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, February 15, 2024

Agenda

1. Introductions
2. Announcements
    a. Salmon Tales & Oak Trails
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. Nimbus Hatchery HGMP for fall-run Chinook Update
    b. SacPAS updates
    c. March in-person meeting ?
    d. Annual Report Update
8. Next Meetings:
    a. Thursday, March 21st, 1:30-3:30pm

CALIFORNIA DEPARTMENT OF FISH and WILDLIFE

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

Surveys commenced on October 16, 2023

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
5	Nov 13-16	56	329	273	220	3	881
6	Nov 20-22	71	786	545	266	Not Surveyed	1668
7	Nov 27-30	121	1193	1020	704	268	3306
8	Dec 4-7	196	1433	1010	1189	273	4101
9	Dec 11-15	129	1397	778	1058	663	4025
10	Dec 18-22	98	862	449	332	177	1918
11	Dec 27-29	88	445	101	181	Not Surveyed	815
12	Jan 2-5	48	326	127	76	36	613
13	Jan 8-11	38	323	111	38	45	555
14	Jan 16-18	18	138	32	13	0	201
15	Jan 22-24	0	46	4	4	0	54
N/A	Totals	911	7642	4622	4162	1471	18808

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
5	Nov 13-16	27	5	95	127
6	Nov 20-22	32	15	177	224

Survey Period	Dates	Unspawned	Partial	Spawned	Total
7	Nov 27-30	63	23	220	306
8	Dec 4-7	67	20	199	286
9	Dec 11-15	26	7	151	184
10	Dec 18-22	13	8	100	121
11	Dec 27-29	3	3	32	38
12	Jan 2-5	2	1	32	35
13	Jan 8-11	3	1	22	26
14	Jan 16-18	N/A	N/A	4	4
15	Jan 22-24	N/A	N/A	1	1
N/A	Total	307	104	1105	1516
N/A	%	20%	7%	73%	100%

CALIFORNIA DEPARTMENT OF FISH and WILDLIFE

Provisional Data Subject to Revision

NIMBUS FISH HATCHERY

Presented by Emily Fisher, CDFW, 916-272-4113, emily.fisher@wildlife.ca.gov

- NIM released approximately 1 million parentage-based tagging button-up fry on Monday February 12th
- Approximately 1,346,700 green eggs have been collected from steelhead thus far
    - 85% of green egg take goal
    - 2 more weeks of spawning planned

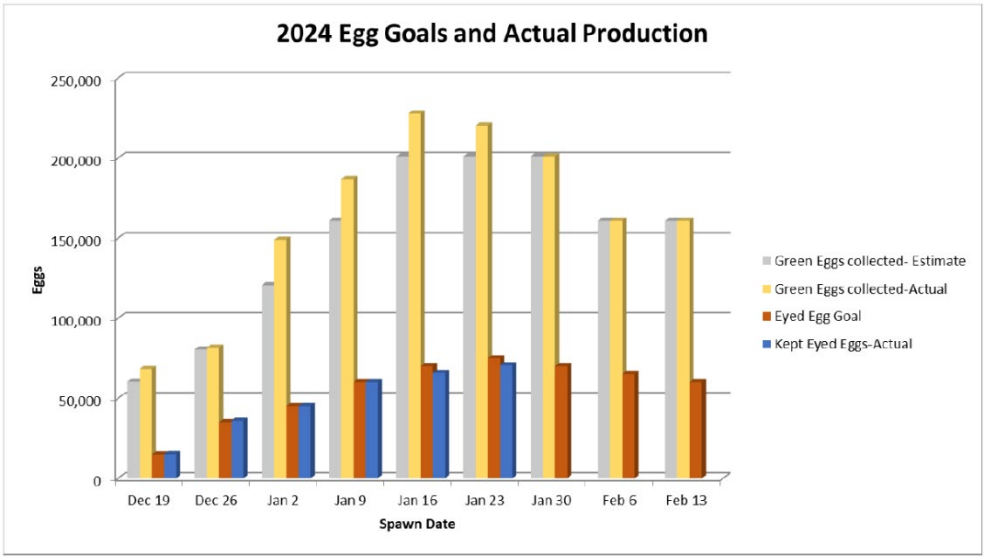


Figure 1. Graph of green eggs collected at Nimbus Fish Hatchery compared to the green egg collection goal for BY 2024 steelhead.

Figure 1 is a bar graph of green eggs collected at Nimbus Fish Hatchery compared to the green egg collection goal for BY 2024 steelhead. The spawn dates range from 12/19/23 to 02/13/24 and bars represent the estimated number of green eggs collected, the actual number of green eggs collected, the eyed egg goal, and the actual kept eyed eggs.

Lower American River 2024 Steelhead Spawning Survey Summary

Table 3. Steelhead and Chinook salmon redd counts during 2024 steelhead spawning surveys.

Dates	Steelhead	Chinook	Total
Jan 9-11	20	3	23
Jan 24 - 26	7	0	7
Feb 7 - 9	13	0	13
Total	40	3	43

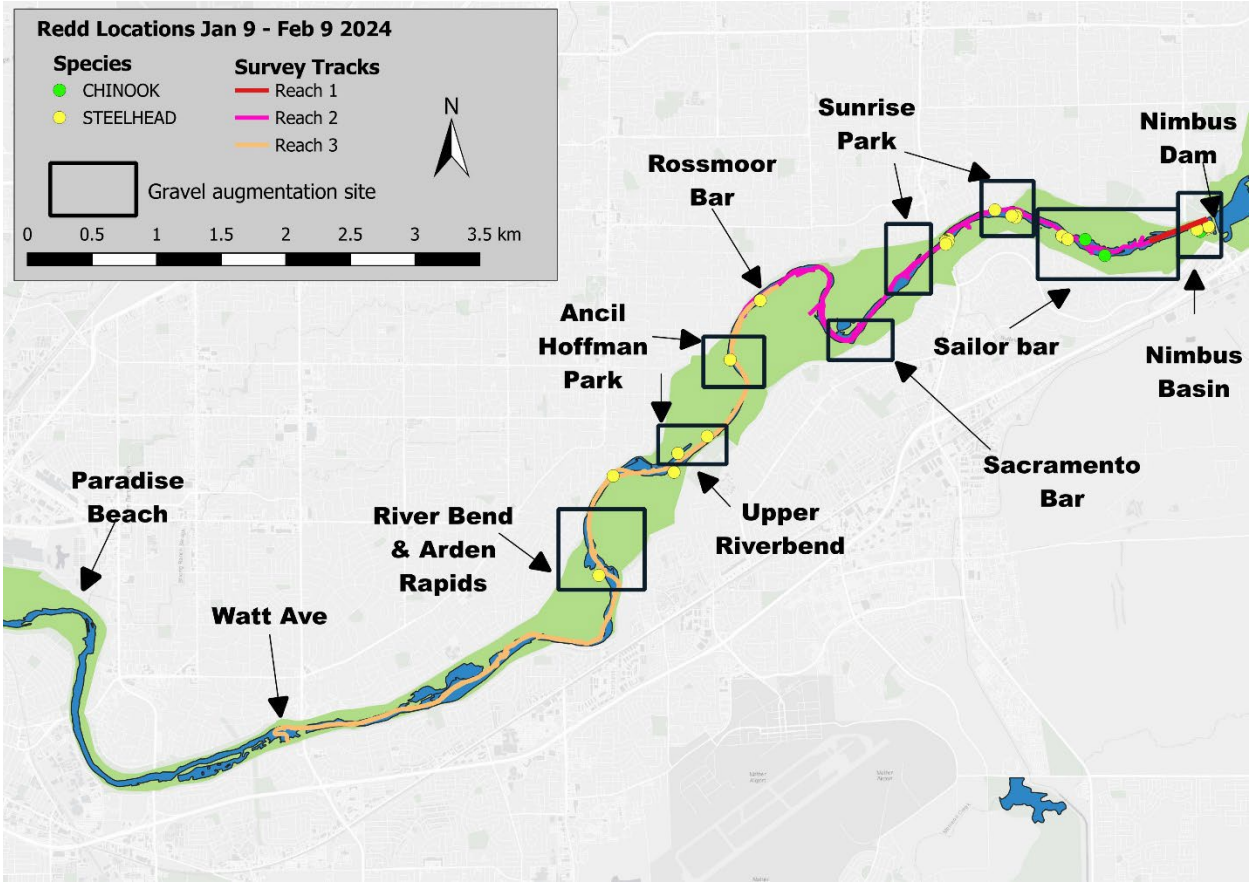


Figure 2. Locations of redds identified during the 2024 steelhead spawning surveys along the Lower American River through February 9 2024. The black boxes represent areas where gravel augmentation has occurred.

Figure 2 is a map of redds identified during the 2024 steelhead spawning surveys along the Lower American River through February 9 2024. The redds are identified along three

survey tracks and belong to two species, Chinook and Steelhead. 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.

