



— 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, March 16th, 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
8. Next Meetings:
 - a. Thursday, April 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

- Steelhead spawning began 12/20/2022
- Last day of spawning was 02/28/2023
- Estimated 1,554,400 steelhead eggs collected
 - Green egg collection goal is 1,500,000 eggs

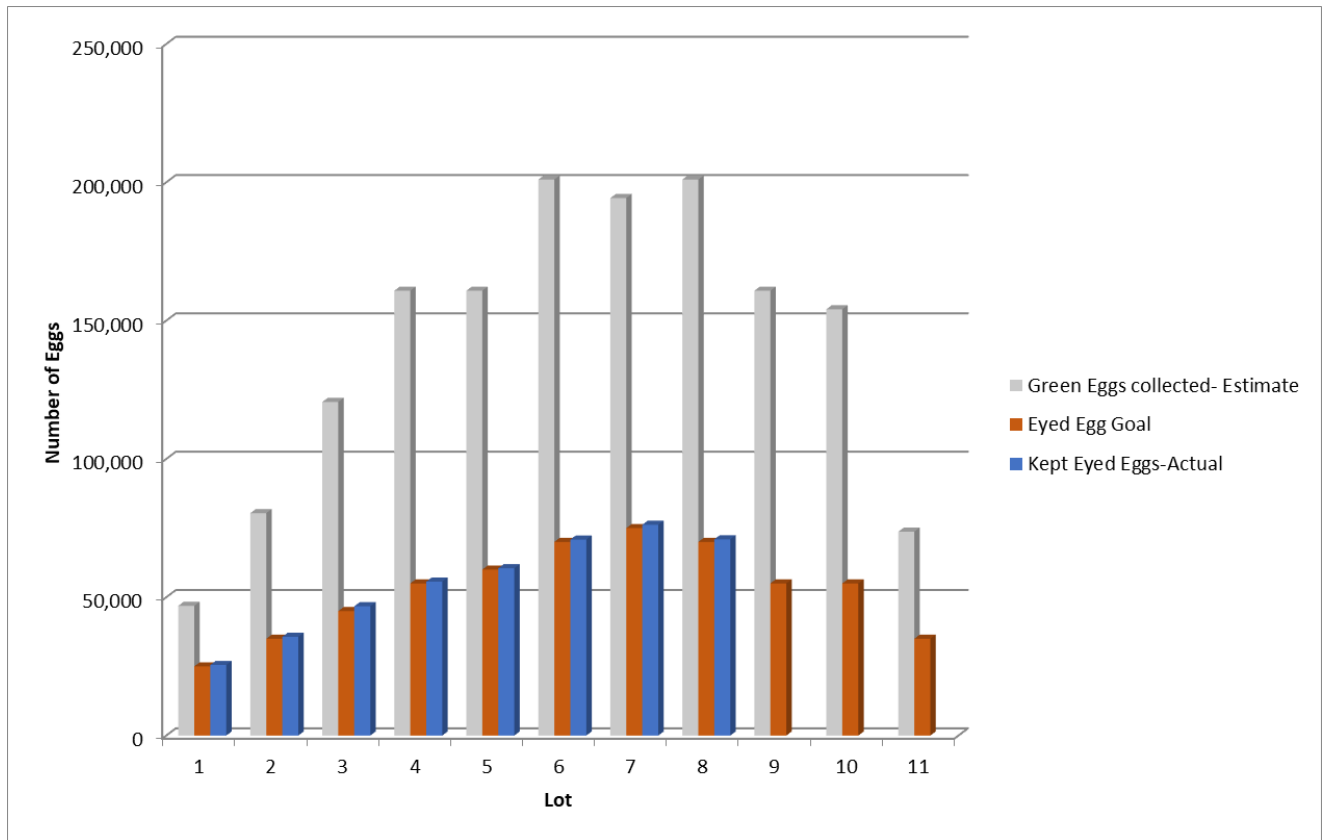


Figure 1. Steelhead trout egg collection goals and eggs collected per spawning at Nimbus Fish Hatchery

LOWER AMERICAN RIVER 2023 STEELHEAD SPAWNING SURVEY SUMMARY

A total of 31 steelhead redds, and two unknown redds have been observed in the Lower American River as of 8 March 2023.

Table 1. Steelhead, Chinook Salmon, lamprey and unknown redd counts during 2023 spawning surveys.

Dates	Steelhead	Chinook	Lamprey	Unknown¹	Total
Feb 8-10	7	0	0	2	9
Feb 22-23	15	0	0	0	15
Mar 6-8	9	0	0	0	9

¹Redd(s) not measured due to angler presence and/or undefined redd features, therefore species not classified using DFA

Next spawning surveys are scheduled for 20-22 March.

Stranding surveys will be conducted following flow reduction and coordination with CDFW and the Bureau of Reclamation.

Pacific States Marine Fisheries Commission Update

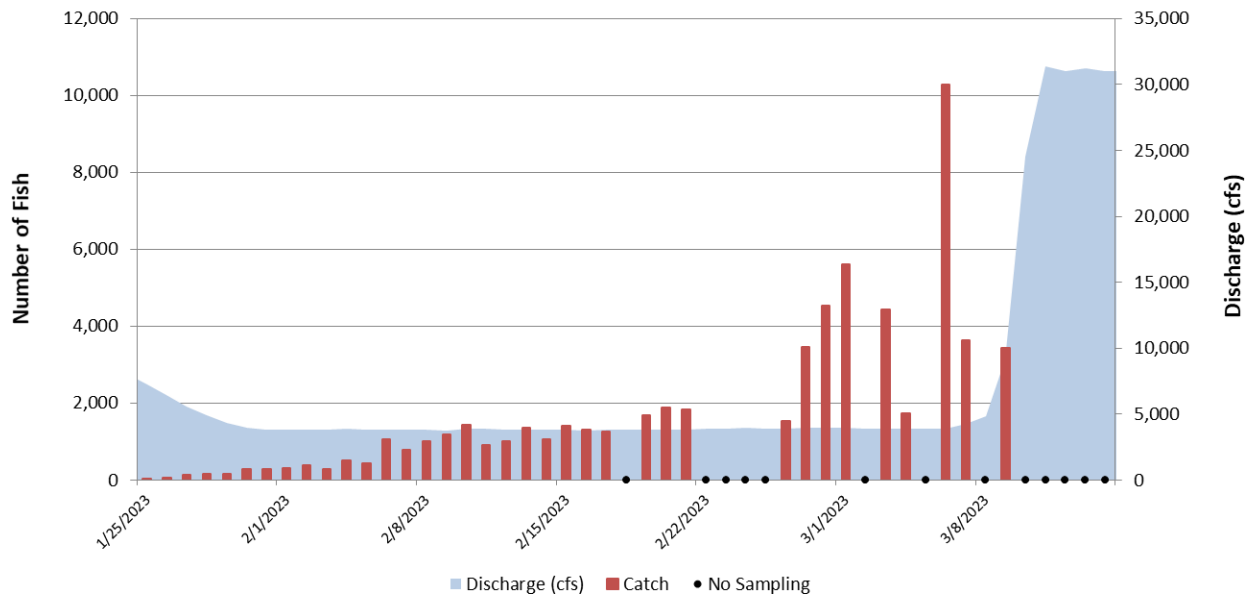
UPDATED 3/14/23

Table 2. Unmarked Juvenile Chinook Salmon (Length-at-Date)

Fall	Late Fall	Spring	Winter
60,758	0	13	15

Lower American River at Watt Ave (RSTs):

