



— 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 15th, 2023**

### Agenda

1. Introductions
2. Announcements
3. Housekeeping
  - a. Meeting will be recorded for notetaking purposes
4. Fisheries Update
  - a. CDFW
  - b. CFS
  - c. PSMFC
5. Operations Forecast
  - a. SMUD
  - b. PCWA
6. Central Valley Operations
7. Discussion
  - a. Temperature Management Planning
8. Next Meetings:
  - a. Thursday, July 20th, 1:30-3:30pm

### **Provisional Data Subject to Revision**

#### **NIMBUS FISH HATCHERY**

**Presented by Emily Fisher, CDFW, 916-272-4113, [emily.fisher@wildlife.ca.gov](mailto:emily.fisher@wildlife.ca.gov)**

- Steelhead are being adipose fin-clipped
- Steelhead are being moved into outdoor raceways
- Chinook releases are occurring
  - One raceway remains, will be released next week

#### **JUVENILE SALMONID MONITORING**

**Presented by Emily Fisher, CDFW, 916-272-4113, [emily.fisher@wildlife.ca.gov](mailto:emily.fisher@wildlife.ca.gov)**

- 191 juvenile Chinook Salmon and 21 steelhead trout observed thus far
- Each site is sampled once a month
- Remaining sites will be seined and/or snorkeled next week
- Seine and snorkel sites are variable based on river conditions

**Provisional Data Subject to Revision**

Table 1: Juvenile salmonids observed during Lower American River juvenile salmonid monitoring seine and snorkel surveys

Mon.	Cat.	Upper Reach - Nimbus Basin Main	Upper Reach- Nimbus Basin Side	Upper Reach- Upper Sunrise / Sailor Bar Main	Upper Reach- Upper Sunrise / Sailor Bar Side	Upper Reach- Lower Sunrise Main/ Sacramento Bar	Upper Reach - Lower Sunrise Side	Upper Reach- Rossmoor	Middle Reach- Riverbend Main	Middle Reach- Riverbend Side	Middle Reach- Gristmill	Lower Reach -Watt	Lower Reach- Paradise Beach/ Howe Avenue
April	CS	***	0	1	1	0	***	2	0	16	30	2	0
April	SH	***	4	0	0	0	***	1	0	2	1	0	0
May	CS	***	***	***	***	3	***	10	***	***	1	16	0
May	SH	***	***	***	***	0	***	0	***	***	3	0	0
June	CS	N/A	N/A	N/A	N/A	85	N/A	3	N/A	N/A	N/A	21	N/A
June	SH	N/A	N/A	N/A	N/A	2	N/A	0	N/A	N/A	N/A	8	N/A

Table 2: Summary of total salmonids observed during juvenile monitoring in the Lower American River

Category	Upper Reach	Middle Reach	Lower Reach	Total
Chinook Salmon	105	47	39	191
Steelhead trout	7	6	8	21

Lower American River

## 2023 Steelhead Spawning and Stranding Survey Summary

### Spawning surveys

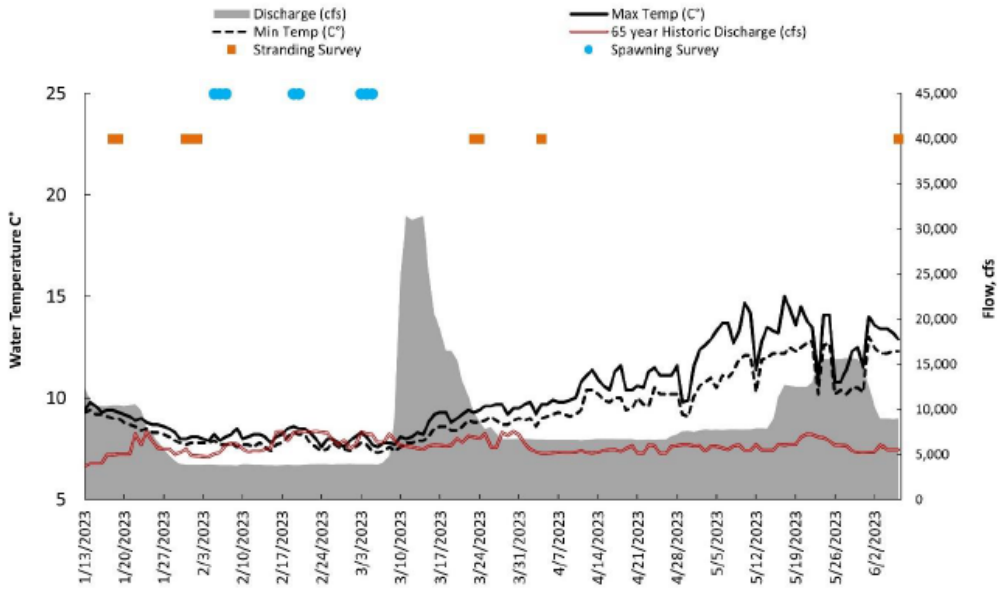


Figure 1. 2023 Lower American River flow (AFO stream gage), temperature, and survey timing.

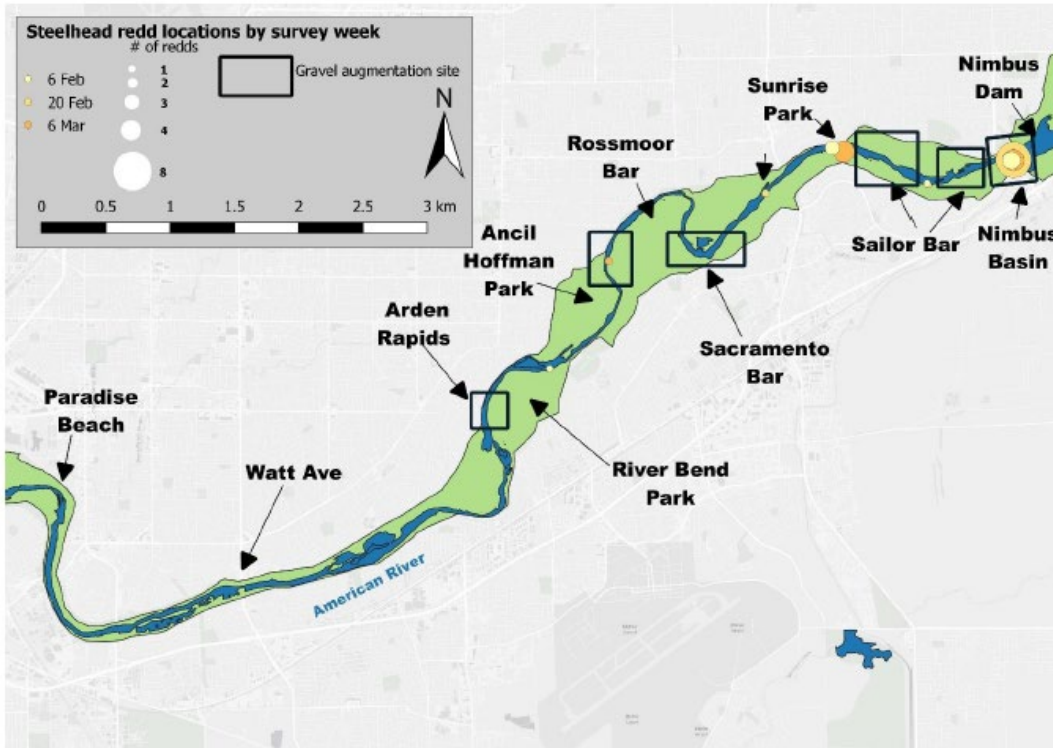


Figure 2. 2023 steelhead redd spatial distribution in the lower American River. A total of 31 steelhead redds were observed in 2023.

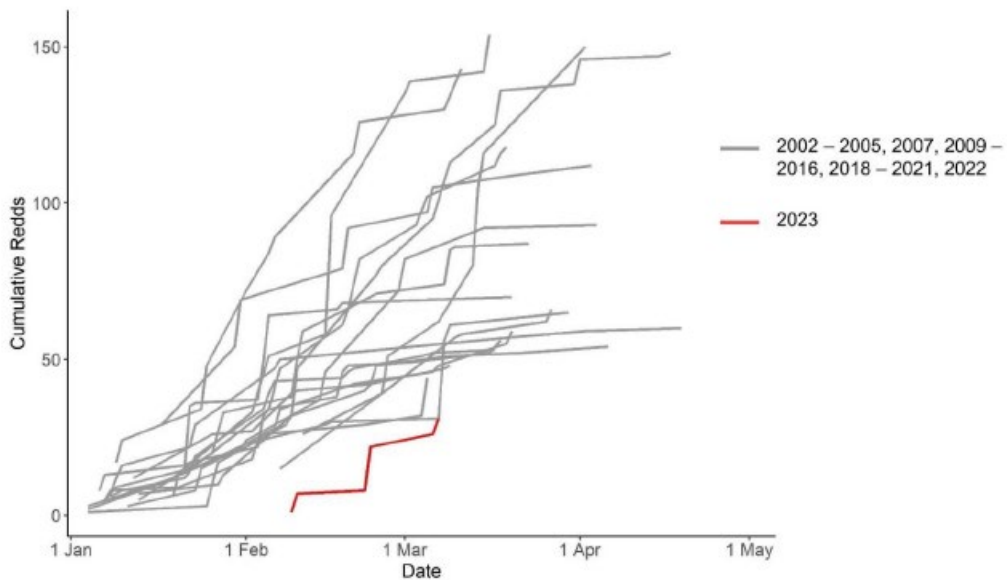


Figure 3. Temporal distribution of steelhead redds on the lower American River in 2023 compared to previous years. High flows and low visibility prevented surveys from occurring prior to 9 February and after 7 March 2023.

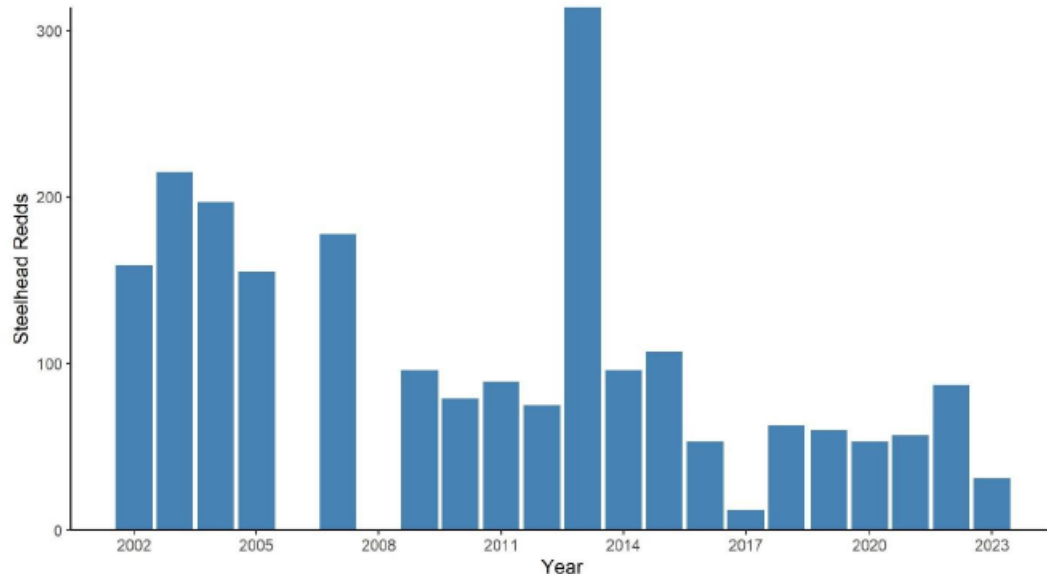


Figure 4. Comparison of 2023 redd counts with previous years. A total of 31 steelhead redds were observed in 2023.

