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, June 20, 2024

Agenda

1. Introductions
2. Announcements
3. Housekeeping
    a. Meeting will be recorded for notetaking purposes
4. Fisheries Update
    a. CDFW
    b. CFS
    c. PSMFC
5. Operations Forecast
    a. SMUD
    b. PCWA
6. Central Valley Operations
7. Discussion
8. Next Meetings:
    a. Thursday, July 18, 1:30-3:30pm

Lower American River 2024 Stranding Survey Summary

Spawning surveys

Steelhead spawning surveys were conducted from conducted 8 January - 17 April 2024 on the Lower American River. No new steelhead redds were observed after 2 April 2024.

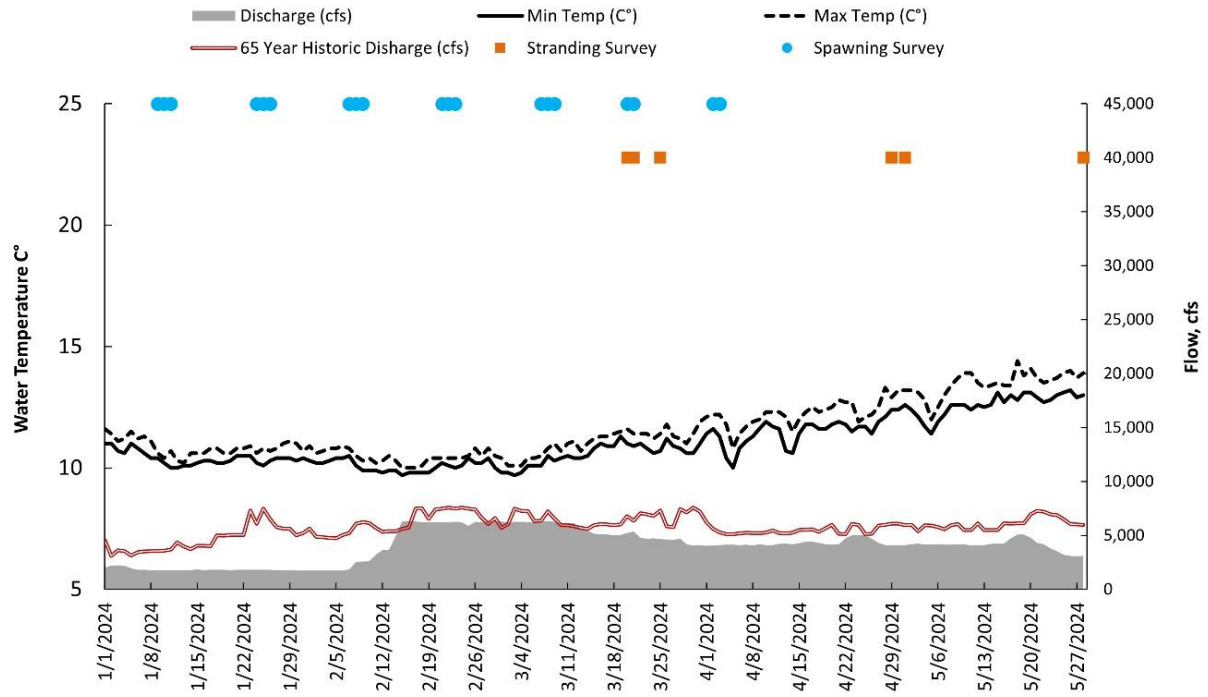

Figure 1. 2024 lower American River flow (AFO stream gage), temperature, and survey timing.

Figure 1 is a line graph that shows flow, temperatures, and survey timing from January 1, 2024 until May 27, 2024.

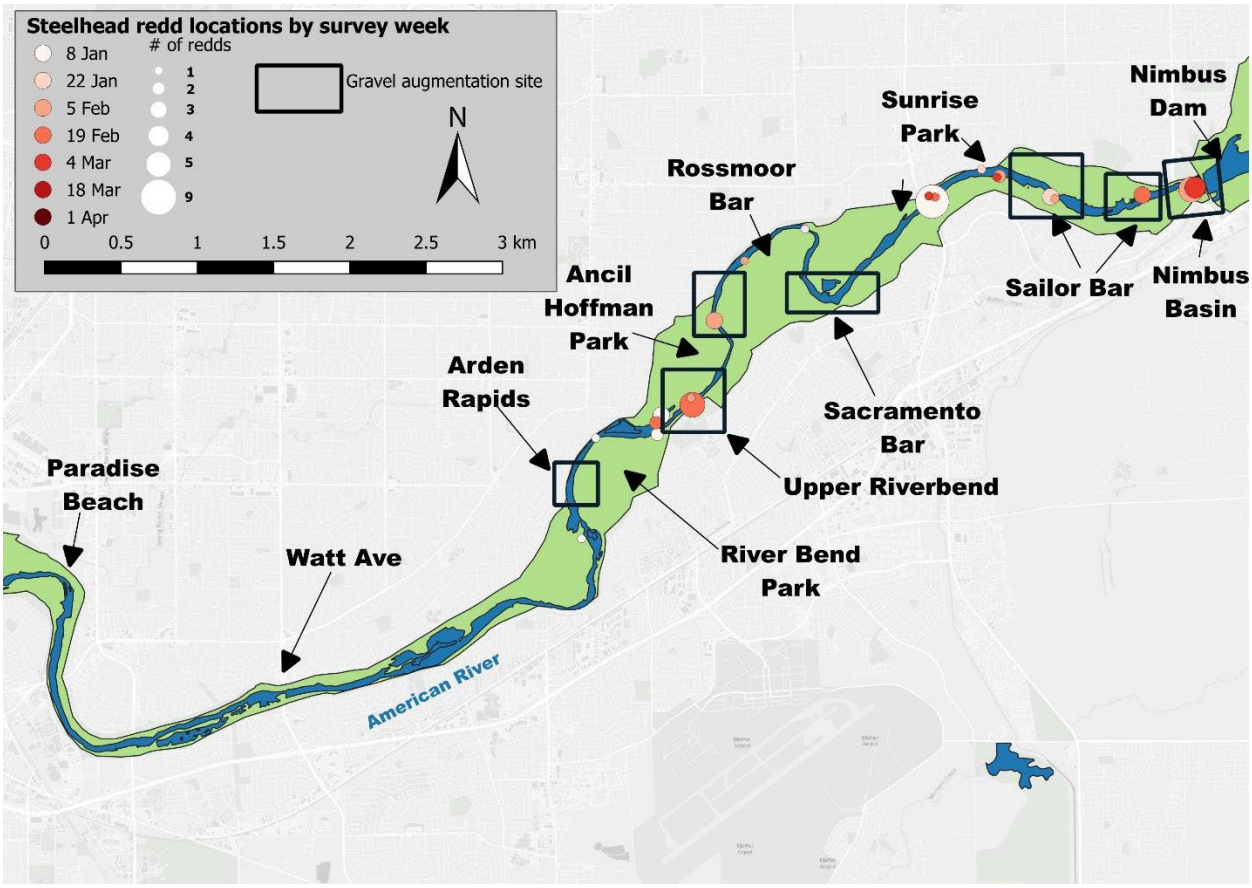

Figure 2. 2024 steelhead redd spatial distribution in the lower American River. A total of 62 steelhead redds were observed in 2024.

Figure 2 is a map of redds identified during the 2024 steelhead spawning surveys along the Lower American River by week. The map identifies how many reds were identified each week and at which location. The black boxes at River Bend & Arden Rapids, Upper Riverbend, Ancil Hoffman Park, Sacramento Bar, Sunrise Park, Sailor Bar, and Nimbus Basin represent areas where gravel augmentation has occurred.

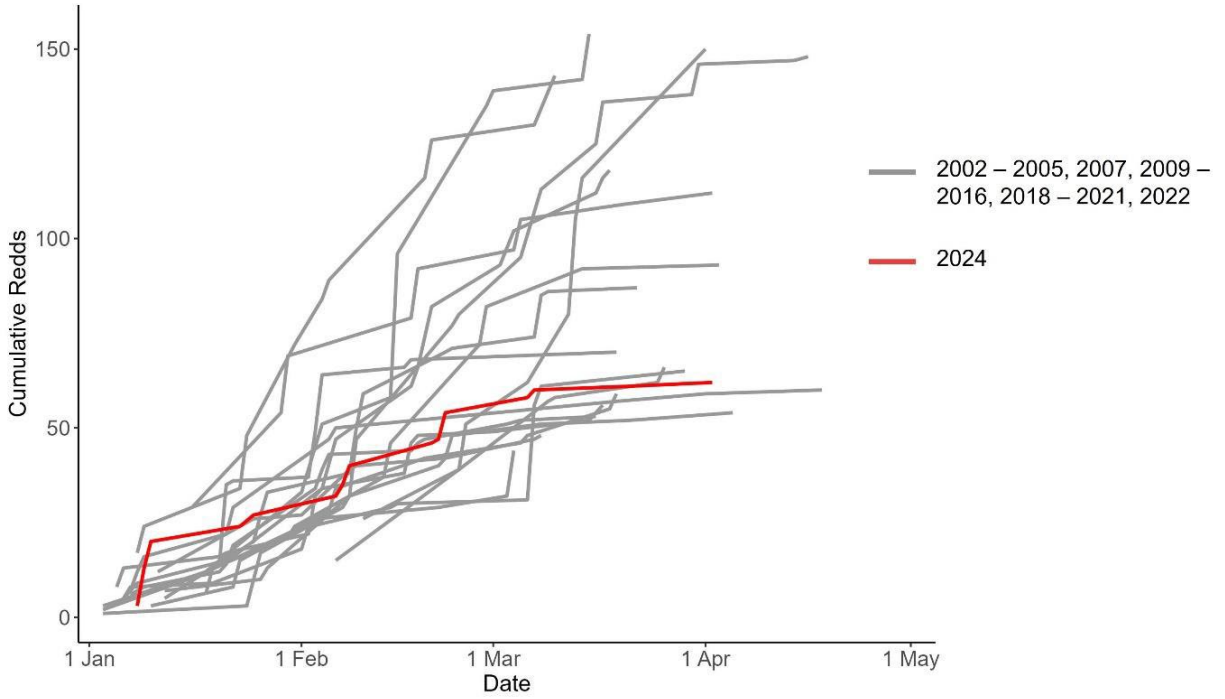

Figure 3. Temporal distribution of steelhead redds on the lower American River in 2024 compared to previous years.

