

Provisional Data Subject to Revision

JUVENILE SALMONID MONITORING

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

- No new salmonids have been observed so far this month
- Staff were not able to safely access the Upper Sunrise side channel

Month	Category	Nimbus Main Channel	Nimbus Side Channel	Upper Sunrise Main Channel	Upper Sunrise Side Channel	Lower Sunrise Main Channel	Lower Sunrise Side Channel**	Rossmoor Main Channel	Gristmill Main Channel	Riverbend Main Channel	Riverbend Side Channel	Watt Avenue Main Channel	Paradise Beach Main Channel
March	SH	1	*	7	NA	7	3	3	0	0	NA	1	0
March	CS	0	*	0	NA	8	76	8 (+1 UNID)	2	4	NA	0	0
April	SH	2	8	5	NA	3	33	0	0	0	NA	1	0
April	CS	1	160	2	NA	3	461	6	0	0	NA	0	0

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May	SH	1	2	** *	***	0	0	0	1	0	NA	0	3
May	CS	1	25	** *	***	1	0	0	0	0	NA	0	1
June	SH	0	0	0	0	0	0	1	0	0	0	0	0
June	CS	0	2	0	0	0	0	0	0	0	0	0	0
July	UNID	0	0	0	0	0	0	2	0	0	0	0	0
Aug	SH	***	***	0	***	***	***	0	0	***	***	0	***

Month	Category	Nimbus Main Channel	Nimbus Side Channel	Upper Sunrise Main Channel	Upper Sunrise Side Channel	Lower Sunrise Main Channel	Lower Sunrise Side Channel**	Rossmoor Main Channel	Gristmill Main Channel	Riverbend Main Channel	Riverbend Side Channel	Watt Avenue Main Channel	Paradise Beach Main Channel
Aug	CS	***	***	0	***	***	***	0	0	***	***	0	***

- NA: Side channel no longer present, salmonids were salvaged from isolated pools in the upper Sunrise side channel in March
- *: Not able to seine due to presence of steelhead redds
- **: Lower Sunrise Side Channel is not connected at the upstream end
- ***: Not seined at this time

PCWA MFP OPERATIONS OVERVIEW for American River Operations Group (Real Time Data as of August 17, 2022)

- ❖ **French Meadows Storage = 90,000 AF of 136,405 AF = 66% Capacity**
 - MFAR above FM Inflow (R24) = 7-day AVG ~3 cfs

- ❖ **Hell Hole Storage = 120,000 AF of 207,590 AF = 58% Capacity**
 - Five Lakes Inflow (R23) = 7-day AVG 10 cfs
 - Rubicon Inflow (R22) = 7-day AVG 8 cfs

- ❖ **Combined Storage (FM+HH) = 211,000 AF/342,590 AF = 62% Capacity; 94% of AVG YTD**
 - 14 Day Change = -19,000 AF
 - 7 Day Change = -12,000 AF

- ❖ **MFAR @ R11: 7-day AVG 600 cfs**

- ❖ **NFAR @ ARPS: 7-day AVG 700 cfs**

SMUD Upper American River Project Update

Conditions – Tuesday 16 August 2022

No precipitation in August in the UARP basin.

Runoff into storage reservoir basins is 95% of median to date.

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

- 325,606 acre feet (July 19 was 350,408 AF)
- 86% full
- 109% of historical average (16 August historical average: 299,234 AF)

Individual Reservoir Storage

- Loon Lake: 59,602 AF
- Ice House: 37,000 AF
- Union Valley: 229,004 AF

Last year (on August 16, 2021), storage was at 54% (205,508 AF). **Total capacity: 329,210 AF.*

Chili Bar releases into the South Fork American River

(Previous month) July 2022 releases:

- Daily average flow: 675 cfs
- Total releases: 41,504 AF

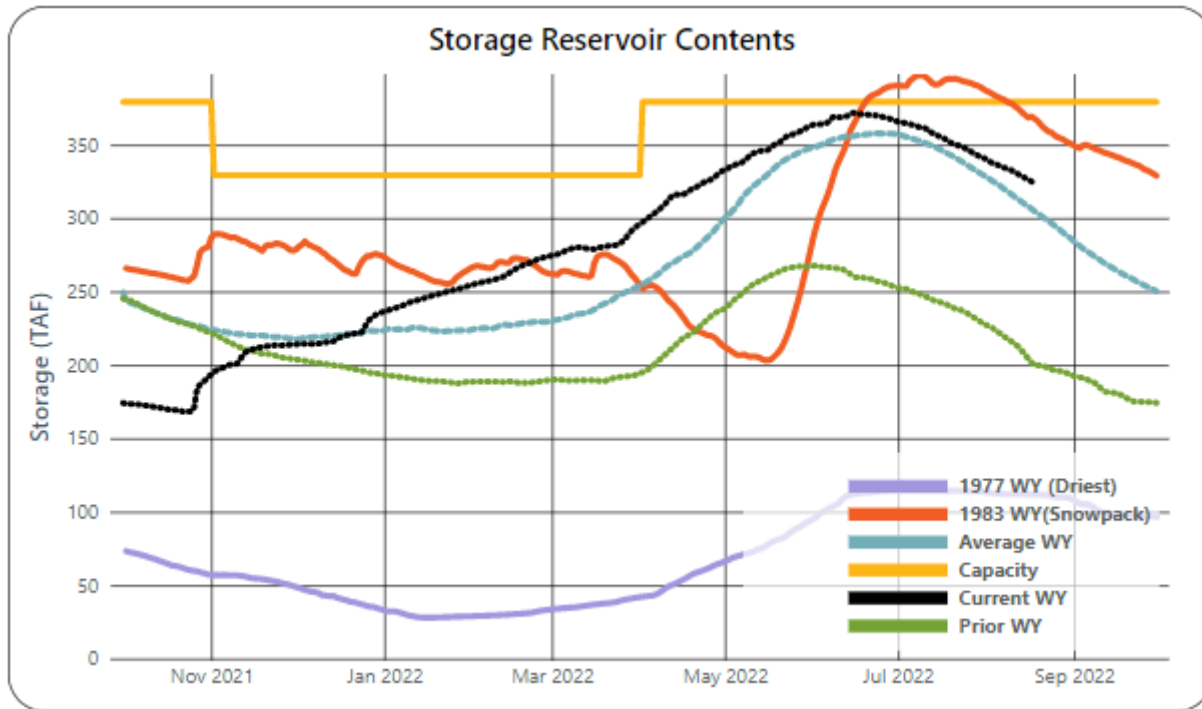
(Current month) August 2022 releases (August 1-15)

