



— 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, November 16, 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. Annual Report Update
8. Next Meetings:
  - a. Thursday, December 21st, 1:30-3:30~~pm~~

**Provisional Data Subject to Revision**

**FALL-RUN CHINOOK SALMON CARCASS SURVEY**

Presented by Jenny O’Brien, CDFW, 916-282-8710, [Jennifer.obrien@wildlife.ca.gov](mailto:Jennifer.obrien@wildlife.ca.gov)

Surveys commenced on October 16, 20023

Table 1. Preliminary count of Chinook Salmon carcasses processed during the 2023 lower American River escapement survey.

Survey Period	Dates	Nimbus Basin	Section 1A	Section 1B	Section 2	Section 3	Total Carcasses Processed
1	Oct 16 – 19	6	35	8	1	0	50
2	Oct 23 – 26	16	55	11	7	0	89
3	Oct 30 – Nov 2	11	102	35	15	2	165
4	Nov 6 -9	15	172	118	58	4	367

Table 2. Preliminary count of female Chinook Salmon carcasses assessed for spawning conditions during the 2023 lower American River escapement survey.

Survey Period	Dates	Unspawned	Partial	Spawned	Total
1	Oct 16 – 19	10	3	0	13
2	Oct 23 – 26	19	4	2	25
3	Oct 30 – Nov 2	21	3	13	37
4	Nov 6 -9	21	11	57	89
N/A	Total	71	21	72	164
N/A	%	43.3%	12.8%	43.9%	N/A

**Provisional Data Subject to Revision**

**LOWER AMERICAN RIVER REDD SURVEYS**

Presented by Duane Linander, CDFW, 916-516-2473, [duane.linander@wildlife.ca.gov](mailto:duane.linander@wildlife.ca.gov)

Surveys commenced on October 24, 20023

Table 3. Preliminary count of redds surveyed during the 2023/2024 fall-run Chinook Salmon redd survey season.

Survey Period	Dates	Nimbus Basin	Section 1A	Section 1B	Section 2	Section 3	Total Carcasses Processed
1	Oct 24 - 27	8	3	2	0	0	13
2	Oct 31 – Nov 3	8	36	15	1	0	60
3	Nov 7 – Nov 11	12	55	15	5	0	87
4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	Total	28	94	32	6	0	160

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)

Unable to spawn on November 2, 2023, due to low DO.

Fish spawn occurred on November 6, 2023.

2,101,554 green eggs collected thus far.

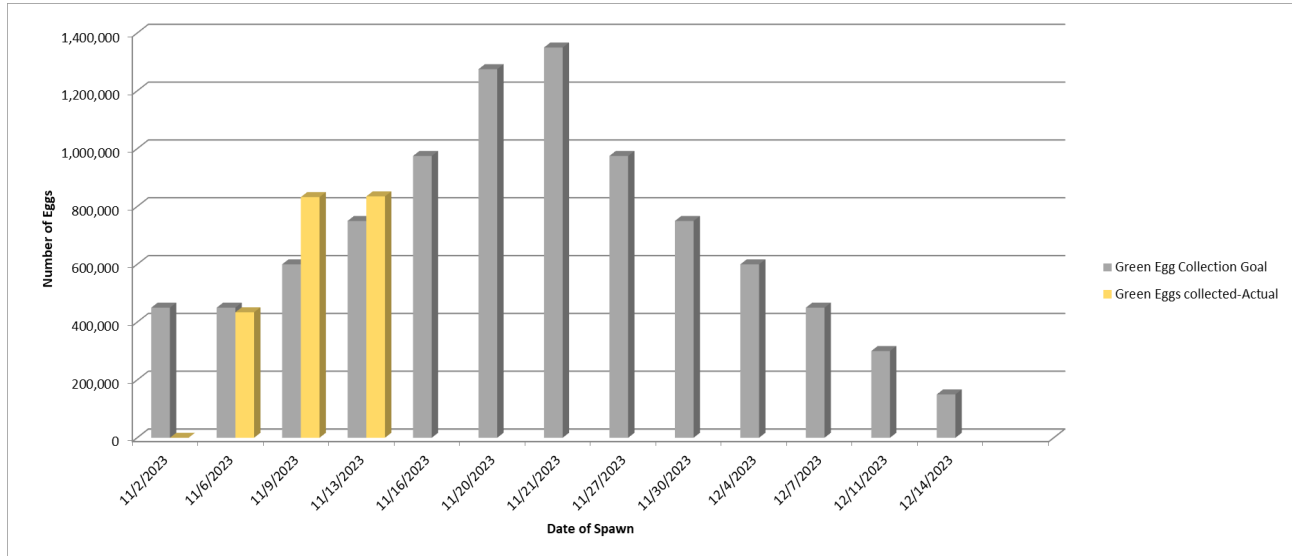


Figure 1. Graph of green eggs collected at Nimbus Fish Hatchery compared to the green egg collection goal for BY 2023 Chinook.

# SMUD Hydroelectric Facilities – Upper American River Project

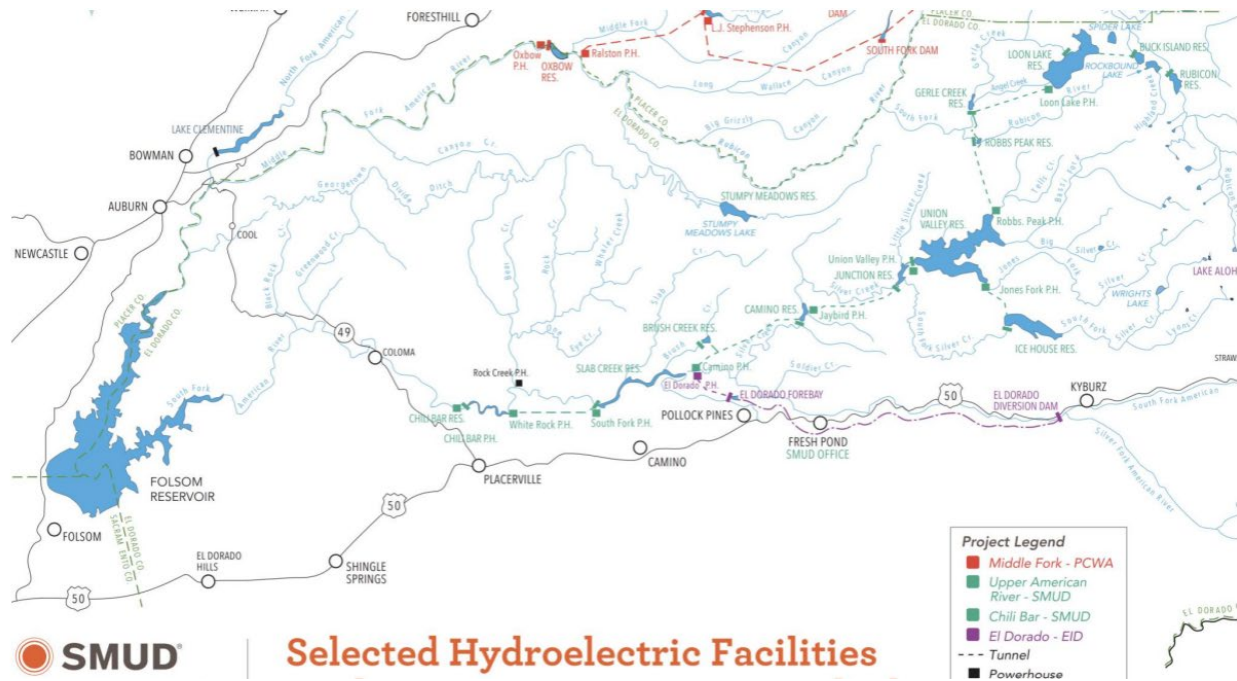


Figure 2. Sacramento Municipal Utility District (SMUD) Hydroelectric Facilities – Upper American River Project

Figure 2 is a map of the SMUD Upper American River Project hydroelectric facilities. It notes down, major roadways, and SMUD projects on the Upper American River, and Chili Bar, including tunnels, and powerhouses. The Placer County Water Agency Middle Fork Project and El Dorado Irrigation District El Dorado Project are also pictured.