Figure 3 is a line graph that compares the distribution of cumulative redds identified on the lower American River between January 1 and May 1 from the year 2005 until 2024, excluding 2006, 2008, and 2017, and 2023. Cumulative redds identified in 2024 are highlighted.

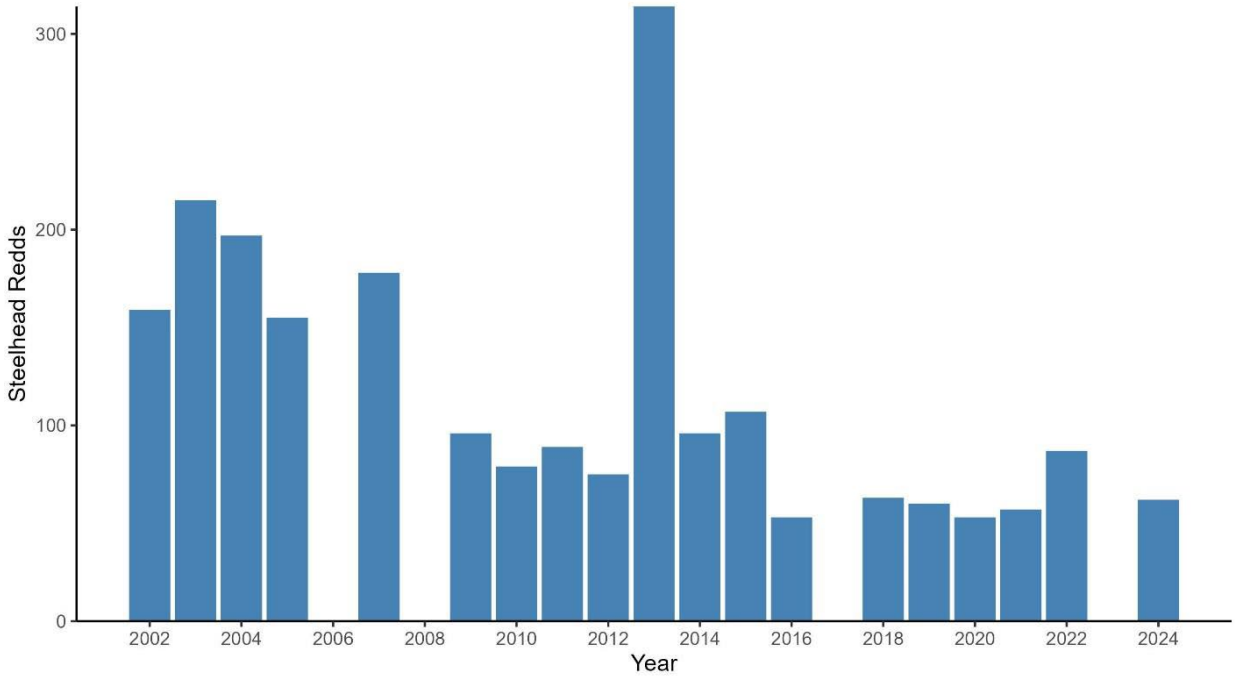

Figure 4. Comparison of 2024 redd counts with previous years. A total of 62 steelhead redds were observed in 2024.

Figure 4 is a bar graph comparing redd counts, by year, from 2002 until 2024. A total of 62 steelhead redds were observed in 2024. Redd surveys were not possible during portions of 2017 and 2023 due to high flows and low visibility, therefore the redd count is not included for these years. Redd surveys were not conducted in 2006 and 2008 due to low visibility.

Stranding Surveys

Salmonid stranding surveys were conducted from 20 – 21 March, 29 April, 1 May and 28 May. No stranded salmonids were observed during the 28 May stranding survey.

Table 1. Summary of stranded juvenile salmonids on the Lower American River observed during stranding surveys that occurred 20 - 21 March, 25 March, 29 April, and 1 May. A survey was also conducted on 28 May; however, no stranded salmonids were observed during that survey.

Date	Location (river mile)	# of pools	Species Observed: Chinook	Species Observed: Steelhead	Species Observed: Unid. Salmonids	Rescue conducted	Total pool area (m^2)	Average Temperature (°C)	Average DO (mg/L)	Average Turbidity (NPU)
20-21 Mar	Upper Sailor Bar, Nimbus Hatchery to boat ramp (22)	1	125	0	0	N[1]	5	13	13.4	N/A
20-21 Mar	Below Rossmoor/Ancil Hoffman top (16)	1	60	0	0	Partial[2]	23	14.9	13.6	N/A
20-21 Mar	Below River Bend (12)	1	172	0	0	Y	12	12.8	2.08	6.5
20-21 Mar	Paradise Beach (5)	1	2500	0	0	Y	1603	17.8	9.1	N/A
25 Mar	Paradise Beach (5)*	4	3849	0	0	Y	906	18.7	10.4	N/A

Date	Location (river mile)	# of pools	Species Observed: Chinook	Species Observed: Steelhead	Species Observed: Unid. Salmonids	Rescue conducted	Total pool area (m^2)	Average Temperature (°C)	Average DO (mg/L)	Average Turbidity (NPU)
29 Apr – 1 May	Below Riverbend/ William B Pond Access (13)	2	570	6	0	Y	800	14.9	8.2	1.6
29 Apr – 1 May	Rossmoor Bar (17)	1	30	0	0	N[1]	77	14.5	2.2	2.5
20 Mar – 1 May	N/A	11	7306	6	0	N/A	3426	N/A	N/A	N/A

[1]Rescues not conducted due to dense vegetation and debris.

[2]Partial rescues conducted due to dense vegetation and debris.

*Pools revisited from 20 – 21 March survey

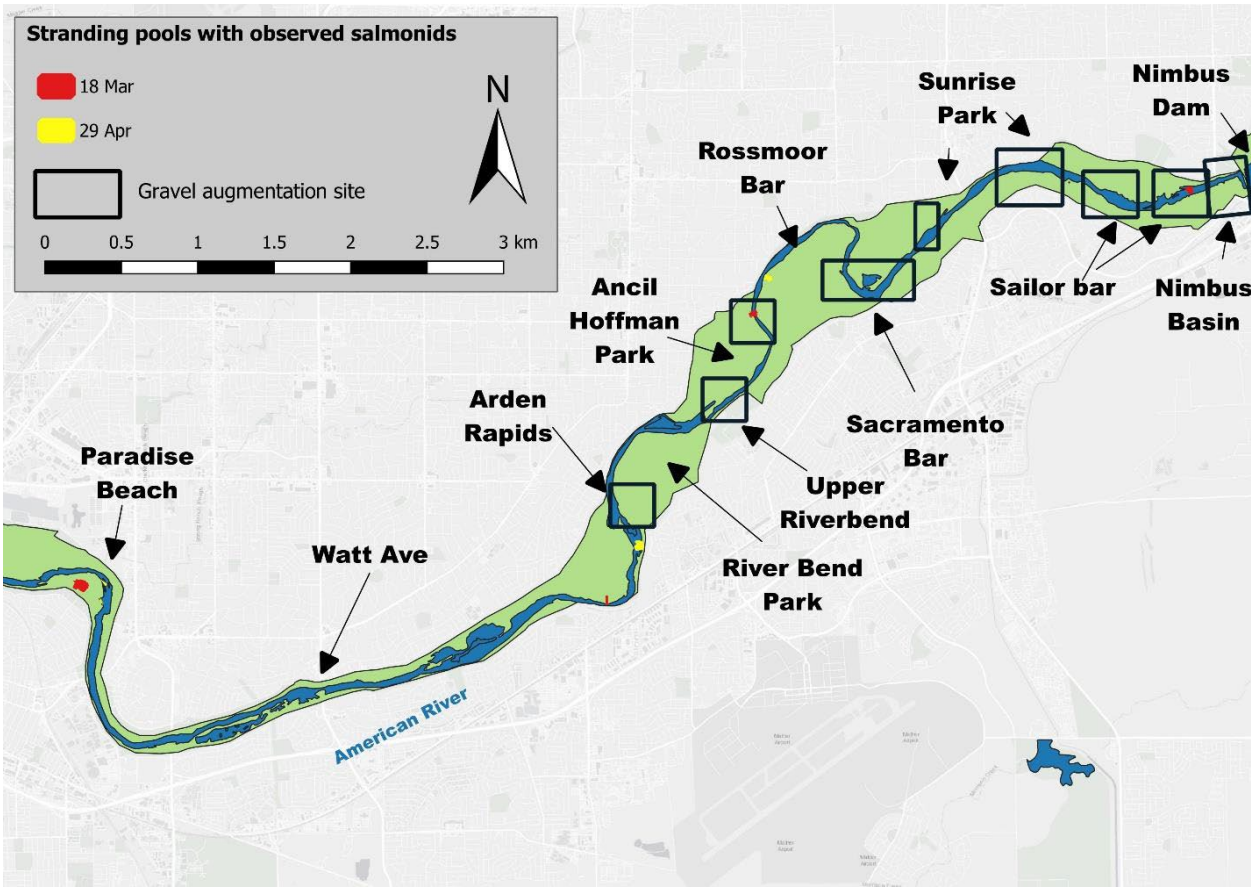

Figure 5. 2024 Lower American River stranding locations

Figure 5 is a map of stranding pools with observed salmonid along the lower American River in 2024. Stranding pools observed March 18, 2024 are designated in red, while stranding pools observed April 29, 2024 are designated in yellow. The black boxes at River Bend & Arden Rapids, Upper Riverbend, Ancil Hoffman Park, Sacramento Bar, Sunrise Park, Sailor Bar, and Nimbus Basin represent areas where gravel augmentation has occurred.