*Note: Redd surveys were not possible during portions of 2017 and 2023 due to high flows and low visibility, therefore the redd count is likely lower than the actual number of redds in the river. Redd surveys were not conducted in 2006 and 2008 due to low visibility.*

## Stranding Survey

Salmonid stranding surveys were conducted from 31 January, 23- 24 March, 4 April, and 6 June to assess potential stranding of juvenile salmonids and steelhead redds. CFS coordinated with CDFW to conduct juvenile salmonid rescues if warranted.

Table 3. Summary of isolated pools by location on the Lower American River

Date	Location (river mile)	# of pools	Species Obs. – Chinook	Species Obs.- Steelhead	Species Obs. – Salmonids	Rescue Conducted?	Total pool area (m2)	Average Temperature (°C)	Average DO (mg/L)	Average Turbidity (NTU)
31 Jan	Below Riverbend/William B Pond Access (13)	2	N/A	N/A	2	N	75	7.4	6.2	N/A
31 Jan	Riverbend Side Channel (13)	1	N/A	N/A	3	N	15	9.9	5.5	N/A
23-24 Mar	Upper Riverbend Side Channel (14)	2	N/A	N/A	50	N	31	N/A	N/A	N/A
23-24 Mar	River Bend Side Channel (13)	2	N/A	359	N/A	Y	48	13.9	9.2	5.4
23-24 Mar	Rossmoor Bar (17)	1	N/A	60	N/A	Y	16	17.1	5	N/A
23-24 Mar	Below Riverbend/William B Pond Access (13)	1	N/A	1108	N/A	Y	300	10.6	8.1	2.5
23-24 Mar	Sacramento Bar (18)	2	N/A	1	10	N	67	10.4	8.6	8.6
23-24 Mar	Below Upper Sunrise SC	1	2	425	N/A	Y	148	9.5	11.5	5.1
23-24 Mar	Below San Juan Rapids (18)	1	N/A	57	N/A	Y	139	12.3	9.7	2.9
23-24 Mar	El Manto to San Juan Rapids (18)	1	N/A	1	N/A	N	22	13.7	13.4	N/A
4 Apr	Sacramento Bar (18)	1	25	N/A	N/A	Y	8	18.9	2.3	25

Date	Location (river mile)	# of pools	Species Obs. – Chinook	Species Obs.- Steelhead	Species Obs. – Salmonids	Rescue Conducted?	Total pool area (m2)	Average Temperature (°C)	Average DO (mg/L)	Average Turbidity (NTU)
4 Apr	Riverbend Side Channel (13)	1	N/A	521	N/A	Y	67	9.2	7.6	N/A
6 Jun	Upper Sailor Bar, weir to boat ramp (22)	1	N/A	N/A	5	N	6	13.9	9.2	2.1
6 Jun	Upper Sunrise Side Channel Island (21)	1	N/A	2	N/A	N	129	13.7	8.9	1.1
N/A	Total	18	27	2534	70	N/A	N/A	N/A	N/A	N/A



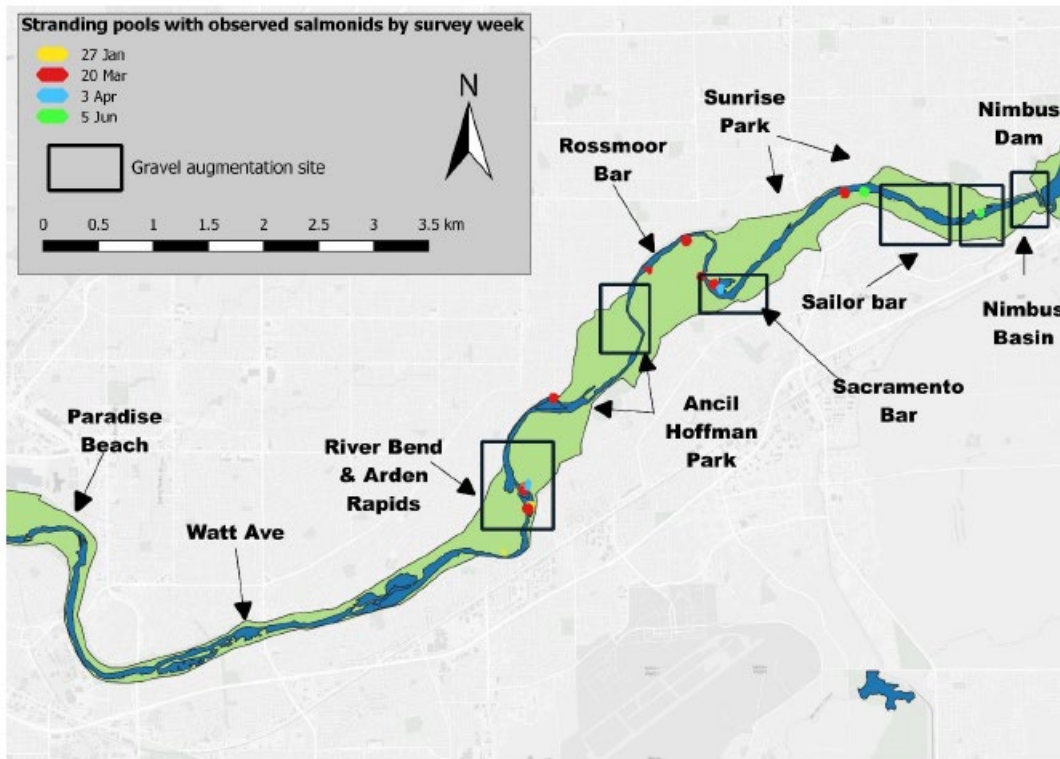


Figure 5. 2023 lower American River stranding locations.

**Pacific States Marine Fisheries Commission Update**

**Updated 6/13/23**

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

Fall	Late Fall	Spring	Winter
69,639	512	24	15

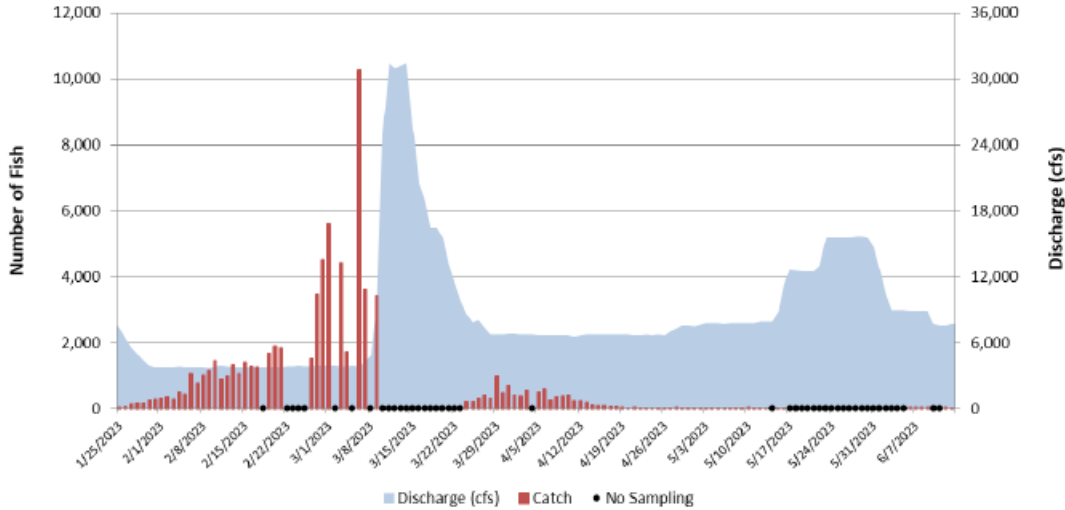
14 adipose clipped Chinook Salmon at approximately 78 mm (68 - 87 mm) have also been captured beginning March 30th.

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

Fry	Parr	Smolt	Adult
178	28	1	0

**Lower American River at Watt Ave (RSTs):**

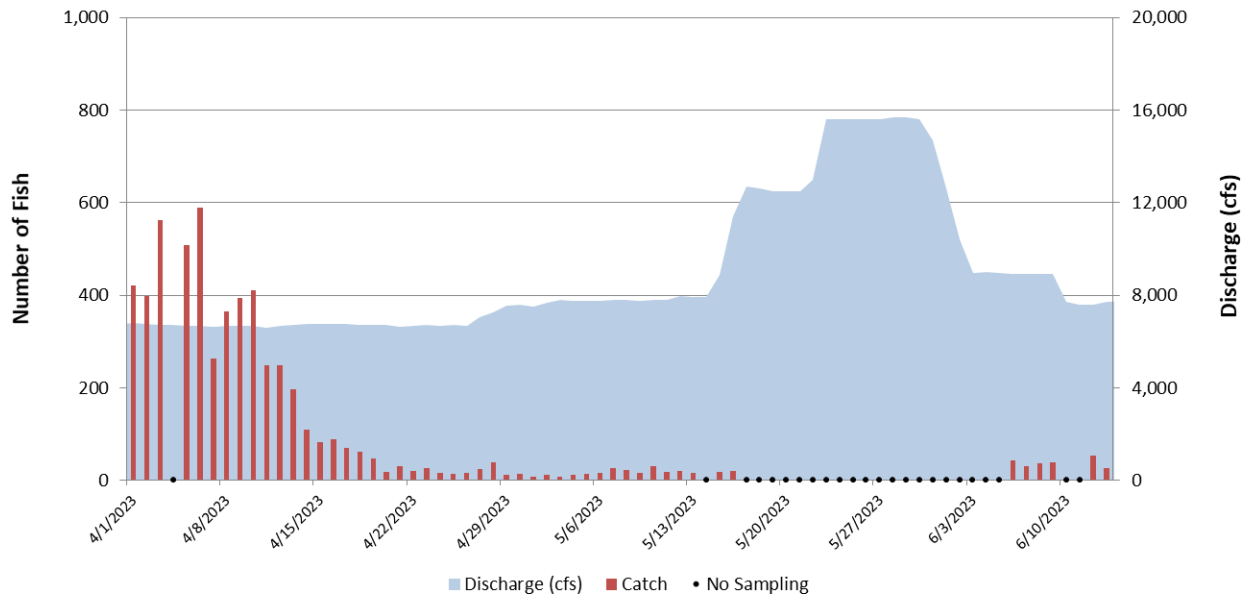
Daily catch of unmarked Chinook Salmon and daily average discharge at Fair Oaks during the 2023 Lower American River rotary screw trap survey season.



Lower American River at Watt Ave (RSTs) – Daily catch of unmarked Chinook Salmon and daily average discharge at Fair Oaks during the 2023 Lower American River rotary screw trap survey season.