Spawning surveys are scheduled for next week (20-22 Feb)

Updated 2/13/24

RST Operations:

RSTs offline on 1/22 – 1/23 due to excessive and large debris coming downstream. RSTs offline from 2/1 – 2/5 for the Nimbus Hatchery Steelhead Release

RSTs offline from 2/6 – Current due to backflow issues at the Watt Avenue RST site

Table 4: Unmarked Juvenile Chinook Salmon (length-at-date)

Fall	Late Fall	Spring	Winter
36,819	0	7	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.

Lower American River RSTs at Watt Avenue:

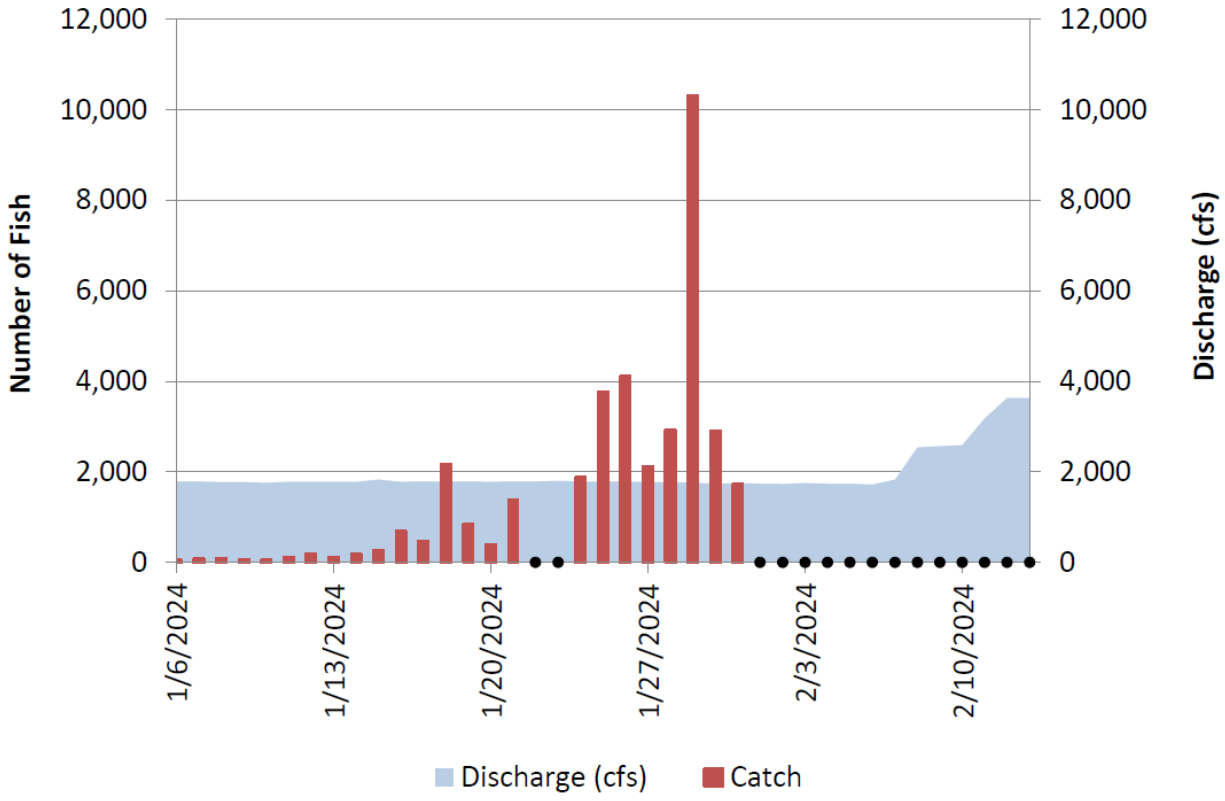


Figure 3: Daily catch of unmarked Chinook Salmon and daily average discharge at Fair Oaks during the 2024 Lower American River rotary screw trap sampling season.

Figure 3 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 2/13/24. 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.

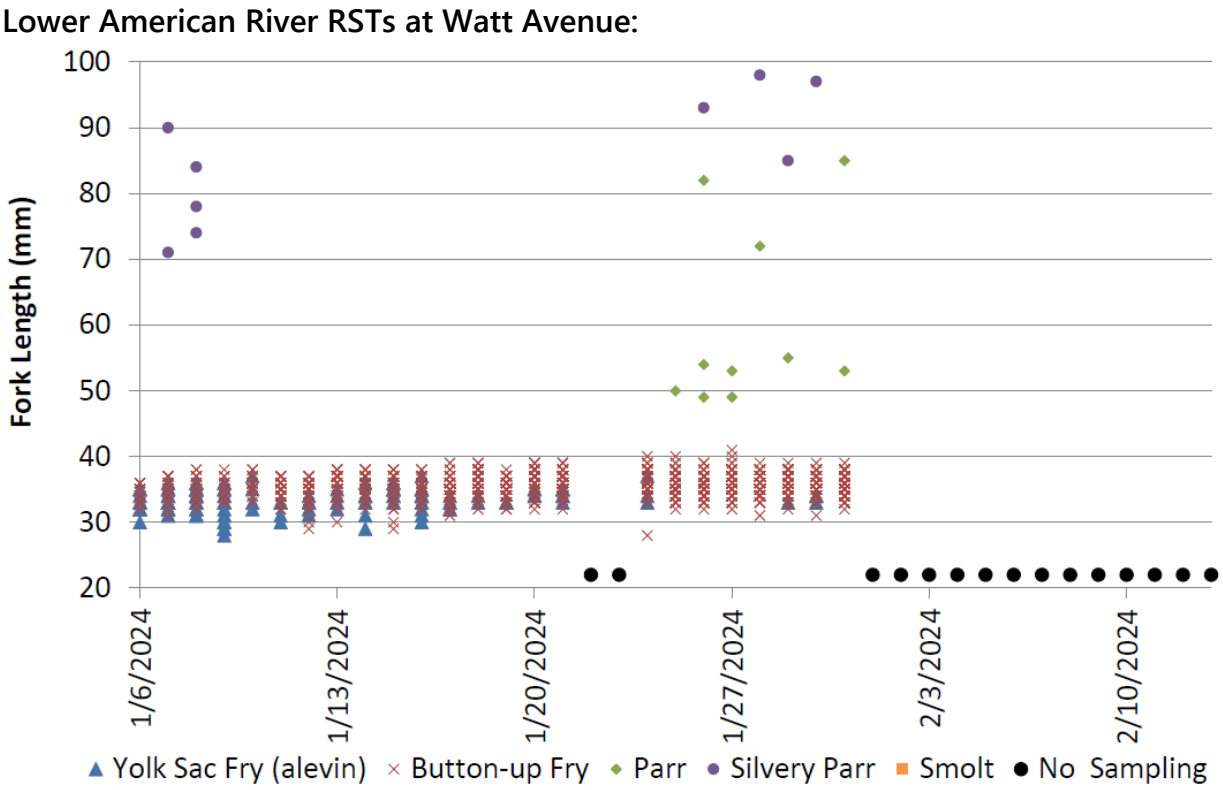


Figure 4: Daily fork length distribution by life stage of unmarked Chinook Salmon measured during the 2024 Lower American River rotary screw trap sampling season.

Figure 4 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 2/10/24. 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:
https://www.calfish.org/ProgramsData/ConservationandManagement/CentralValleyMonitorin%20g/SacramentoValleyTributaryMonitoring/LowerAmericanRiver-RSTMonitoring.aspx