# SMUD Upper American River Project Update 11/13/23

## Fresh Pond Precipitation

November precipitation through 11/13/2023 is 1.23 inches, which is 17.9% of the November average of 6.87 inches. Precipitation for the water year to date is 2.6 inches which is 41.4% of average to date (6.28 inches) and 4.5% of the entire water year average of 57.32 inches.

## Runoff and Snowpack Water Content

Runoff into storage reservoir basins is 87.7% of median to date through 11/13/2023. The snowpack is 20.7% 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 Historical Average
October	1.37	3.30	42%
November	1.23	6.87	18%
December	0.00	9.14	0%
January	0.00	9.55	0%
February	0.00	9.50	0%
March	0.00	9.06	0%
April	0.00	4.84	0%
May	0.00	2.97	0%
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	2.60	57.32	5%

\* Month to date total, full month historical average.

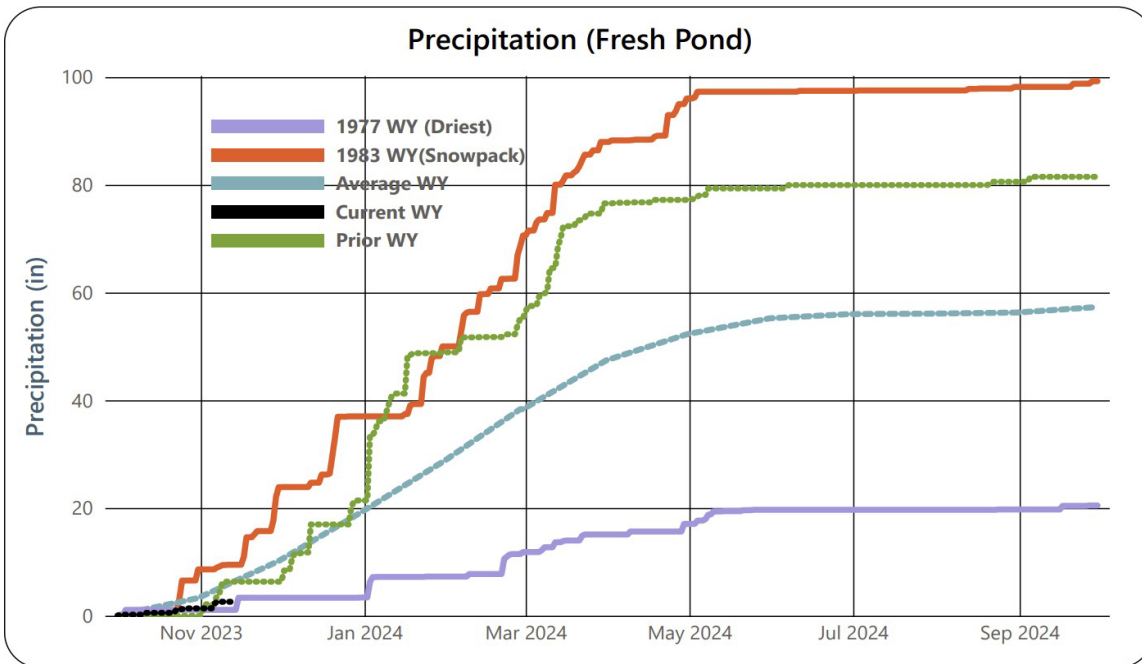


Figure 3. Fresh Pond Precipitation

Figure 3 is a line graph of fresh pond precipitation in inches for November 2023 – September 2024. It includes precipitation data from the driest water year (1977), 1983’s water year snowpack, average, current, and prior water year. November precipitation through 11/13/2023 is 1.23 inches, which is 17.9% of the November average of 6.87 inches.

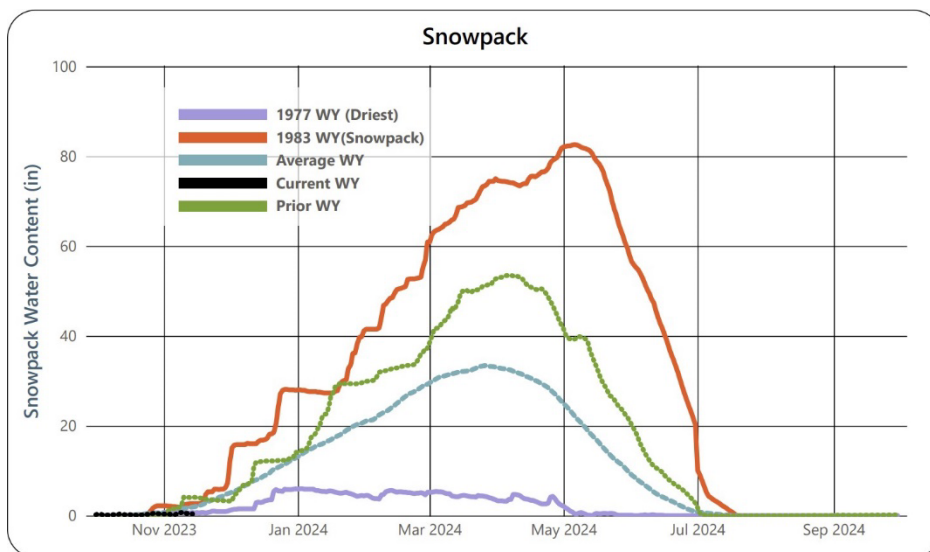


Figure 4. September 18, 2023 snowpack

Figure 4 is a line graph of snowpack water content in inches for September 2022-2023. 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 192.1% of median to date through 9/18/2023.