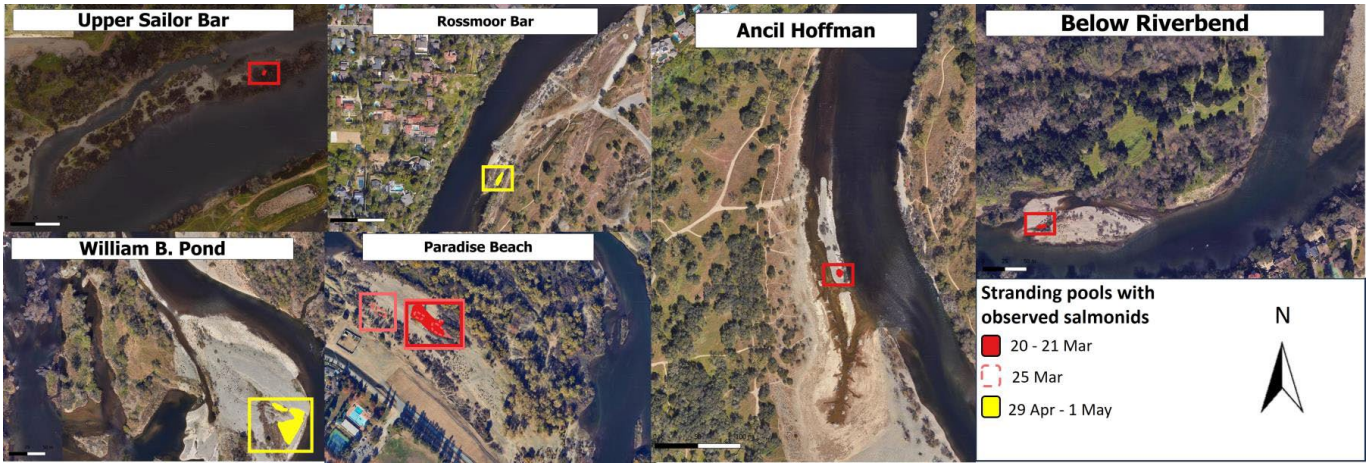

Figure 6. Stranding pool locations containing juvenile salmonids in spring 2023 on the Lower American River.

Figure 6 is a set of satellite images showing stranding pools containing juvenile salmonids in spring 2023 on the Lower American River. Pools identified from March 20 until March 21, 2023 are identified in red, pools identified on March 25 are identified with a pink box, and pools identified from April 29 until May 1, 2024 are identified in yellow. Stranding pools were identified at Upper Sailor Bar, William B. Pond, Rossmoor Bar, Paradise Beach, Ancil Hoffman, and Below Riverhead.

Updated 6/18/24

Table 2: Unmarked Juvenile Chinook Salmon (length-at-date):

Fall	Late Fall	Spring	Winter
83,064	84	41	12

Additionally, the RSTs captured 1 adipose clipped Chinook Salmon at 77 mm on 1/26. Currently, it is suspected that this fish was a hatchery-origin winter-run from the Livingston Stone/Coleman release on the Sacramento River near Shasta Dam.

Table 3: Unmarked Juvenile O. mykiss (lifestage):

Fry	Parr	Smolt	Adult
110	49	0	0

Lower American River RSTs at Watt Avenue:

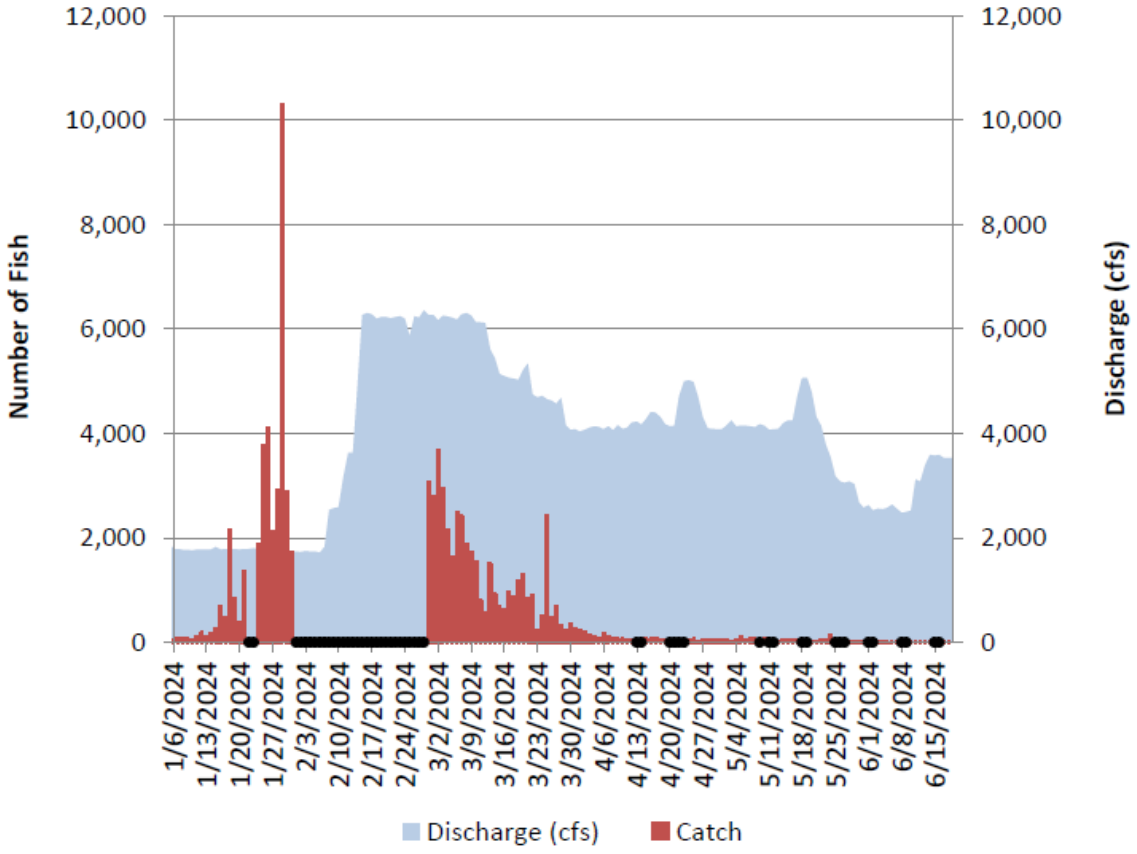

Figure 7. Daily catch of unmarked Chinook Salmon and daily average discharge at Fair Oaks during the 2024 Lower American River rotary screw trap sampling season.

Figure 7 is a bar graph of the daily catch of unmarked Chinook Salmon and daily average discharge at Fair Oaks during the 2024 Lower American River rotary screw trap sampling season from 1/6/24 to 6/15/24. Discharge is measured in cubic feet per second and the number the daily catch reached its high point on 1/29 at a count of over 10,000.

Lower American River RSTs at Watt Avenue:

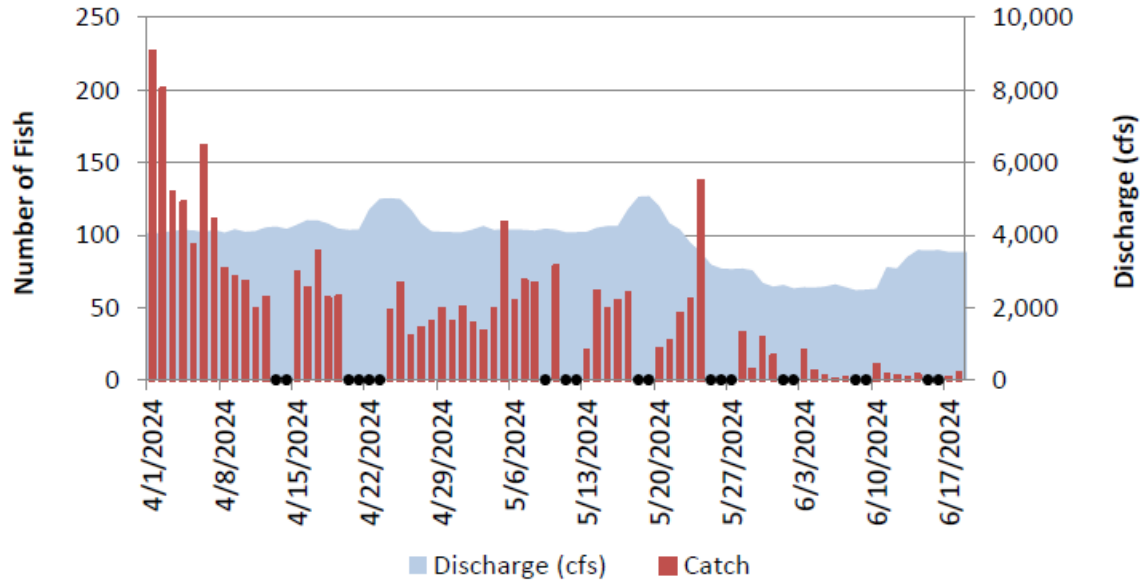

Figure 8. Daily catch of unmarked Chinook Salmon and daily average discharge at Fair Oaks from April 1st to June 18th during the 2024 Lower American River rotary screw trap sampling season.

Figure 8 is a bar graph of the daily catch of unmarked Chinook Salmon and daily average discharge at Fair Oaks during the 2024 Lower American River rotary screw trap sampling season from 4/1/24 to 6/17/24. Discharge is measured in cubic feet per second and the number the daily catch reached its high point on 4/1 at a count of over 225.