SMUD Hydroelectric Facilities – Upper American River Project

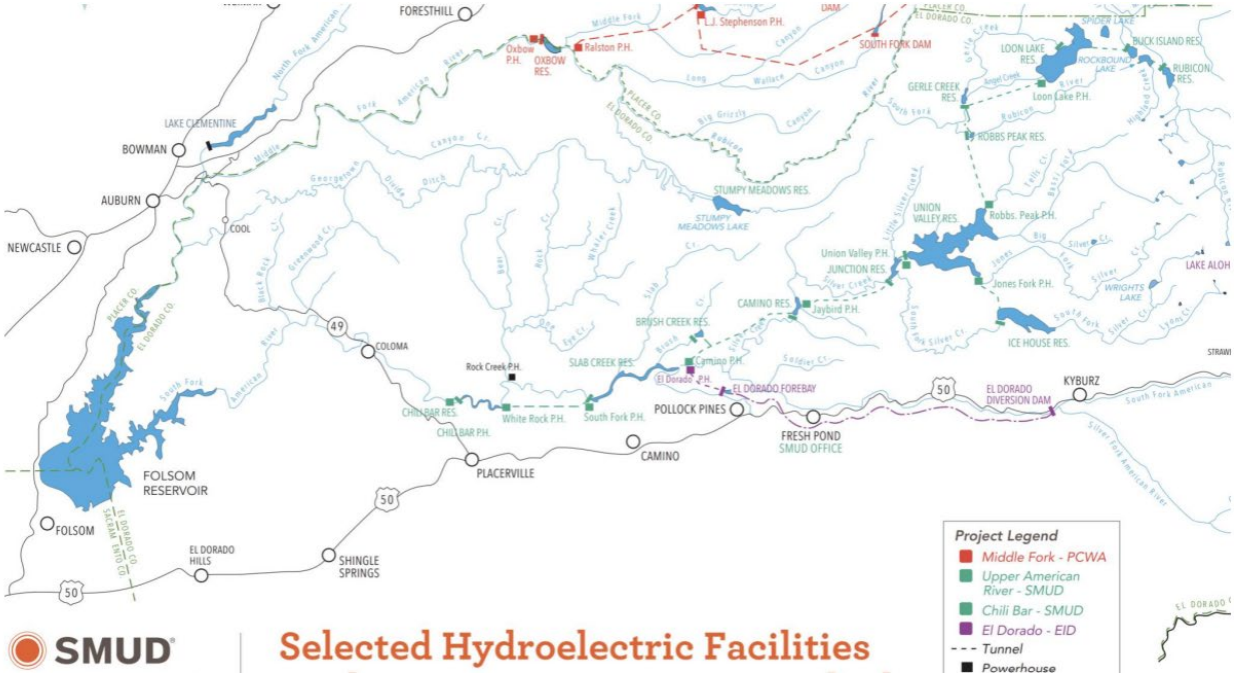


Figure 5. Sacramento Municipal Utility District (SMUD) Hydroelectric Facilities – Upper American River Project

Figure 5 is a map of the SMUD Upper American River Project hydroelectric facilities. It notes downs, 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 02/15/24

Fresh Pond Precipitation

February precipitation through 2/12/2024 is 5.12 inches, which is 53.9% of the February average of 9.50 inches. Precipitation for the water year to date is 26.3 inches which is 79.8% of average to date (32.94 inches) and 45.9% of the entire water year average of 57.32 inches.

Runoff and Snowpack Water Content

Runoff into storage reservoir basins is 94.1% of median to date through 2/12/2024. The snowpack is 65.0% of average at selected snow sensors: Robbs PH, Robbs Saddle, Van Vleck, Alpha, and Schneider.

Table 5. Fresh Pond Precipitation

Month	Current Water Year	Historical Average	% of Historical 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	5.12	9.50	54%
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	26.30	57.32	46%

* Month to date total, full month historical average.

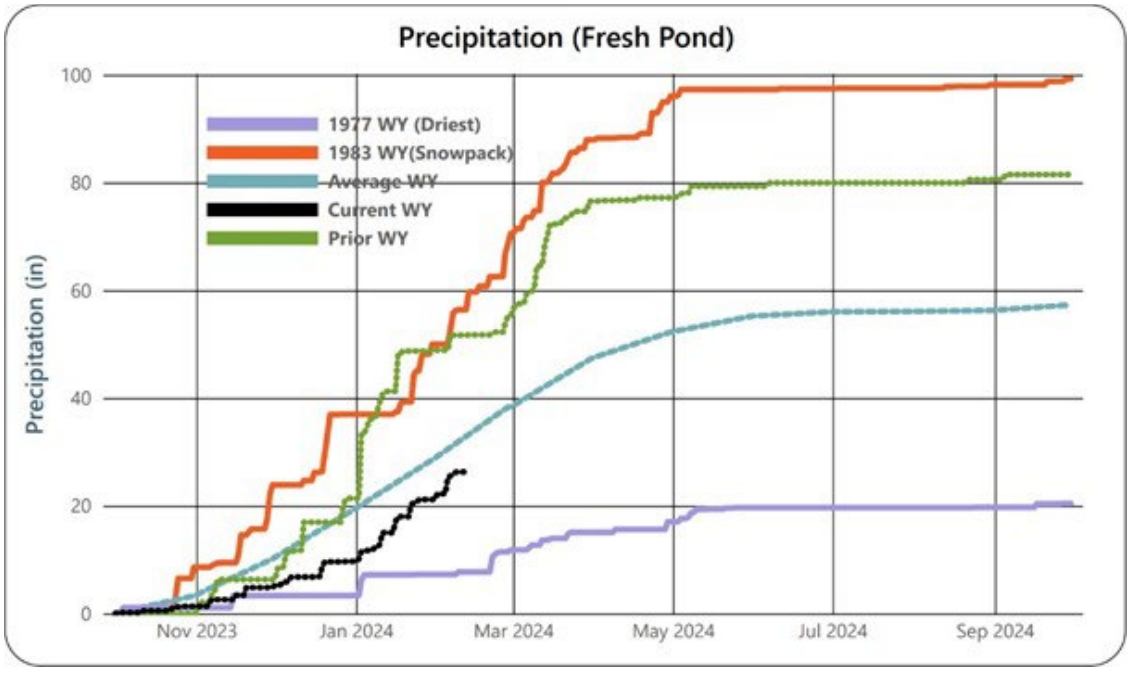


Figure 6. Fresh Pond Precipitation

Figure 6 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. February precipitation through 02/12/2024 is 5.12 inches, which is 53.9% of the February average of 9.50 inches.

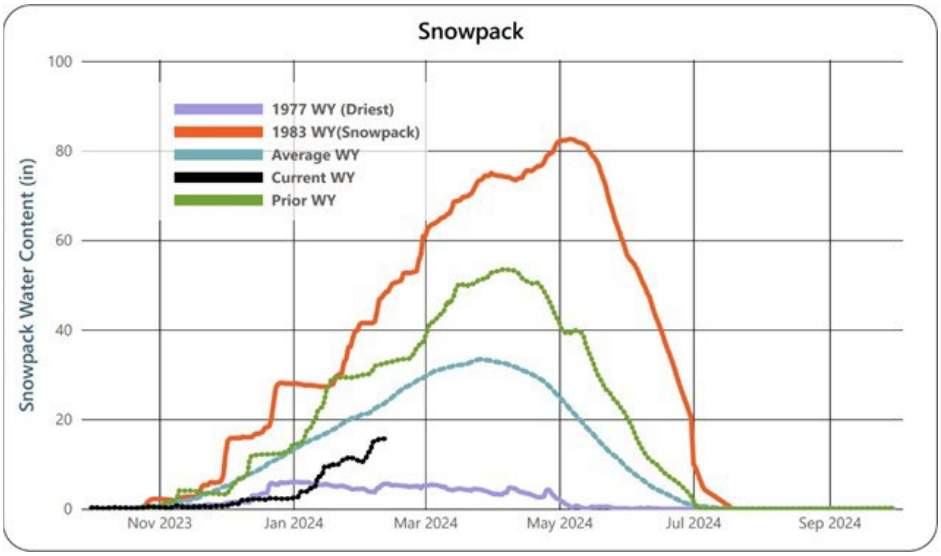


Figure 7. February 15, 2024 snowpack

Figure 7 is a line graph of snowpack water content in inches for November 2023 – 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 94.1% of median to date through 2/12/2024.

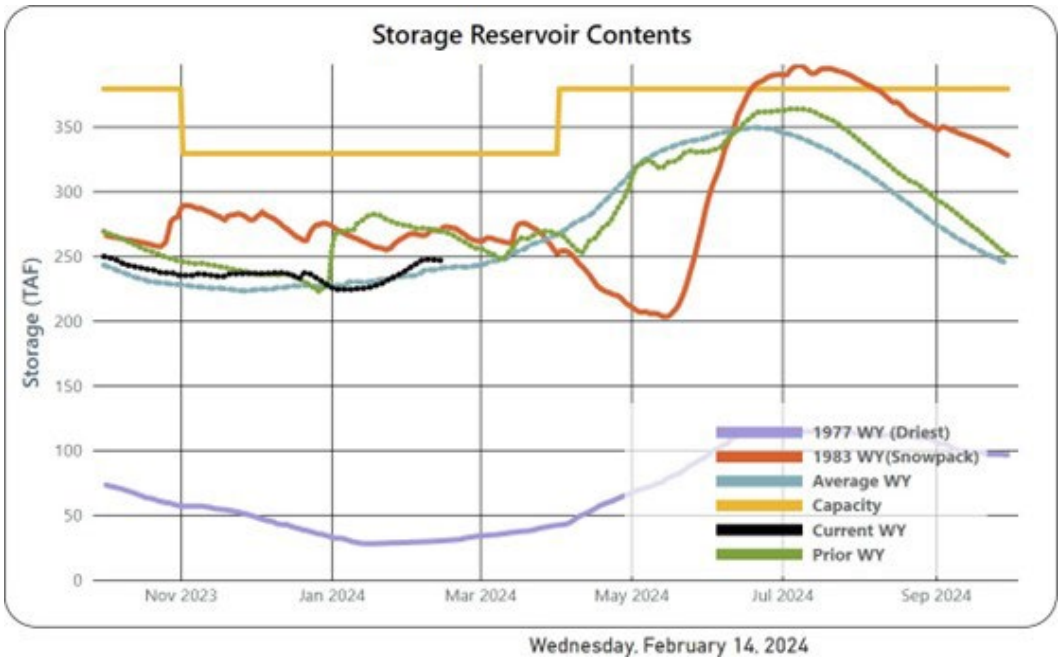


Figure 8. Storage Reservoir Contents

Figure 8 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 6. 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	28,086	65%	30,290	69.6%	28,306	65%	43,500	34,855
Loon Lake	41,735	60%	46,413	67%	38,883	56%	69,310	69,310
Union Valley	171,592	64%	169,670	63.7%	202,310	76%	266,370	225,046
Total Reservoir Storage	241,412	64%	246,373	65.0%	269,499	71%	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