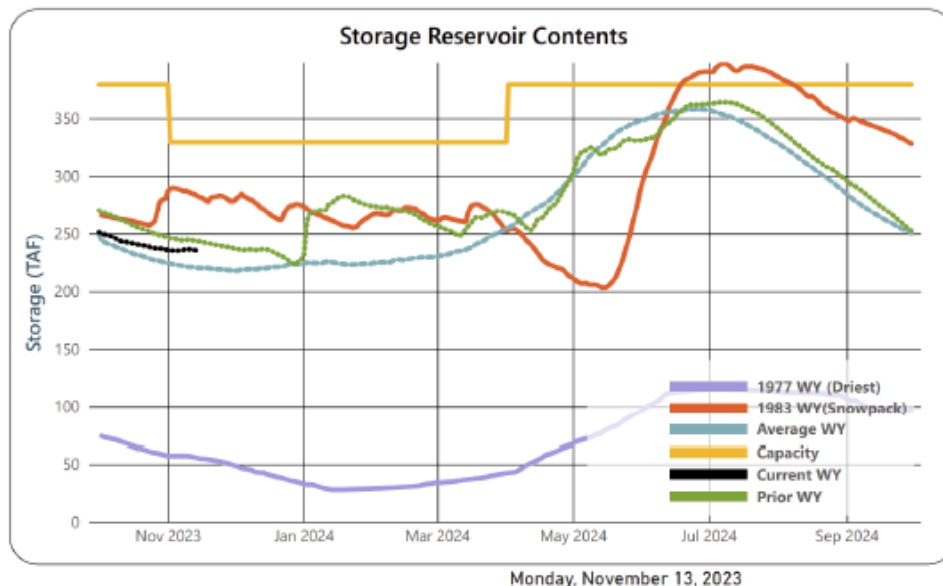


Figure 5. Storage Reservoir Contents

Figure 5 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
Ice House	28,199	65 %	29,642	68.1%	29,503	68%	43,500	34,855
Loon Lake	42,568	61%	43,373	62.6%	43,495	63%	69,310	69,310
Union Valley	153,767	58%	162,212	60.9%	170,527	64%	266,370	255,046
Total Reservoir Storage	224,534	59%	235,227	62.0%	243,524	64%	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 OPEN, Robbs Peak gates are OPEN.



## Chili Bar Releases into the South Fork American River

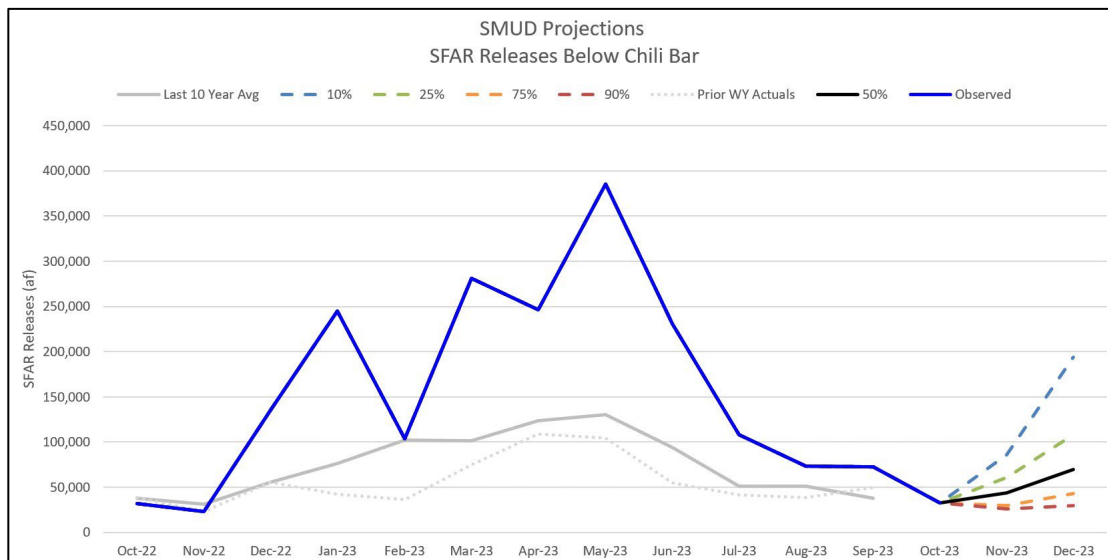


Figure 6. Chili Bar releases into the South Fork American River. Projections based on forecast from September 11, 2023.

Figure 6 is a line graph of observed and projected releases below Chili Bar from October 2022 to December 2023. The graph includes a last 10-year average, actual prior water year data, and projections of 90%, 75%, 50%, 25%, and 10% likelihood.

\* Month to date total, full month historical average.

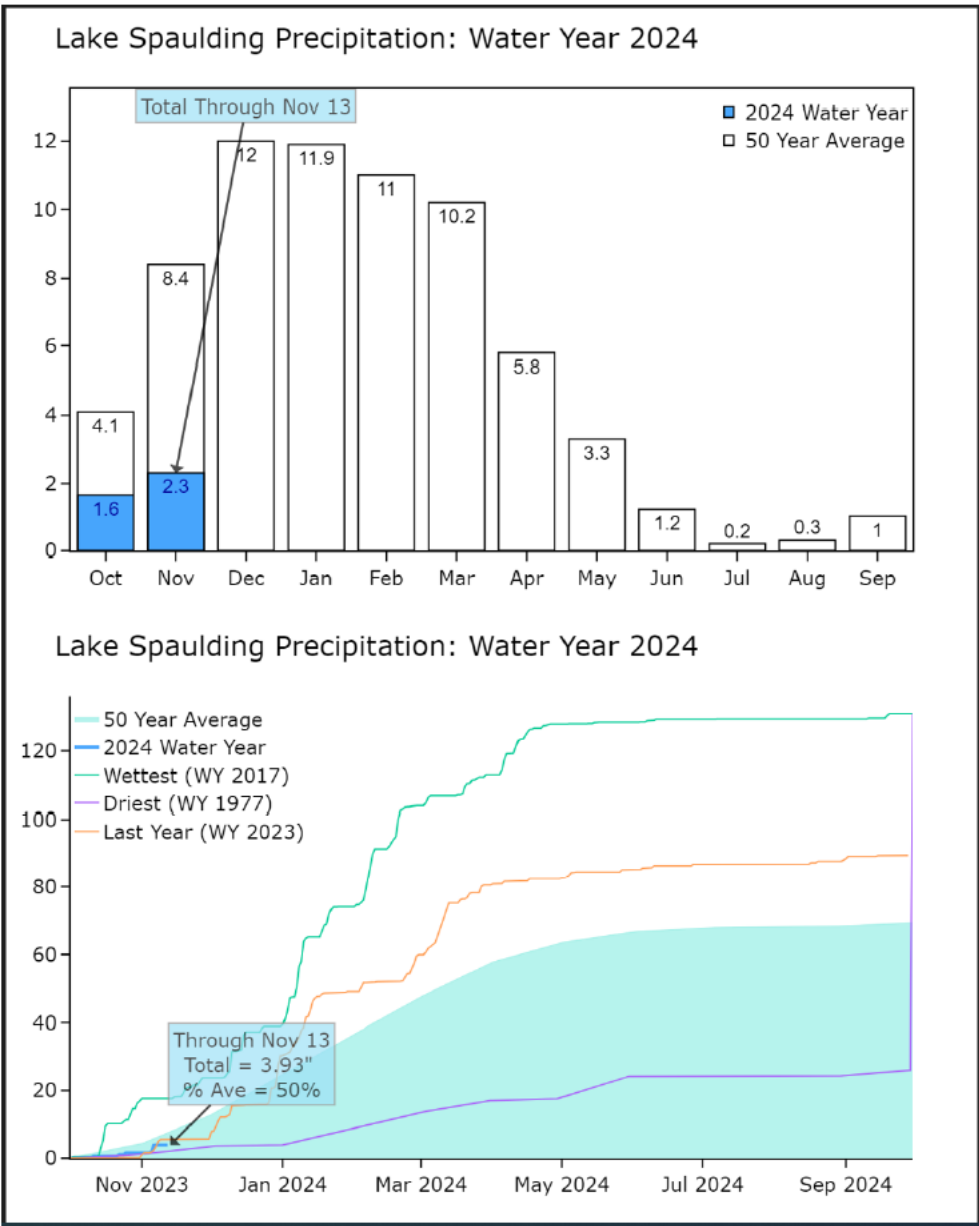
Table 6. Chili Bar releases into the South Fork American River