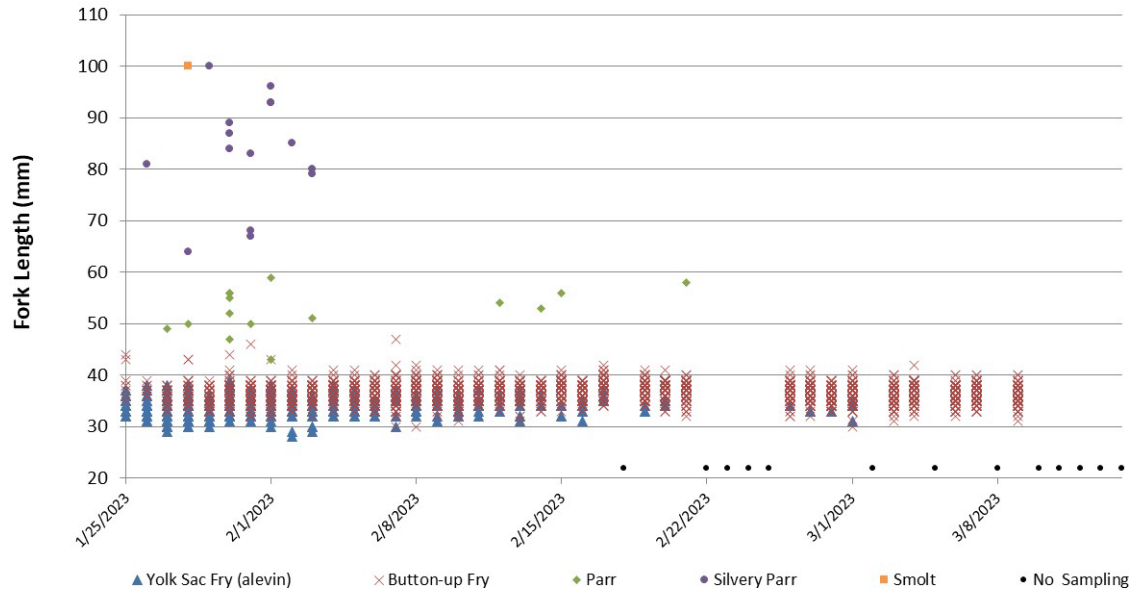
Daily catch of unmarked Chinook Salmon and daily average discharge at Fair Oaks during the 2023 Lower American River rotary screw trap survey season.



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 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 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 RST CalFish Webpage:

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

SMUD Upper American River Project Update

Conditions – Tuesday 14 March 2023

March precipitation through 3/14/2023 is 14.82 inches, which is 163.6% of the

March average of 9.06 inches. Precipitation for the water year to date is 70.06 inches which is 165% of average to date (42.45 inches) and 122.2% of the entire water year average of 57.32 inches.

Runoff into the storage reservoir basins is 203.7% of median to date through 3/14/2023. The snowpack is 138.5% of average at selected snow sensors.

Combined reservoir storage for Loon Lake, Union Valley and Ice House Reservoirs

- 255,676 acre feet (16 February was 268,624 acre feet)
- 67.4% full
- 98% of historical average (March 13 historical average: 260,680 AF)

Individual Reservoir Storage

- Loon Lake: 34,333 AF
- Ice House: 29,732 AF
- Union Valley: 191,611 AF

Last year (on March 14, 2022), total storage was at 74% (379,180 AF). *Total capacity: 329,210 AF.

Chili Bar releases into the South Fork American River

(Previous month) February 2023 releases:

- Daily average flow: 1,862 cfs
- Total releases: 103,424 AF

(Current month) March 2023 releases (March 1-13)

- Daily average flow so far: 3,850 cfs
- Total releases so far: 99,275 AF

Table 3. South Fork American River Natural Runoff Forecast (in cfs, daily average forecasted flow, forecast 2023-3-14)

Basin	Fri Mar 17	18-Mar	19-Mar	20-Mar	21-Mar	22-Mar
SFA above Slab	699	604	618	591	545	475
Slab Creek Reservoir	1,087	932	1,068	1,079	1,412	1,345
Combined South Fork	1,785	1,536	1,687	1,670	1,957	1,820