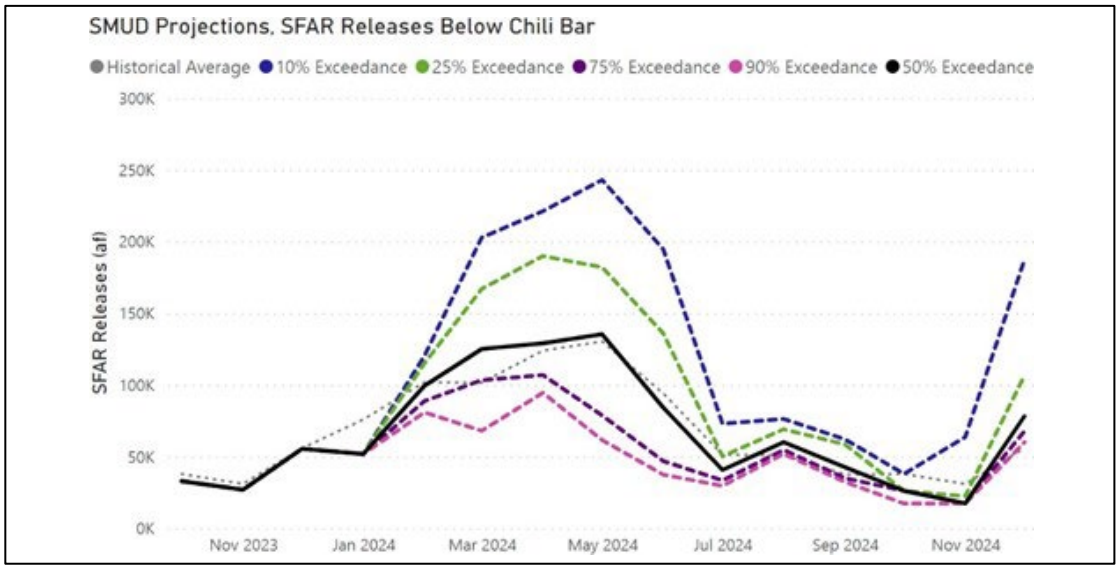


Figure 9. Chili Bar releases into the South Fork American River. Projections based on forecast from February 12, 2024.

Figure 9 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.

* Month to date total, full month historical average.

Table 7. 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-23	537	32977
Actuals	Nov-23	454	26994
Actuals	Dec-23	905	55544
Actuals	Jan-24	846	51913
Forecast	Feb-24	1732	99457
Forecast	Mar-24	2039	125135
Forecast	Apr-24	2173	129091
Forecast	May-24	2206	135394
Forecast	Jun-24	1418	84242
Forecast	Jul-24	664	40786
Forecast	Aug-24	980	60125

Type (Actual or Forecast	Date	Daily Mean Release Rate (cfs)	Monthly Total Release (acre-ft)
Forecast	Sep-24	719	42733
Forecast	Oct-24	427	26193
Forecast	Nov-24	294	17471
Forecast	Dec-24	1275	78268

PCWA MFP Operations Overview for American River Operations Group (Real Time Data as of February 14, 2024)

- French Meadows Storage = 75,000 AF of 136,405 AF = 55% Capacity
    - MFAR above FM Inflow (R24) =7-day AVG ~70 cfs
- Hell Hole Storage = 76,000 AF of 207,590 AF = 37% Capacity
    - Five Lakes Inflow (R23) = 7-day AVG ~50 cfs
    - Rubicon Inflow (R22) = 7-day AVG ~75 cfs
- Combined Storage (FM+HH) = 151,000 AF/342,590 AF = 44% Capacity; 92% of AVG YTD
- MFAR @ R11: 7-day AVG ~1,100 cfs
- NFAR @ ARPS: 7-day AVG ~2,100 cfs
- MFP is operating under conservation of storage mode – reassess end of Feb.

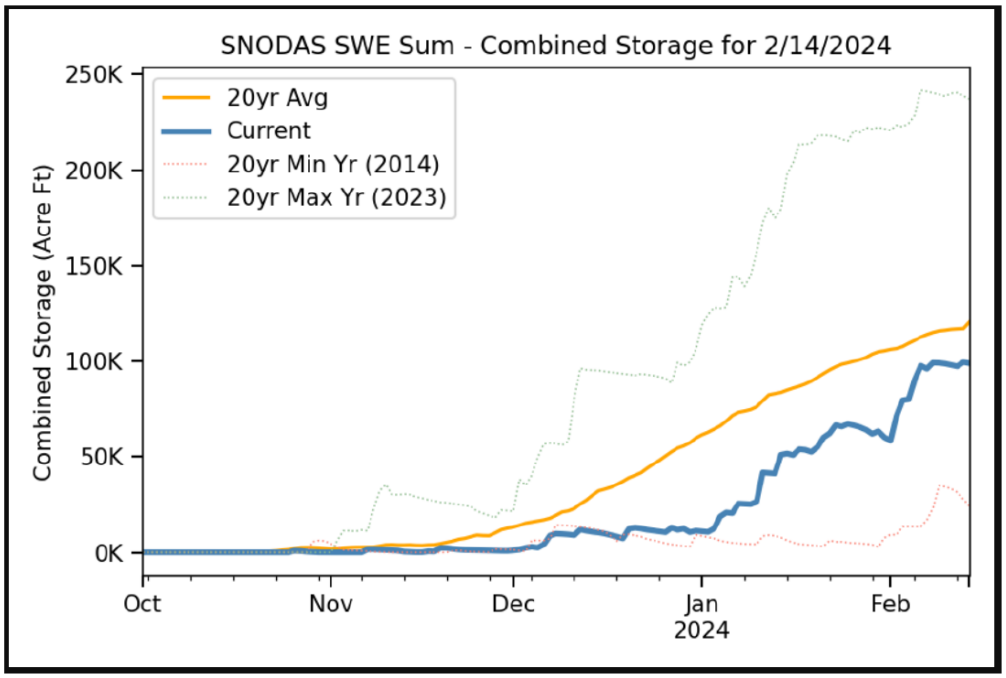
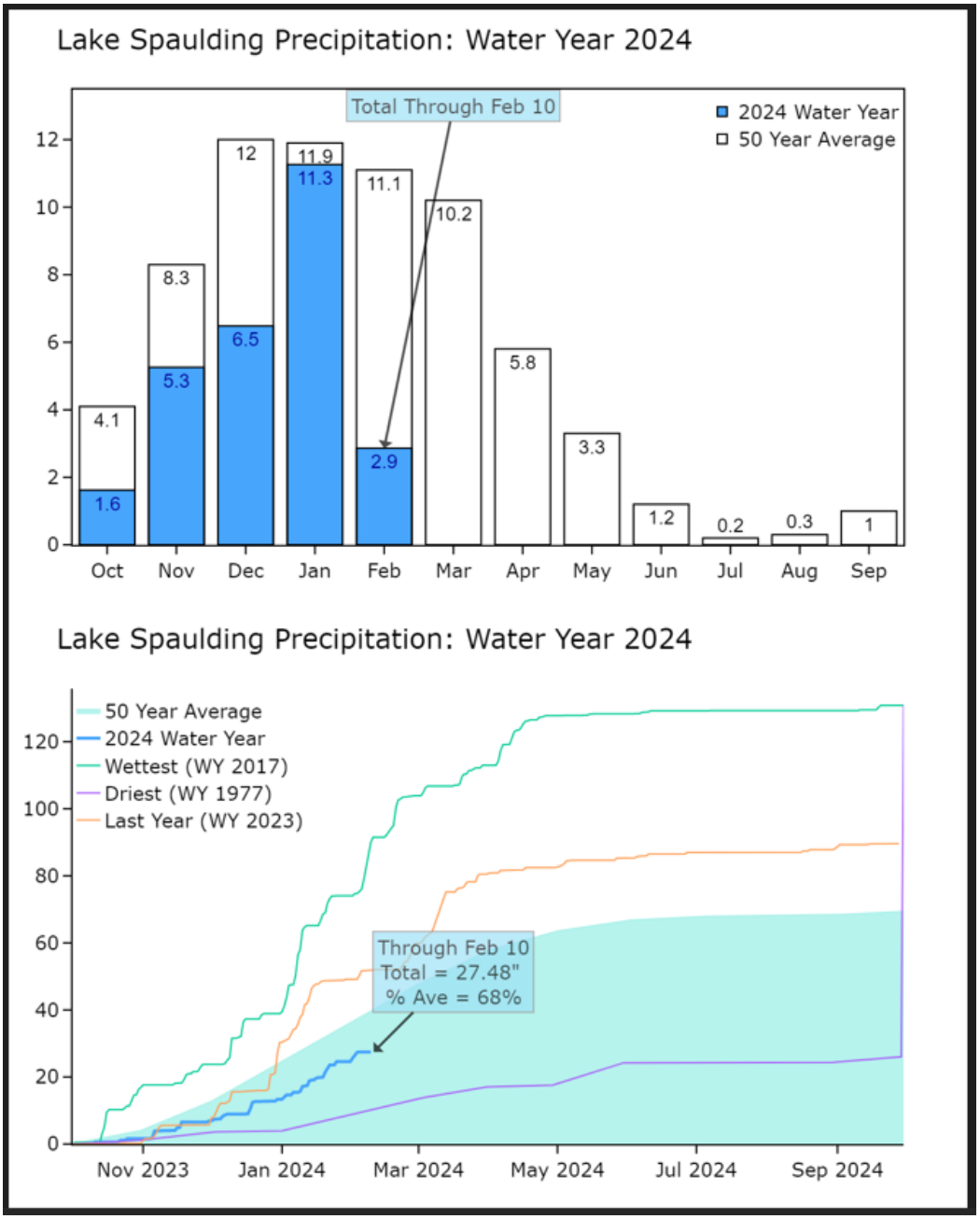