- Daily average flow so far: 618 cfs
- Total releases so far: 18,382 AF

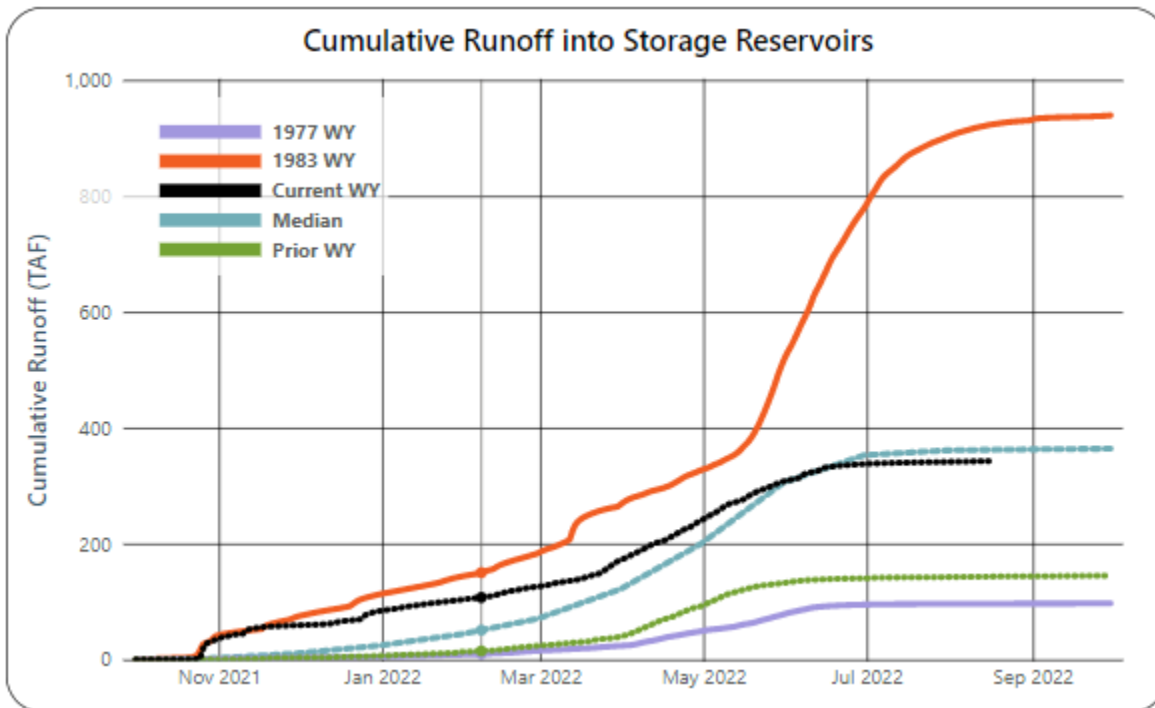
South Fork American River Natural Runoff Forecast (in cfs, daily average forecasted flow, forecast 2022-08-16) (Figure 1)

BASIN	Fri Aug 19	20-Aug	21-Aug	22-Aug	23-Aug	24-Aug
SFA above Slab	86	79	71	64	56	49
Slab Creek Reservoir	70	70	71	71	72	72
Combined South Fork	156	149	142	135	128	121

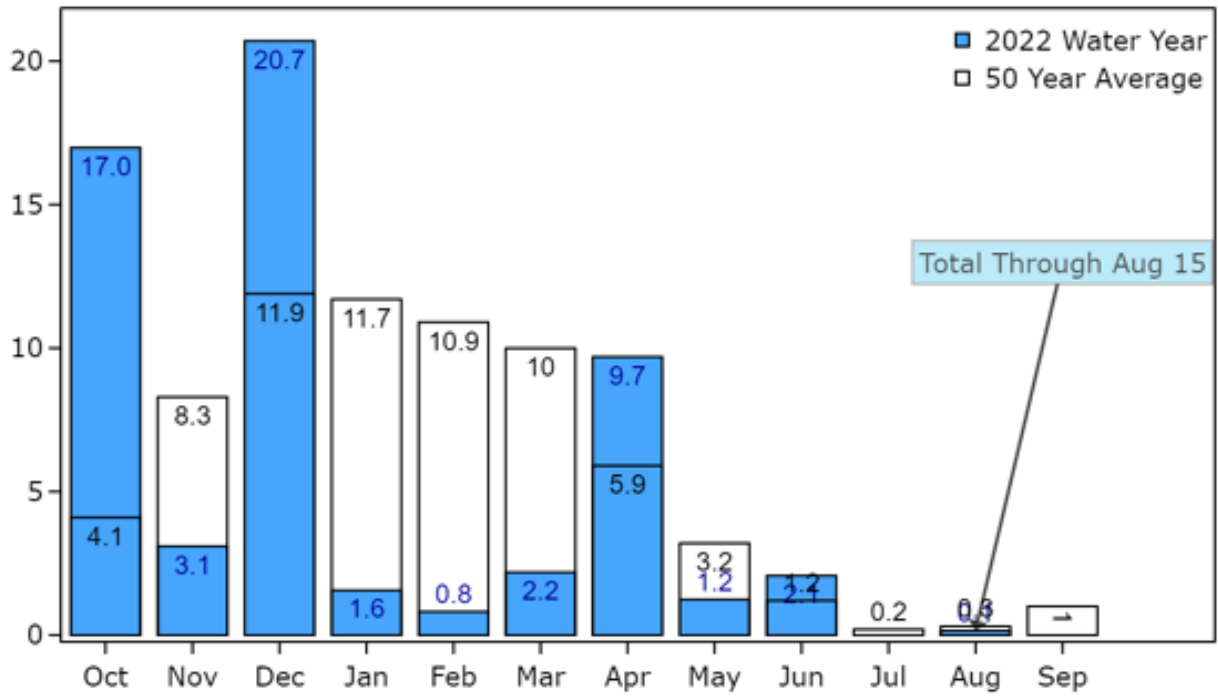
August 16, 2022 reservoir storage: (Figure 2)