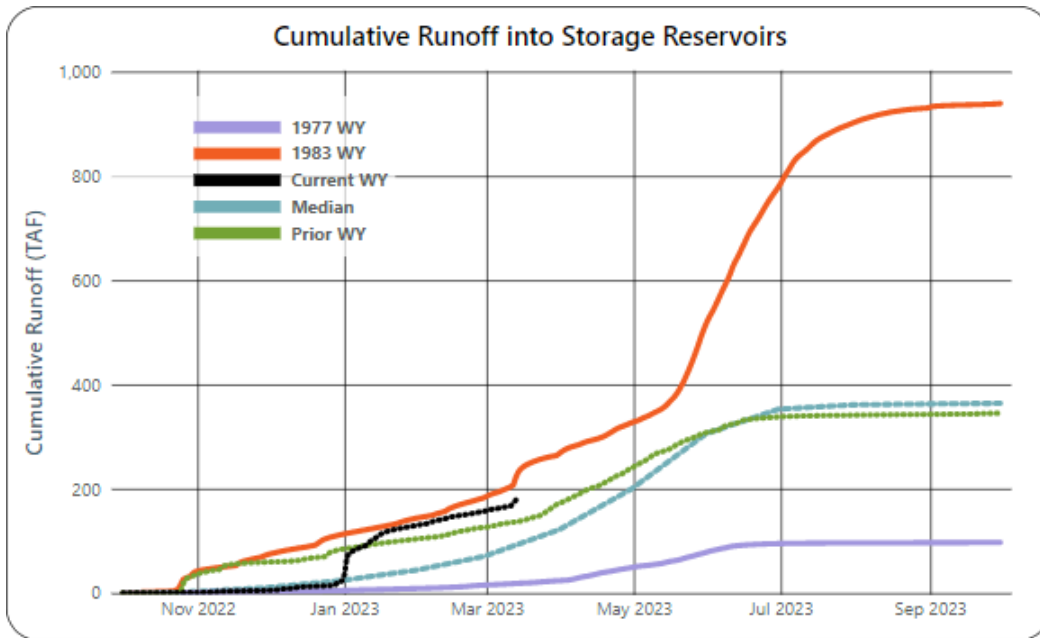


Figure 2. March 14, 2023 runoff into storage

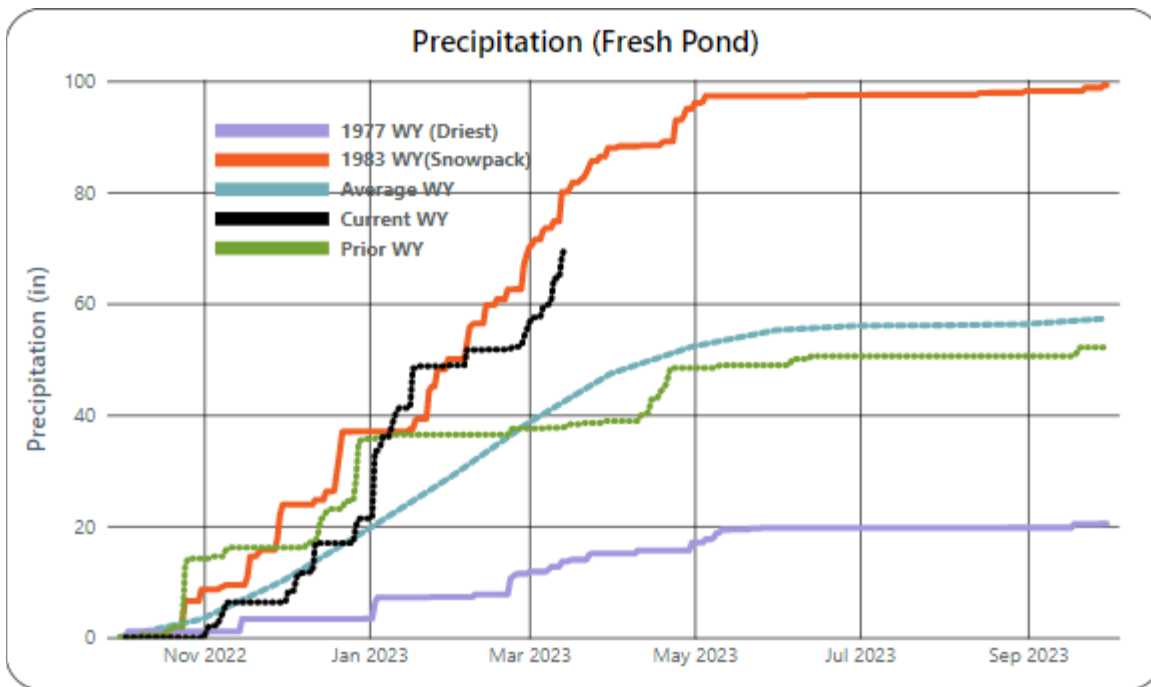


Figure 3. March 14, 2023 FP precipitation

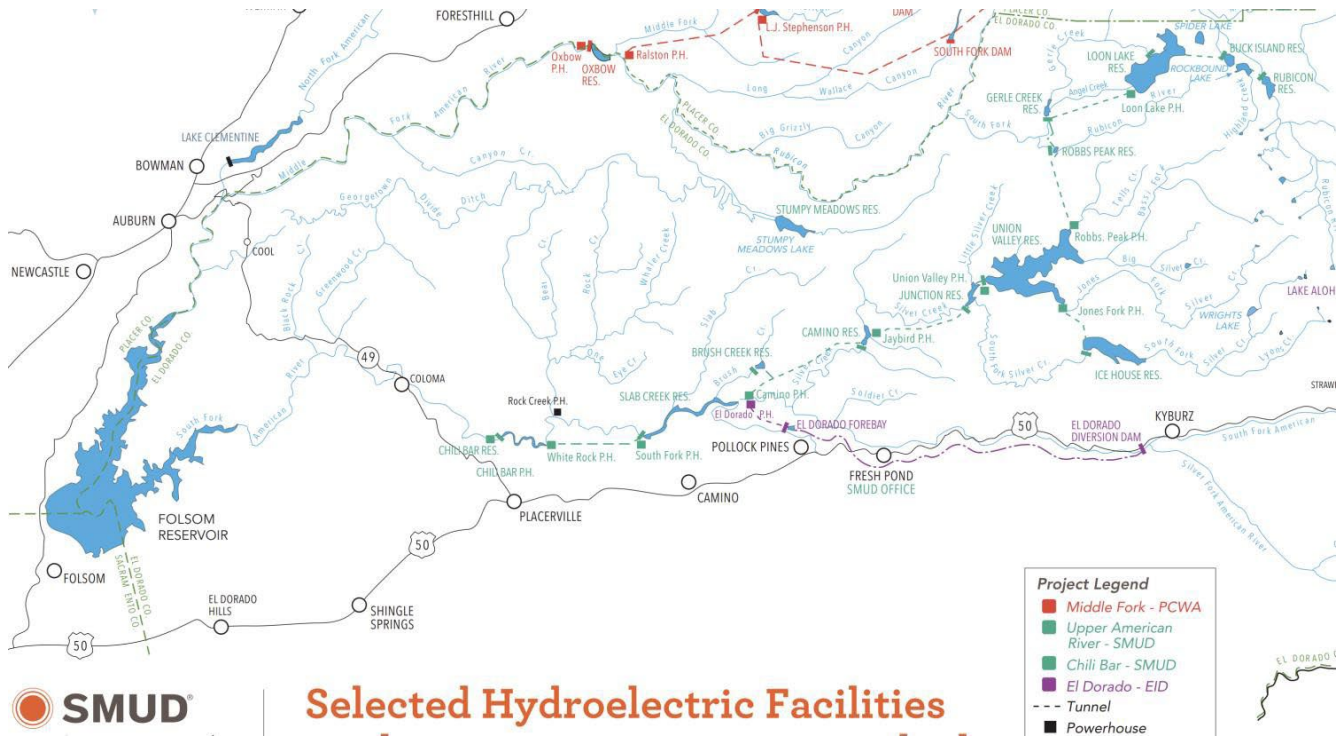
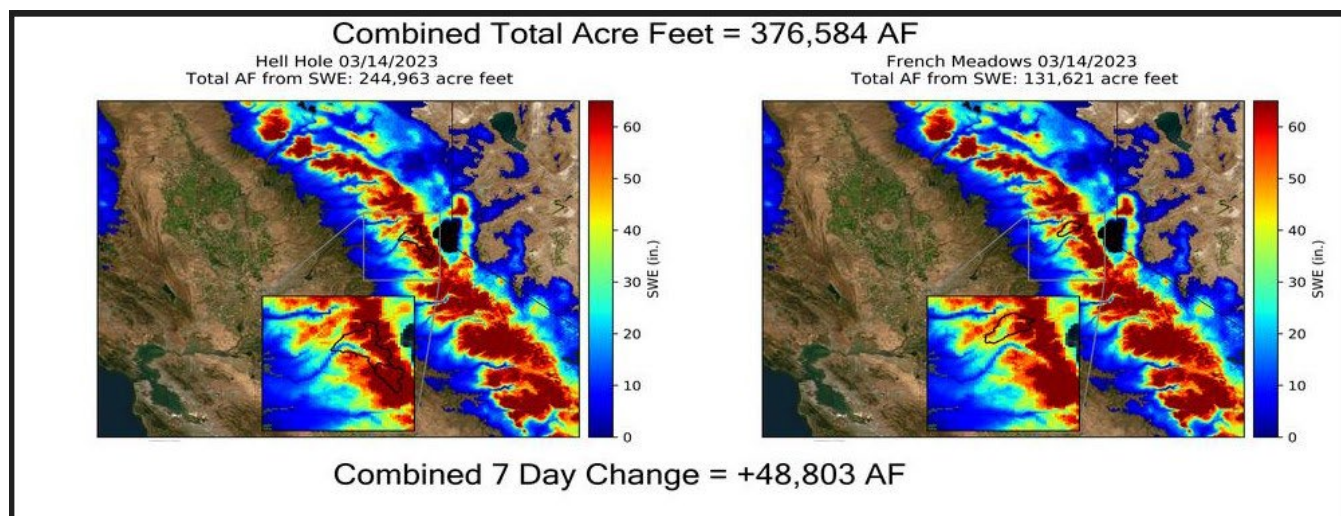


Figure 4. SMUD Hydroelectric Facilities – Upper American River Project

PCWA MFP Operations Overview for American River Operations Group

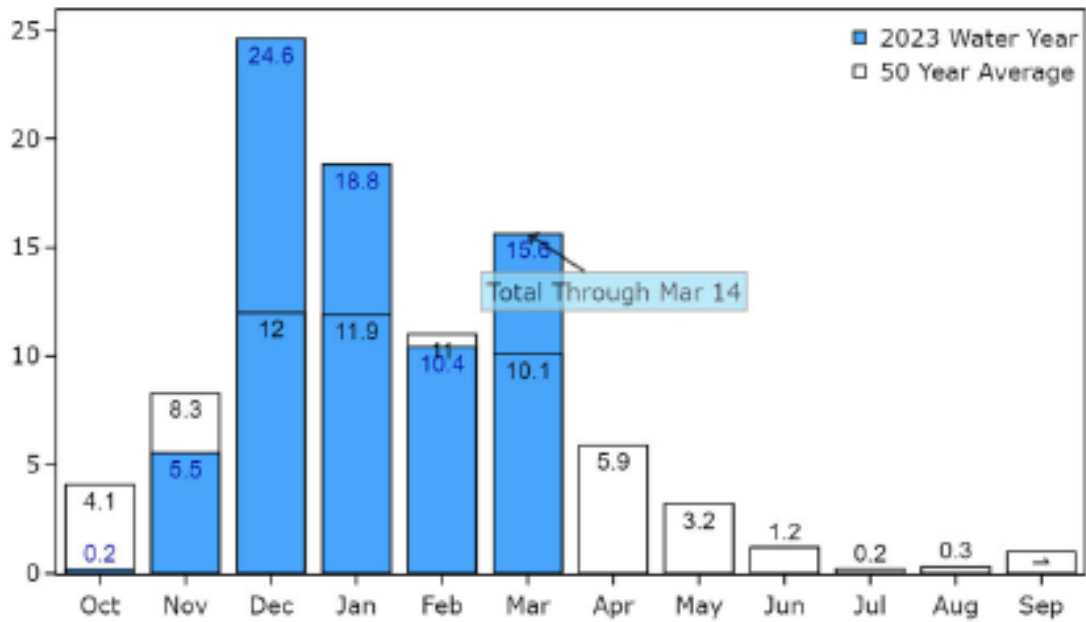
(Real Time Data as of March 15, 2023)