Lower American River RSTs at Watt Avenue:

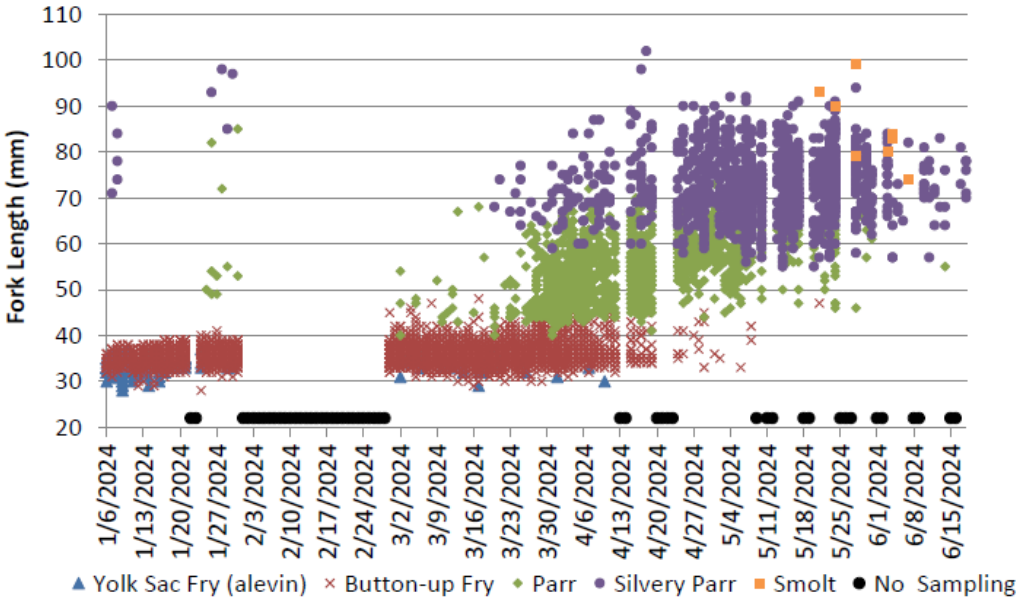

Figure 9. Daily fork length distribution by life stage of unmarked Chinook Salmon measured during the 2024 Lower American River rotary screw trap sampling season.

Figure 9 is a boxplot of the daily fork length distribution by life stage of unmarked Chinook Salmon measured during the 2024 Lower American River rotary screw trap sampling season from 1/6/24 to 6/15/24. Fork length is measured in millimeters from 20 to 100, and the life stages observed include the Yolk Sac Fry (alevin), Button-up Fry, Parr, Silvery Parr, and Smolt.

Lower American River RST CalFish Webpage: CalFish Lower American River – RST Monitoring

SMUD Upper American River Project Update 06/17/2024

Fresh Pond Precipitation

June precipitation through 6/17/2024 is 0.00 inches, which is 0.0% of the June average of 0.79 inches. Precipitation for the water year to date is 49.05 inches which is 88.1% of average to date (55.68 inches) and 85.6% of the entire water year average of 57.32 inches.

Runoff and Snowpack Water Content

Runoff into the storage reservoir basins is 108.0% of median to date through 6/17/2024. The snowpack is 0.0% of average at selected snow sensors: Robbs PH, Robbs Saddle, Van Vleck, Alpha, and Schneider

Table 4. Fresh Pond Precipitation

Month	Current Water Year	Historical Average	% of Average
October	1.37	3.30	42%
November	3.47	6.87	51%
December	4.86	9.14	53%
January	11.48	9.55	120%
February	9.83	9.50	103%
March	13.62	9.06	150%
April	2.20	4.84	45%
May	2.22	2.97	75%
June	0.00	0.79	0%
July	0.00	0.08	0%
August	0.00	0.20	0%
September	0.00	1.02	0%
Total	49.05	57.32	86%

* Month to date total, full month historical average.

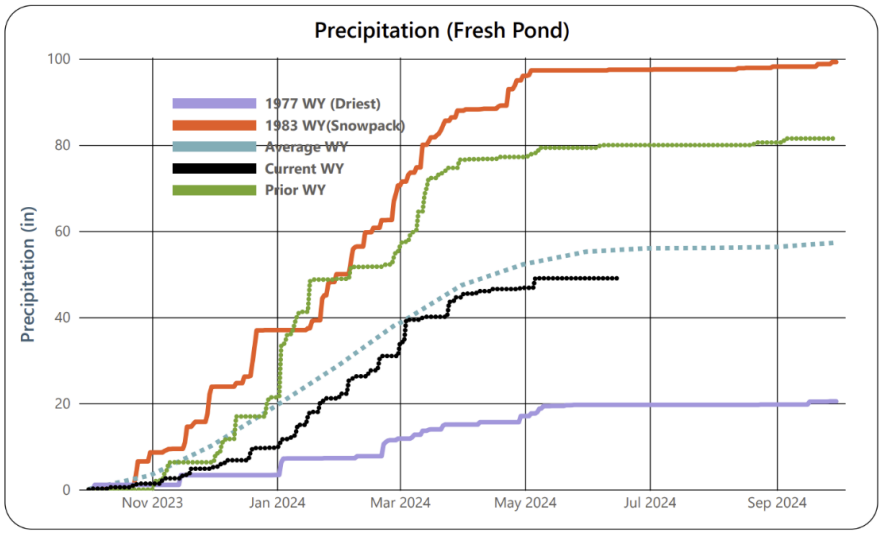

Figure 10. Fresh Pond Precipitation

Figure 10 is a line graph of fresh pond precipitation in inches for November 2023 to September 2024. It includes precipitation data from the driest water year (1977), 1983's water year snowpack, average, current, and prior water year. June's precipitation through 06/17/2024 is 0.0 inches, which is 0.0% of the June average of 0.79 inches.

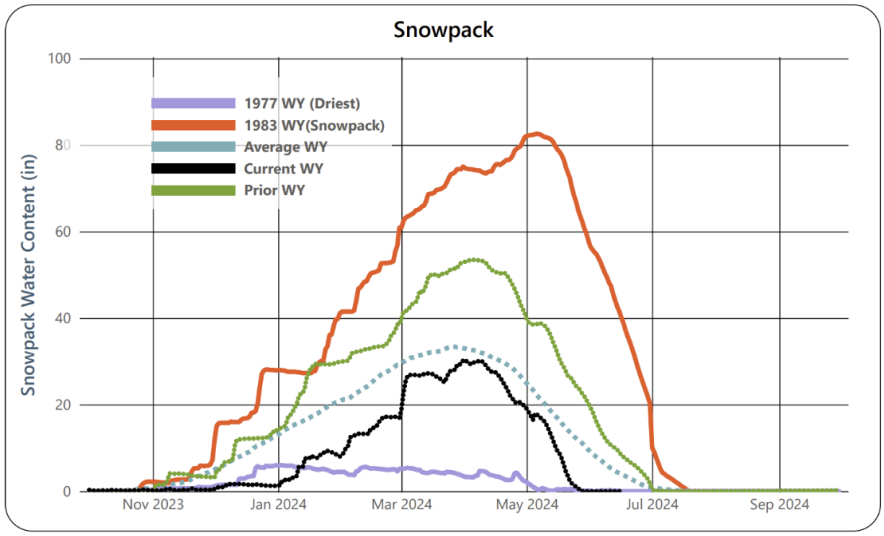

Figure 11. June 17, 2024 Snowpack

Figure 11 is a line graph of snowpack water content in inches for November 2023 to September 2024. It includes data from the driest water year (1977), 1983's water year snowpack, average, current, and prior water year. Runoff into the storage reservoir basins is 108.0% of median to date through 6/17/2024.

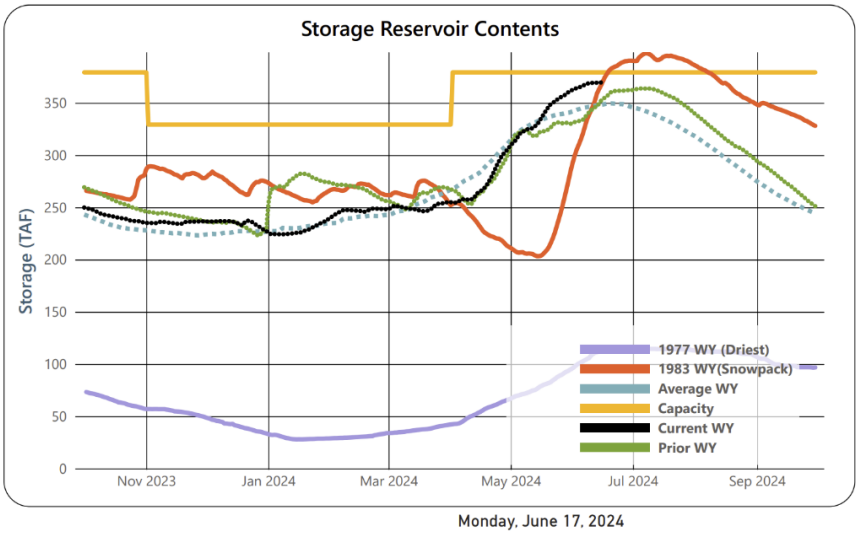

Figure 12. Storage Reservoir Contents

Figure 12 is a line graph of SMUD storage reservoir contents for November 2023 to September 2024. 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 5. SMUD Storage Reservoirs

Reservoir	Hist. Avg (Acre-ft)	Hist. Avg (% full)	Current Acre-ft	Current % Full	Prior Year Acre-ft	Prior Year % Full	Capacity Acre-ft	Winter Acre-ft
Union Valley	246, 062	92%	260,639	97.8%	252,864	95%	266,370	225,046
Loon Lake	62,895	91%	67,505	97.4%	60,272	87%	69,310	69,310
Ice House	39,249	90%	40,805	93.8%	41,118	95%	43,500	34,855
Total Reservoir Storage	348,2067	92%	368,949	97.3%	354,254	93%	379,180	329,211

Chili Bar releases into the South Fork American River

Table 6. Chili Bar releases into the South Fork American River

Observation	Year	Month	Daily Mean Release Rate (cfs)	Monthly Total Release (ac-ft)	Monthly Total Release (90% Exceedance)	Monthly Total Release (10% Exceedance)
Actual	2023	October	537	32,977	32,977	32,977
Actual	2023	November	454	26,994	26,994	26,994
Actual	2023	December	905	55,544	55,544	55,544
Actual	2024	January	846	51,913	51,913	51,913
Actual	2024	February	1,618	92,878	92,878	92,878
Actual	2024	March	2,373	145,636	145,636	145,636
Actual	2024	April	3,107	184,572	184,572	184,572
Actual	2024	May	3,175	194,875	194,875	194,875
Forecast	2024	June	2,112	125,424	125,299	125,662
Forecast	2024	July	770	47,270	46,868	60,283
Forecast	2024	August	916	56,236	55,098	63,172
Forecast	2024	September	561	33,329	32,182	40,895
Forecast	2024	October	427	26,193	26,193	28,598
Forecast	2024	November	374	22,206	17,471	100,397
Forecast	2024	December	1,116	68,478	44,491	179,721