Type (Actual or Forecast)	Date	Daily Mean Release Rate (cfs)	Monthly Total Release (acre-ft)
Actuals	Oct-22	520	31977
Actuals	Nov-22	386	22966
Actuals	Dec-22	2207	135729
Actuals	Jan-23	3980	244747
Actuals	Feb-23	1862	103424
Actuals	Mar-23	4573	281182
Actuals	Apr-23	4142	246460
Actuals	May-23	6264	385181
Actuals	Jun-23	3874	230517
Actuals	Jul-23	1755	107923
Actuals	Aug-23	1191	73247
Actuals	Sep-23	1220	72585

Type (Actual or Forecast)	Date	Daily Mean Release Rate (cfs)	Monthly Total Release (acre-ft)
Actuals	Oct-23	536	32976
Forecast	Nov-23	732	43559
Forecast	Dec-23	1137	69898

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

- French Meadows Storage = 77,000 AF of 136,405 AF = 57% Capacity
  - MFAR above FM Inflow (R24) = 7-day AVG ~10 cfs
- Hell Hole Storage = 86,000 AF of 207,590 AF = 41% Capacity
  - Five Lakes Inflow (R23) = 7-day AVG ~10 cfs
  - Rubicon Inflow (R22) = 7-day AVG ~20 cfs
- Combined Storage (FM+HH) = 163,000 AF/342,590 AF = 48% Capacity; 96% of AVG YTD
  - 7 Day Change = -4,000 AF
- MFAR @ R11: 7-day AVG ~330 cfs
- NFAR @ ARPS: 7-day AVG ~500 cfs
- MFP annual maintenance outage ended November 15th – MFP is back online



Lake Spaulding Precipitation: Water Year 2024 – Total through Nov 13 are 2.3 with a 50-year average of 8.4

### Reservoir Releases in Cubic Feet/Second

Reservoir	Dam	WY 2022	WY 2023	15 Yr Median
Trinity	Lewiston	304	292	303
Sacramento	Keswick	3,726	4,998	4,804
Feather	Oroville (SWP)	2,000	1,750	1,750
American	Nimbus	1,320	2,070	1,798
Stanislaus	Goodwin	202	206	206
San Joaquin	Friant	501	428	375

### 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	1,225	532	1,210	99
Shasta	4,552	2,242	1,397	3,112	139
Folsom	977	382	266	516	135
New Melones	2,420	1,246	585	1,905	153
Fed. San Luis	966	384	185	713	186
Total North CVP	11,363	5,479	2,965	7,456	136
Millerton	521	245	313	146	59
Oroville (SWP)	3,538	1,492	1,022	2,362	158

### 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	22	12	58	31	71
Shasta	274	342	418	308	89
Folsom	85	67	250	91	94
New Melones	71	N/A	126	51	140
Millerton	166	38	164	82	202

### 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	1.62	0.85	4.63	3.54 (63)	46	0.00
Sacramento at Shasta Dam	1.14	1.41	6.49	6.28 (68)	18	0.00
American at Blue Canyon	0.00	2.34	10.92	6.23 (49)	0	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>
Stanislaus at New Melones	1.27	N/A	5.20	2.60 (46)	49	0.00
San Joaquin at Huntington Lk	0.13	1.80	9.60	3.86 (50)	3	0.00

November 2023 | Folsom Lake Daily Operations | Run Date: 11/15/2023

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	Pumping Plant	Evap. - C.F.S.	Evap. - Inches	Precip Inches
		552.1									
1	422.53	549.0	-3.2	652	1,614	0	493	123	28	0.10	0.00
2	422.17	545.9	-3.0	633	1,487	0	516	123	28	0.10	0.00
3	421.79	542.8	-3.2	701	1,645	0	516	113	25	0.09	0.00
4	421.48	540.2	-2.6	1,015	1,653	0	516	113	31	0.11	0.00
5	421.20	537.9	-2.3	1,086	1,583	0	514	116	45	0.16	0.15
6	420.88	535.2	-2.6	813	1,534	0	512	103	0	0.00	0.36
7	420.56	532.6	-2.6	801	1,498	0	514	91	25	0.09	0.00
8	420.35	530.9	-1.7	985	1,229	0	514	85	28	0.10	0.00
9	420.01	528.1	-2.8	760	1,542	0	514	93	22	0.08	0.00
10	419.66	525.2	-2.9	902	1,723	0	513	97	8	0.03	0.00
11	419.39	523.0	-2.2	1,120	1,592	0	512	104	22	0.08	0.00
12	419.13	520.9	-2.1	977	1,406	0	512	106	22	0.08	0.00
13	418.81	518.3	-2.6	733	1,410	0	512	100	19	0.07	0.00
14	418.50	515.8	-2.5	703	1,336	0	512	92	25	0.09	0.00
Totals			-36.3	11,881	21,252	0	7,170	1,459	328	1.18	0.51
Acre-Feet			- 36,300	23,566	42,153	0	14,222	2,894	651		

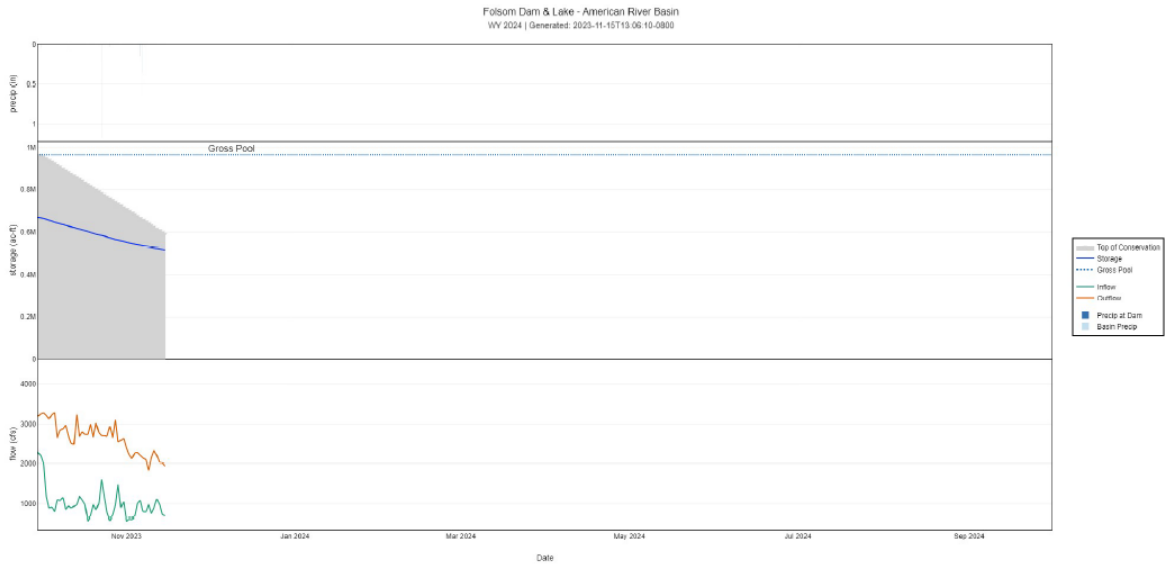
\* Computed inflow is the sum of change in storage, releases, pumping, and evaporation