**Lower American River at Watt Ave (RSTs):**

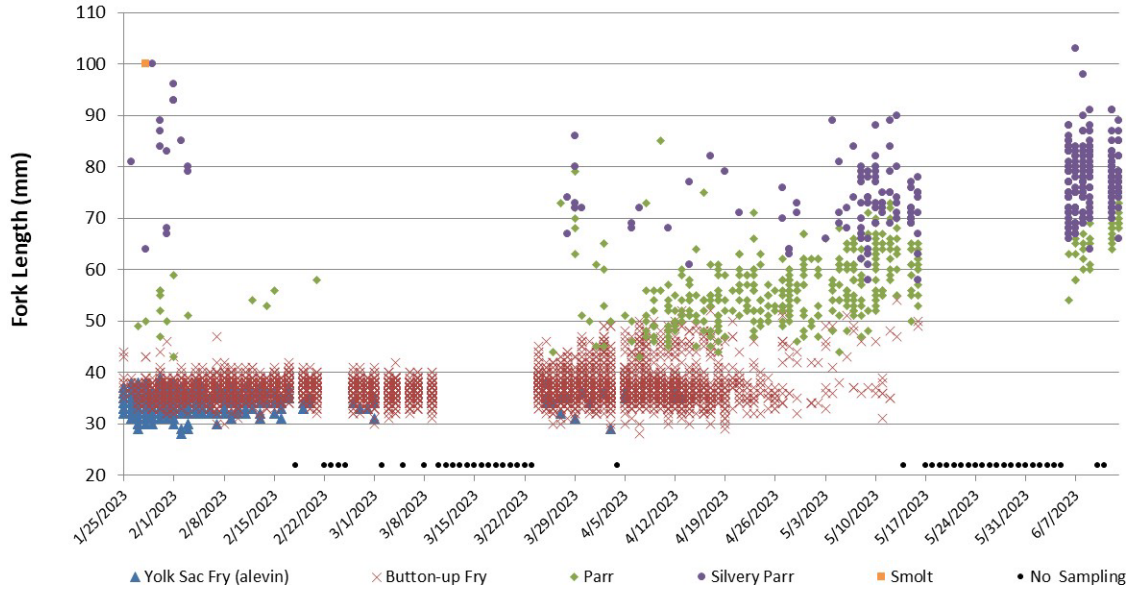
Daily catch of unmarked Chinook salmon and daily average discharge at Fair Oaks from April 1st to June 13th during the 2023 Lower American River rotary screw trap survey season.



Lower American River at Watt Ave (RSTs) – Daily catch of unmarked Chinook Salmon and daily average discharge at Fair Oaks from April 1st to May 16th during the 2023 Lower American River rotary screw trap survey season.

**Lower American River at Watt Ave (RSTs):**

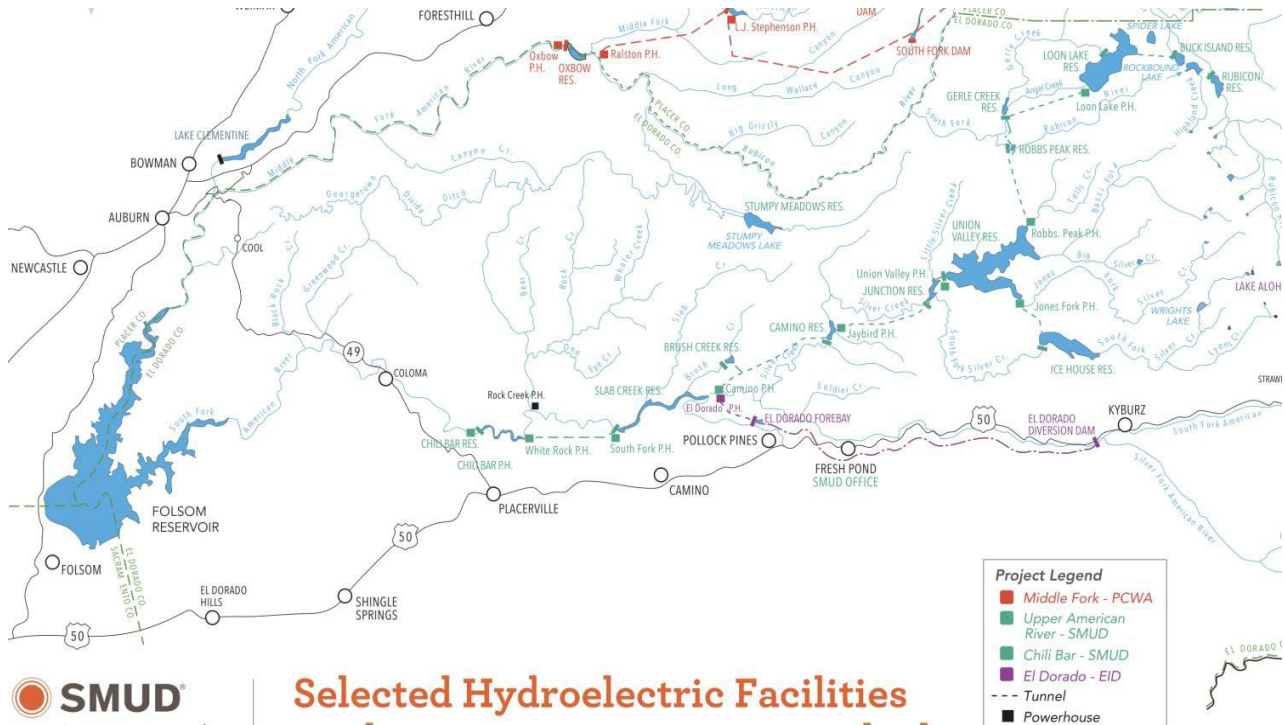
Daily fork length distribution by life stage of unmarked Chinook Salmon measured during the 2023 Lower American River rotary screw trap survey season.



Lower American River at Watts Ave (RSTs) – Daily fork length distribution by life stage of unmarked Chinook Salmon measured during the 2023 Lower American River rotary screw trap survey season.

Lower American River RST CalFish Webpage:

<https://www.calfish.org/ProgramsData/ConservationandManagement/CentralValleyMonitoring/SacramentoValleyTributaryMonitoring/LowerAmericanRiver-RSTMonitoring.aspx>



Map – SMUD Hydroelectric Facilities – Upper American River Project

## SMUD Upper American River Project Update 6/15/23

### Fresh Pond Precipitation

June precipitation through 6/12/2023 is 0.63 inches, which is 79.7% of the June average of 0.79 inches. Precipitation for the water year to date is 79.97 inches which is 144.0% of average to date (55.54 inches) and 139.5% of the entire water year average of 57.32 inches.

### Runoff and Snowpack Water Content

Runoff into storage reservoir basins is 183.9% of median to date through 6/12/2023. The snowpack is 269.1% of average at selected snow sensors: Robbs PH, Robbs Saddle, Van Vleck, Alpha, and Schneider.

Table 5. Fresh Pond Precipitation

Month	Current WY	Hist. Avg	% of Avg.
Oct	0.00	3.30	0%
Nov	6.33	6.87	92%
Dec	15.08	9.14	165%
Jan	27.51	9.55	288%
Feb	6.32	9.50	67%
Mar	21.32	9.06	235%
Apr	0.65	4.84	13%
May	2.13	2.97	72%
Jun	0.63	0.79	80%
Jul	0.00	0.08	0%

<b>Month</b>	<b>Current WY</b>	<b>Hist. Avg</b>	<b>% of Avg.</b>
Aug	0.00	0.20	0%
Sep	0.00	1.02	0%
Total	79.97	57.32	140%

\*Month to date total, full month historical average

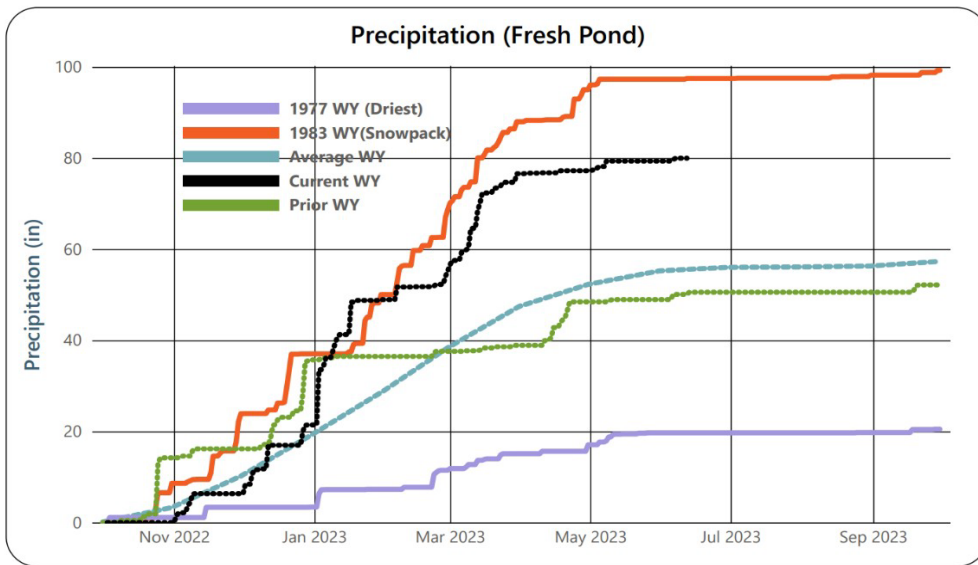


Figure 1. WY 2023 Precipitation (Fresh Pond)