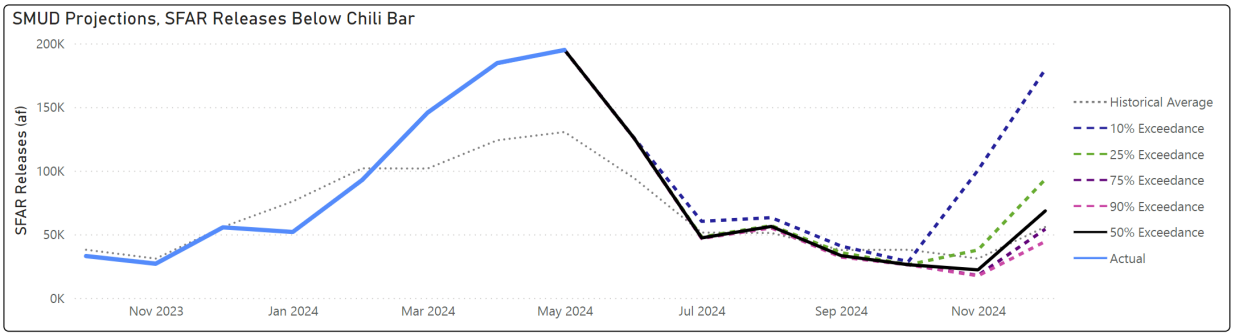

Figure 13. Chili Bar releases into the South Fork American River. Projections based on forecast from 6/17/24.

Figure 13 is a line graph of observed and projected releases below Chili Bar from November 2023 to November 2024. The graph includes a last 10-year average, actual prior water year data, and projections of 90%, 75%, 50%, 25%, and 10% likelihood.

PCWA MFP Operations Overview for American River Operations Group (Real Time Data as of June 20, 2024)

- French Meadows Storage = 127,000 AF of 136,405 AF = 93% Capacity
    - MFAR above FM Inflow (R24) =7-day AVG ~100 cfs
- Hell Hole Storage = 184,000 AF of 207,590 AF = 88% Capacity
    - Five Lakes Inflow (R23) = 7-day AVG ~80 cfs
    - Rubicon Inflow (R22) = 7-day AVG ~75 cfs
- Combined Storage (FM+HH) = 311,000 AF/342,590 AF = 91% Capacity; ~113% of 15 YR AVG
- MFAR @ R11: 7-day daily average ~700 cfs
- NFAR @ ARPS: 7-day daily average ~1,300 cfs
- Inflows YTD are right at the 50% historical exceedance.

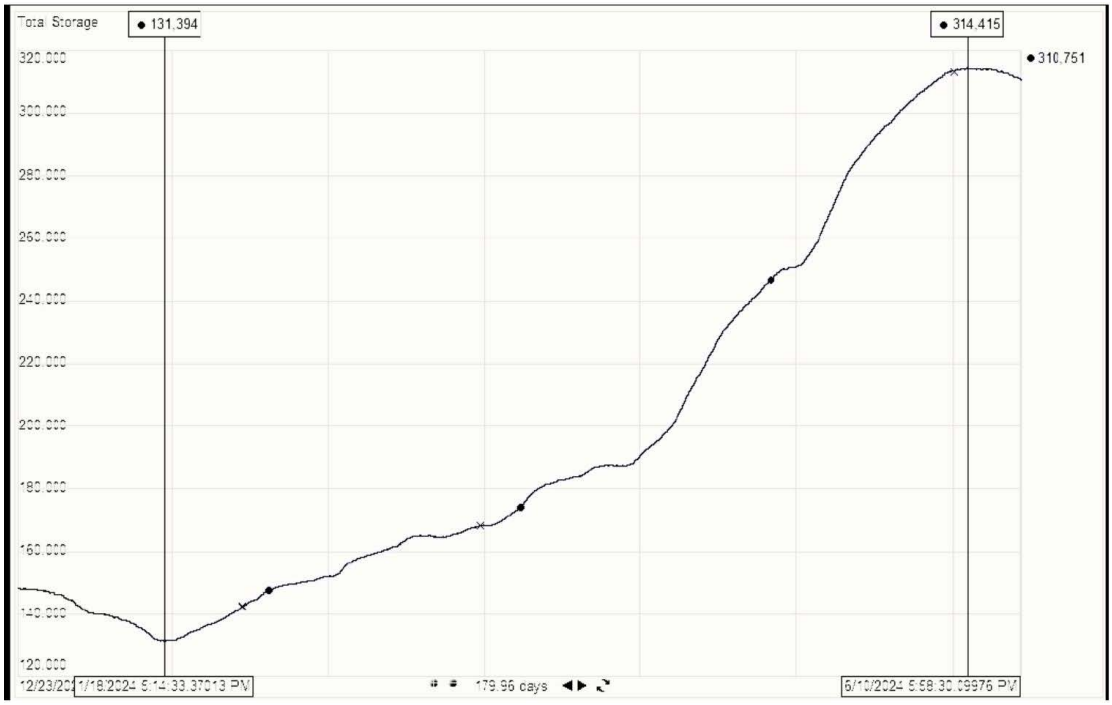

Figure 14. Total storage from January 18, 2024 until June 10, 2024.

Figure 14 is a line graph that shows the increase in total storage over a span of 179.96 days from 131,394 on January 18, 2024 at 5:14:33 PM to 314, 415 on June 10, 2024 at 5:59:30 PM. The y axis shows total storage and the x axis shows the passage time.

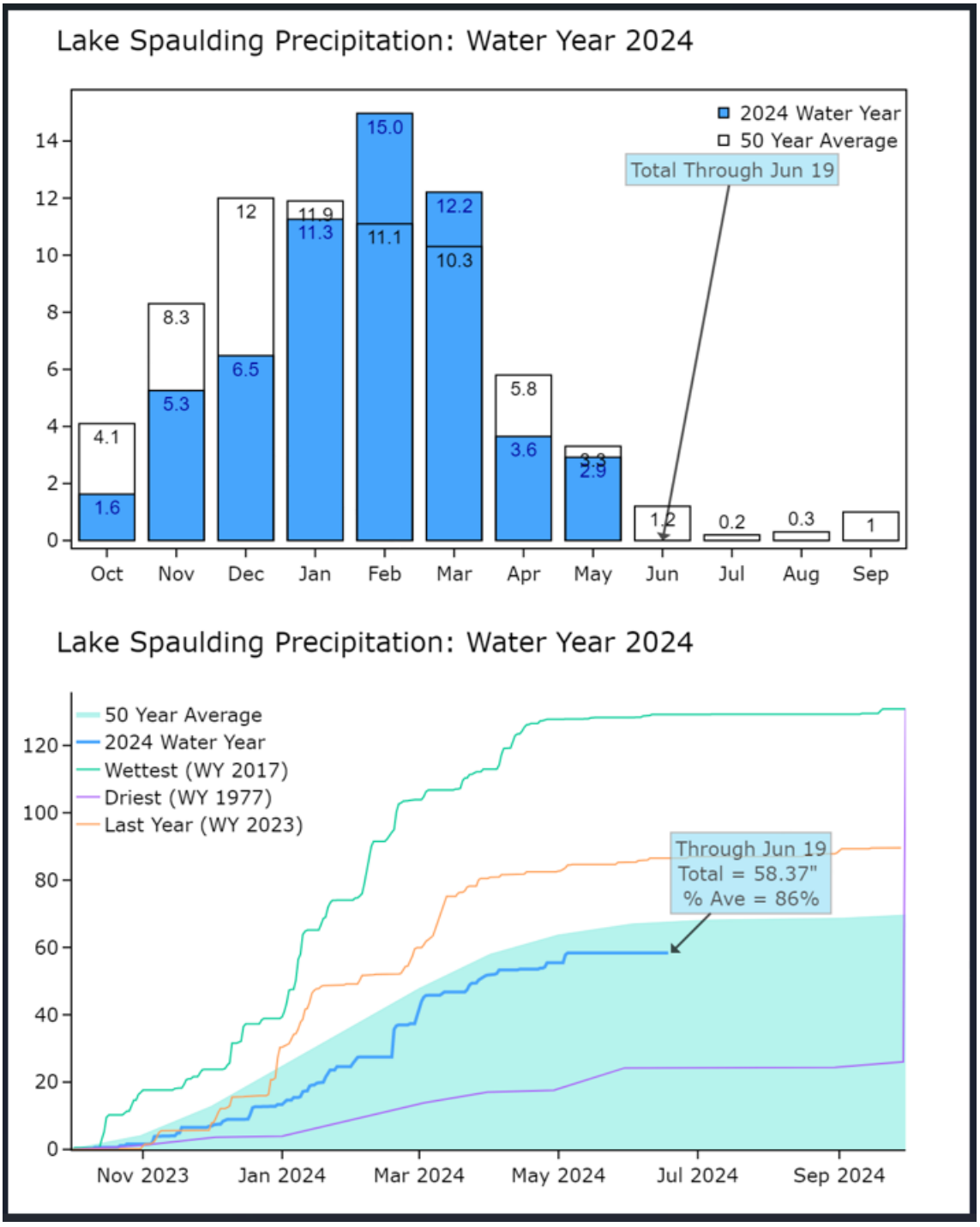

Figure 15. Lake Spaulding Precipitation: Water Year 2024

Figure 15 consists of two graphs that show the precipitation levels in Lake Spaulding from a bar graph and a line graph showing precipitation levels in Lake Spaulding during Water Year 2024. The first graph is a bar graph showing the precipitation totals and the 50-year average in percent from October 2023 to September 2024. The total through June 19 is 1.2. The second graph is a line graph showing the precipitation totals and the 50-year average from October 2023 to September 2024. The total through June 19 is 58.37 inches which is 86% of the 50-year average.