### Summary: Release (acre-feet)

Power	42153
Spill	0
Outlet	14222
Pumping Plant	2894
Total Releases	59269

### Summary: Precipitation (Month/Inches)

This month	0.51
October 1, 2022 to date	1.70



Folsom Dam & Lake – American River Basin  
WY 2024 2023-11-15T13:06:10-0800



# Isobath 10/01–10/31 (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
Sep	59.0	59.6	63.1	64.6	65.2	65.6	70.2	699				
10/01	59.1	58.0	64.3	65.0	65.2	65.4	65.1	2984	664	A 0	A 64	A 36
10/02	60.0	58.3	64.3	65.3	65.4	65.4	65.1	2987	660	A 0	A 63	A 37
10/03	61.3	59.8	64.7	65.4	65.6	65.7	67.6	2986	656	A 0	A 76	A 24
10/04	62.2	60.9	64.9	65.9	66.2	66.3	72.0	2990	651	A 0	A 77	A 23
10/05	63.2	62.1	64.9	66.1	66.6	66.8	74.3	2984	646	A 0	A 75	A 25
10/06	63.8	62.0	62.3	66.2	66.8	67.0	74.4	2912	643	T 0	T 3	M 96
10/07	64.1	61.2	62.0	65.2	66.2	66.7	74.7	2501	639	T 2	T 11	M 88
10/08	64.3	60.9	61.6	64.4	65.4	65.9	74.8	2489	636	T 0	T 45	M 55
10/09	63.6	60.0	61.4	63.5	63.7	63.9	63.6	2486	631	T 0	T 25	M 75
10/10	62.8	59.7	61.4	62.7	63.3	63.6	64.5	2553	628	T 3.2	T 26.1	M 71
10/11	61.8	60.3	61.2	63.0	63.1	63.2	61.2	2416	625	T 11.8	M 28.6	M 60
10/12	60.5	59.7	61.2	62.7	62.9	62.9	62.0	2428	621	T 11.7	M 0.8	M 87
10/13	59.3	58.7	60.8	62.2	62.5	62.6	66.0	2500	617	T 8.8	M 55.2	A 36
10/14	59.8	59.5	60.6	62.4	63.0	63.1	68.2	2486	614	T 11.3	M 57.7	A 31
10/15	59.4	58.6	60.3	62.0	62.6	62.9	67.1	2464	610	T 10.3	M 38.8	A 51
10/16	59.3	58.5	60.5	61.8	62.2	62.4	68.1	2436	607	T 10.9	M 44.5	A 45
10/17	59.3	58.5	60.5	61.9	62.3	62.5	68.1	2436	602	T 10.7	M 45.9	A 43
10/18	59.5	59.1	60.0	62.1	62.6	62.9	69.5	2446	598	T 6.8	M 22.8	A 70
10/19	59.8	59.2	60.9	61.6	62.1	62.6	70.0	2403	594	T 1.2	M 28.4	A 70
10/20	59.8	59.0	61.4	61.5	62.1	62.4	69.2	2570	590	T 1.3	M 46.6	A 52
10/21	59.8	58.8	61.0	61.8	62.0	62.1	63.9	2540	586	T 1.4	M 49.7	A 49
10/22	59.1	58.0	61.1	61.6	61.6	61.5	61.1	2534	584	T 1.7	M 68.1	A 30
10/23	59.3	58.8	60.9	62.1	62.4	62.5	64.1	2534	581	T 1.3	M 52.3	A 46
10/24	59.5	59.1	61.3	62.3	62.8	62.8	64.8	2558	577	T 1.5	M 50.8	A 48
10/25	58.5	58.1	61.4	61.9	61.6	61.4	58.7	2571	573	T 1.4	M 47.0	A 52
10/26	57.2	56.9	61.0	61.4	61.3	61.1	54.3	2457	569	T 1.4	M 51.4	A 47
10/27	55.4	55.8	61.4	61.1	60.8	60.4	52.8	2515	565	T 1.3	M 45.8	A 53
10/28	53.7	54.7	61.5	61.3	60.7	60.1	52.8	2505	562	T 1.8	M 50.5	A 48
10/29	52.0	53.7	61.4	61.0	60.5	59.8	56.5	2459	559	T 1.7	M 48.2	A 50

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
10/30	51.3	53.3	60.4	61.1	60.7	60.1	54.7	2461	556	T 1.8	B 47.8	B 50
10/31	51.0	53.2	59.3	61.2	61.0	60.3	54.2	2188	552	T 2.0	B 74.0	B 24
Oct	59.3	58.5	61.5	62.8	63.1	63.1	64.6	606				
							Total AF	158238				

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

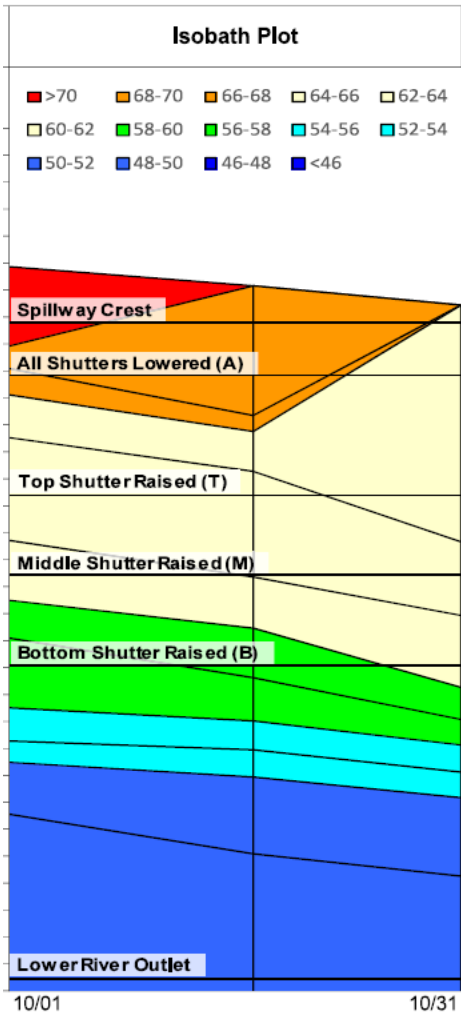
M = Middle Shutter Raised

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 10/01-10/31 (Showing Spillway Crest, All Shuttters Lowered (A), Top Shutter Raised (T), Middle Shutter Raised (M), Bottom Shutter Raised (B), and Lower River Outlet)