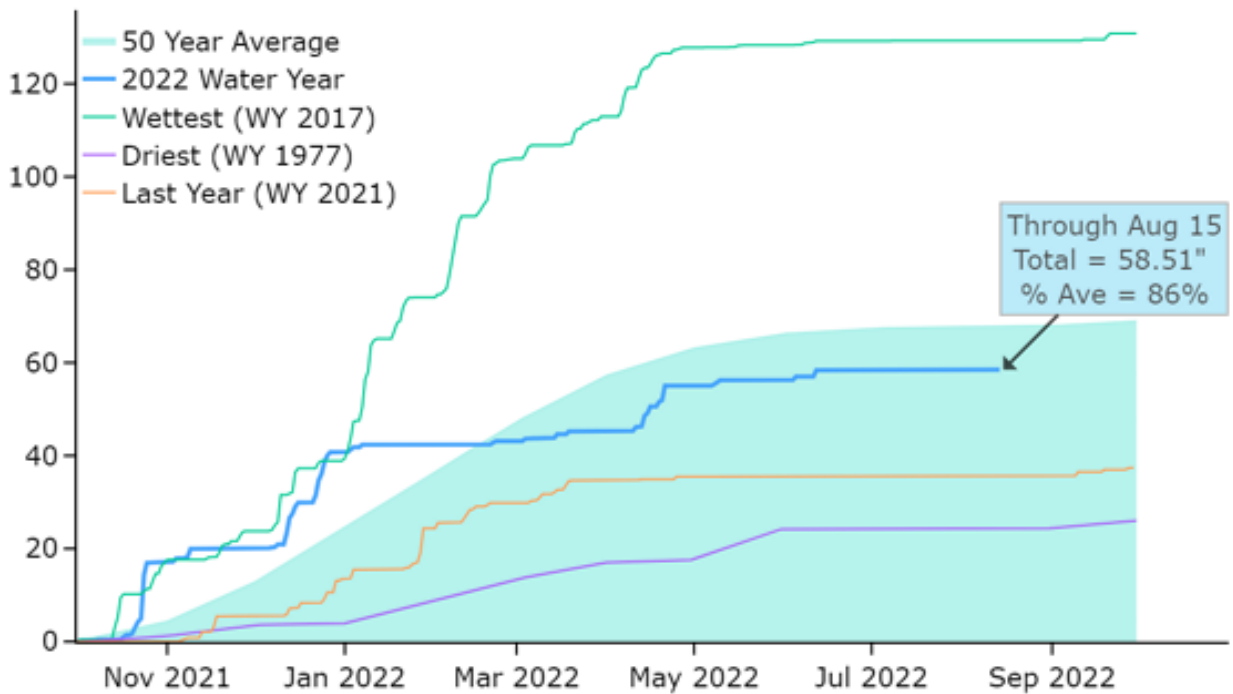
August 16, 2022 runoff into SMUD storage: (Figure 3)



Lake Spaulding Precipitation: Water Year 2022



Lake Spaulding Precipitation: Water Year 2022



UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. BUREAU OF RECLAMATION-CENTRAL VALLEY PROJECT-CALIFORNIA
DAILY CVP WATER SUPPLY REPORT

AUGUST 16, 2022

RUN DATE: AUGUST 17, 2022

TABLE 1. RESERVOIR RELEASES IN CUBIC FEET/SECOND

RESERVOIR	DAM	WY 2021	WY 2022	15 YR MEDIAN
TRINITY	LEWISTON	455	452	453
SACRAMENTO	KESWICK	8,550	4,608	10,036
FEATHER	OROVILLE (SWP)	1,750	3,000	3,000
AMERICAN	NIMBUS	1,005	3,213	2,745
STANISLAUS	GOODWIN	735	255	255
SAN JOAQUIN	FRIANT	264	0	353

TABLE 2. STORAGE IN MAJOR RESERVOIRS IN THOUSANDS OF ACRE-FEET

RESEVOIR	CAPACITY	15 YR AVG	WY 2021	WY 2022	% O 15 YR AVG
TRINITY	2,448	1,429	920	637	45
SHASTA	4,552	2,604	1,317	1,632	63
FOLSOM	977	522	236	507	97
NEWMLEONES	2,420	1,285	948	671	52
FED. SAN LUIS	966	240	-15	168	70
TOTAL NORTH CVP	11,363	6,080	3,406	3,615	59
MILLERTON	520	291	225	0	0
OROVILLE (SWP)	3,538	1,827	824	1,367	75

TABLE 3. ACCUMULATED INFLOW FOR WATER YEAR TO DATE IN THOUSANDS OF ACRE-FEET

RESERVOIR	CURRENT WY 2022	WY 1997	WY 1983	15 YR AVG	% O 15 YR AVG
TRINITY	481	201	2,831	999	48
SHASTA	2,703	2,293	10,366	4,397	61
FOLSOM	1,648	318	6,307	2,298	72
NEW MELONES	536	N/A	2,666	902	59
MILLERTON	821	300	4,384	1,366	60

TABLE 4. ACCUMULATED PRECIPITATION FOR WATER YEAR TO DATE IN INCHES

RESERVOIR	CURRENT WY 2022	WY 1977	WY 1983	AVG (IN YRS)	% OF AVG	LAST 24 HRS
TRINITY AT FISH HATCHERY	18.92	12.11	55.19	30.95 (60)	61	0.00
SACRAMENTO AT SHASTA DAM	41.35	17.42	112.58	60.32 (65)	69	0.00
AMERICAN AT BLUE CANYON	64.11	15.64	103.88	65.21 (47)	98	0.00
STANISLAUS AT NEW MELONES	19.62	N/A	45.33	26.92 (44)	73	0.00
SAN JOAQUIN AT HUNTINGTON LK	24.78	17.20	82.00	40.56 (47)	61	0.00

UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. BUREAU OF RECLAMATION-CENTRAL VALLEY PROJECT-CALIFORNIA

AUGUST 2022

FOLSOM LAKE DAILY OPERATIONS

RUN DATE: AUGUST 17, 2022

Day	ELEV	Storage In Lake (1000 Acre-Feet)	Storage Change (1000 Acre-Feet)	Computed Inflow C.F.S.	Power	Release C.F.S. River Spill	Outlet	Pumping Plant	Evaporation-C.F.S.	Evaporation-Inches	Precip. Inches
N/A	N/A	591.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	426.85	585.9	-5.3	1,700	4,163	0	0	176	47	.16	.00
2	426.12	579.5	-6.3	1,531	4,469	0	0	181	75	.26	.00
3	425.45	573.8	-5.8	1,575	4,174	0	0	192	121	.42	.00
4	424.87	568.8	-5.0	1,562	3,791	0	0	188	95	.33	.00
5	424.30	563.9	-4.9	1,439	3,646	0	0	174	71	.25	.00
6	423.78	559.5	-4.4	1,817	3,802	0	0	181	63	.22	.00
7	423.06	553.4	-6.1	1,426	4,243	0	0	185	68	.24	.00
8	422.38	547.7	-5.7	1,373	3,974	6	0	181	87	.31	.00
9	421.86	543.4	-4.3	1,565	3,494	9	0	176	78	.28	.00
10	421.13	537.3	-6.1	1,274	4,066	5	0	181	78	.28	.00
11	420.41	531.4	-5.9	1,247	3,969	5	0	177	89	.32	.00
12	419.75	525.9	-5.4	1,221	3,675	5	0	185	85	.31	.00
13	419.17	521.2	-4.7	1,409	3,509	4	0	192	88	.32	.00
14	418.62	516.8	-4.5	1,499	3,465	0	0	188	93	.34	.00
15	418.03	512.0	-4.8	1,241	3,343	0	0	187	114	.42	.00
16	417.40	507.0	-5.0	1,169	3,417	2	0	188	105	.39	.00
TOTALS	N/A	N/A	-84.2	23,048	61,200	36	0	2,932	1,357	4.85	.00
ACRE- FEET	N/A	N/A	-84.200	45,716	121,390	71	0	5,816	2,692	N/A	N/A