- French Meadows Storage = 90,000 AF of 136,405 AF = 66% Capacity
 - MFAR above FM Inflow (R24) = 7-day AVG ~350 cfs
- Hell Hole Storage = 149,000 AF of 207,590 AF = 72% Capacity
 - Five Lakes Inflow (R23) = 7-day AVG ~150 cfs
 - Rubicon Inflow (R22) = 7-day AVG ~380 cfs
- Combined Storage (FM+HH) = 239,000 AF/342,590 AF = 70% Capacity; 128% of AVG YTD
 - 7 Day Change = +16,000 AF
- MFAR @_R11: 7-day AVG 7,500 cfs
- NFAR @ ARPS: 7-day AVG 17,000 cfs

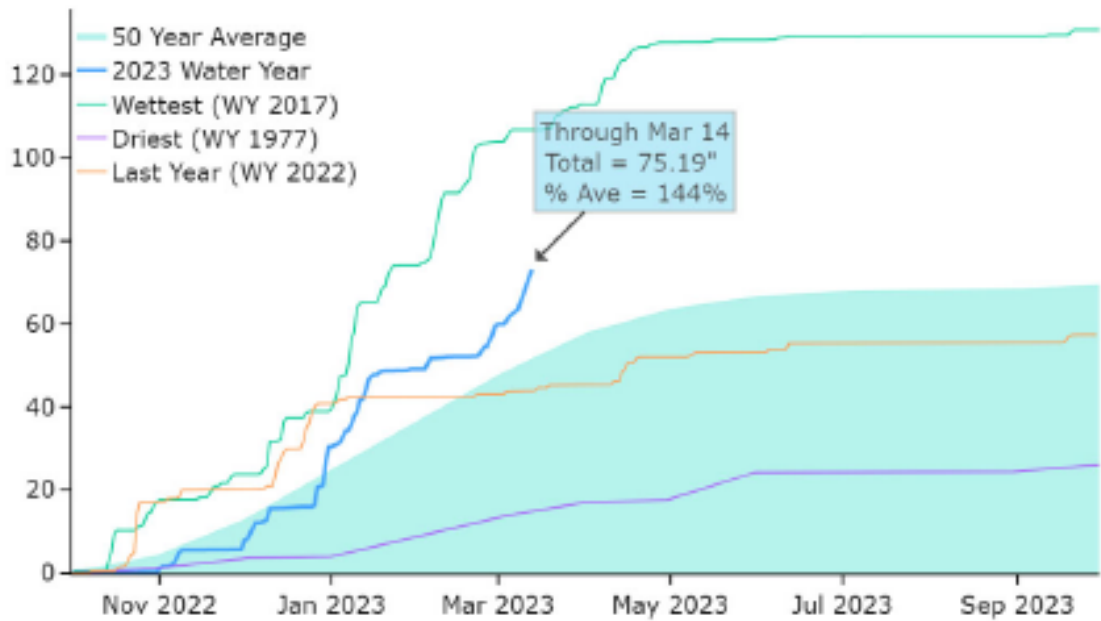


Maps showing Hell Hole 03/14/2023 and French Meadows 03/14/2023; Combined Total Acre-feet = 376,584 AF; Combined 7-Day Change = 48,803 AF

Lake Spaulding Precipitation: Water Year 2023



Lake Spaulding Precipitation: Water Year 2023



Lake Spaulding Precipitation: Water Year 2023 – Total through Mar 14 are 15.6 with a 50-Year average of 10.1



Forest Order No. 17-23-01
USDA Forest Service Tahoe National Forest
Mosquito Fire Road & Trail Closure



Pursuant to 16 U.S.C. § 551 and 36 C.F.R. § 261.50(a) and (b), and to provide for public safety, the following acts are prohibited within the American River Ranger District of the Tahoe National Forest. This Order is effective beginning at 6:00 p.m., Pacific Standard Time, on January 5, 2023, through December 31, 2023.

1. Being on: (1) National Forest System Road 96 (Mosquito Ridge Road) from its intersection with the Tahoe National Forest western boundary continuing east to its intersection with National Forest System Road 0096-017 (Middle Fork Interbay Road), or (2) National Forest System Road 0096-017 (Middle Fork Interbay Road) from its intersection with National Forest System Road 96 (Mosquito Ridge Road) continuing south to its terminus, as shown on Exhibit A. 36 C.F.R. § 261.54(e).
2. Being on: (1) National Forest System Trail 16E10 (Western States Trail) from Michigan Bluff to Last Chance Townsite, (2) National Forest System Trail 11E38 (Mitchell Trail or Tie 5-6 Trail),

(3) National Forest System Trail 11E44 (Codfish Trail or Loop 6 Trail), (4) National Forest System Trail 12E23 (Grouse Creek OHV Trail), or (5) National Forest System Trail 12E22 (Grouse Falls Overlook Trail), as shown on Exhibit A. 36 C.F.R. § 261.55(a).

Pursuant to 36 C.F.R. § 261.50(e), the following persons are exempt from this Order:

1. Any Federal, State, or local officer, or member of an organized rescue or fire-fighting force in the performance of an official duty.
2. Persons with Forest Service Permit No. FS-7700-48 (Permit for Use of Roads, Trails, or Areas Restricted by Regulation or Order), specifically exempting them from this Order.
3. Owners or lessees of land and residents of such private landholdings, to the extent necessary to access their land.

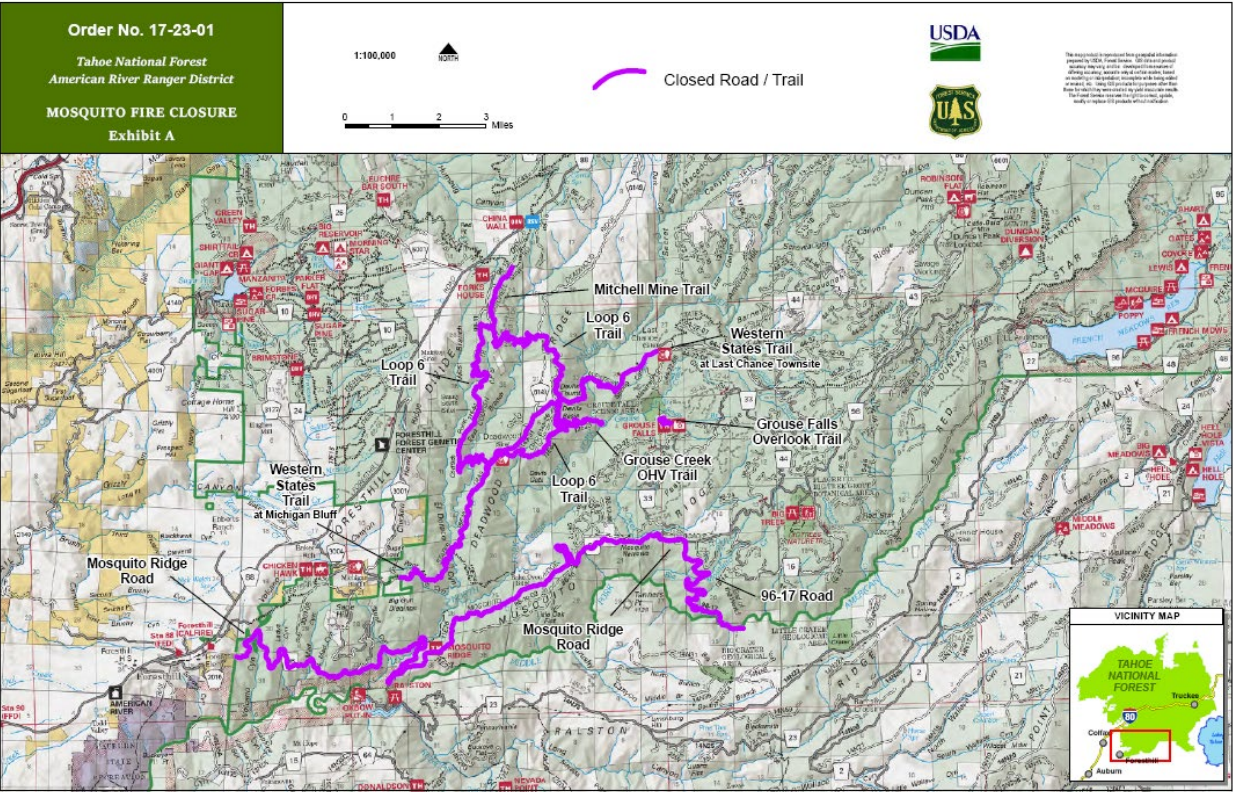
These prohibitions are in addition to the general prohibitions in 36 C.F.R. § 261, Subpart A.