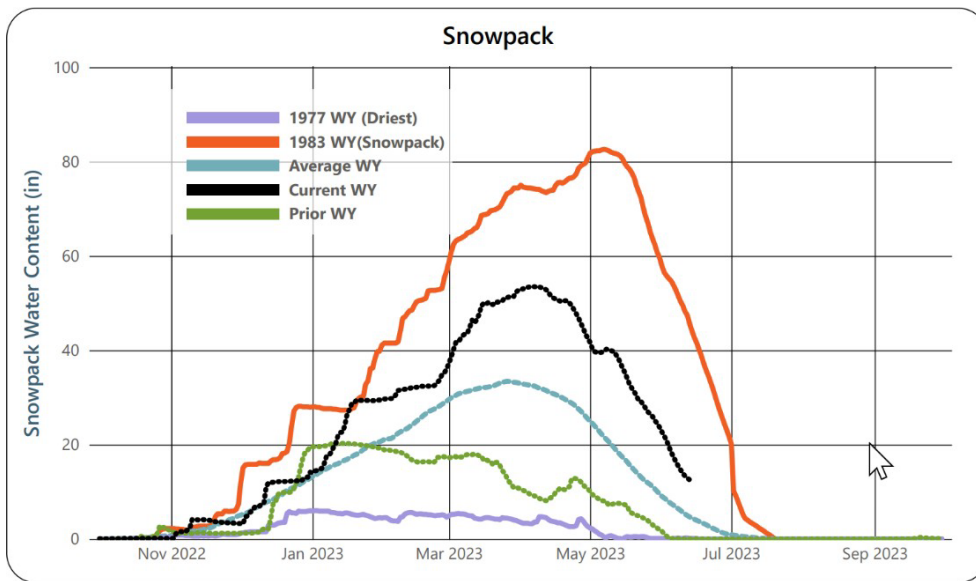


Figure 2. WY 2023 snowpack

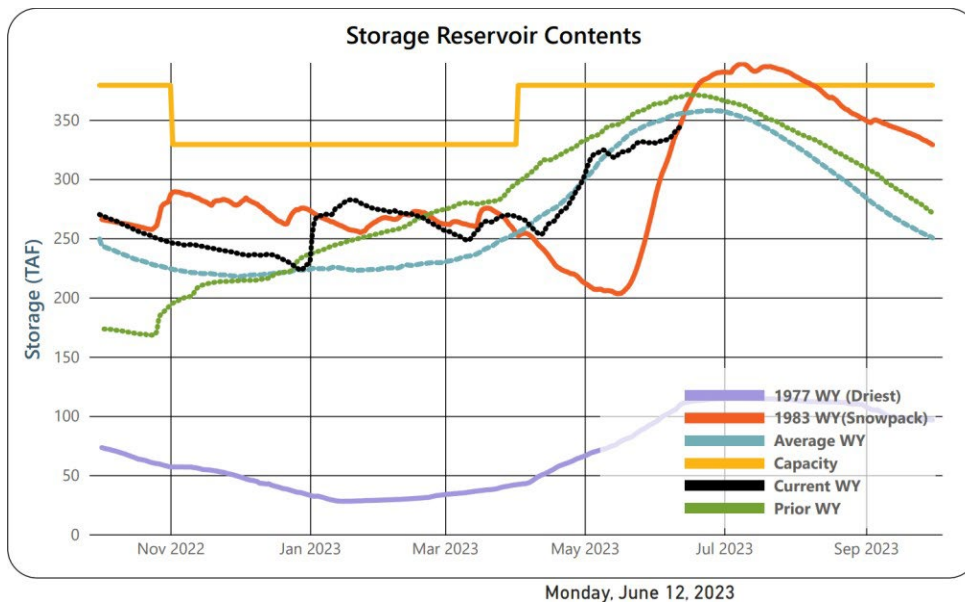


Figure 3. WY 2023 Cumulative Runoff into Storage Reservoirs

Table 6. SMUD Storage Reservoirs

Reservoir Storage	Hist. Avg Acre-ft	Hist. Avg % Full	Current Acre-Ft	Current % Full	Prior Year Acre-ft	Prior Year % Full	Capacity Acre-ft	Winter Acre-ft
Union Valley Reservoir	249,087	94%	247,073	92.8%	262,424	99%	266,370	255,046
Ice House Reservoir	38,992	90%	40,363	92.8%	39,444	91%	43,500	34,855
Loon Lake Reservoir	62,012	89%	58,917	85.0%	67,544	97%	69,310	69,310
Total Reservoir Storage	350,091	92%	346,353	91.3%	369,412	97%	379,180	329,211

Data listed here are always % of maximum capacity with gates closed as of today. Union Valley gates are OPEN, Ice House gates are CLOSE, Robbs Peak gates are OPEN.

Table 7. FERC End of Month Storage Requirements – Wet WY

Dates	Loon	Ice House	Union Valley	Total Storage
31- Jul	55,962	37,632	227,654	321,248
31 - Aug	47,468	33,357	193,005	273,830
30 - Sep	44,033	31,025	166,383	241,441

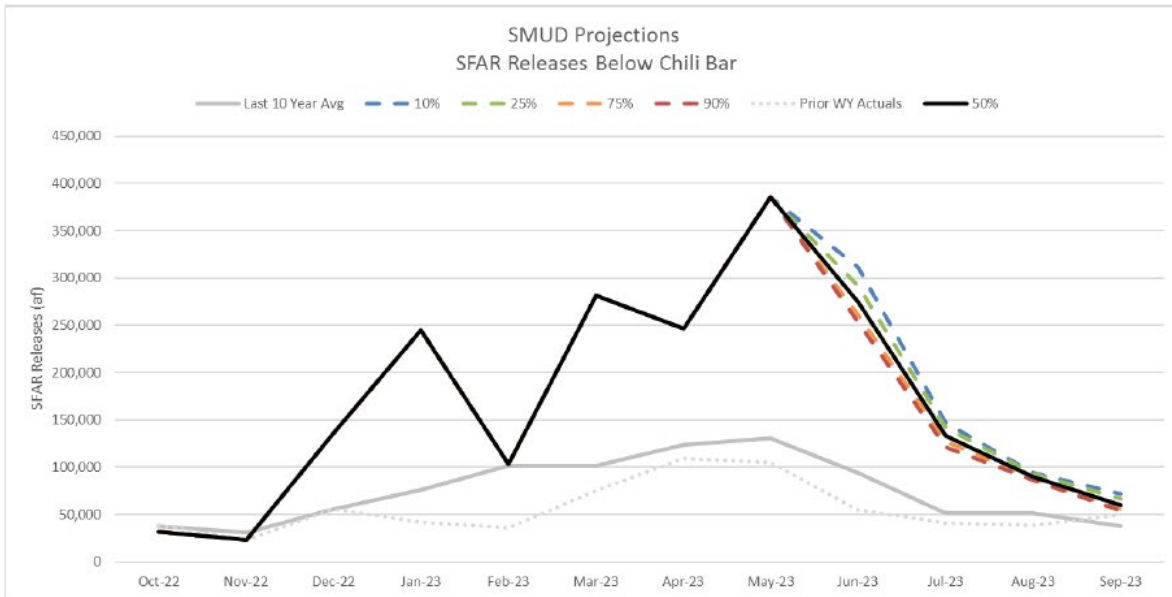


Figure 4. Chili Bar releases into the South Fork American River based on forecast from 6/5/23.

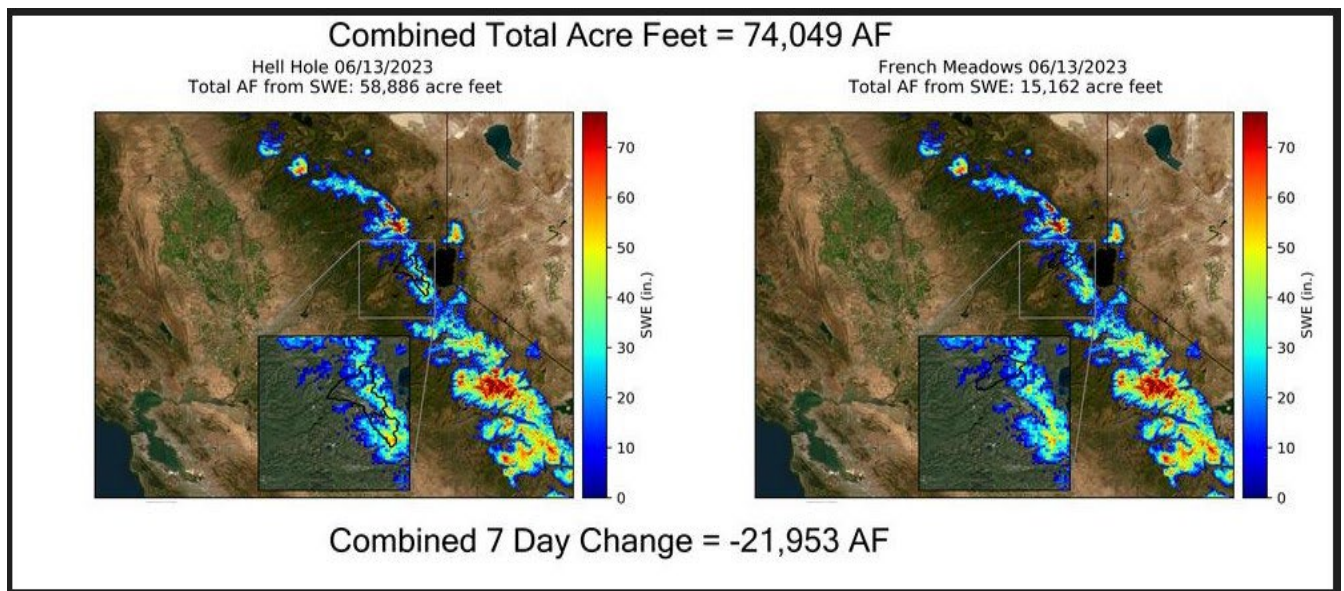
Table 8. Releases below Chili Bar Dam

Observed/Forecast	Month	Daily Mean Release Rate (cfs)	Monthly Total Release (ac-ft)
Observed	Oct-22	520	31,977
Observed	Nov-22	386	22,966
Observed	Dec-22	2,207	135,729
Observed	Jan-23	3,980	244,747
Observed	Feb-23	1,862	103,424
Observed	Mar-23	4,573	281,182
Observed	Apr-23	4,142	246,460
Observed	May-23	6,264	385,181
Forecast	Jun-23	4,621	274,974
Forecast	Jul-23	2,170	133,453
Forecast	Aug-23	1,463	89,941
Forecast	Sep-23	1,004	59,762