COMMENTS:

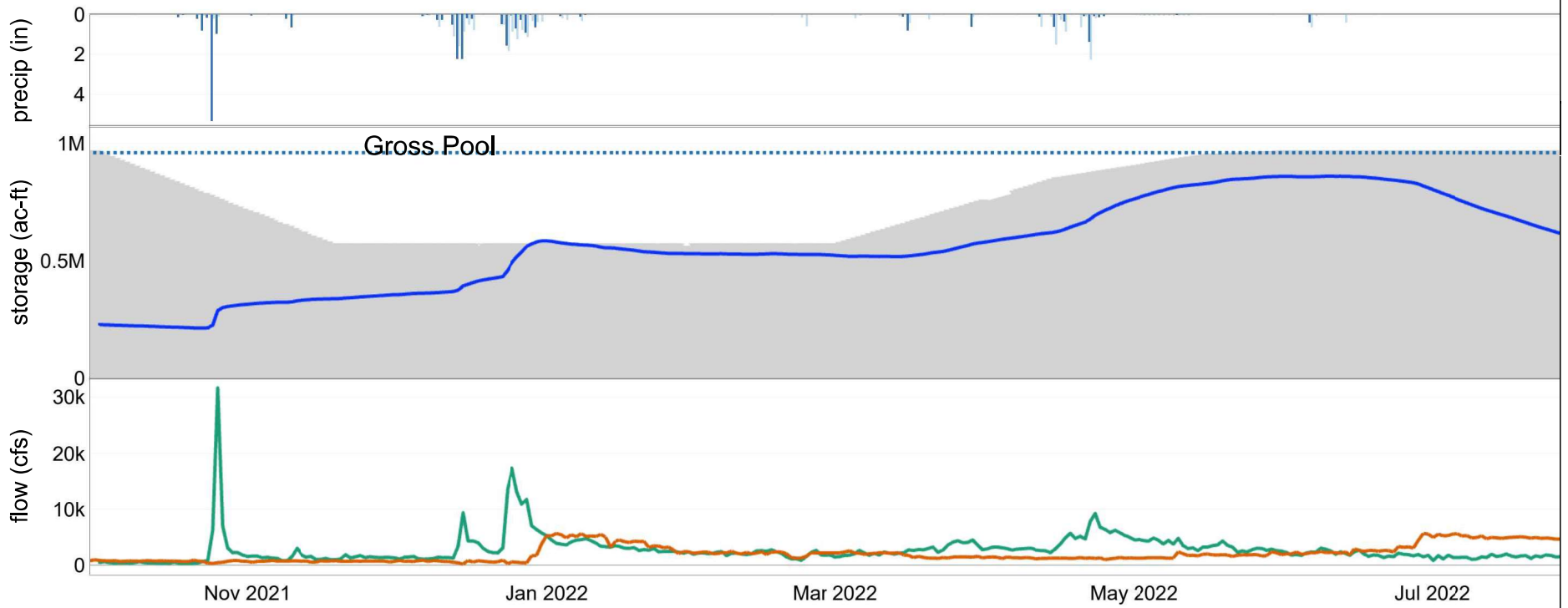
* COMPUTED INFLOW IS THE SUM OF CHANGE IN STORAGE, RELEASES, PUMPING AND EVAPORATION.

SUMMARY

RELEASE (ACRE-FEET)	N/A
POWER	121,390
SPILL	71
PUMPING PLANT	5,816
OUTLET	0
TOTAL	127,277

TIME	PRECIPITATION
THIS MONTH	.00
JULY 1, 2021 TO DATE	.00
OCT 1, 2021 TO DATE	23.95

Folsom Dam & Lake - American River Basin 2022-08-17T07:16:46-0700



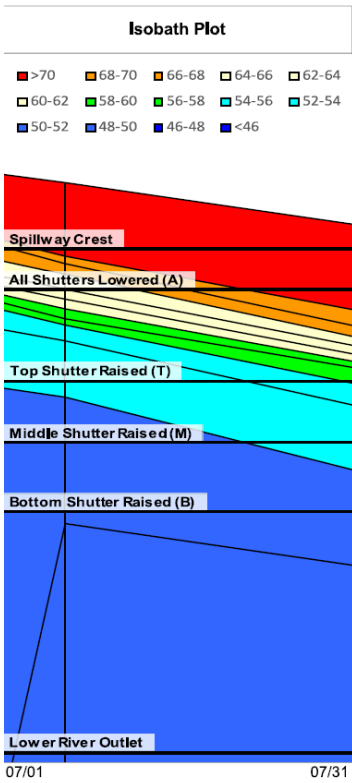


Figure 1. Isobath Plot 07/01- 07/31.