A violation of these prohibitions is punishable by a fine of not more than \$5000 for an individual or

\$10,000 for an organization, or imprisonment for not more than 6 months, or both. 16 U.S.C. § 551 and 18 U.S.C. §§ 3559, 3571, and 3581.

Executed in Nevada City, California, this 5th day of January, 2023 at 5:00 p.m..

Eli Ilano
Forest Supervisor Tahoe National Forest



Map – Tahoe National Forest American River Ranger District – Mosquito Fire Closure.

Reservoir Releases in Cubic Feet/Second

Reservoir	Dam	WY 2022	WY 2023	15 Yr Median
Trinity	Lewiston	293	710	306
Sacramento	Keswick	3,233	4,097	3,810
Feather	Oroville (SWP)	2,500	15,000	1,750
American	Nimbus	1,928	30,089	1,890
Stanislaus	Goodwin	436	1,516	317
San Joaquin	Friant	632	5,899	386

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	1,492	795	834	56
Shasta	4,552	3,142	1,708	3,098	99
Folsom	977	528	521	580	110
New Melones	2,420	1,423	956	1,248	88
Fed. San Luis	966	632	309	0	0
Total North CVP	11,363	7,217	4,289	5,760	80
Millerton	521	308	287	373	121
Oroville (SWP)	3,538	2,188	1,611	2,830	129

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	396	248	1,121	428	93
Shasta	2,440	1,806	5,113	2,452	99
Folsom	1,909	649	2,945	1,149	166
New Melones	738	N/A	783	396	186
Millerton	879	372	681	419	210

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	29.83	18.16	33.75	23.84 (63)	125	0.66
Sacramento at Shasta Dam	53.32	27.01	66.45	46.03 (68)	116	5.90
American at Blue Canyon	70.71	N/A	88.57	50.01 (49)	141	2.50

Reservoir	Current WY 2023	WY 1977	WY 1983	Average (N Years)	% of Average	Last 24 Hours
Stanislaus at New Melones	42.28	N/A	26.80	20.88 (46)	202	0.69
San Joaquin at Huntington Lk	55.00	11.50	47.50	30.40 (50)	181	0.11

Bureau of Reclamation
 Historical Archive and Report Database

March 2023 | Folsom Lake Daily Operations | Run Date: 3/15/2023

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
		551.6									
1	424.03	561.6	10.0	8,916	3,793	0	0	51	46	0.16	0.00
2	424.56	566.3	4.7	6,730	4,293	0	0	48	23	0.08	0.00
3	424.98	569.7	3.4	5,827	4,035	0	0	48	23	0.08	0.00
4	425.50	574.2	4.5	6,217	3,909	0	0	52	0	0.00	0.01
5	426.20	580.2	6.0	7,019	3,921	0	0	53	0	0.00	0.01
6	426.75	585.0	4.8	6,287	3,824	0	0	57	0	0.00	0.01
7	426.93	586.6	1.6	5,619	4,788	0	0	44	0	0.00	0.01
8	427.14	588.4	1.8	6,232	5,262	0	0	46	0	0.00	0.01
9	426.93	586.6	-1.8	7,428	5,534	2,772	0	46	0	0.00	0.01
10	426.76	585.1	-1.5	19,439	7,146	12,982	0	49	6	0.02	0.53
11	424.27	563.7	-21.4	14,018	7,061	17,706	0	50	6	0.02	0.21
12	423.16	554.3	-9.4	19,817	6,676	17,830	0	54	0	0.00	0.29
13	423.25	555.0	0.8	25,129	6,750	17,941	0	54	0	0.00	0.29
14	426.17	580.0	25.0	39,412	6,717	20,044	0	45	23	0.08	0.61
Totals			28.5	178,090	73,709	89,275	0	697	127	0.44	1.99
Acre-Feet			28,500	353,242	146,202	177,077	0	1,382	252		

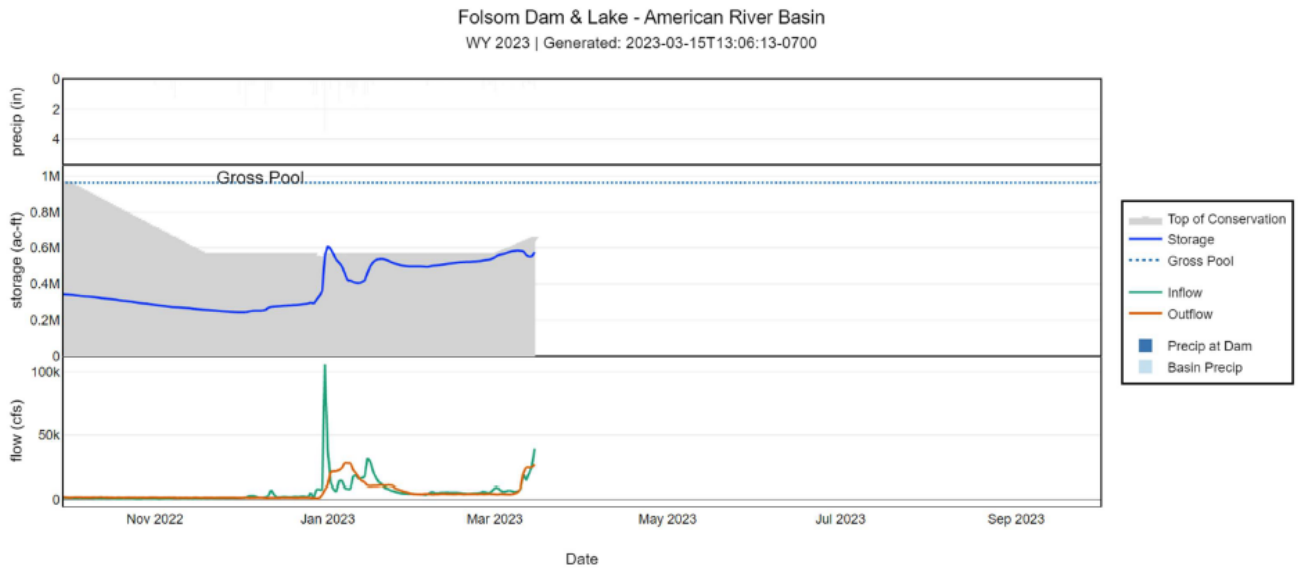
* Computed inflow is the sum of change in storage, releases, pumping, and evaporation

Summary: Release (acre-feet)

Power	146,202
Spill	177,077
Outlet	0
Pumping Plant	1,382
Total Releases	324,661

Summary: Precipitation (Month/Inches)