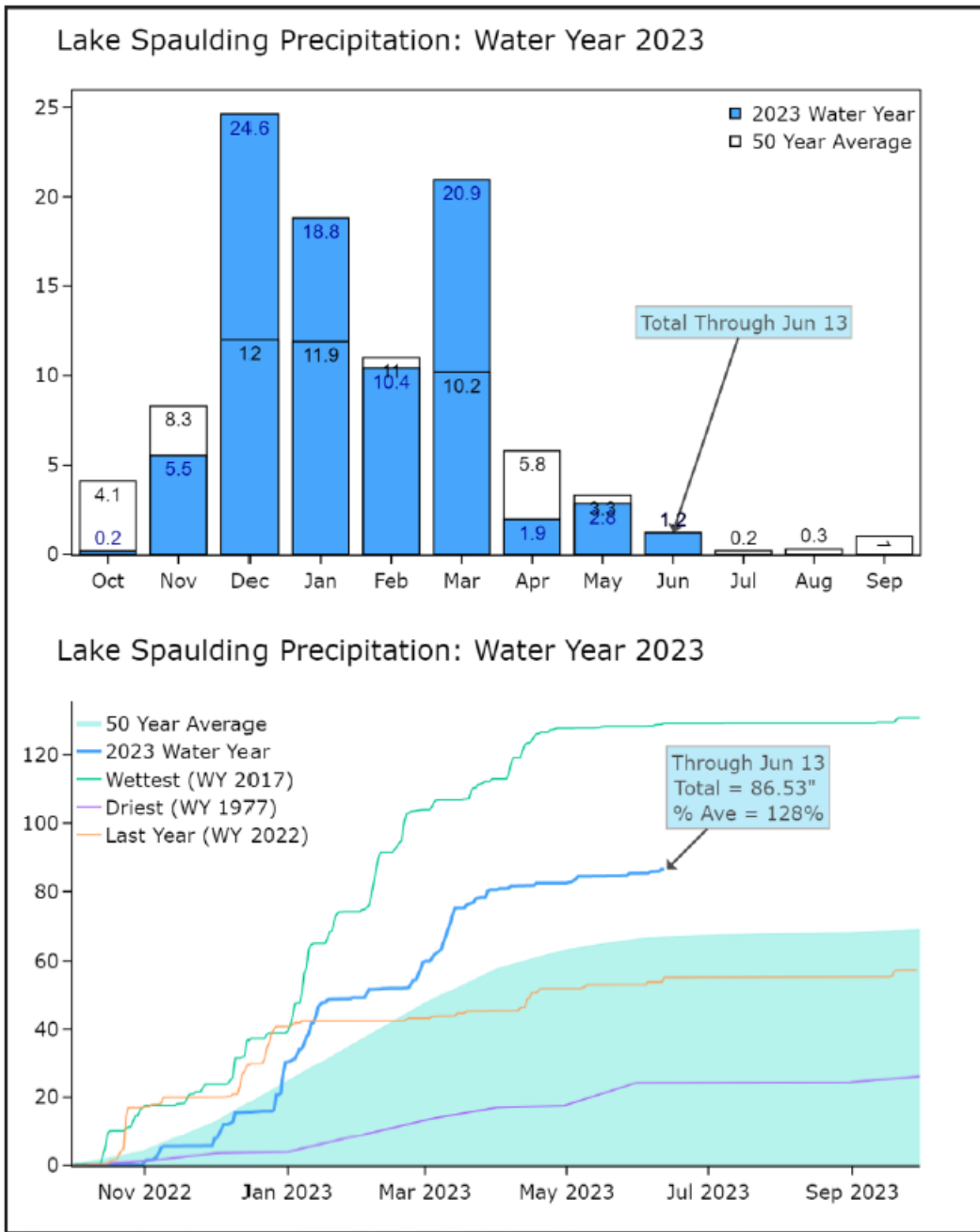


# PCWA MFP OPERATIONS OVERVIEW for American River Operations Group (Real Time Data as of June 14, 2023)

- French Meadows Storage = 130,000 AF of 136,405 AF = 96% Capacity
  - MFAR above FM Inflow (R24) = 7-day AVG ~600 cfs
- Hell Hole Storage = 208,000 AF of 207,590 AF = 100% Capacity
  - Five Lakes Inflow (R23) = 7-day AVG ~1,400 cfs
  - Rubicon Inflow (R22) = 7-day AVG ~500 cfs
  - Spill = 7-day AVG ~1,000 cfs
- Combined Storage (FM+HH) = 339,000 AF/342,590 AF = 99% Capacity; 118% of AVG YTD
  - 7 Day Change = -1,000 AF
- MFAR @\_R11: 7-day AVG 3,000 cfs
- NFAR @ ARPS: 7-day AVG 4,750 cfs



Maps showing Hell Hole 06/13/2023 and French Meadows 06/13/2023; Combined Total Acre-feet = 74,049 AF; Combined 7-Day Change = -21,953 AF



Lake Spaulding Precipitation: Water Year 2023 – Total through Jun 13 are 86.53 with a 50-Year average of 128%

2023 MFP Recreation Release Tables\*

\* Designated release time and flow magnitude from the point of release at Oxbow Powerhouse.

Table 9. May/June MFP Recreational Releases

Day	Date	Class II Run Time	Class II Run (cfs)	Class IV Run Time	Class IV Run (cfs)
Sat	27-May	N/A	N/A	8:00am-12:00pm	1,000 cfs
Sun	28-May	N/A	N/A	8:00am-12:00pm	1,000 cfs
Mon	29-May <sup>1</sup>	N/A	N/A	N/A	N/A
Tue	30-May <sup>1</sup>	N/A	N/A	N/A	N/A
Wed	31-May <sup>1</sup>	N/A	N/A	N/A	N/A
Thu	1-Jun	N/A	N/A	9:00am-12:00pm	1,000 cfs
Fri	2-Jun	N/A	N/A	9:00am-12:00pm	1,000 cfs
Sat	3-Jun	N/A	N/A	8:00am-12:00pm	1,000 cfs
Sun	4-Jun	N/A	N/A	8:00am-12:00pm	1,000 cfs
Mon	5-Jun	N/A	N/A	9:00am-12:00pm	1,000 cfs
Tue	6-Jun	N/A	N/A	9:00am-12:00pm	1,000 cfs
Wed	7-Jun	N/A	N/A	9:00am-12:00pm	1,000 cfs
Thu	8-Jun	N/A	N/A	9:00am-12:00pm	1,000 cfs
Fri	9-Jun	N/A	N/A	9:00am-12:00pm	1,000 cfs
Sat	10-Jun	N/A	N/A	8:00am-12:00pm	1,000 cfs
Sun	11-Jun	N/A	N/A	8:00am-12:00pm	1,000 cfs
Mon	12-Jun	N/A	N/A	9:00am-12:00pm	1,000 cfs
Tue	13-Jun	N/A	N/A	9:00am-12:00pm	1,000 cfs
Wed	14-Jun	N/A	N/A	9:00am-12:00pm	1,000 cfs
Thu	15-Jun	N/A	N/A	9:00am-12:00pm	1,000 cfs
Fri	16-Jun	N/A	N/A	9:00am-12:00pm	1,000 cfs
Sat	17-Jun	N/A	N/A	8:00am-12:00pm	1,000 cfs
Sun	18-Jun	N/A	N/A	8:00am-12:00pm	1,000 cfs
Mon	19-Jun	N/A	N/A	9:00am-12:00pm	1,000 cfs
Tue	20-Jun	N/A	N/A	9:00am-12:00pm	1,000 cfs
Wed	21-Jun	N/A	N/A	9:00am-12:00pm	1,000 cfs
Thu	22-Jun	N/A	N/A	9:00am-12:00pm	1,000 cfs
Fri	23-Jun	N/A	N/A	9:00am-12:00pm	1,000 cfs
Sat	24-Jun <sup>2</sup>	N/A	N/A	No Class IV Release	No Class IV Release
Sun	25-Jun	N/A	N/A	8:00am-12:00pm	1,000 cfs
Mon	26-Jun	N/A	N/A	9:00am-12:00pm	1,000 cfs
Tue	27-Jun	N/A	N/A	9:00am-12:00pm	1,000 cfs
Wed	28-Jun	N/A	N/A	9:00am-12:00pm	1,000 cfs
Thu	29-Jun	N/A	N/A	9:00am-12:00pm	1,000 cfs
Fri	30-Jun	N/A	N/A	9:00am-12:00pm	1,000 cfs

1 No recreation release required

2 Special Event Early Release Days

3 Class II Early Release Day

Table 10. July MFP Recreational Releases

Day	Date	Class II Run Time	Class II Run (cfs)	Class IV Run Time	Class IV Run (cfs)
Sat	1-Jul <sup>2</sup>	3:00am-8:00am	800 cfs	8:00am-12:00pm	1,000 cfs
Sun	2-Jul	N/A	N/A	8:00am-12:00 pm	1,000 cfs
Mon	3-Jul	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Tue	4-Jul	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Wed	5-Jul	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Thu	6-Jul	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Fri	7-Jul	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Sat	8-Jul <sup>2</sup>	3:00am-8:00am	800 cfs	8:00am-12:00pm	1,000 cfs
Sun	9-Jul	N/A	N/A	8:00am-12:00 pm	1,000 cfs
Mon	10-Jul	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Tue	11-Jul	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Wed	12-Jul	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Thu	13-Jul	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Fri	14-Jul	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Sat	15-Jul <sup>2</sup>	3:00am-8:00am	800 cfs	8:00am-12:00pm	1,000 cfs
Sun	16-Jul	N/A	N/A	8:00am-12:00 pm	1,000 cfs
Mon	17-Jul	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Tue	18-Jul	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Wed	19-Jul	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Thu	20-Jul	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Fri	21-Jul	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Sat	22-Jul <sup>2</sup>	3:00am-8:00am	800 cfs	8:00am-12:00pm	1,000 cfs
Sun	23-Jul	N/A	N/A	8:00am-12:00 pm	1,000 cfs
Mon	24-Jul	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Tue	25-Jul	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Wed	26-Jul	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Thu	27-Jul	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Fri	28-Jul	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Sat	29-Jul <sup>3</sup>	3:00am-8:00am	800 cfs	No Class IV Release	No Class IV Release
Sun	30-Jul	N/A	N/A	8:00am-12:00 pm	1,000 cfs
Mon	31-Jul	N/A	N/A	9:00am-12:00 pm	1,000 cfs

1 No recreation release required

2 Special Event Early Release Days

3 Class II Early Release Day

Table 10. August MFP Recreational Releases

Day	Date	Class II Run Time	Class II Run (cfs)	Class IV Run Time	Class IV Run (cfs)
Tue	1-Aug	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Wed	2-Aug	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Thu	3-Aug	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Fri	4-Aug	N/A	N/A	9:00am-12:00 pm	1,000 cfs

Day	Date	Class II Run Time	Class II Run (cfs)	Class IV Run Time	Class IV Run (cfs)
Sat	5-Aug <sup>2</sup>	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Sun	6-Aug	N/A	N/A	8:00am-12:00pm	1,000 cfs
Mon	7-Aug	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Tue	8-Aug	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Wed	9-Aug	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Thu	10-Aug	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Fri	11-Aug	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Sat	12-Aug <sup>2</sup>	3:00am-8:00am	800 cfs	8:00am-12:00pm	1,000 cfs
Sun	13-Aug	N/A	N/A	8:00am-12:00pm	1,000 cfs
Mon	14-Aug	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Tue	15-Aug	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Wed	16-Aug	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Thu	17-Aug	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Fri	18-Aug	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Sat	19-Aug <sup>2</sup>	3:00am-8:00am	800 cfs	8:00am-12:00pm	1,000 cfs
Sun	20-Aug	N/A	N/A	8:00am-12:00 pm	1,000 cfs
Mon	21-Aug	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Tue	22-Aug	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Wed	23-Aug	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Thu	24-Aug	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Fri	25-Aug	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Sat	26-Aug <sup>2</sup>	3:00am-8:00am	800 cfs	8:00am-12:00pm	1,000 cfs
Sun	27-Aug	N/A	N/A	8:00am-12:00pm	1,000 cfs
Mon	28-Aug	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Tue	29-Aug	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Wed	30-Aug	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Thu	31-Aug	N/A	N/A	9:00am-12:00 pm	1,000 cfs

1 No recreation release required

2 Special Event Early Release Days

3 Class II Early Release Day

Table 10. September MFP Recreational Releases

Day	Date	Class II Run Time	Class II Run (cfs)	Class IV Run Time	Class IV Run (cfs)
Fri	1-Sep	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Sat	2-Sep <sup>2</sup>	3:00am-8:00am	800 cfs	8:00am-12:00pm	1,000 cfs
Sun	3-Sep	N/A	N/A	8:00am-12:00pm	1,000 cfs
Mon	4-Sep	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Tue	5-Sep	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Wed	6-Sep	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Thu	7-Sep	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Fri	8-Sep	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Sat	9-Sep <sup>2</sup>	3:00am-8:00am	800 cfs	8:00am-12:00pm	1,000 cfs
Sun	10-Sep	N/A	N/A	8:00am-12:00pm	1,000 cfs
Mon	11-Sep <sup>1</sup>	N/A	N/A	N/A	N/A

Day	Date	Class II Run Time	Class II Run (cfs)	Class IV Run Time	Class IV Run (cfs)
Tue	12-Sep	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Wed	13-Sep	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Thu	14-Sep	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Fri	15-Sep	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Sat	16-Sep <sup>2</sup>	3:00am-8:00am	800 cfs	8:00am-12:00pm	1,000 cfs
Sun	17-Sep	N/A	N/A	8:00am-12:00pm	1,000 cfs
Mon	18-Sep <sup>1</sup>	N/A	N/A	N/A	N/A
Tue	19-Sep	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Wed	20-Sep	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Thu	21-Sep	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Fri	22-Sep	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Sat	23-Sep	N/A	N/A	8:00am-12:00pm	1,000 cfs
Sun	24-Sep	N/A	N/A	8:00am-12:00pm	1,000 cfs
Mon	25-Sep <sup>1</sup>	N/A	N/A	N/A	N/A
Tue	26-Sep	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Wed	27-Sep	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Thu	28-Sep	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Fri	29-Sep	N/A	N/A	9:00am-12:00 pm	1,000 cfs
Sat	30-Sep	N/A	N/A	8:00am-12:00pm	1,000 cfs