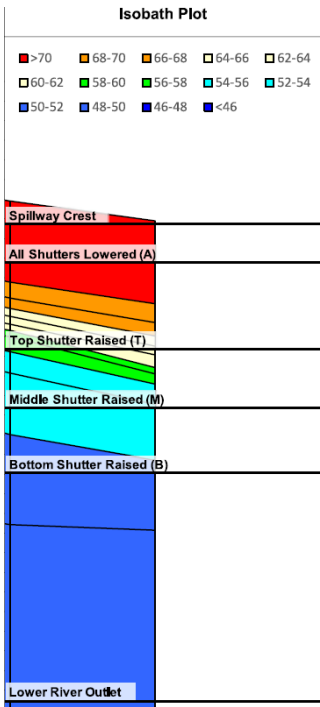


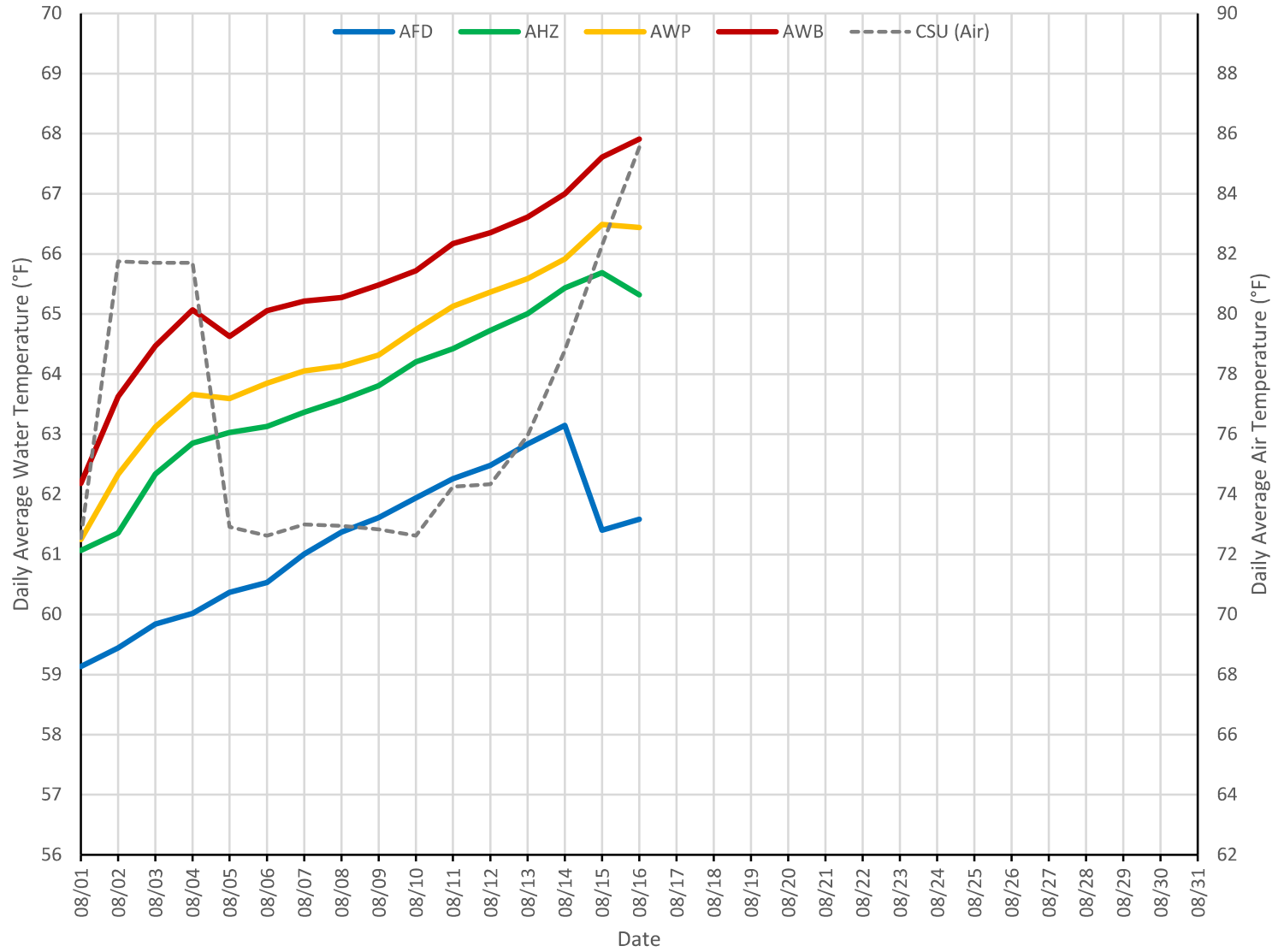
Figure 2. Isobath Plot 08/01- 08/31

Table 5. Isobath Plot 07/01- 07/31

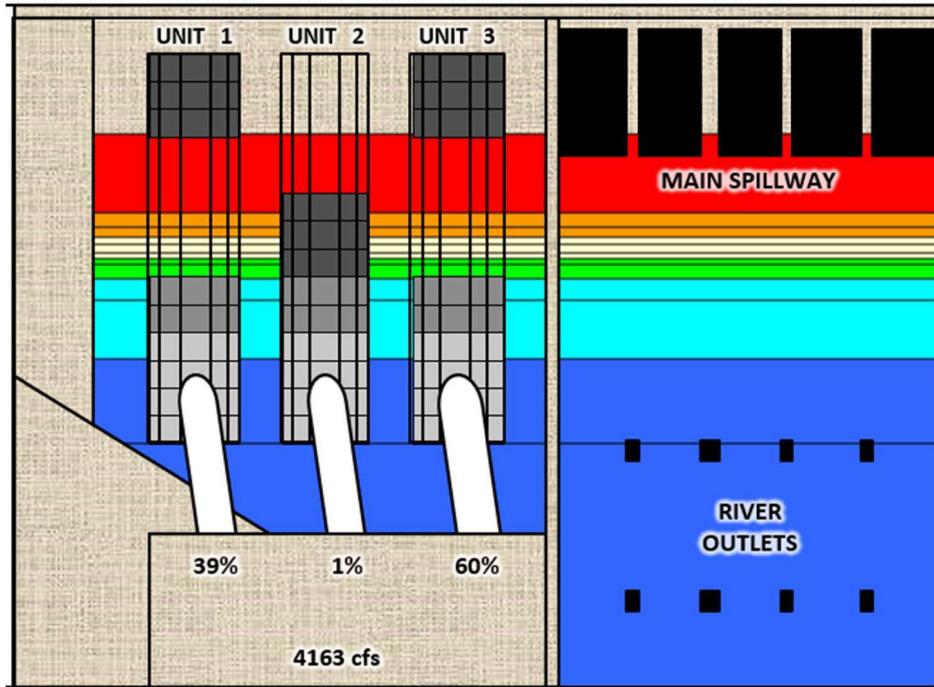
Mean Daily Temperatures (°F) = MDT, Unit Shutter Position = USP, Load Percentage = LP, A= All Shutters Lowered, B= Bottom Shutter Raised, and T= Top Shutter Raised