Figure 10. Snow Data Assimilation System Snow Water Equivalent combined storage for 2/14/24.

Figure 10 is a line graph of the combined storage in acre feet of the Snow Data Assimilation System's Snow Water Equivalent for 2/14/24. The graph includes the last

20-year average, the 20-year min year (2014), the 20-year max year (2023) and the current combined storage.



Lake Spaulding Precipitation: Water Year 2024 – Total through Feb 10 are 2.9 with a 50-year average of 11.1

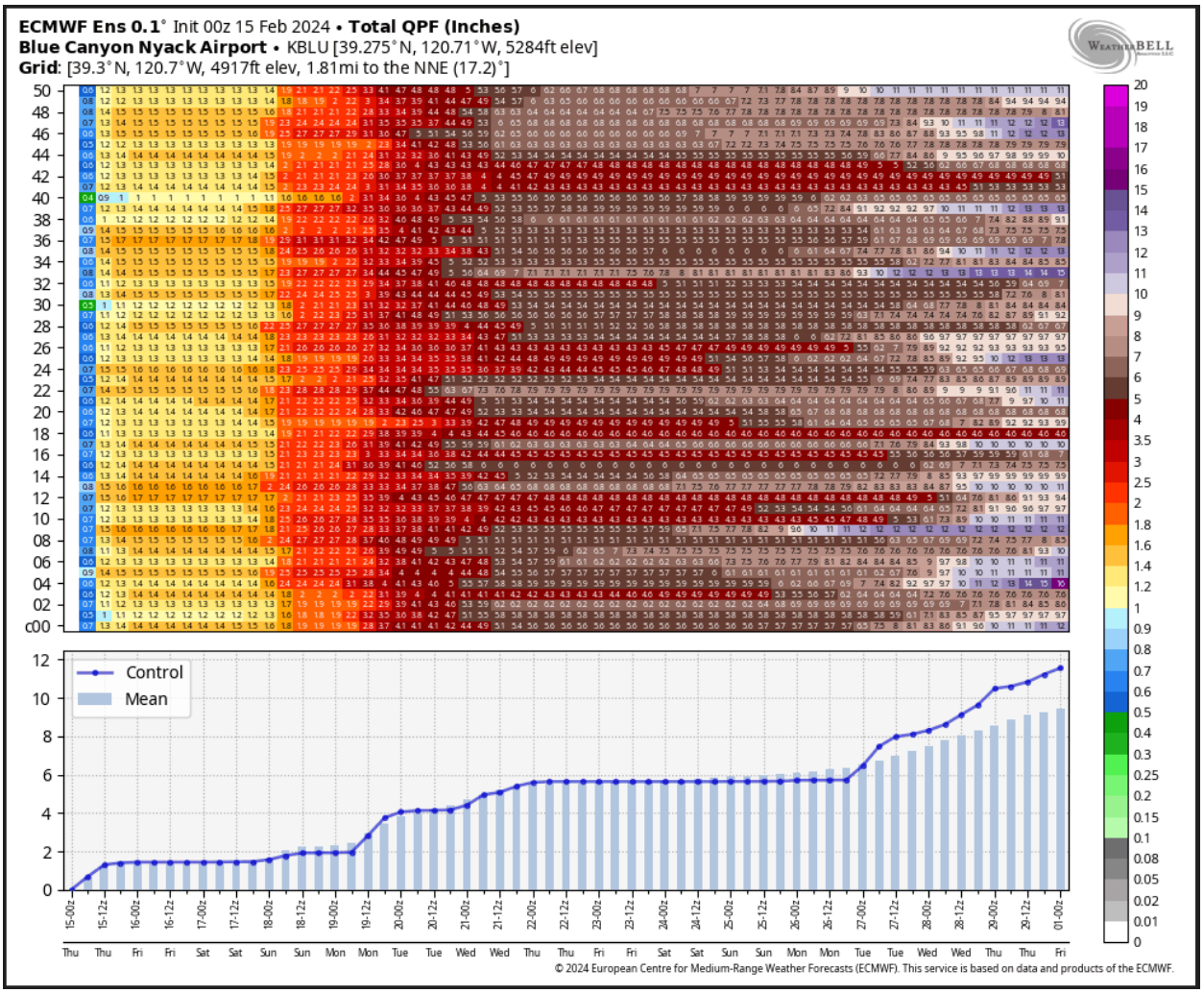


Figure 11. A medium-range weather forecast for the Blue Canyon Nyack Airport.

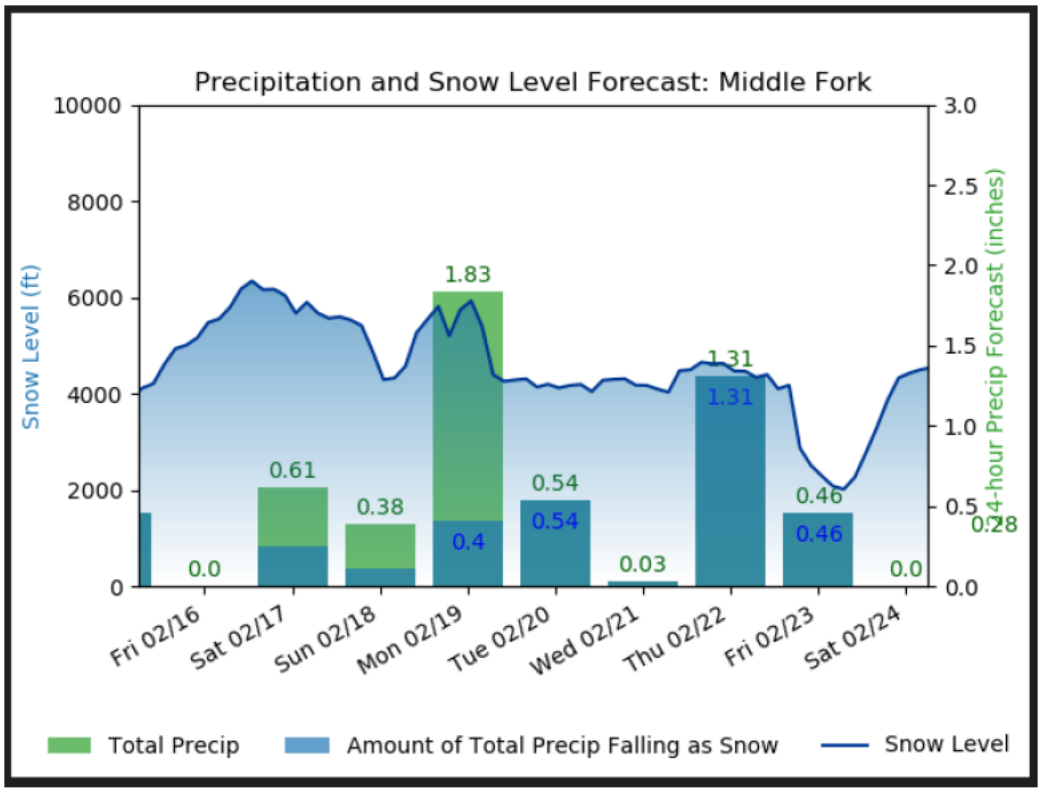


Figure 12. Precipitation and Snow Level Forecast for Middle Fork.

Figure 12 is a bar graph comparing the total precipitation, the snow level (ft), and the 4-hour precipitation forecast (inches) from Friday, February 16 until Saturday, February 24.