1 No recreation release required

2 Special Event Early Release Days

3 Class II Early Release Day

### Reservoir Releases in Cubic Feet/Second

Reservoir	Dam	WY 2022	WY 2023	15 Yr Median
Trinity	Lewiston	461	684	820
Sacramento	Keswick	4,032	8,982	9,932
Feather	Oroville (SWP)	3,500	7,000	3,300
American	Nimbus	2,013	7,910	3,014
Stanislaus	Goodwin	803	1,507	874
San Joaquin	Friant	1,704	5,989	370

### Storage in Major Reservoirs in Thousands of Acre-Feet

Reservoir	Capacity	15 Yr Avg	WY 2022	WY 2023	% of 15 Yr Avg
Trinity	2,448	1,638	733	1,384	85
Shasta	4,552	3,450	1,811	4,412	128
Folsom	977	791	864	916	116
New Melones	2,420	1,459	827	1,945	133
Fed. San Luis	966	507	305	962	190
Total North CVP	11,363	7,846	4,540	9,319	123
Millerton	521	379	367	307	81
Oroville (SWP)	3,538	2,538	1,859	3,521	139

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

Reservoir	Current WY 2023	WY 1977	WY 1983	15 Yr Avg	% of 15 Yr Avg
Trinity	1,391	620	1,830	961	145
Shasta	4,825	2,800	8,062	4,068	119
Folsom	4,046	912	5,382	2,238	181
New Melones	1,840	N/A	1,822	841	219
Millerton	2,870	557	2,103	1,133	253

### Accumulated Precipitation for Water Year to Date in Inches

Reservoir	Current WY 2023	WY 1977	WY 1983	Average (N Years)	% of Average	Last 24 Hours
Trinity at Fish Hatchery	36.28	21.79	38.20	29.51 (63)	123	0.00

<b>Reservoir</b>	<b>Current WY 2023</b>	<b>WY 1977</b>	<b>WY 1983</b>	<b>Average (N Years)</b>	<b>% of Average</b>	<b>Last 24 Hours</b>
Sacramento at Shasta Dam	72.21	32.94	83.71	57.94 (68)	125	0.00
American at Blue Canyon	77.92	N/A	112.31	63.58 (49)	123	0.00
Stanislaus at New Melones	46.93	N/A	36.55	26.55 (46)	177	0.00
San Joaquin at Huntington Lk	65.94	11.50	65.40	39.57 (50)	167	0.00



June 2023 | Folsom Lake Daily Operations | Run Date: 06/14/2023

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	Pump-ing Plant	Evap. - C.F.S.	Evap. - Inches	Precip Inches
		900.5									
1	458.84	898.4	-2.0	12,201	7,945	5,022	0	178	86	0.24	0.00
2	458.98	899.9	1.5	11,734	7,900	2,783	0	204	89	0.25	0.00
3	459.26	902.9	3.0	11,168	7,915	1,395	0	230	104	0.29	0.00
4	459.74	908.1	5.2	12,195	7,830	1,402	0	238	111	0.31	0.00
5	460.09	911.9	3.8	11,389	7,738	1,407	0	239	97	0.27	0.00
6	460.44	915.7	3.8	11,390	7,736	1,411	0	230	97	0.27	0.00
7	460.60	917.4	1.7	10,385	7,818	1,416	0	207	68	0.19	0.00
8	460.56	917.0	-0.4	9,310	7,819	1,419	0	208	83	0.23	0.00
9	460.46	915.9	-1.1	9,109	7,904	1,420	0	231	101	0.28	0.00
10	460.45	915.8	-0.1	8,609	7,927	458	0	221	58	0.16	0.00
11	460.46	915.9	0.1	8,397	8,032	3	0	228	79	0.22	0.00
12	460.53	916.7	0.8	8,582	7,637	273	0	224	65	0.18	0.00
13	460.49	916.2	-0.4	8,039	7,962	0	0	217	79	0.22	0.00
Totals			15.9	132,508	102,163	18,409	0	2,855	1,117	3.11	0.00
Acre-Feet			15,900	262,830	202,640	36,514	0	5,663	2,216		

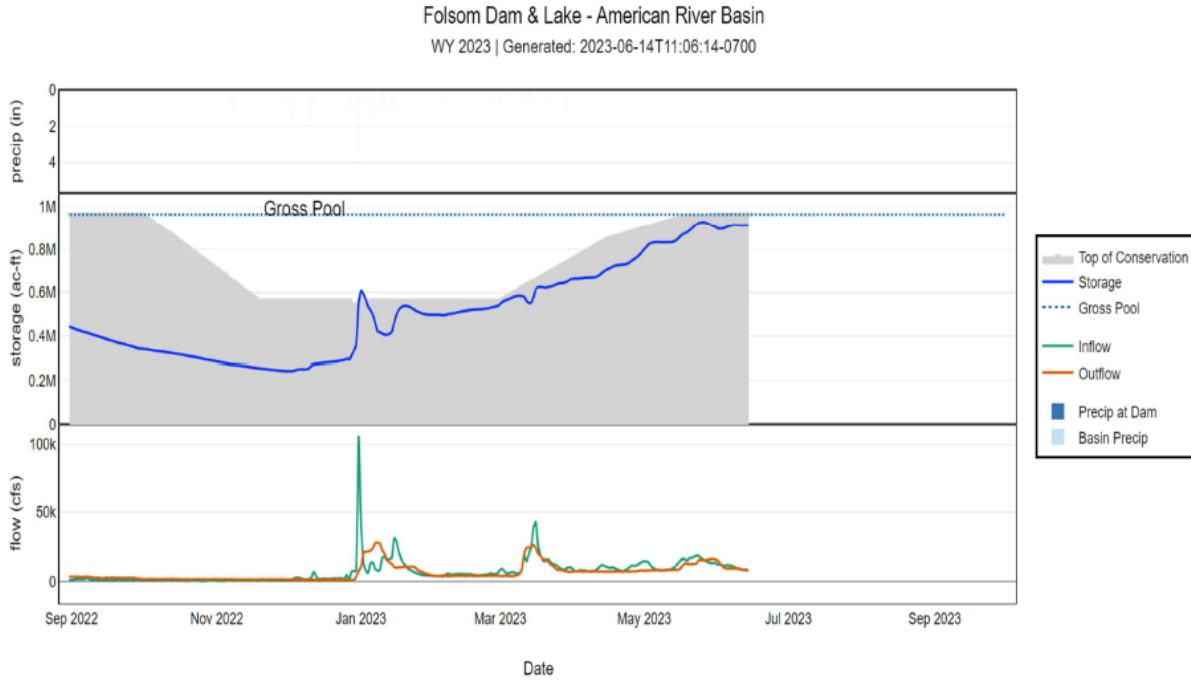
\* Computed inflow is the sum of change in storage, releases, pumping, and evaporation

**Summary: Release (acre-feet)**

Power	202,640
Spill	36,514
Outlet	0
Pumping Plant	5,663
Total Releases	244,817

**Summary: Precipitation (Month/Inches)**

This month	0.00
October 1, 2022 to date	30.81



Folsom Dam & Lake – American River Basin  
2023-06-14T11:06:14-0700

# 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 <sup>1</sup>	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	49.4	48.4	48.5	50.1	50.2	51.5	59.9	715		A	A	A
05/01	50.4	49.7	50.0	51.2	51.1	51.8	54.0	7749	817	A 36.8	A 26.7	A 36
05/02	48.6	48.6	49.8	51.3	51.2	51.8	53.2	7861	828	A 33.7	A 33.2	A 33
05/03	47.7	47.8	49.9	51.1	50.9	51.4	55.1	7992	832	A 33.3	A 33.4	A 33
05/04	47.5	46.6	50.0	50.8	50.7	51.2	55.8	7958	835	A 33.4	A 33.3	A 33
05/05	47.2	46.9	49.7	51.0	50.9	51.5	56.1	7947	835	A 33.3	A 33.5	A 33
05/06	47.5	47.2	50.3	51.1	51.0	51.7	56.5	7942	835	A 33.6	A 33.4	A 33
05/07	48.2	48.4	50.9	52.0	51.9	52.6	57.5	7975	835	A 33.5	A 33.4	A 33
05/08	49.0	47.8	49.9	52.1	52.4	53.1	57.7	7988	834	A 33.3	A 33.4	A 33
05/09	49.6	48.2	50.5	51.5	51.6	52.4	60.0	7959	835	A 33.3	A 33.4	A 33
05/10	50.7	49.2	51.3	52.4	!	53.2	58.6	7974	835	A 33.3	A 33.4	A 33
05/11	52.3	50.3	51.2	52.9	!	54.0	61.2	7998	835	A 33.7	A 33.5	A 33
05/12	53.4	51.5	50.1	? 53.0	! 53.6	54.3	68.1	8001	837	A 33.4	A 33.5	A 33
05/13	54.2	52.8	51.4	? 52.5	52.5	53.4	74.4	7928	841	A 34.5	A 33.7	A 32
05/14	54.1	53.8	51.5	? 53.7	54.1	55.0	73.6	7922	851	A 33.5	A 33.5	A 33
05/15	53.4	53.9	50.7	53.0	53.8	54.9	69.9	8645	862	A 33.4	A 33.4	A 33
05/16	52.8	53.2	51.8	53.5	53.6	54.2	73.5	10806	871	A 33.3	A 33.4	A 33
05/17	52.5	52.9	52.6	54.7	54.9	55.4	73.2	12183	878	A 33.3	A 33.4	A 33
05/18	52.7	53.1	53.8	55.5	55.4	55.8	68.8	11991	882	A 33.6	A 33.5	A 33
05/19	53.2	53.2	52.4	54.7	55.5	56.5	69.4	11665	891	A 33.3	A 33.4	A 33
05/20	53.9	53.6	52.3	54.2	54.6	55.3	64.8	12081	899	A 33.3	A 33.4	A 33
05/21	54.2	54.1	52.9	54.7	54.8	55.4	68.0	12036	910	A 33.3	A 33.4	A 33
05/22	54.2	54.1	52.8	54.8	55.3	56.0	73.0	12406	922	A 33.3	A 33.4	A 33
05/23	53.8	54.2	53.1	54.8	55.0	55.6	65.0	15056	927	A 33.3	A 33.4	A 33
05/24	53.5	53.7	55.0	56.0	55.7	55.9	61.6	15056	930	A 35.1	A 31.8	A 33
05/25	53.8	53.6	53.5	55.5	56.0	56.8	60.6	15049	930	A 33.3	A 33.4	A 33
05/26	53.8	53.9	53.7	55.2	55.3	55.8	61.3	14952	928	A 33.3	A 33.4	A 33
05/27	54.5	54.2	54.7	56.1	56.0	56.3	62.4	15008	924	A 33.4	A 33.4	A 33
05/28	55.1	54.3	54.4	55.9	56.2	56.7	62.4	15115	918	A 33.3	A 33.4	A 33
05/29	54.9	54.7	53.9	55.7	55.9	56.5	62.0	15150	912	A 33.3	A 33.4	A 33