Date	MDT Water NFA	MDT Water ARP	MDT Water AFD	MDT Water AFO	MDT Water AWP	MDT Water AWB	MDT Air CSU	Release (CFS) Nimbus	Storage (TAF) Folsom	USP Unit 1	LP Unit 1	USP Unit 2	LP Unit 2	USP Unit 3	LP Unit 3
Jun	65.6	64.6	56.7	60.3	62.0	63.6	74.9	2516	N/A	N/A	N/A	N/A	N/A	N/A	N/A
07/01	66.3	68.0	59.8	61.9	62.4	63.4	68.0	4999	799	A	49	O	0	A	50
07/02	64.9	67.0	59.7	62.2	62.5	63.5	63.9	5004	791	A	50	O	0	A	50
07/03	64.9	65.9	60.3	61.9	62.2	63.1	64.1	5002	783	A	50	O	0	A	50
07/04	65.4	66.0	60.7	62.3	62.7	63.6	69.6	4994	775	A	50	O	0	A	50
07/05	66.5	68.2	60.8	63.1	63.7	64.8	74.2	4984	763	A	50	O	0	A	50
07/06	66.9	69.1	60.9	63.4	63.9	64.9	69.3	4981	744	A	49	O	0	A	51
07/07	67.3	69.5	61.6	63.3	64.0	65.0	70.9	4544	747	A	50	O	1	A	50
07/08	68.0	69.0	61.8	64.1	64.6	65.6	75.3	4466	740	A	50	O	1	A	49
07/09	66.2	68.7	61.8	64.4	65.0	66.0	73.5	4472	734	A	50	O	1	A	50
07/10	65.4	68.0	62.5	64.6	65.1	66.2	79.8	4465	717	A	50	O	1	A	50
07/11	64.6	68.5	60.8	65.0	65.8	67.0	84.2	4457	720	A	57	O	1	T	42
07/12	62.0	69.3	59.3	63.6	64.7	66.3	77.0	4460	714	A	57	O	1	T	42
07/13	61.4	69.5	59.2	62.4	63.0	N/A	72.1	4454	707	A	53	O	1	T	46
07/14	62.6	69.9	59.7	62.1	62.8	N/A	75.5	4459	701	A	55	O	1	T	45
07/15	61.4	69.3	59.8	62.5	63.0	N/A	76.0	4457	695	A	53	O	1	T	46
07/16	62.8	68.6	60.1	62.3	63.1	64.5	80.6	4448	691	A	54	O	1	T	46
07/17	66.3	68.0	60.3	62.5	63.3	64.6	82.8	4496	691	A	54	O	1	T	46
07/18	65.2	68.0	60.4	63.0	63.7	64.9	82.2	4502	673	A	52	O	1	T	48
07/19	63.9	68.5	60.9	63.1	63.7	64.9	79.5	4474	666	A	54	O	1	T	45
07/20	63.2	69.1	61.3	63.3	63.9	65.1	77.8	4483	659	A	57	O	1	T	42
07/21	63.5	69.8	61.3	63.7	64.2	65.3	75.8	4499	652	A	55	O	1	T	44
07/22	63.1	68.8	61.6	63.7	64.4	65.6	77.6	4276	645	A	56	O	1	T	43
07/23	62.4	67.8	61.8	64.0	64.5	65.5	75.3	4259	639	A	57	O	1	T	43
07/24	62.0	67.0	62.3	64.2	64.8	66.0	76.2	4235	633	A	57	O	1	T	42
07/25	62.0	67.7	62.4	64.6	65.1	66.1	72.0	4232	626	A	60	O	1	T	39
07/26	63.1	68.4	62.5	64.6	64.9	65.9	73.2	4224	620	A	60	O	1	T	39
07/27	61.8	68.9	62.6	64.7	65.2	66.3	73.8	4232	613	A	58	O	1	T	41
07/28	62.5	70.7	62.6	64.9	65.5	66.6	73.2	4035	607	A	57	O	1	T	42
07/29	63.4	69.5	59.5	65.1	65.6	66.7	73.3	4018	602	T	39	O	1	T	60
07/30	61.9	69.1	58.4	62.7	64.1	65.8	72.5	4012	596	T	41	O	1	T	58

American River Daily Average Water and Air Temperatures (2021)



