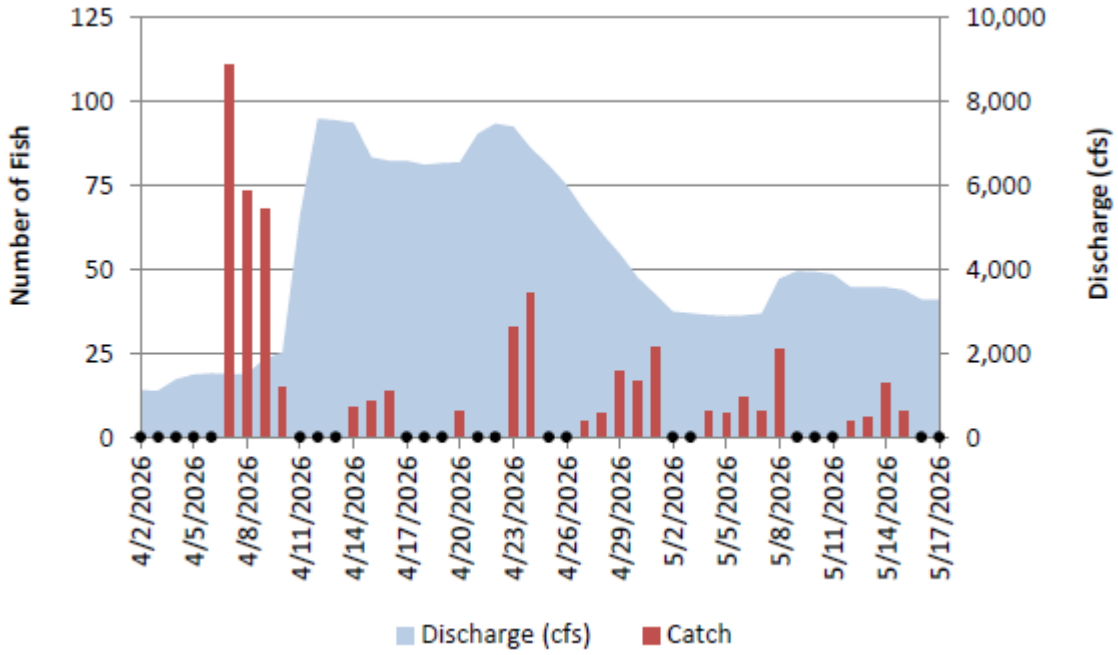

Figure 1. Daily Fish Catch and Discharge, April–May 2026.

Figure 1 shows daily fish catch (red bars, left axis) and discharge in cfs (light blue area, right axis) from April 2 through May 17, 2026, with black dots along the x-axis marking days with no catch. Catch peaks sharply on April 8 at 111 fish, followed by elevated counts of 74 and 68 on the following two days, then drops to near zero through mid-April. Discharge rises sharply around April 11 to a peak near 7,500 cfs, remains elevated through late April, then declines gradually to around 3,000 cfs by mid-May, with a secondary smaller rise around May 11–14. Smaller catch peaks occur intermittently through late April and May, including a notable spike of 43 fish on April 23 and 27 fish on May 8.

Daily fork length distribution by life stage of unmarked Chinook Salmon measured during the 2026 Lower American River rotary screw trap sampling season.

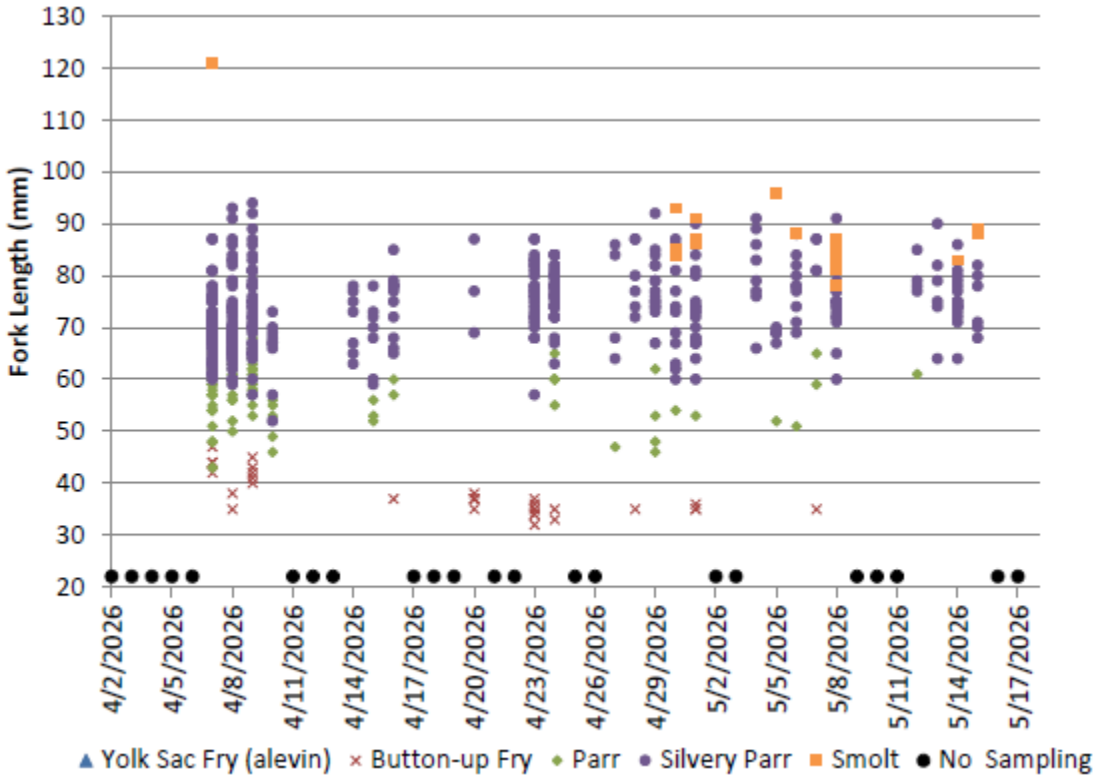

Figure 2. Fork Length by Life Stage, April–May 2026.

Figure 2 shows fork length in millimeters by life stage from April 2 through May 17, 2026, including Yolk Sac Fry (alevin, blue triangle), Button-up Fry (red x), Parr (green diamond), Silvery Parr (purple dot), and Smolt (orange square), with black dots marking days with no sampling. Button-up Fry cluster in the 30–45 mm range throughout the period. Parr range from approximately 45–65 mm, while Silvery Parr dominate the upper range at roughly 55–95 mm and are present across nearly every sampling date. Smolt observations are sparse but trend toward the highest fork lengths, ranging from approximately 75–97 mm, appearing intermittently from April 5 through mid-May.

Lower American River RST CalFish Webpage