Date	MDT, Water, NFA	MDT, Water, ARP	MDT, Water, AFD <sup>1</sup>	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
05/30	54.9	54.4	54.4	55.9	55.9	56.3	62.8	15017	907	A 34.0	A 33.8	A 32
05/31	54.5	54.7	54.5	56.0	56.1	56.7	63.0	14182	900	A 33.3	A 33.4	A 33
May	52.1	51.8	52.0	53.6	53.9	54.4	63.3	873				
Total AF								669600				

Legend:

? = 1-9 hours of data missing

! = 10 or more hours of data missing

# = Station out of service

**Monthly Averages**

A = All Shutters Lowered

T = Top Shutter Raised

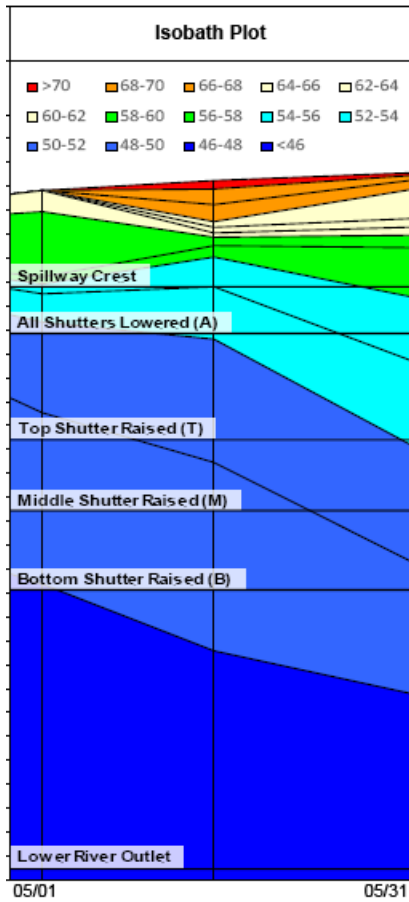
M = Middle Shutter Raised

B = Bottom Shutter Raised

O = Unit Outage

Notes:

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



Isobath Plot 05/01-05/31 (Showing Spillway Crest, All Shuttters Lowered (A), Top Shutter Raised (T), Middle Shutter Raised (M), Bottom Shutter Raised (B), and Lower River Outlet)

# Isobath 06/1-13/23 (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 <sup>1</sup>	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	52.1	51.8	52.0	53.6	53.9	54.4	63.3	873		A	A	A
06/01	55.5	54.7	53.9	56.2	56.5	57.1	64.7	12243	898	A 33.3	A 33.4	A 33
06/02	55.2	54.8	53.2	55.4	55.9	56.6	68.0	10245	900	A 33.3	A 33.4	A 33
06/03	55.5	54.8	52.9	55.0	55.7	56.6	72.7	9002	903	A 33.4	A 33.4	A 33
06/04	56.5	55.1	52.9	55.0	55.6	56.4	76.6	9046	908	A 33.2	A 33.8	A 33
06/05	56.5	55.1	53.0	55.1	55.5	56.4	68.3	9006	912	A 33.2	A 33.2	A 34
06/06	55.4	54.8	53.2	54.8	55.0	55.7	62.7	8938	916	A 33.1	A 33.2	A 34
06/07	55.2	54.6	53.3	55.2	55.4	56.0	64.0	8918	917	A 33.3	A 33.4	A 33
06/08	54.9	54.1	53.5	55.3	55.7	56.5	67.1	8925	917	A 33.3	A 33.4	A 33
06/09	55.9	54.3	53.5	55.5	55.9	56.7	64.3	8951	916	A 33.3	A 33.4	A 33
06/10	56.5	53.5	53.3	55.3	55.7	#	64.2	8022	916	A 33.3	A 33.4	A 33
06/11	55.9	54.2	53.2	54.9	55.4	#	65.2	7877	916	A 34.4	A 33.4	A 32
06/12	56.2	53.6	53.4	54.9	55.2	56.0	64.5	7861	917	A 36.2	A 35.0	A 29
06/13	56.8	54.0	53.5	55.2	55.8	56.6	67.3	7910	916	A 34.6	A 32.7	A 33
06/14												
06/15												
06/16												
06/17												
06/18												
06/19												
06/20												
06/21												
06/22												
06/23												
06/24												
06/25												
06/26												
06/27												
06/28												
06/29												
06/30												
-												
Jun	55.8	54.4	53.3	55.2	55.6	56.4	66.9	912				
						Total	AF	231954				

Legend:

? = 1-9 hours of data missing

! = 10 or more hours of data missing

# = Station out of service

**Monthly Averages**

A = All Shutters Lowered

T = Top Shutter Raised

M = Middle Shutter Raised

B = Bottom Shutter Raised

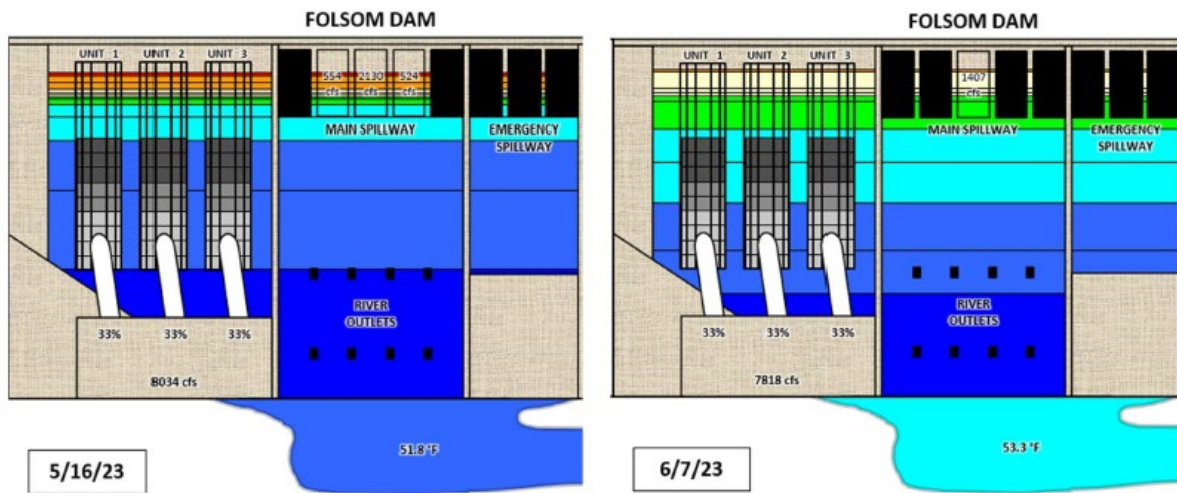
O = Unit Outage

Notes:

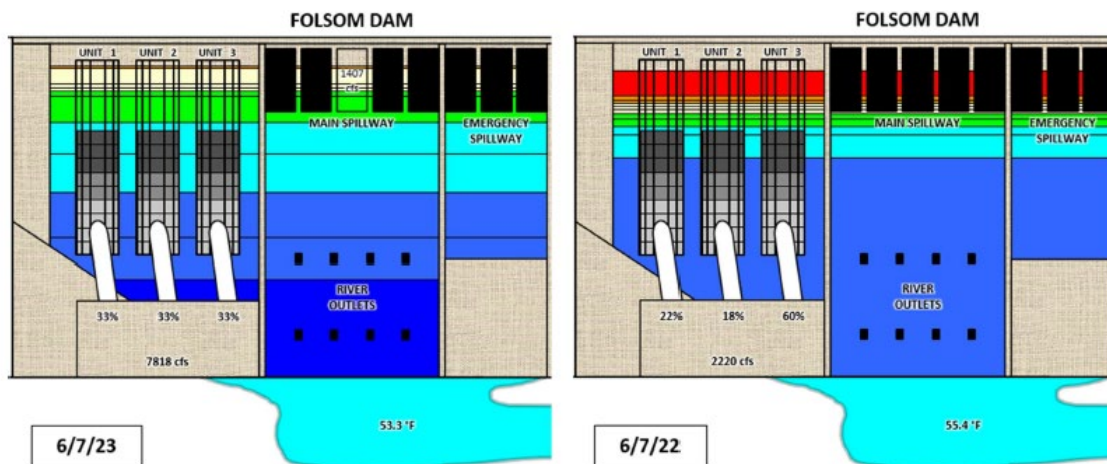
<sup>1</sup> AFD is a weighted average based on hourly flow values, including generation, bypass and spill







Graphic showing Folsom Dam on 5/16/23 with a temperature of 51.8 °F and 6/7/23 with a temperature of 53.3 °F



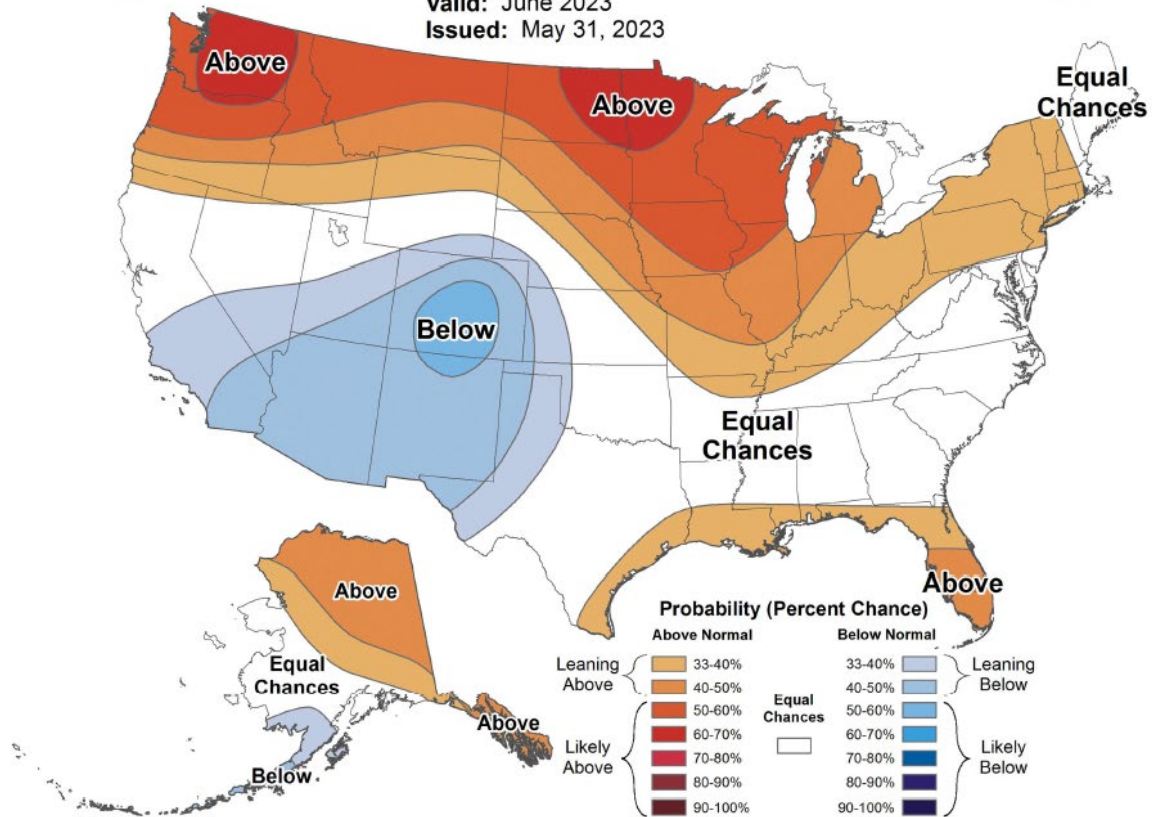
Graphic showing Folsom Dam on 6/7/23 with a temperature of 53.3 °F and 6/7/22 with a temperature of 55.4 °F