Bureau of Reclamation
Historical Archive and Report Database
Daily CVP Water Supply
February 14, 2024 | Run Date: 02/15/2024

Reservoir Releases in Cubic Feet/Second

Reservoir	Dam	WY 2023	WY 2024	15 Yr Median
Trinity	Lewiston	295	318	307
Sacramento	Keswick	3,297	15,111	3,361
Feather	Oroville (SWP)	950	3,000	1,750
American	Nimbus	4,011	4,767	2,252
Stanislaus	Goodwin	202	1,517	402
San Joaquin	Friant	498	568	393

Storage in Major Reservoirs in Thousands of Acre-Feet

Reservoir	Capacity	15 Yr Avg	WY 2023	WY 2024	% of 15 Yr Avg
Trinity	2,448	1,440	788	1,637	114
Shasta	4,552	2,979	2,659	3,768	126
Folsom	977	498	520	599	120
New Melones	2,420	1,422	1,045	1,971	139
Fed. San Luis	966	644	596	877	136
Total North CVP	11,363	6,982	5,608	8,852	127
Millerton	521	292	280	314	108
Oroville (SWP)	3,538	2,047	2,443	2,792	136

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

Reservoir	Current WY 2024	WY 1977	WY 1983	15 Yr Avg	% of 15 Yr Avg
Trinity	503	171	786	329	153
Shasta	2,007	1,300	3,632	1,850	108
Folsom	539	493	1,948	854	63
New Melones	253	N/A	451	301	84
Millerton	451	313	446	319	142

Accumulated Precipitation for Water Year to Date in Inches

Reservoir	Current WY 2024	WY 1977	WY 1983	Average (N Years)	% of Average	Last 24 Hours
Trinity at Fish Hatchery	22.57	12.18	29.33	19.71 (61)	115	0.00
Sacramento at Shasta Dam	39.63	15.23	54.69	36.62 (69)	108	0.60
American at Blue Canyon	23.50	N/A	70.94	38.48 (50)	61	0.80
Stanislaus at New Melones	13.84	N/A	70.94	16.18 (47)	86	0.00
San Joaquin at Huntington Lk	15.19	11.50	33.40	23.07 (51)	66	0.00

February 2024 | Folsom Lake Daily Operations | Run Date: 02/15/2024

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
		537.8									
1	421.73	542.3	4.5	3,683	1,363	0	0	59	0	0.00	0.75
2	422.42	548.0	5.8	4,562	1,599	0	0	58	0	0.00	0.47
3	423.06	553.4	5.4	4,498	1,719	0	0	62	1	0.04	0.00
4	423.65	558.4	5.0	4,297	1,710	3	0	68	0	0.00	0.66
5	424.95	569.5	11.1	7,175	1,529	3	0	64	0	0.00	0.40
6	426.23	580.5	11.0	7,083	1,450	0	0	66	6	0.02	0.01
7	427.18	588.8	8.3	6,082	1,858	0	0	61	0	0.00	0.46
8	427.91	595.1	6.4	5,533	2,241	5	0	57	9	0.03	0.05
9	428.35	599.0	3.9	4,422	2,393	0	0	60	15	0.05	0.00
10	428.78	602.8	3.8	4,153	2,145	4	0	70	21	0.07	0.00
11	428.70	602.1	-0.7	3,172	3,434	0	0	70	24	0.08	0.00
12	428.71	602.2	0.1	3,407	3,275	0	0	70	18	0.06	0.00
13	428.67	601.8	-0.4	3,479	3,579	0	0	57	21	0.07	0.00
14	428.31	598.7	-3.2	3,325	4,846	0	0	60	21	0.07	0.00
Totals			61.0	64,871	33,141	15	0	882	146	0.49	2.80
Acre-Feet			61,000	128,672	65,735	30	0	1,749	290		

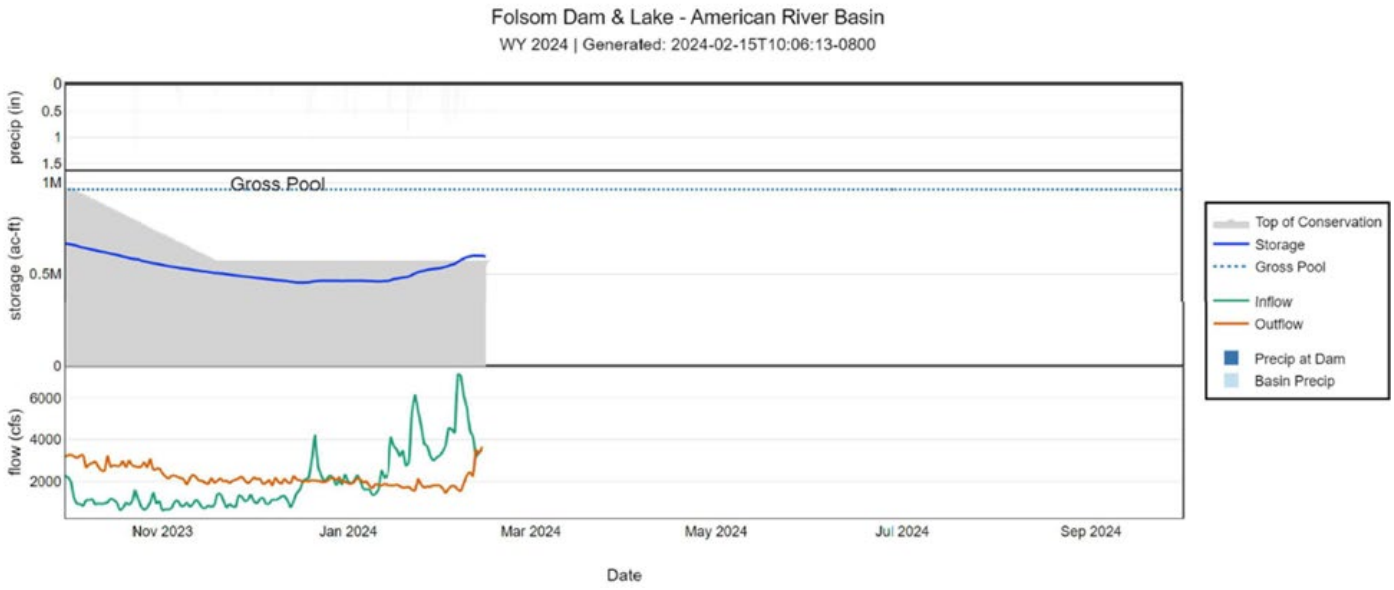
* Computed inflow is the sum of change in storage, releases, pumping, and evaporation

Summary: Release (acre-feet)

Power	65735
Spill	30
Outlet	0
Pumping Plant	1749
Total Releases	67514

Summary: Precipitation (Month/Inches)

This month	2.80
October 1, 2022 to date	12.06



Folsom Dam & Lake – American River Basin
WY 2024 2024-02-15T10:06:13-0800

Isobath 01/01–01/31 (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
Jan	47.6	45.2	54.1	54.2	54.2	53.7	50.3	465		T	B	B
01/01	47.6	46.6	51.6	52.2	52.6	52.3	49.6	1984	465	T 1	B 23	B 76
01/02	46.5	45.7	51.9	51.9	51.9	51.4	47.3	1944	465	T 25	B 1	B 74
01/03	47.0	46.7	52.6	51.7	51.8	50.9	47.5	2020	465	T 71	B 1	B 27
01/04	46.1	46.0	52.8	51.5	51.4	51.3	46.8	1982	465	T 79	B 2	B 20
01/05	45.9	45.6	52.6	52.1	52.0	50.6	48.7	1770	465	T 75	B 2	B 23
01/06	44.7	44.6	52.1	51.9	51.3	50.4	44.3	1728	464	T 69	B 2	B 29
01/07	43.6	43.7	51.3	51.5	51.2	50.0	41.5	1734	464	T 18	B 2	B 79
01/08	42.5	42.8	51.0	51.1	50.8	50.3	43.2	1727	463	T 1	B 2	B 97
01/09	43.2	43.5	51.2	50.8	50.8	50.1	46.8	1731	462	T 39	B 2	B 59
01/10	44.0	44.4	50.9	50.7	50.6	49.4	46.5	1730	461	T 36.2	B 1.7	B 62
01/11	44.0	43.5	51.1	50.4	50.2	49.2	43.8	1744	463	T 59.9	B 2.0	B 38
01/12	43.1	42.4	51.0	50.2	49.9	49.5	43.8	1764	463	T 35.7	B 1.9	B 62
01/13	43.5	43.2	50.5	50.2	50.1	50.5	45.9	1772	465	T 28.5	B 1.8	B 70
01/14	44.8	44.8	50.4	50.6	50.9	50.8	50.2	1770	469	T 27.0	B 1.5	B 42
01/15	44.8	45.3	50.6	50.7	51.0	50.5	49.8	1823	473	T 56.8	B 1.5	B 42
01/16	44.9	44.6	50.0	50.7	50.9	51.5	50.1	1777	476	T 27.0	B 1.4	B 72
01/17	45.6	45.4	49.9	50.9	51.6	50.6	53.4	1779	479	T 41.1	B 1.8	B 57
01/18	45.2	43.8	50.3	50.7	50.9	50.9	49.5	1780	483	T 63.6	B 2.5	B 34
01/19	45.7	44.1	50.2	50.6	51.1	51.5	51.9	1781	485	T 68.4	B 1.9	B 30
01/20	46.6	45.7	49.8	50.8	51.5	51.8	55.7	1780	487	T 60.7	B 2.0	B 37
01/21	47.1	47.4	49.7	51.2	51.9	51.5	56.1	1786	494	T 44.4	B 2.6	B 53
01/22	47.5	46.6	49.5	51.3	52.0	52.0	55.8	1781	504	T 34.0	B 2.6	B 63
01/23	47.6	45.9	49.6	51.1	51.9	52.0	56.3	1779	510	T 24.4	B 1.5	B 74
01/24	47.4	45.1	50.1	50.8	51.5	51.5	54.0	1776	516	T 73.0	B 1.1	B 26
01/25	47.6	46.8	50.1	50.6	51.4	51.5	52.9	1782	520	T 74.3	B 1.4	B 24
01/26	47.7	46.7	50.3	51.0	51.4	51.2	53.8	1770	524	T 71.2	B 1.5	B 27
01/27	47.8	46.9	50.1	51.0	51.4	51.3	54.7	1757	527	T 64.9	B 1.4	B 34
01/28	48.5	47.3	50.0	51.1	52.0	51.9	57.2	1757	529	T 62.6	B 1.2	B 36
01/29	48.9	46.9	49.7	51.1	51.9	52.0	57.0	1759	532	T 32.1	B 1.0	B 67