This month	1.99
October 1, 2022 to date	27.42



Folsom Dam & Lake – American River Basin
2023-03-15T13:06:13-0700

Isobath 02/01–02/28 (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	45.5	44.6	47.4	48.2	47.7	48.3	48.8	502				
02/01	41.7	40.2?	45.6	46.2	45.8	46.0	43.6	3972	500	B 23	B 41	B 36
02/02	42.0	40.0	45.4	46.3	45.7	45.9	44.6	3962	500	B 16	B 52	B 32
02/03	42.7	40.0	45.3	46.2	45.8	46.2	49.1	4012	500	B 27	B 51	B 22
02/04	43.4	40.2	!	46.1	45.8	46.1	49.3	4066	498	B 47	B 32	B 21
02/05	44.6	42.3	!	46.4	46.3	46.7	50.6?	4065	500	B 0	B 50	B 50
02/06	44.3	41.5	45.2?	46.1	45.8	46.3	47.6	4063	504	B 9	B 49	B 42
02/07	43.5	41.3	45.1	46.1	45.8	46.2	47.7	4063	506	B 0	B 52	B 48
02/08	43.5	41.9	45.0	46.2	46.0	46.4	47.9	4058	507	B 1	B 54	B 45
02/09	43.5	42.2	44.8	46.2	46.1	46.6	50.7	4072	509	B 1	B 48	B 51
02/10	44.0	42.2	44.9	46.1	45.9	46.5	50.6	4019	511	B 1	B 49	B 50
02/11	44.1	41.8	45.0	46.2	45.9	46.4	48.2	4032	514	B 1	B 49	B 49
02/12	43.8	41.8	45.1	46.2	45.9	46.4	52.9	4019	516	B 1	B 50	B 49
02/13	43.9	42.1	45.0	46.4	46.3	46.8	51.8	4017	518	B 1	B 49	B 49
02/14	43.5	42.3	45.1	46.1	45.7	46.1	47.4	4011	520	B 1	B 50	B 49
02/15	42.2	41.6	45.2	45.7	45.2	45.6	45.2	4015	522	B 1	B 50	B 49
02/16	41.6	41.4	45.5	46.1	45.5	45.7	45.0	4011	524	T 1	T 46	T 52
02/17	41.6	41.7	46.1	46.4	45.9	46.2	46.4	4015	525	T 17	T 51	T 32
02/18	41.6	42.0	46.1	46.9	46.4	46.7	46.8	4017	525	T 54	T 46	T 0
02/19	42.1	41.9	45.8	47.1	46.8	47.1	48.6	4017	525	T 57	T 43	T 0
02/20	42.9	42.0	45.7	47.0	46.9	47.4	52.6	4013	526	T 49	T 50	T 0
02/21	43.6	41.3	45.5	47.0	46.8	47.3	51.3	4019	527	T 50	T 25	T 25
02/22	42.6	40.6	45.6	46.4	46.0	46.4	43.1	4016	528	T 49	T 1	T 50
02/23	41.4	40.6	45.0	46.1	45.5	45.6	41.5	4020	530	T 49	T 27	T 24
02/24	40.4	40.8	45.5	45.4	44.9	45.1	42.8	4044	534	T 32	T 41	T 28
02/25	40.3	41.4	45.5	46.0	45.3	45.5	42.7	4016	536	T 54	T 13	T 33
02/26	41.1	40.8	45.2	46.2	45.8	46.1	45.2	3950	537	T 49	T 24	T 27
02/27	40.8	41.5	45.3	45.8	45.1	45.5	41.9	3997	542	T 47	T 28	T 25
02/28	40.3	41.6	45.1	45.6	44.9	45.1	43.2	4015	552	T 55	T 30	T 15
-										T	T	

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
-										T	T	T
Feb	42.5	41.4	45.3	46.2	45.9	46.2	47.1	519				
Total AF								223330				

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

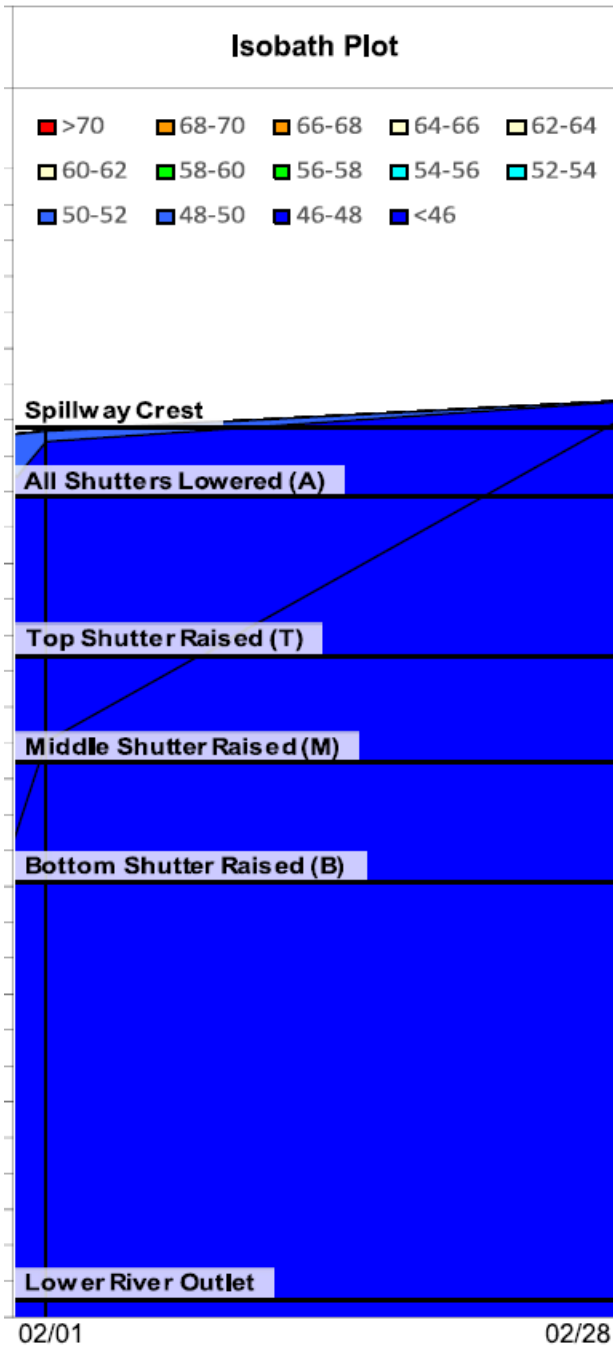
M = Middle Shutter Raised

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 02/01-02/28 (Showing Spillway Crest, All Shuttters Lowered (A), Top Shutter Raised (T), Middle Shutter Raised (M), Bottom Shutter Raised (B), and Lower River Outlet)

Isobath 12/1–12/13 (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
Feb	42.5	41.4	45.3	46.2	45.9	46.2	47.1	519				
03/01	40.8	43.2	45.0	45.8	45.4	45.8	43.8	4013	562	T 53	T 15	T 32
03/02	41.1	42.8	45.0	46.1	45.8	46.3	46.0	4017	566	T 40	T 24	T 35
03/03	42.2	42.9	44.9	46.5	46.3	46.9	48.6	3983	570	T 3	T 43	T 54
03/04	42.8	41.9	44.3	46.2	46.0	46.6	47.3	4011	574	T 31	T 30	T 39
03/05	42.3	41.8	44.2	45.6	45.5	46.3	45.8	4019	580	T 57	T 40	T 3
03/06	41.9	41.6	44.5	45.4	45.1	45.6	44.5	4012	585	T 55	T 16	T 29
03/07	42.6	42.7	44.6	45.7	45.5	46.1	46.8	4346	587	T 44	T 14	T 43
03/08	42.8	42.6	44.6	45.8	45.7	46.3	48.0	4974	588	T 40	T 32	T 28
03/09	42.2	41.0	44.9	45.6	45.1	45.4	46.6	9284	587	T 41	T 30	T 29
03/10	43.8	45.6	45.2	46.0	45.7	46.2	54.1	23762	585	T 34	T 33	T 33
03/11	44.3	45.4	45.6	46.2	45.7	46.1	51.9	30039	564	T 34	T 33	T 33
03/12	45.2	45.7	45.5	46.4	46.0	46.4	55.4	29840	554	T 33	T 33	T 33
03/13	45.9	47.5	45.6	46.4	46.1	46.6	58.5	29999	555	T 33	T 33	T 34
03/14	46.5	48.6	45.8	46.5	46.2	46.6	56.3	30089	580	T 33	T 33	T 34
03/15										T	T	T
03/16										T	T	T
03/17										T	T	T
03/18										T	T	T
03/19										T	T	T
03/20										T	T	T
03/21										T	T	T
03/22										T	T	T
03/23										T	T	T
03/24										T	T	T
03/25										T	T	T
03/26										T	T	T
03/27										T	T	T
03/28										T	T	T
03/29										T	T	T
03/30										T	T	T
03/31												
Mar	43.2	43.8	45.0	46.0	45.7	46.2	49.5	574				
							Total AF	369693				