# Isobath 11/01–11/30 (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 <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
Oct	59.3	58.5	61.5	62.8	63.1	63.1	64.6	606				
11/01	50.8	52.4	58.3	60.3	60.3	60.0	55.5	2072	549	T 3	B 29	B 69
11/02	51.3	53.0	58.1	59.6	59.8	59.6	59.8	2055	546	T 3	B 65	B 32
11/03	52.8	55.0	58.4	59.1	59.8	59.8	63.1	2072	543	T 2	B 24	B 74
11/04	53.8	55.3	58.5	59.1	59.5	59.5	65.3	2031	540	T 2	B 26	B 72
11/05	54.9	55.2	58.7	59.0	59.5	59.6	61.3	2091	538	T 2	B 30	B 68
11/06	55.8	55.4	58.6	59.1	59.7	59.8	62.9	2112	535	T 1	B 30	B 68
11/07	55.7	55.3	58.6	59.2	59.3	59.1	56.2	2139	533	T 0	B 31	B 68
11/08	53.9	53.4	58.4	59.0	58.7	58.3	54.5	2043	531	T 1	B 50	B 50
11/09	51.8	51.7	58.9	58.6	58.2	57.7	51.4	2063	528	T 0	B 30	B 69
11/10	50.7	52.1	59.1	58.3	58.3	57.9	53.6	2167	525	T 0.4	B 22.2	B 77
11/11	50.4	52.0	59.1	58.5	58.3	57.8	54.2	2063	523	T 0.4	B 28.3	B 71
11/12	50.4	51.9	58.9	58.7	58.6	58.1	56.6	2053	521	T 0.5	B 27.4	B 72
11/13	50.4	50.6	58.9	58.8	58.7	58.3	56.4	2053	518	T 0.5	B 27.4	B 72
11/14	50.2	50.4	58.8	58.8	58.9	58.5	57.4	2070	516	T 0.5	B 25.7	B 74
11/15												
11/16												
11/17												
11/18												
11/19												
11/20												
11/21												
11/22												
11/23												
11/24												
11/25												
11/26												
11/27												
11/28												
11/29												
11/30												
Nov	52.3	53.1	58.7	59.0	59.1	58.9	57.7	532				
Total AF								57687				

Legend:

? = 1-9 hours of data missing

! = 10 or more hours of data missing

# = Station out of service

**November Monthly Averages**

A = All Shutters Lowered

T = Top Shutter Raised

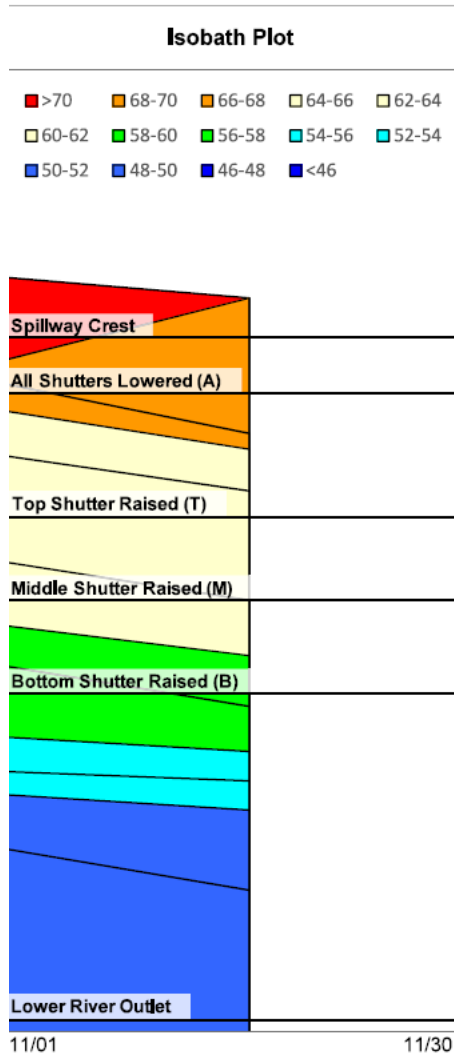
M = Middle Shutter Raised

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

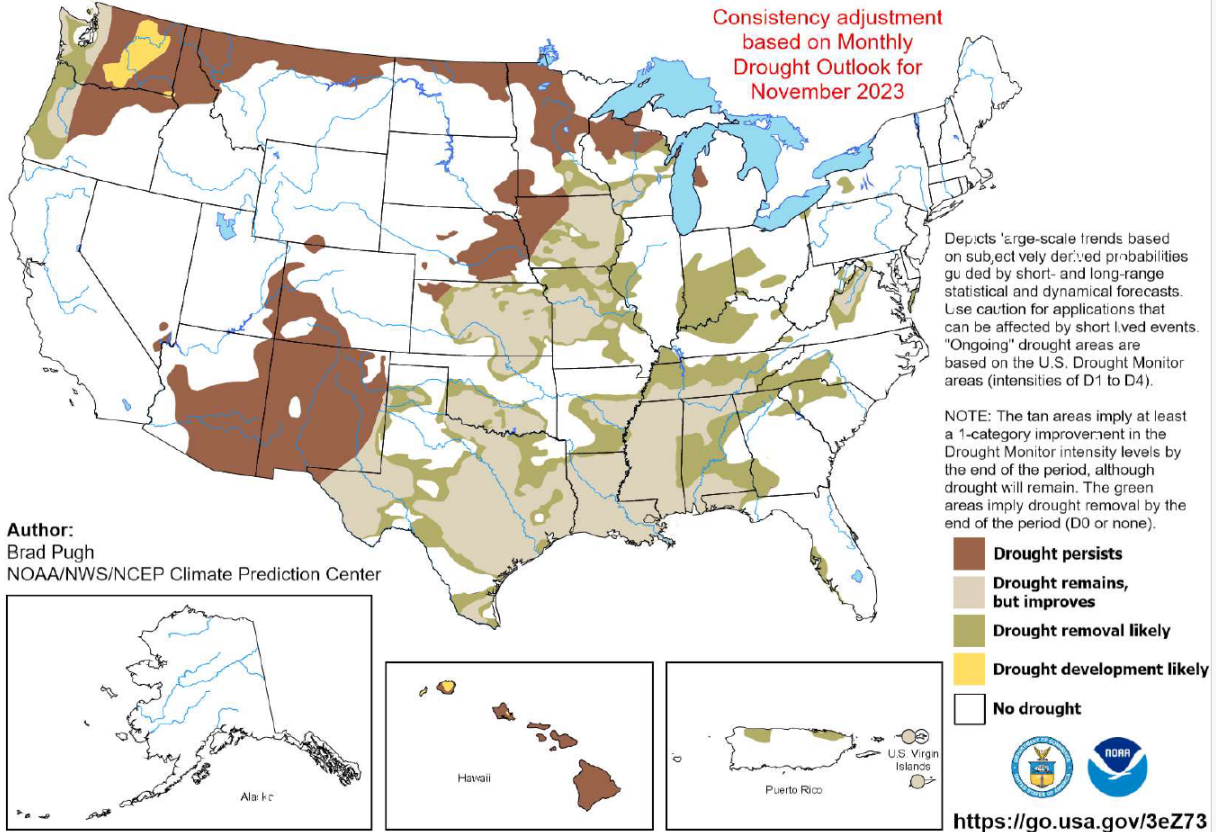


Isobath Plot 11/01-11/30. Showing Spillway Crest, All Shutters Lowered (A), Top Shutter Raised (T), Middle Shutter Raised (M), Bottom Shutter Raised (B), and Lower River Outlet