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
01/30	49.1	46.9	50.0	51.1	52.2	52.3	58.0	1739	534	T 60.4	B 1.2	B 38
01/31	48.8	46.3	49.5	51.0	51.2	51.4	56.2	1736	538	T 37.7	B 1.1	B 61
Jan	46.0	45.3	50.7	51.0	51.3	51.0	50.6	487				
						Total	AF	110165				

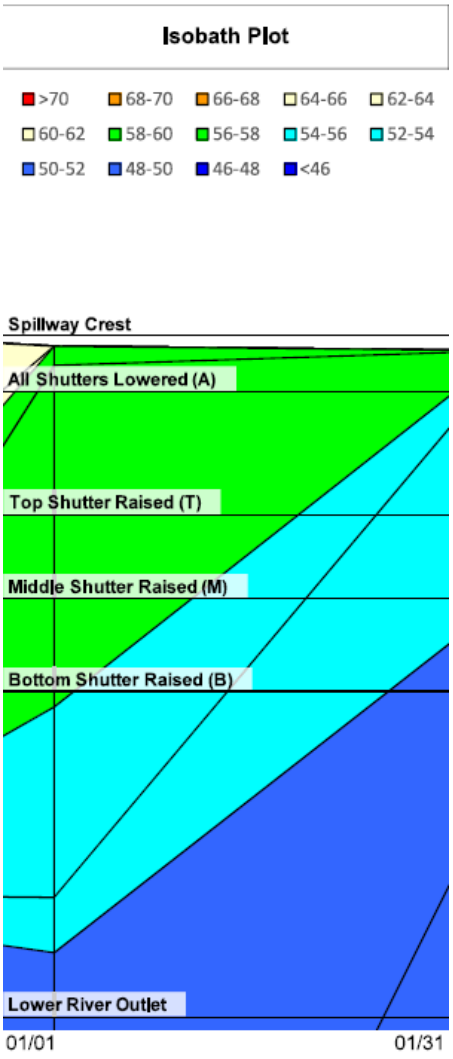
Legend:

? = 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



Isobath Plot 01/01-01/31 (Showing Spillway Crest, All Shutters 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[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
Jan												
02/01	48.7	47.5	50.2	51.0	51.9	51.7	52.6	1734	542	T 70	B 2	B 28
02/02	48.0	47.7	50.1	50.6	51.3	51.4	50.8	1736	548	T 62	B 1	B 37
02/03	46.9	46.4	50.1	50.8	50.7	50.4	48.8	1740	553	T 66	B 1	B 33
02/04	46.4	47.6	49.9	50.8	51.3	51.1	52.8	1739	558	T 32	B 1	B 67
02/05	46.8	47.9	50.4	50.9	51.8	51.8	53.8	1740	569	T 64	B 1	B 35
02/06	47.0	47.0	50.4	51.1	51.6	51.5	51.4	1741	580	T 36	B 1	B 63
02/07	46.7	45.7	50.2	51.1	50.6	50.1	45.3	1797	589	T 29	B 25	B 46
02/08	45.9	45.1	50.0	50.4	50.6	50.2	45.1	2327	595	T 1	B 36	B 63
02/09	45.0	44.5	49.9	50.0	50.3	49.9	44.7	2445	599	T 1	B 77	B 22
02/10	44.5	44.3	49.6	50.2	50.3	50.1	49.5	2469	603	T 0.8	B 18.3	B 81
02/11	44.3	44.4	49.7	50.1	50.3	50.2	48.1	3036	602	T 12.3	B 45.8	B 42
02/12	44.4	43.8	49.8	50.0	50.2	50.0	48.2	3491	602	T 47.2	B 10.9	B 42
02/13	44.8	43.7	49.8	50.2	50.5	50.2	49.8	3494	602	T 54.4	T 22.2	T 23
02/14	45.3	44.3	49.4	50.2	50.3	50.1	52.1	4767	599	T 41.6	T 13.6	T 45
02/15												
02/16												
02/17												
02/18												
02/19												
02/20												
02/21												
02/22												
02/23												
02/24												
02/25												
02/26												
02/27												
02/28												
02/29												
Feb	46.0	45.7	50.0	50.5	50.8	50.6	49.5	582				
						Total AF		67945				

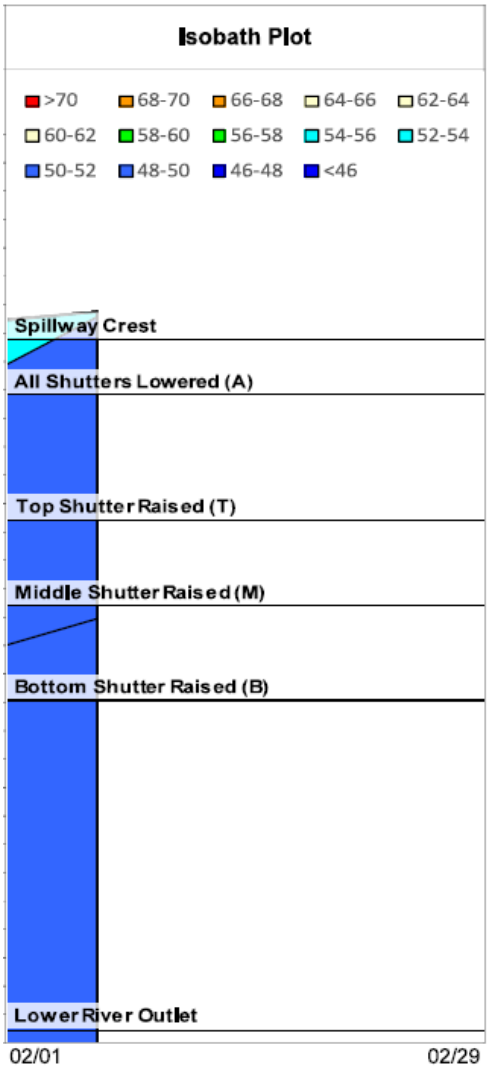
Legend:

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

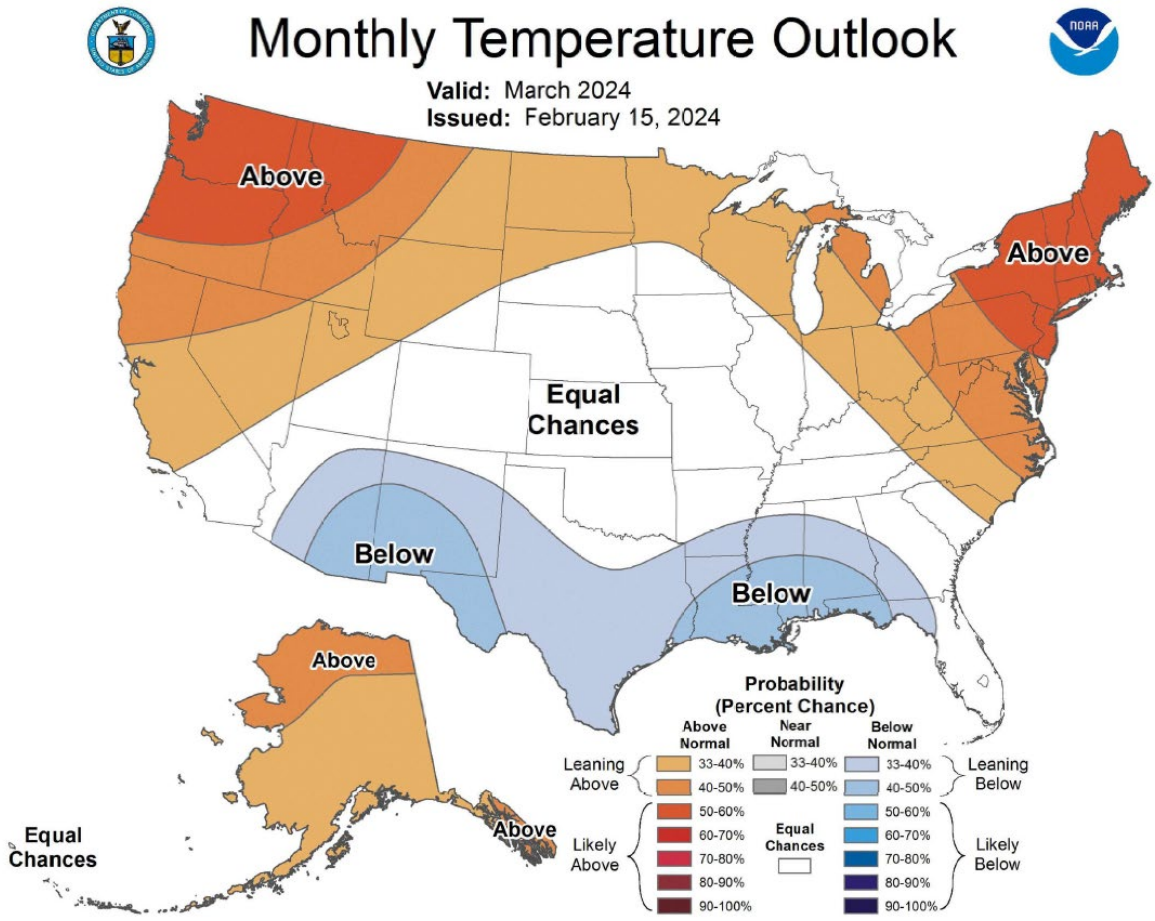
November Monthly Averages

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

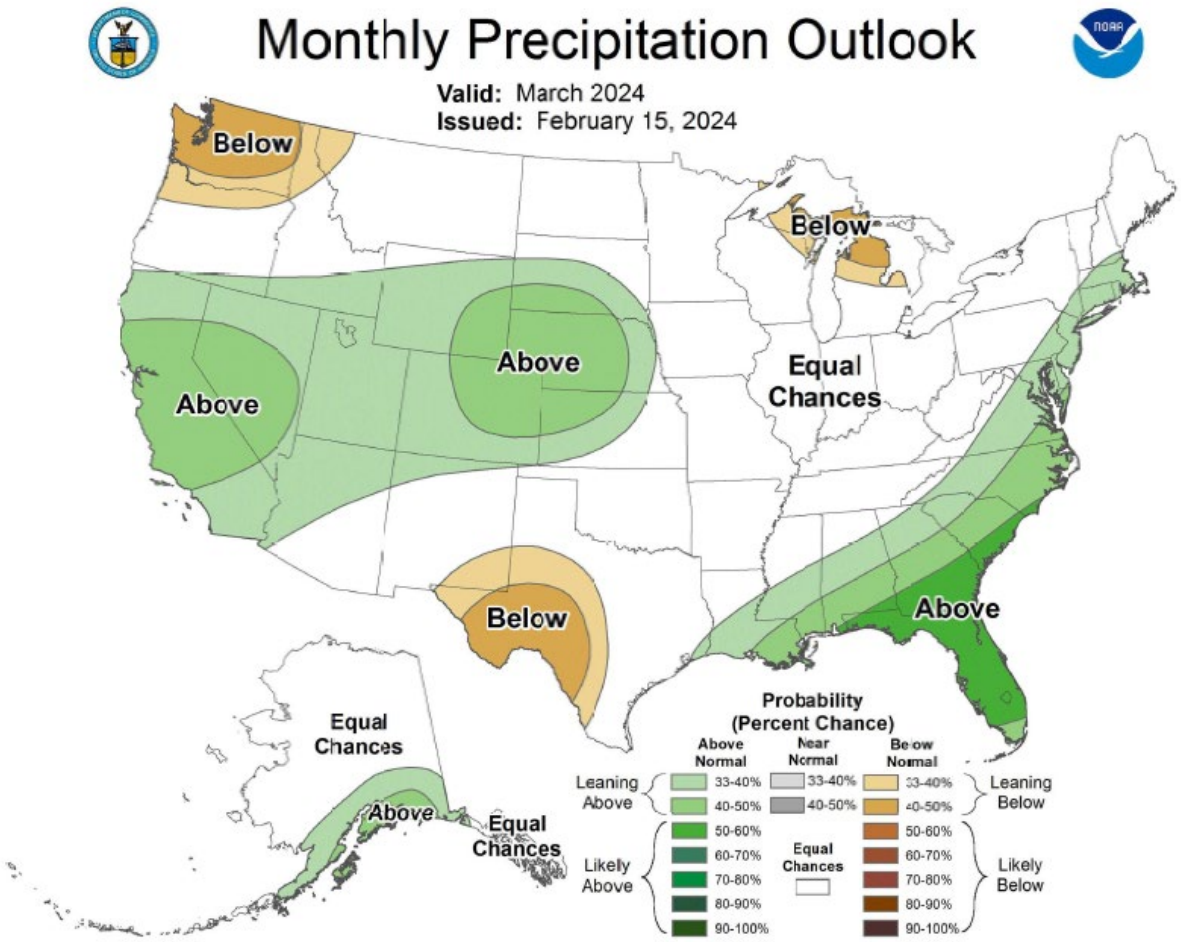
Notes:
[1] AFD is a weighted average based on hourly flow values, including generation, bypass and spill



Isobath Plot 02/01-02/29. Showing Spillway Crest, All Shutters Lowered (A), Top Shutter Raised (T), Middle Shutter Raised (M), Bottom Shutter Raised (B), and Lower River Outlet

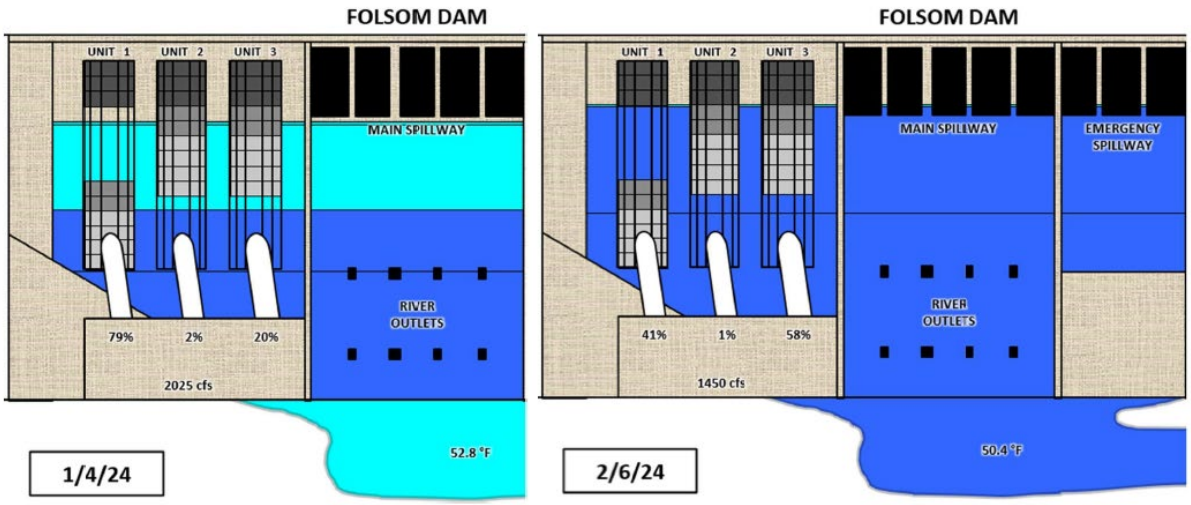


Map – U.S Monthly Temperature Outlook; Valid March 2024; Issued February 15, 2024



Map – U.S Monthly Precipitation Outlook; Valid March 2024; Issued February 15, 2024

American River Daily Average Water and Air Temperatures



Graphic showing Folsom Dam on 01/04/24 with a temperature of 52.8 ˚F and 02/06/24 with a temperature of 50.4 ˚F.

American River Summary Conditions – February (On-going)

Release Management Conditions

- Releases are currently at 1,750 cfs

Temperature Management

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

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

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

Folsom Shutter Configuration and Changes

Next change will be lowering and closing the top shutters in March

American River 90% Outlook

February 90% Exceedance

Storages

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

Facility	Feb	Mar	Apr	May	Jun	Jul
Folsom Storage	564	674	769	796	684	536
Folsom Elevation	424	437	446	449	438	421

Monthly River Release (TAF/cfs)

Facility	Feb	Mar	Apr	May	Jun	Jul
American TAF	167	77	81	123	185	206
American cfs	3000	1250	1356	1994	3118	3352

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

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.
[2] 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.