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

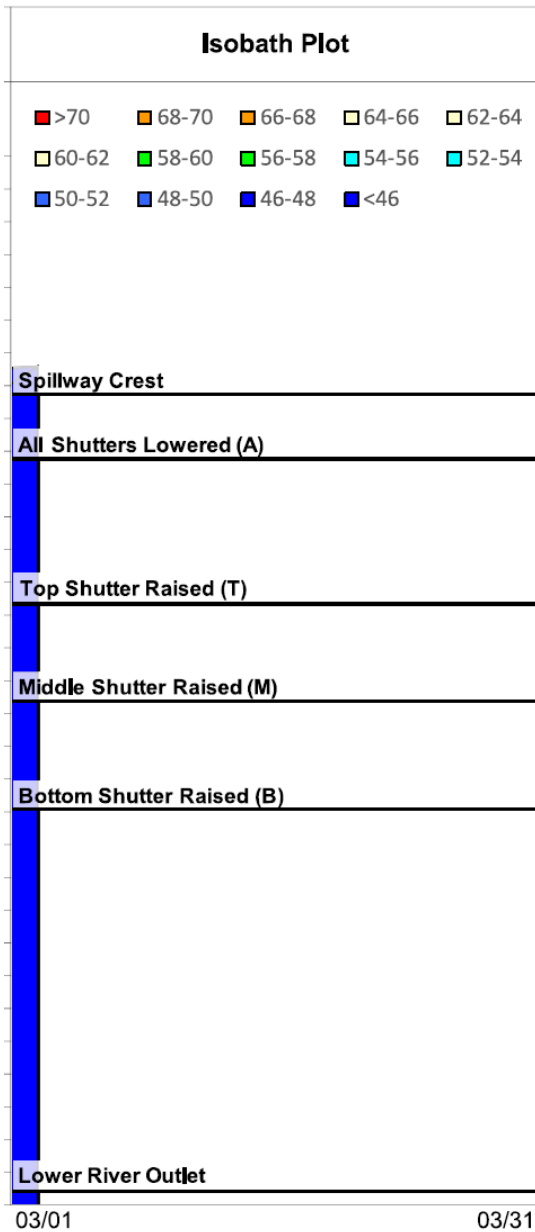
M = Middle Shutter Raised

B = Bottom Shutter Raised

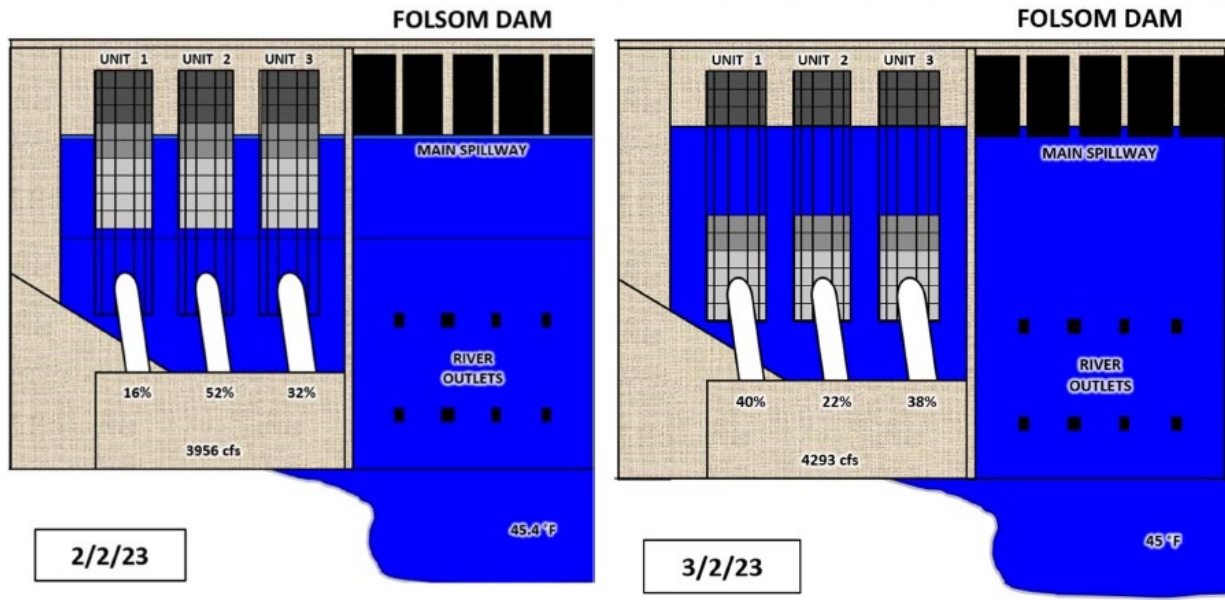
O = Unit Outage

Notes:

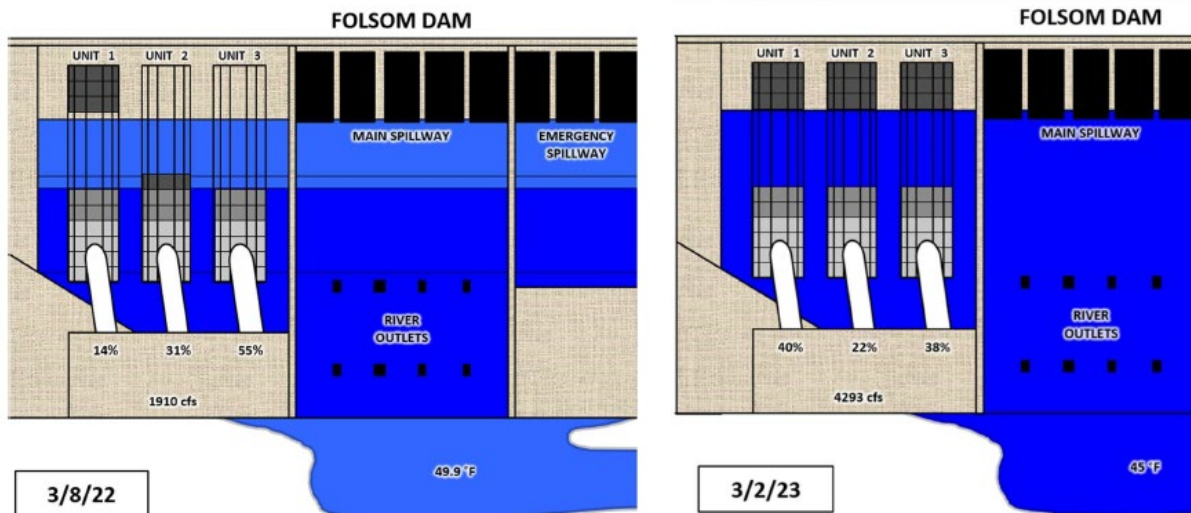
¹ AFD is a weighted average based on hourly flow values, including generation, bypass and spill



Isobath Plot 03/01-03/31 (Showing Spillway Crest, All Shutters Lowered (A), Top Shutter Raised (T), Middle Shutter Raised (M), Bottom Shutter Raised (B), and Lower River Outlet)



Graphic showing Folsom Dam on 02/02/23 with a temperature of 45.4 °F and 03/02/23 with a temperature of 45 °F