# U.S. Seasonal Drought Outlook

## Drought Tendency During the Valid Period

Valid for November 1, 2023 - January 31, 2024  
Released October 31, 2023



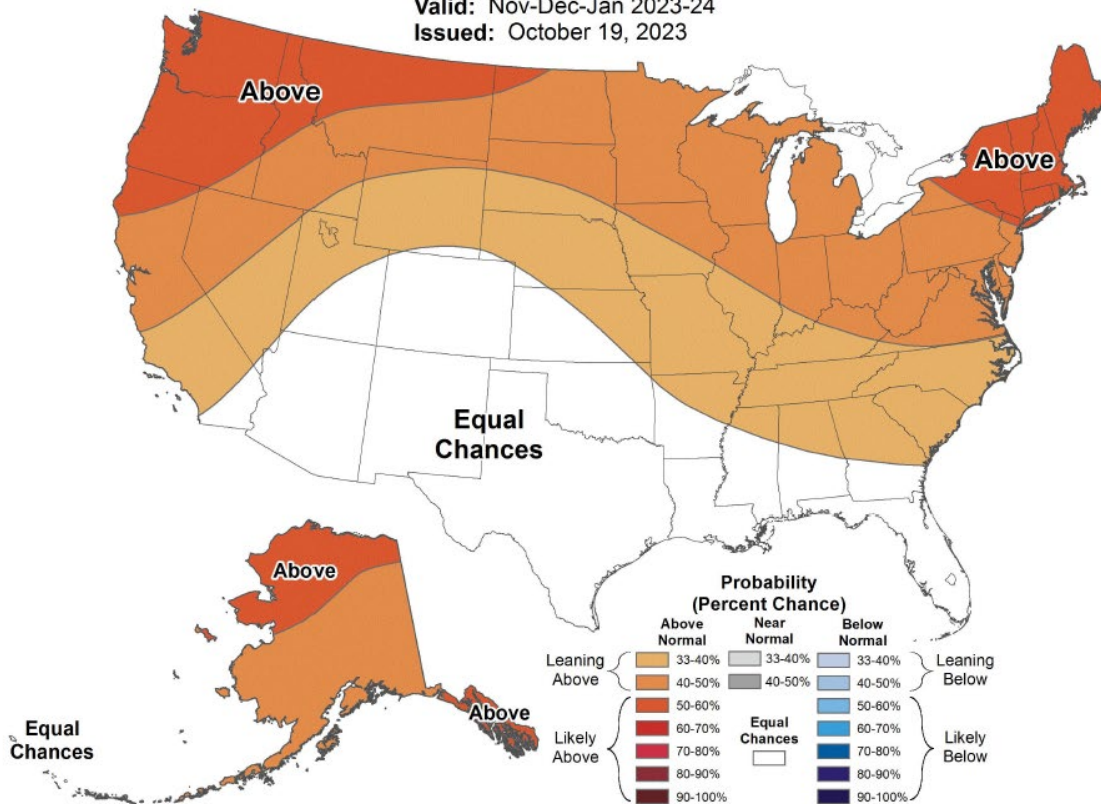
Map – U.S Seasonal Drought Outlook; Valid November 1, 2023 – January 31, 2024; Issued October 31, 2023



# Seasonal Temperature Outlook



Valid: Nov-Dec-Jan 2023-24  
Issued: October 19, 2023



Map – U.S Seasonal Temperature Outlook; Valid Nov-Dec-Jan 2023- 2024; Issued October 19, 2023