June 2024 | Folsom Lake Daily Operations | Run Date: 06/20/2024

Day	Elev	Storage (1000 Acre-Feet) in Lake	Storage (1000 Acre-Feet) Change	Compu-ted* Inflow C.F.S.	Release - C.F.S. River Power	Release - C.F.S. River Spill	Release - C.F.S. River Outlet	Pump-ing Plant	Evap. - C.F.S.	Evap. - Inches	Precip Inches
N/A	N/A	938.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	462.61	939.4	1.4	3,602	2,512	11	0	233	127	0.35	0.00
2	462.70	940.4	1.0	3,367	2,510	8	0	238	113	0.31	0.00
3	462.86	942.1	1.8	3,327	2,117	0	0	238	87	0.24	0.00
4	462.87	942.3	0.1	3,077	2,644	0	0	225	153	0.42	0.00
5	462.89	942.5	0.2	3,148	2,680	0	0	244	113	0.31	0.00
6	462.98	943.5	1.0	3,244	2,371	0	0	237	138	0.38	0.00
7	462.99	943.6	0.1	3,016	2,571	0	0	248	142	0.39	0.00
8	463.05	944.2	0.7	3,395	2,701	0	0	243	117	0.32	0.00
9	463.08	944.6	0.3	2,942	2,424	0	0	242	109	0.30	0.00
10	463.07	944.4	-0.1	2,878	2,574	0	0	247	113	0.31	0.00
11	463.10	944.8	0.3	3,375	2,840	0	0	240	128	0.35	0.00
12	463.06	944.3	-0.4	3,237	3,049	0	0	250	160	0.44	0.00
13	462.88	942.4	-2.0	2,727	3,351	0	0	247	127	0.35	0.00
14	462.59	939.2	-3.2	2,336	3,553	8	0	242	138	0.38	0.00
15	462.33	936.3	-2.9	2,460	3,478	7	0	253	160	0.44	0.00
16	461.95	932.2	-4.2	1,925	3,634	6	0	252	134	0.37	0.00
17	461.56	927.9	-4.3	1,887	3,335	273	0	255	170	0.47	0.00
18	461.17	923.6	-4.3	1,808	3,610	6	0	230	108	0.30	0.00
19	460.76	919.2	-4.5	1,498	3,348	9	0	247	144	0.40	0.00
Totals	N/A	N/A	-19.0	53,249	55,302	328	0	4,611	2,481	6.83	0.00
Acre-Feet	N/A	N/A	-19,000	105,619	109,962	651	0	9,146	4,921	N/A	N/A

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

Summary: Release (acre feet)

Power	109,692
Spill	651
Outlet	0
Pumping Plant	9,146
Total Releases	119,488

Summary: Release (acre feet)

This month	0.00
October 1, 2023 to date	20.57

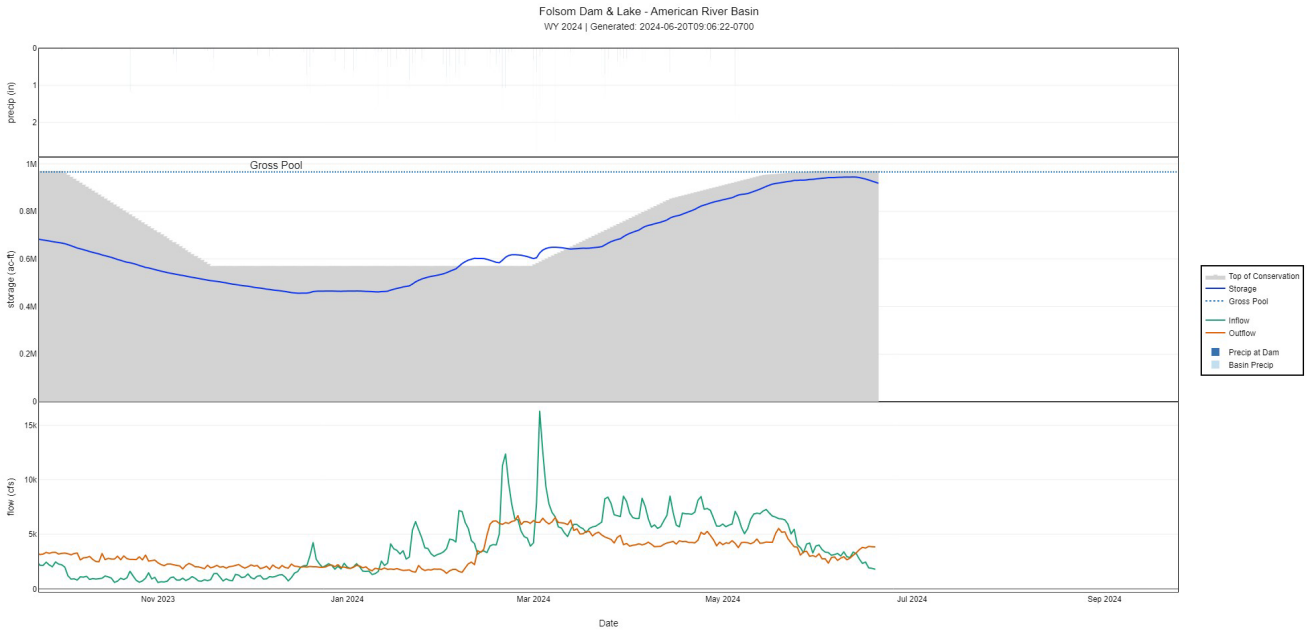

Figure 14. Folsom Dam & Lake – American River Basin WY 2024

Figure 14 is a graph that compares the flow, storage, and precipitation over time for the American River Basin.

Isobath 05/01–05/31 (Mean Daily Temperature, Release, Storage, Unit Shutter Position/Load Percentage

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

Date	MDT, Water, NFA	MDT, Water, ARP	MDT, Water, 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	51.3	50.0	52.0	53.4	54.2	54.5	59.7	783	N/A	A	A	A
05/01	52.7	52.0	53.8	55.1	56.0	56.3	66.0	3916	852	A 45	A 40	A 15
05/02	53.0	51.7	52.7	55.2	56.2	56.7	68.8	3955	855	A 11	A 31	A 58
05/03	53.7	52.1	52.5	54.6	56.1	56.8	67.6	4048	858	A 49	A 11	A 40
05/04	52.4	50.7	52.4	54.1	54.4	54.4	53.6	3959	863	A 57	A 34	A 9
05/05	49.8	51.5	52.9	53.1	53.9	54.0	52.8	3968	869	A 51	A 37	A 12
05/06	49.7	51.0	52.8	53.9	54.9	55.0	56.5	3967	871	A 37	A 36	A 27
05/07	51.2	50.5	53.5	54.9	56.0	56.1	61.0	3961	873	A 44	B 45	A 11
05/08	53.0	50.8	54.5	55.4	56.3	56.5	67.0	3959	875	A 48	A 34	A 18
05/09	54.4	51.4	53.6	55.9	57.0	57.5	72.5	3993	879	A 57	A 34	A 9
05/10	54.5	52.0	53.4	55.9	57.4	58.2	74.2	3964	884	A 56.4	A 32.6	A 11
05/11	54.7	52.5	53.2	55.5	57.2	57.9	74.3	3895	889	A 49.9	A 25.4	A 25
05/12	55.6	53.2	53.2	55.4	56.9	57.6	69.7	3916	894	A 43.5	A 44.7	A 12
05/13	56.8	53.7	53.2	55.4	56.8	57.5	67.7	3921	899	A 45.3	A 45	A 10
05/14	57.0	54.2	53.2	55.5	56.8	57.6	68.7	4024	905	A 57.6	A 34.0	A 8
05/15	57.2	54.9	53.2	55.4	57.0	57.8	69.7	4085	910	A 56.8	A 33.4	A 10
05/16	58.2	55.8	53.4	55.6	56.9	57.6	64.2	4088	915	A 33.5	A 14.1	A 52
05/17	58.7	56.4	54.5	55.8	56.9	57.5	65.2	4513	918	A 44.1	A 12.8	A 43
05/18	59.1	57.0	54.1	56.2	57.3	57.8	63.3	4877	919	A 38.1	A 35.8	A 26
05/19	59.5	57.0	54.7	56.2	57.1	57.4	63.6	4896	922	A 37.2	A 30.9	A 32
05/20	59.9	56.8	53.6	56.6	57.5	57.8	66.9	4655	924	A 33.7	A 33.3	A 33
05/21	59.6	56.0	53.6	55.7	57.0	57.6	71.5	4198	926	A 33.0	A 33.3	A 34
05/22	59.6	55.2	53.9	55.6	57.1	57.7	69.8	4010	927	A 55.8	A 30.3	A 14
05/23	59.7	55.2	54.0	55.9	57.3	57.9	69.0	3686	930	A 50.9	A 12.7	A 36
05/24	60.2	55.9	54.0	56.0	57.4	58.0	61.3	3413	931	A 51.4	A 34.9	A 14
05/25	60.3	56.5	54.2	56.3	57.5	57.7	60.8	3053	932	A 49.9	A 13.9	A 36
05/26	60.8	57.3	54.0	56.3	58.0	58.7	65.0	2963	931	A 35.7	A 35.7	A 29
05/27	61.5	57.4	54.0	56.2	58.3	59.3	69.0	2959	932	A 36.6	A 34.8	A 29
05/28	61.2	57.8	54.4	56.4	58.2	59.1	66.9	2959	935	A 64.1	A 21.3	A 15
05/29	62.0	58.8	54.3	57.4	58.9	59.7	71.9	2888	935	A 52.0	A 35.9	A 12
05/30	63.1	59.4	54.4	57.1	59.5	60.4	75.4	2585	937	A 61.7	A 37.7	A 1