# Monthly Temperature Outlook



Valid: June 2023  
Issued: May 31, 2023



Map – Monthly Temperature Outlook; Valid June 2023; Issued May 31, 2023

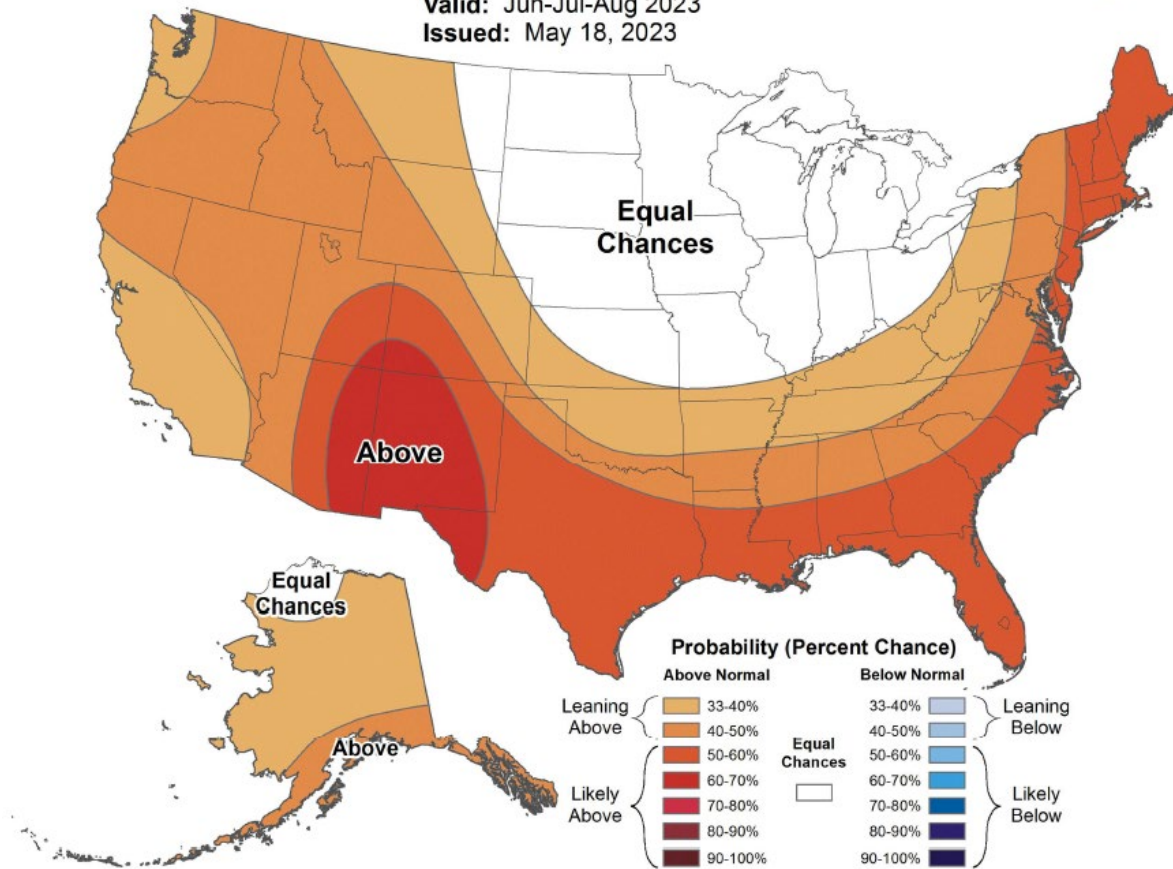


# Seasonal Temperature Outlook



Valid: Jun-Jul-Aug 2023

Issued: May 18, 2023



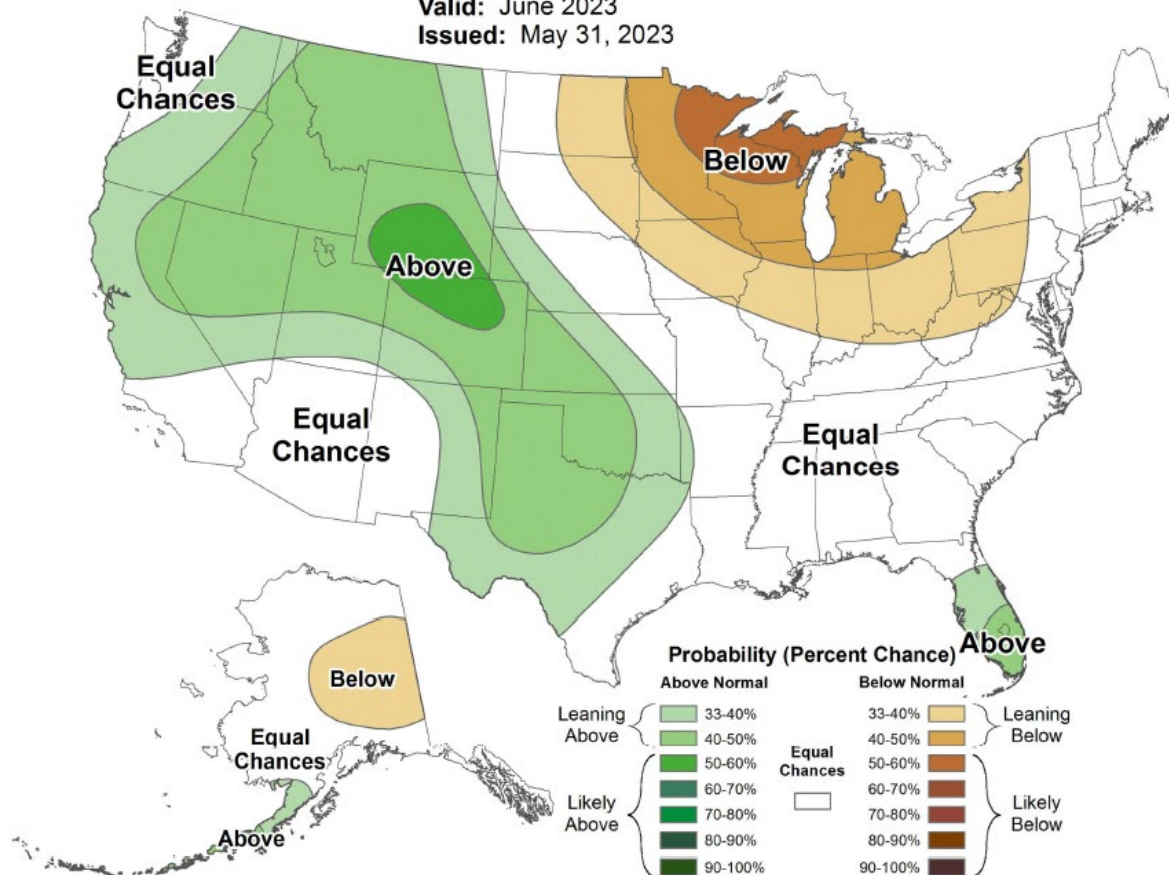
Map – Seasonal Temperature Outlook; Valid Jun-Jul-Aug 2023; Issued May 18, 2023



# Monthly Precipitation Outlook



Valid: June 2023  
Issued: May 31, 2023



Map – Monthly Precipitation Outlook; Valid June 2023; Issued May 31, 2023

# American River Summary Conditions – December (On-going)

## Storage/Release Management Conditions

- May 22, 2023, from 12,000 cfs to 15,000 cfs
- May 31, 2023, from 15,000 cfs to 13,000 cfs
- June 1, 2023, from 13,000 cfs to 11,000 cfs
- June 2, 2023 from 11,000 cfs to 9,000 cfs
- June 10, 2023 from 9,000 cfs to 8,000 cfs
- June 14, 2023, from 8,000 cfs to 7,000 cfs
- June 15, 2023, from 7,000 cfs to 6,500 cfs
- June 16, 2023, from 6,500 cfs to 6,000 cfs
- June 17, 2023, from 6,000 cfs to 5,500
- June 18, 2023, from 5,500 cfs to 5,000 cfs

## Temperature Management

- Top Shutters: Units 1, 2, and 3 -- lowered
- Middle Shutters: Units 1, 2, and 3 -- lowered
- Bottom Shutters: Units 1, 2, and 3 -- lowered

## Folsom Shutter Configuration and Changes

Most likely no Shutter change until July

## American River 90% Outlook

May 50% Exceedance

## Storages

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

Facility	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
Folsom Storage	901	898	789	637	601	503	476	466	495
Folsom Elevation	459	459	448	433	429	417	413	412	416

Monthly River Release (TAF/cfs)

Facility	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
Folsom Storage	584	416	277	277	149	123	120	123	123
Folsom Elevation	9500	7000	4500	4500	2500	2000	2024	2000	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 <sup>1</sup>
October	May ARI <sup>2</sup> (50% exceedance)	1,326 cfs	Not applicable	Not applicable	1,326 cfs	1,462 cfs
November	May ARI <sup>2</sup> (50% exceedance)	1,326 cfs	Not applicable	Not applicable	1,326 cfs	1,352 cfs
December	May ARI <sup>2</sup> (50% exceedance)	1,326 cfs	Not applicable	Not applicable	1,326 cfs	1,928 cfs
January	January SRI (75% exceedance)	1,750 cfs	1,326 cfs	Not applicable	1,326 cfs	14,060 cfs
February	February ARI (50% exceedance)	1,750 cfs	1,750 cfs	1,750 cfs	1,750 cfs	4,021 cfs
March	March ARI (50% exceedance)	1,750 cfs	1,750 cfs	1,750 cfs	1,750 cfs	12,616 cfs
March	March ARI <sup>3</sup> (90% exceedance)	1,750 cfs	1,750 cfs	1,750 cfs	1,750 cfs	12,616 cfs
April	April ARI (50% exceedance)	1,500 cfs	Not applicable	1,500 cfs	1,500 cfs	7,088 cfs
April	April ARI <sup>3</sup> (90% exceedance)	1,500 cfs	Not applicable	1,500 cfs	1,500 cfs	7,088 cfs
May	May ARI (50% exceedance)	1,500 cfs	Not applicable	1,500 cfs	1,500 cfs	10,890 cfs
May	May ARI <sup>3</sup> (90% exceedance)	1,500 cfs	Not applicable	1,500 cfs	1,500 cfs	10,890 cfs
June	May ARI <sup>2</sup> (90% exceedance)	1,269 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

<sup>1</sup> Average of daily release over the month from NAT station on CDEC.

<sup>2</sup> Since new forecasts are usually provided January through May, the May ARI would also be used for June–September of the current water year and October–December of the next water year unless there is an update to the ARI after May.