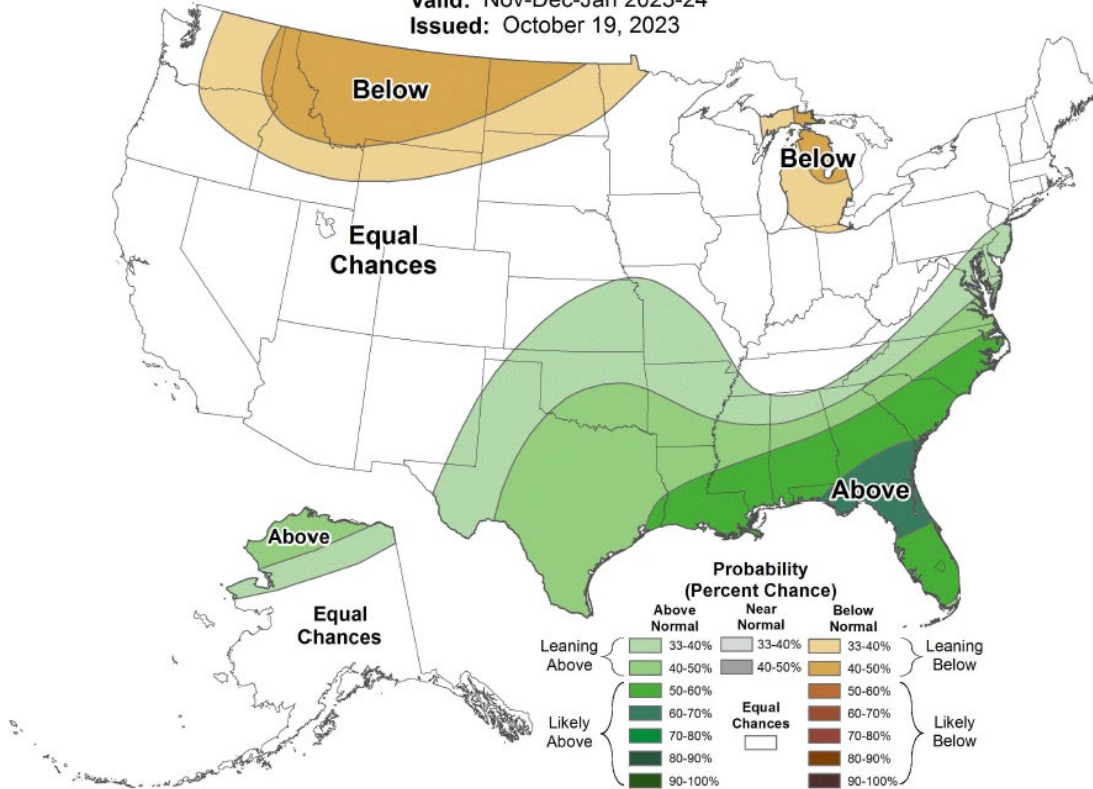




# Seasonal Precipitation Outlook

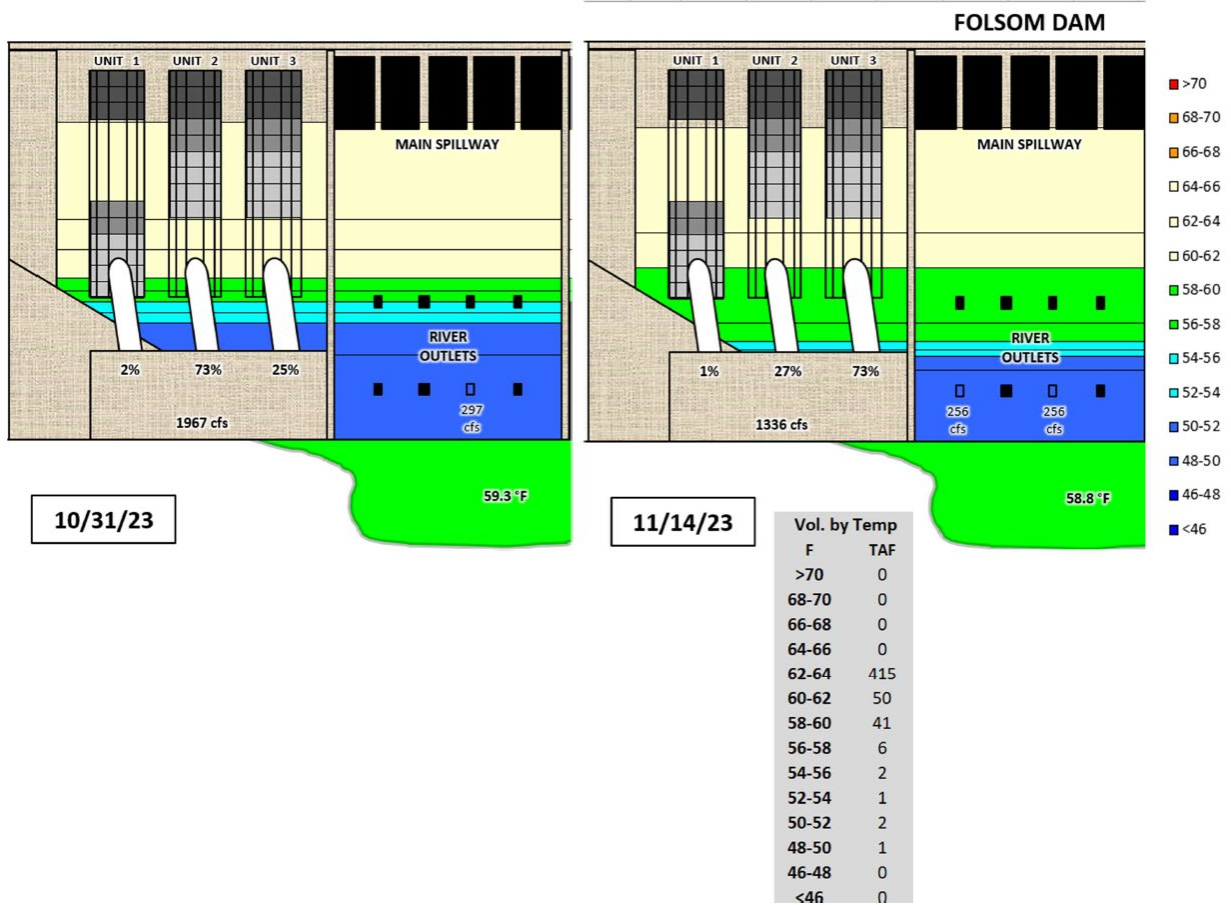


Valid: Nov-Dec-Jan 2023-24  
Issued: October 19, 2023

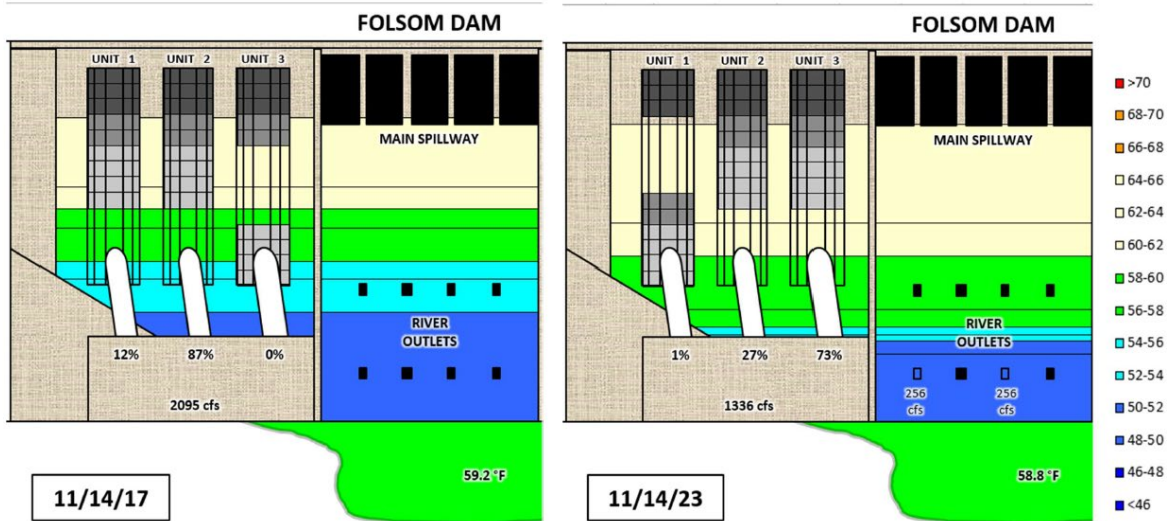


Map – U.S Seasonal Precipitation Outlook; Valid Nov-Dec-Jan 2023- 2024; Issued October 19, 2023

# American River Daily Average Water and Air Temperatures



Graphic showing Folsom Dam on 10/31/23 with a temperature of 59.3 °F and 11/14/23 with a temperature of 58.8 °F.



56 degree on 11/22/17

Graphic showing Folsom Dam on 11/14/17 with a temperature of 59.2 °F and 11/14/23 with a temperature of 58.8 °F. The graphic also includes a note that the temperature was 56 °F on 11/22/17.

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

## Release Management Conditions

- Releases are currently at 3,000 cfs
  - October 31, 2023, from 2,500 cfs to 2,000 cfs

## Temperature Management

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

Middle Shutters: Units 1- lowered, and 2 and 3 –raised

Bottom Shutters: Units 1 – lowered, and 2 and 3 – raised

## Folsom Shutter Configuration and Changes

Next change will be lowering and closing all shutters in February/March

## American River 90% Outlook

September 50% Exceedance

## Storages

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

Facility	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Folsom Storage	552	476	406	361	381	461	575	673
Folsom Elevation	N/A	413	404	397	400	411	426	437

Monthly River Release (TAF/cfs)

Facility	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
American TAF	N/A	119	123	108	83	92	92	77
American cfs	N/A	2000	2000	1750	1500	1500	1538	1250

## 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)	1,500 cfs	Not applicable	Not applicable	1,500 cfs	2,574 cfs
November	May ARI <sup>2</sup> (50% exceedance)	2,000 cfs	Not applicable	Not applicable	2,000 cfs	Not applicable

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.