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
5/31	63.6	59.1	54.6	57.1	59.6	60.8	77.4	2496	938	A 67.8	A 17.4	A 15
May	**57.2**	**54.6**	**53.7**	**55.7**	**57.0**	**57.6**	**66.8**	**904**	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	Total	AF	233592	N/A	N/A	N/A	N/A

Legend

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

Monthly Averages

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

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

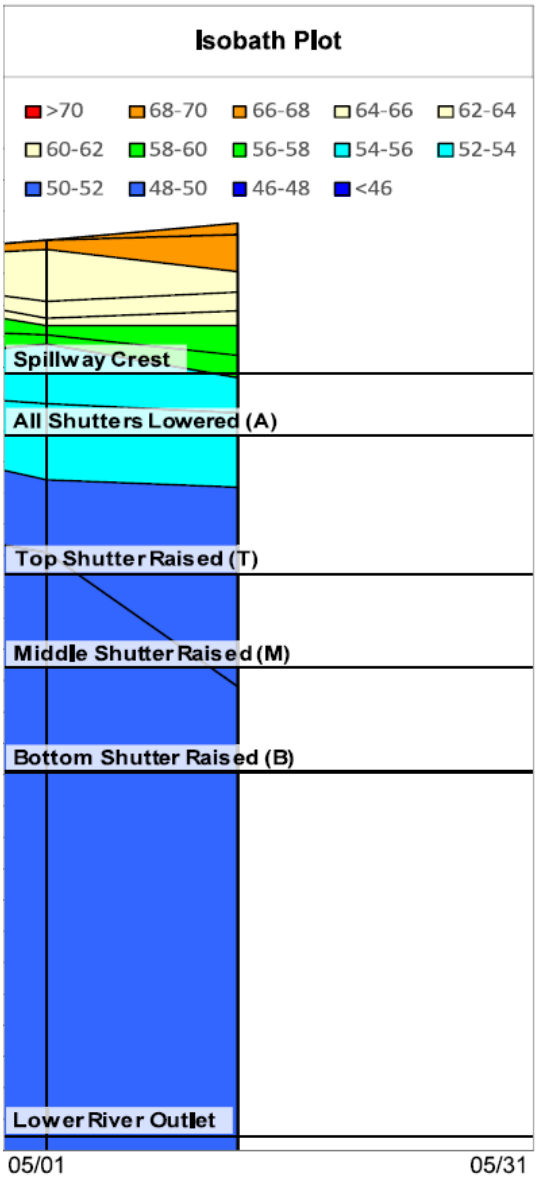

Figure 15. Isobath Plot 5/01-5/31

Figure 15 is an Isobath Plot for the month of June showing Spillway Crest, All Shutters Lowered (A), Top Shutter Raised (T), Middle Shutter Raised (M), Bottom Shutter Raised (B), and Lower River Outlet

Isobath 06/01–06/30 (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
May	57.2	54.6	53.7	55.7	57.0	57.6	66.8	904	N/A	N/A	N/A	N/A
06/01	64.1	59.6	54.6	56.9	59.2	60.4	69.8	2554	939	A 42	A 43	A 15
06/02	64.9	60.5	54.7	57.8	59.7	60.6	70.5	2468	940	A 42	A 43	A 16
06/03	65.1	59.4	54.6	57.5	59.7	60.9	71.2	2475	942	A 43	A 43	A 14
06/04	65.6	61.0	54.8	58.5	60.5	61.6	79.3	2473	942	A 44	A 44	A 11
06/05	67.2	61.8	55.0	58.4	61.4	63.0	85.8	2501	942	A 51	A 34	A 15
06/06	68.8	62.2	55.1	58.0	61.0	62.6	83.0	2497	943	A 43	A 19	A 38
06/07	69.5	62.6	55.1	58.2	60.8	62.1	72.6	2482	944	A 70	A 18	A 12
06/08	67.9	62.4	55.1	58.4	60.5	61.6	67.9	2417	944	A 37	A 39	A 24
06/09	67.2	63.0	54.9	58.2	60.4	61.6	69.7	2431	945	A 36	A 35	A 29
06/10	67.9	63.5	55.3	58.4	60.7	61.9	73.0	2454	944	A 51.1	A 17.5	A 31
06/11	68.0	63.7	55.5	58.7	60.7	62.2	82.0	2794	945	A 56.2	A 30.7	A 13
06/12	68.2	64.0	55.6	58.4	61.2	62.5	78.8	2855	944	A 56.7	A 34.1	A 9
06/13	68.2	64.2	55.8	58.4	59.9	61.1	68.0	3259	942	A 53.1	A 32.6	A 14
06/14	68.5	65.6	55.8	58.7	60.2	61.0	69.0	3455	939	A 54.5	A 12.2	A 33
06/15	67.5	64.7	56.0	58.9	60.1	60.8	71.2	3457	936	A 51.1	A 35.8	A 13
06/16	65.8	64.7	55.9	58.3	59.9	60.8	74.5	3439	932	A 37.4	A 32.6	A 30
06/17	65.4	65.6	56.9	58.6	59.8	60.4	71.6	3402	928	A 36.3	A 34.0	A 30
06/18	63.8	64.4	56.4	58.7	60.0	60.5	73.5	3410	924	A 35.9	A 35.9	A 28
06/19	63.0	65.3	56.7	58.5	59.9	60.7	70.6	3408	919	A 53.1	A 30.6	A 16
06/20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
06/21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
06/22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
06/23	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
06/24	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
06/25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
06/26	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
06/27	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
06/28	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
06/29	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
06/30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
June	**66.7**	**63.1**	**55.5**	**58.3**	**60.3**	**61.4**	**73.8**	**939**	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	Total	AF	107565	N/A	N/A	N/A	N/A

Legend

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

Monthly Averages

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

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

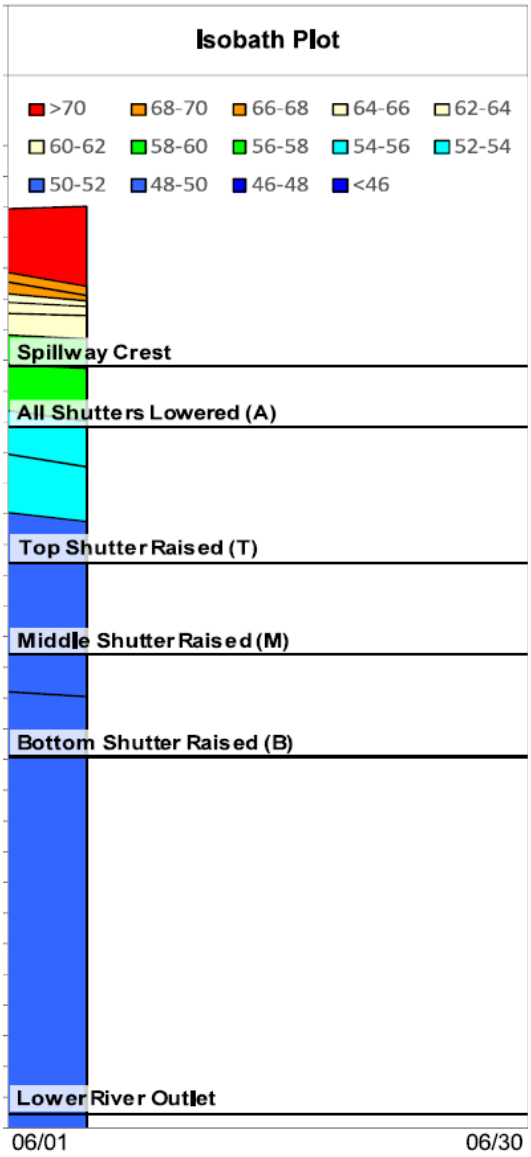

Figure 16. Isobath Plot 6/01-6/31

Figure 16 is an Isobath Plot for the month of June showing Spillway Crest, All Shutters Lowered (A), Top Shutter Raised (T), Middle Shutter Raised (M), Bottom Shutter Raised (B), and Lower River Outlet