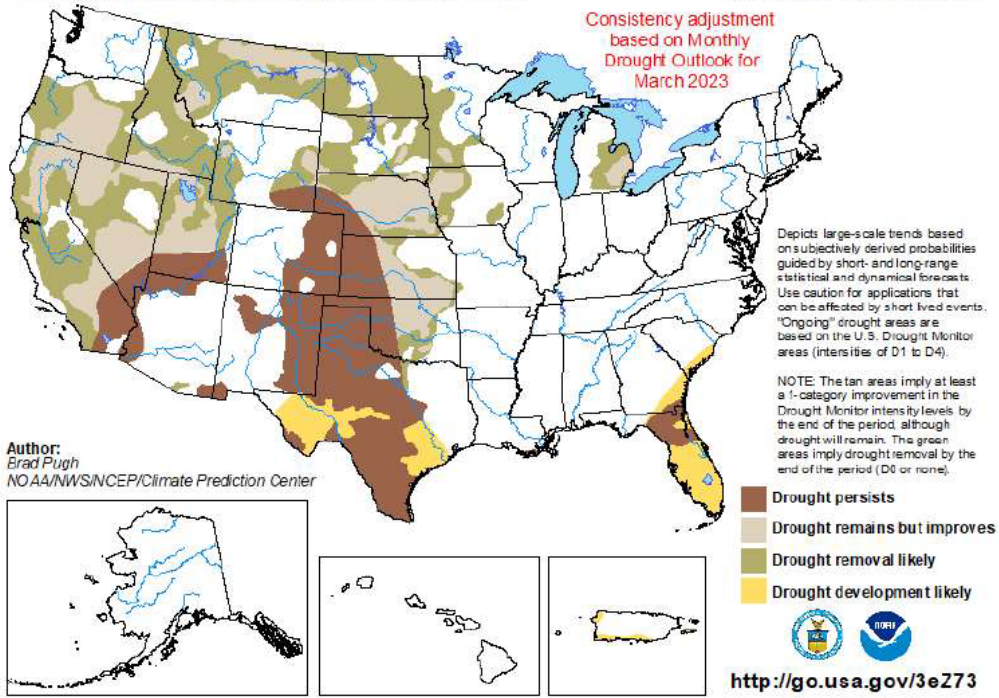


Graphic showing Folsom Dam on 03/08/22 with a temperature of 49.9 °F and 03/02/23 with a temperature of 45 °F

U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid for March 1 - May 31, 2023
Released February 28, 2023



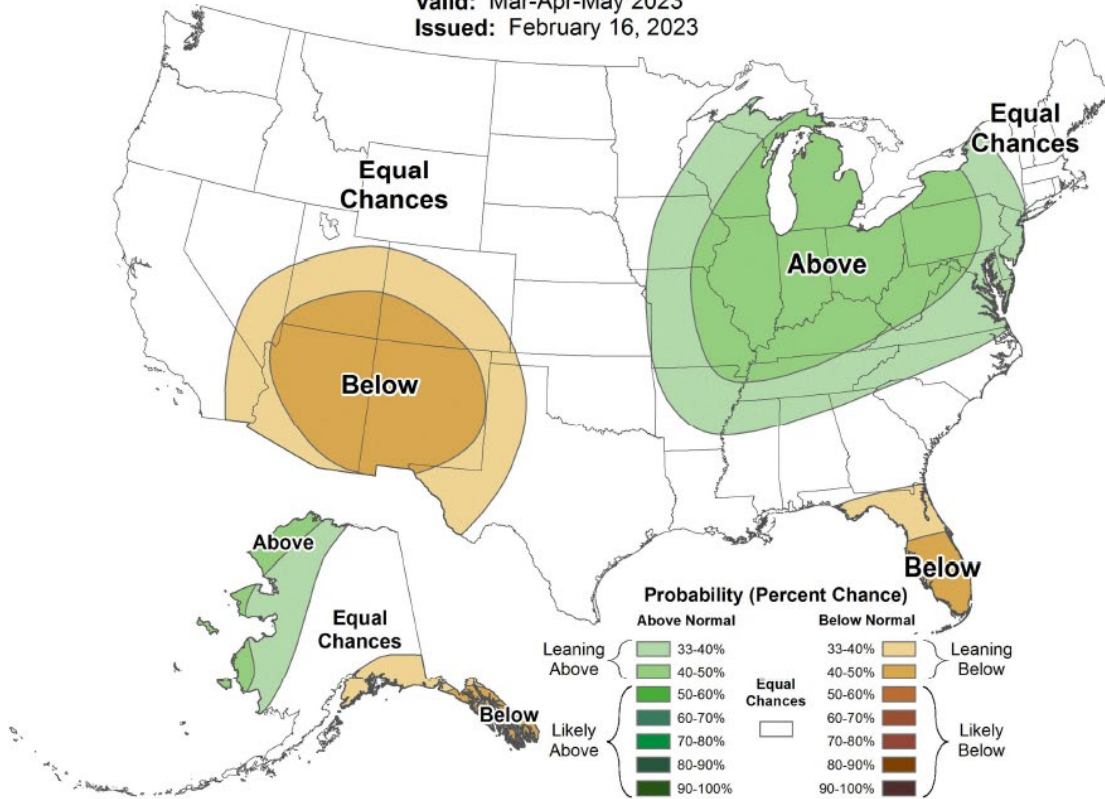
Map – U.S. Seasonal Drought Outlook, Drought Tendency During the Valid Period, Valid for March 1, 2023 – May 31, 2023; Released February 28, 2023



Seasonal Precipitation Outlook



Valid: Mar-Apr-May 2023
Issued: February 16, 2023



Map – Seasonal Precipitation Outlook; Valid Mar-Apr-May 2022-23; Issued February 16, 2023

American River Summary Conditions – March (On-going)

Releases are currently at 20,000 cfs

- March 7, 2023, from 4,000 cfs to 5,000 cfs
- March 9, 2023, from 5,000 cfs to 15,000 cfs
- March 10, 2023, from 15,000 cfs to 30,000 cfs
- March 15, 2023, from 30,000 cfs to 20,000 cfs

Temperature Management:

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

Folsom Shutter Configuration and Changes:

Scheduled to lower the top shutters once weather stabilizes.

American River 90% Outlook:

February 90% Exceedance

Storages

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

Facility	Feb	Mar	Apr	May	Jun	Jul	Aug
Folsom Storage	539	746	889	941	859	666	562
Folsom Elevation	421	444	458	463	455	436	424

Monthly River Release (TAF/cfs)

Facility	Feb	Mar	Apr	May	Jun	Jul	Aug
American TAF	222	154	178	277	239	292	193
American cfs	4000	2500	3000	4500	4020	4742	3142

March 90% Exceedance

Storages

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

Facility	Mar	Apr	May	Jun	Jul	Aug	Sep
Folsom Storage	752	866	961	924	708	489	447
Folsom Elevation	445	456	465	461	440	415	410

Monthly River Release (TAF/cfs)

Facility	Mar	Apr	May	Jun	Jul	Aug	Sep
American TAF	492	268	307	268	318	320	133
American cfs	8000	4500	5000	4506	5177	5203	2234

American River Base Flow 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)	1,326 cfs	Not applicable	Not applicable	1,326 cfs	1,462 cfs
November	May ARI ² (50% exceedance)	1,326 cfs	Not applicable	Not applicable	1,326 cfs	1,352 cfs
December	May ARI ² (50% exceedance)	1,326 cfs	Not applicable	Not applicable	1,326 cfs	1,928 cfs
January	January SRI (75% exceedance)	1,750 cfs	515 cfs	Not applicable	1, 750 cfs	14,060 cfs
February	February ARI (50% exceedance)	1,750 cfs	1, 750 cfs	1, 750 cfs	1, 750 cfs	4,021
March	March ARI (50% exceedance)	1,750 cfs	1,750 cfs	1, 750 cfs	1, 750 cfs	-
March	March ARI ³	1,750 cfs	1,750 cfs	1, 750 cfs	1, 750 cfs	-

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.

³ Due to critical CVP systems wide ops, MMR 90% exceedance was considered and implemented.