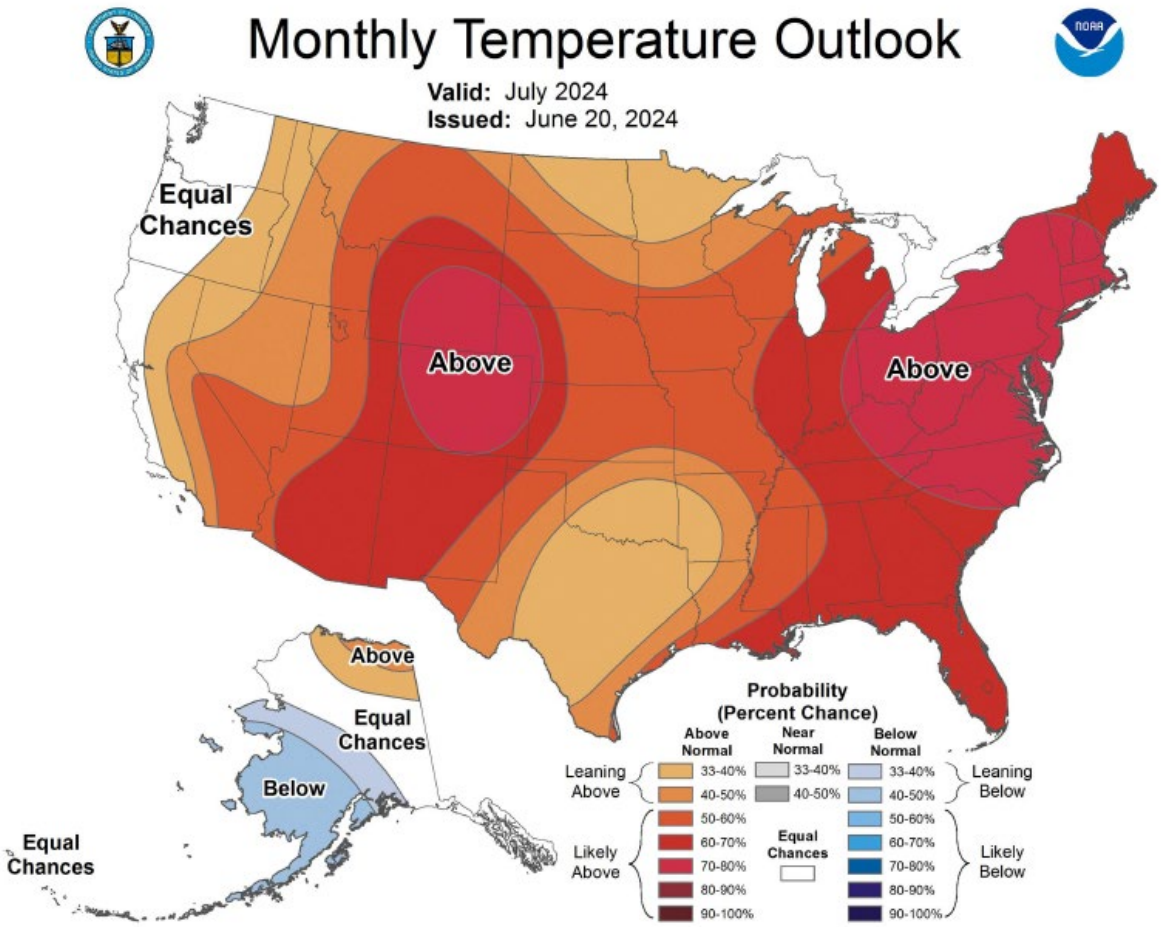

Figure 17. U.S. Seasonal Temperature Outlook

Figure 17 is a map of the United States showing the seasonal temperature outlook during the time period from May 2024 to July 2024; The map was issued on April 18, 2024.

American River Daily Average Water and Air Temperatures

<=58=504 TAF
<=56=390 TAF
<=54=310 TAF

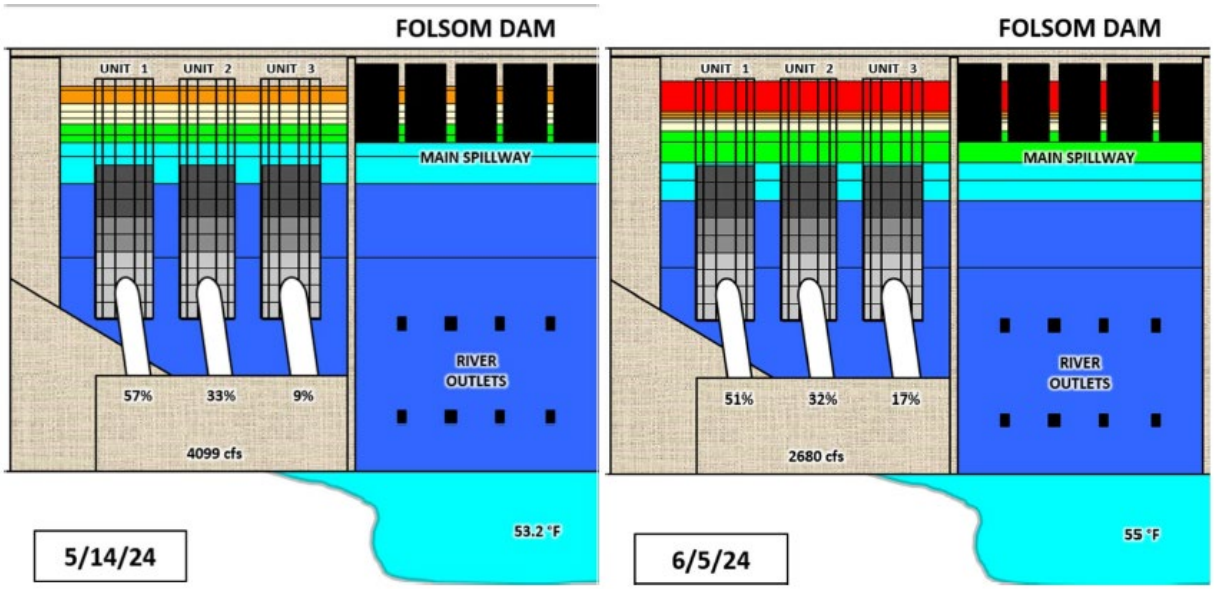

Figure 18. Folson Dam Daily Average Water and Air Temperatures

Figure 18 is a graphic showing Folsom Dam on 05/14/24 with a temperature of 53.2 ˚F and 5/5/24 with a temperature of 55 ˚F.

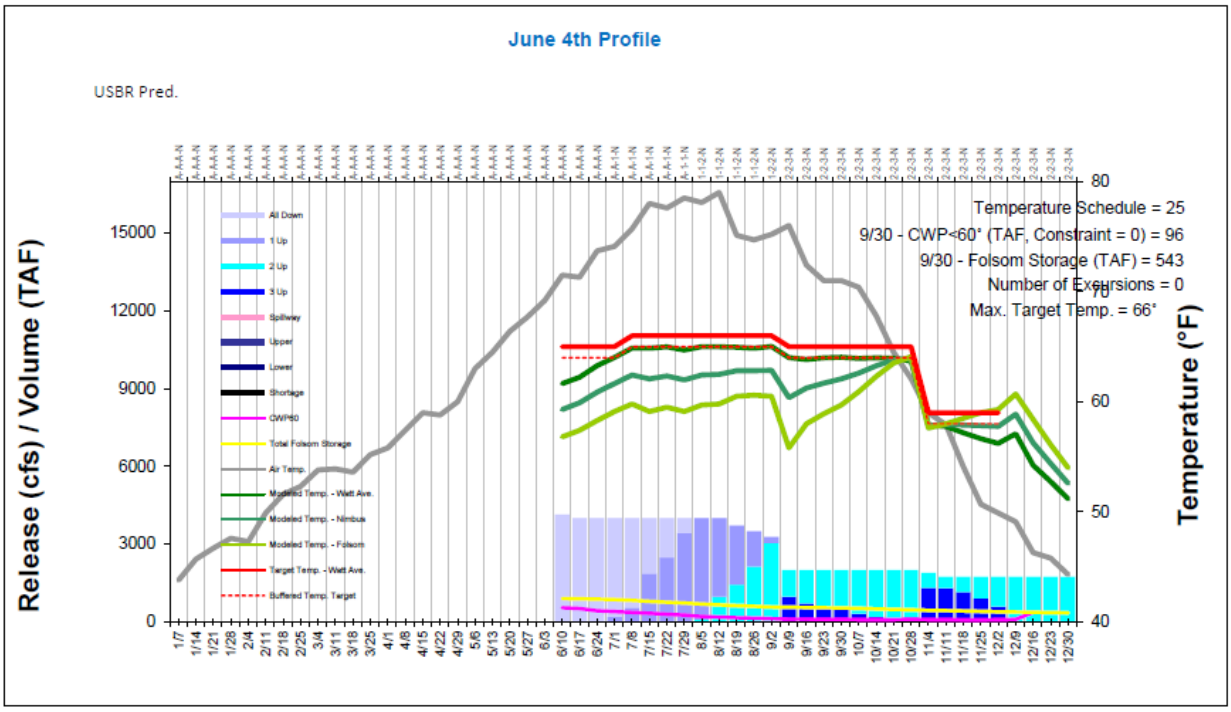

Figure 19. Temperature schedule at Watt Avenue

Figure 19 is a line graph of a temperature schedule showing release in cfs and volume in taf by temperature from 1/7/2024 until 12/30/2024.

American River Summary Conditions – June (On-going)

Release Management Conditions

- Releases are currently at 3,500 cfs

Temperature Management

Top Shutters: Units 1, 2, and 3 – lowered

Middle Shutters: Units 1, 2 – lowered

Bottom Shutters: Units 1, 2 – lowered

Folsom Shutter Configuration and Changes

Next change will be for temperature management

Storages

June 90% Exceedance

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

Facility	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Folsom Storage	861	631	447	435	366	301	272
Folsom Elevation	455	432	410	408	398	387	382

Monthly River Releases (TAF/cfs)

Facility	Jun	Jul	Aug	Sep	Oct	Nov	Dec
American	223	320	270	89	111	107	92
cfs	3750	5200	4400	1500	1799	1801	1500

June 50% Exceedance

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

Facility	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Folsom Storage	882	724	559	503	490	463	453
Folsom Elevation	457	442	424	417	415	412	410

Monthly River Releases (TAF/cfs)

Facility	Jun	Jul	Aug	Sep	Oct	Nov	Dec
American	202	255	260	142	93	119	123
cfs	3400	4154	4226	2389	1520	2007	2000

American River Baseflow Table

Month	Index Used for Index-based MRR	Index Based MRR	RDPB-based MRR for fall-run Chinook salmon (applicable in Jun and Feb)	RDPB-based MRR for steelhead (applicable Feb to May)	Controlling MRR	Actual Average Monthly Nimbus releases[1]
October	May ARI[2] (50% exceedance)	1,500 cfs	Not applicable	Not applicable	1,500 cfs	2,574 cfs
November	May ARI[2] {50% exceedance)	2,000 cfs	Not applicable	Not applicable	2,000 cfs	2,062 cfs
December	May ARI[2] {50% exceedance)	2,000 cfs	Not applicable	Not applicable	2,000 cfs	2,041 cfs
January	January SRI {75% exceedance)	1,390 cfs	1,400 cfs	Not applicable	1,400 cfs	1,792 cfs
February	February ARI (50% exceedance)	1,750 cfs	1,400 cfs	1,750 cfs	1,750 cfs	4,278 cfs
March	March ARI (50% exceedance)	1,750 cfs	1,750 cfs	1,750 cfs	1,750 cfs	5,188 cfs
April	April ARI (50% exceedance)	1,150 cfs	Not applicable	1,500 cfs	1,500 cfs	4,145 cfs
May	April ARI (90% exceedance)	1,500 cfs	Not applicable	1,500 cfs	1,500 cfs	3,799 cfs
Jun	May ARI[2] (50% exceedance)	1,500 cfs	Not applicable	Not applicable	1,500 cfs	N/A

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

[1] Average of daily release over the month from NAT station on CDEC.