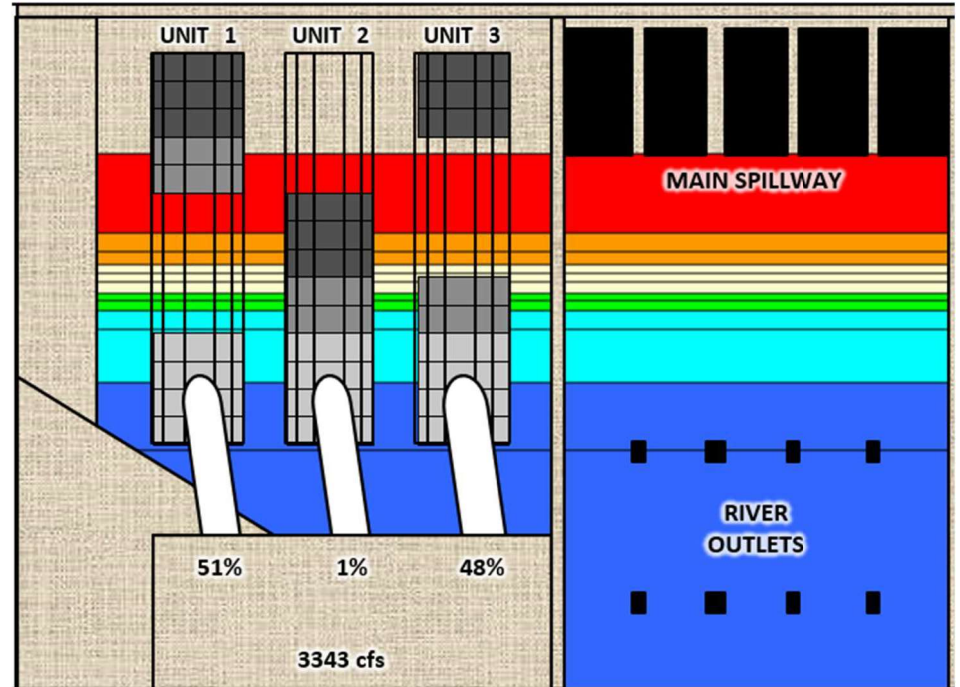
FOLSOM DAM



8/1/22

59.1 °F

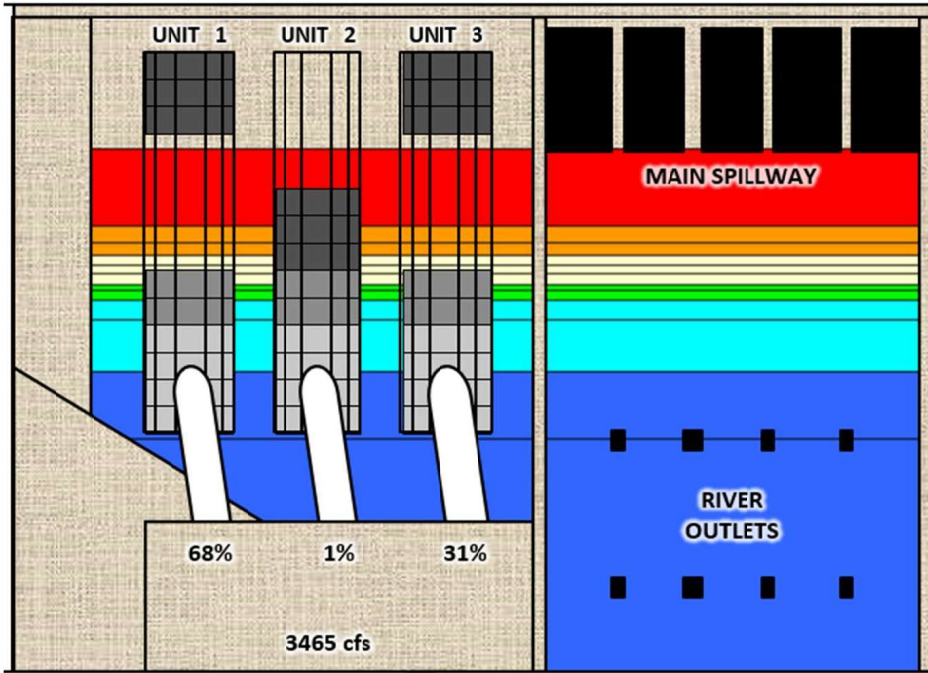
FOLSOM DAM



8/15/22

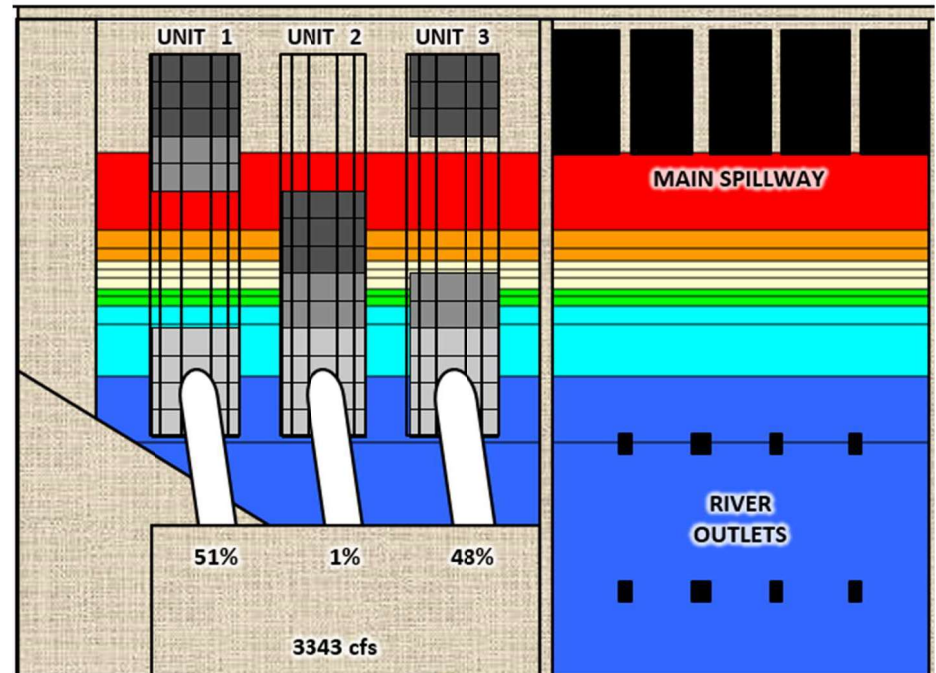
61.4 °F

FOLSOM DAM



8/14/22

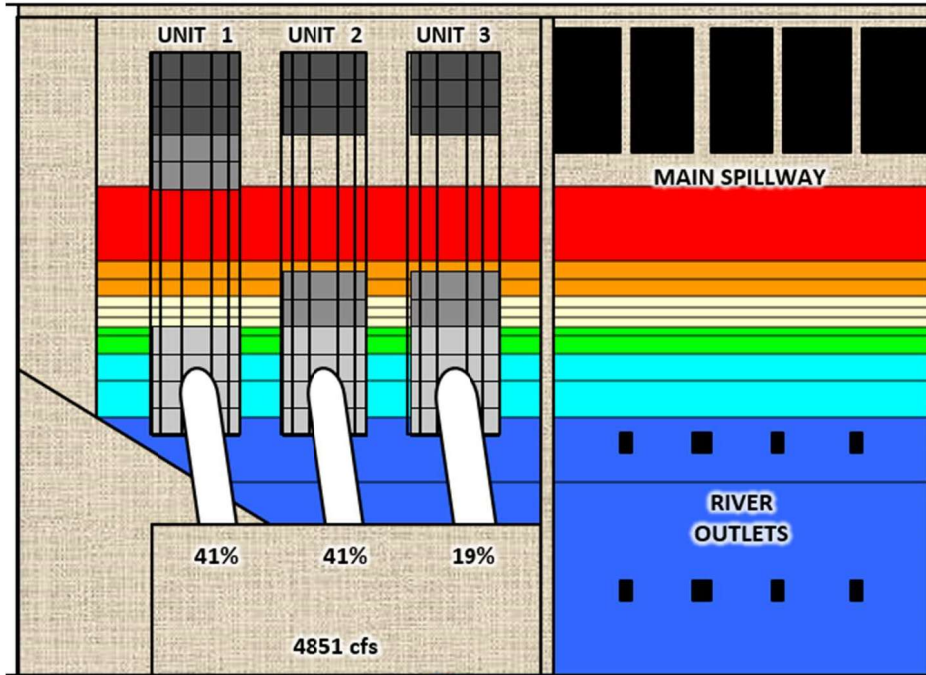
FOLSOM DAM



8/15/22

Results after the mid sets of shutters were raised ~ 1.7 degree cooler

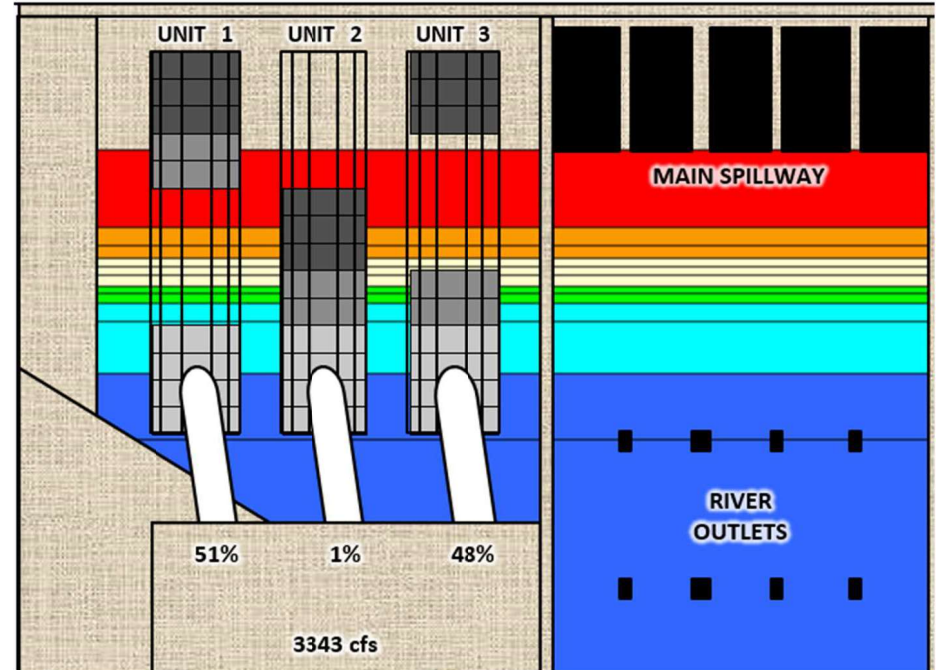
FOLSOM DAM



8/15/16

Haz 67.7 degree

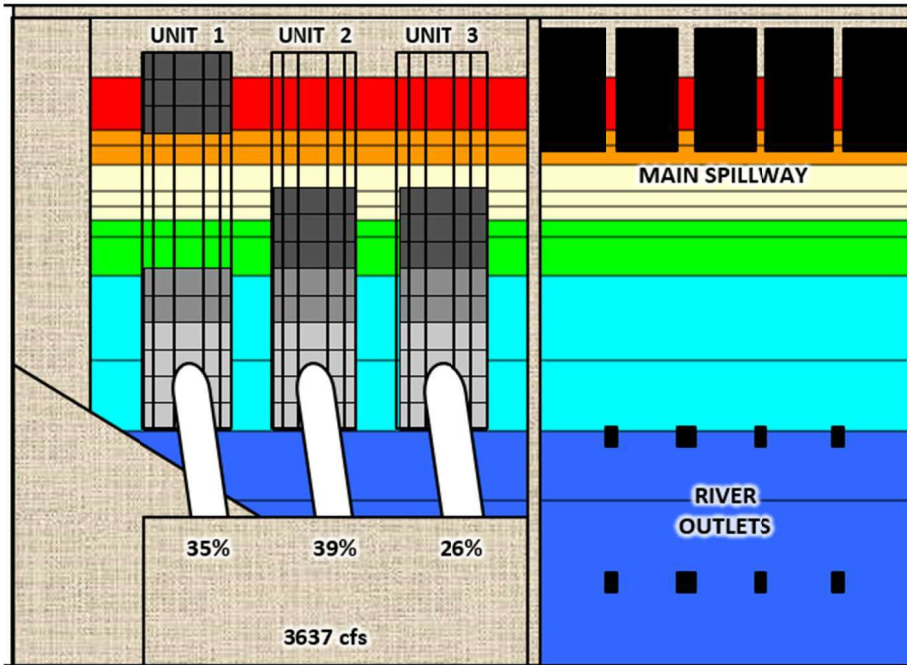
FOLSOM DAM



8/15/22

Haz 65.7 degree

FOLSOM DAM

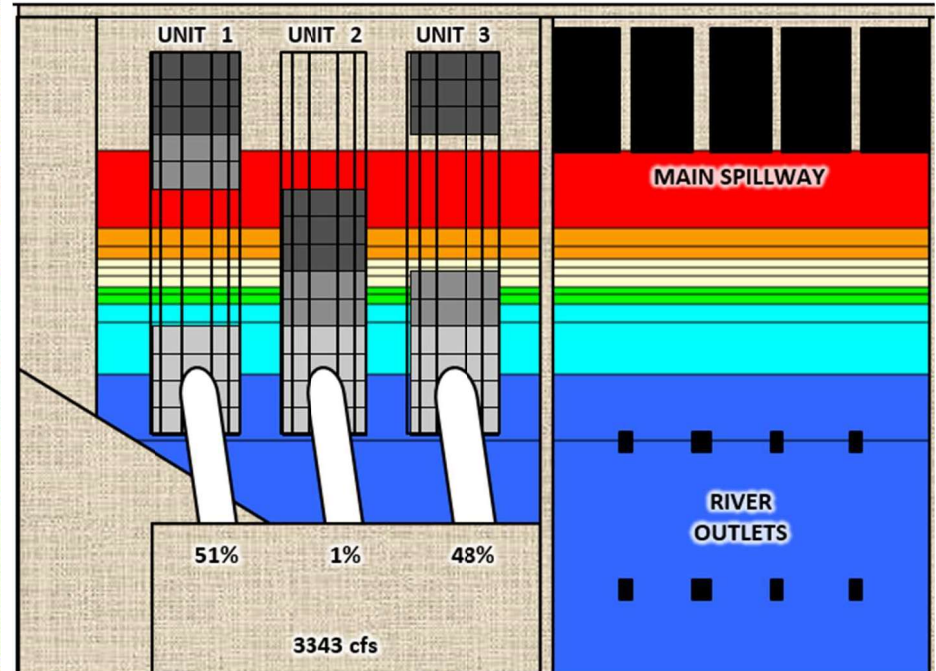


8/15/17

Haz 61.8 degree

Air temp 67.5

FOLSOM DAM



8/15/22

Haz 65.7 degree

Air temp 82.3 degree

American River Summary Conditions - August (On-going)

- Releases are currently at 3,250 cfs
 - July 22, 2022, from 4,500 cfs to 4,250 cfs
 - July 28, 2022, from 4,250 to 4,000 cfs
 - August 4, 2022, from 4,000 to 3,750 cfs
 - August 11, 2022, from 3,750 to 3,500 cfs
 - August 15, 2022, from 3,500 to 3,250 cfs

Temperature Management:

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

Folsom Shutter Configuration and Changes:

Drawing water from Units 1 and 3 blending. Unit 2 - Outage thru September

American River 90% Outlook:

June 90% Exceedance

Storages

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

Table 7. Federal End of the Month Storage/Elevation (TAF/Feet)

Reservoir	End of 2021 Carryover Storage Volume	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Folsom Storage	865	784	560	363	303	264	230	203
Folsom Elevation	N/A	448	424	397	388	381	374	368

Table 8. Monthly River Release (TAF/cfs)

Reservoir	Jun	Jul	Aug	Sep	Oct	Nov	Dec
American TAF	169	280	258	113	80	77	80
American cfs	2838	4562	4203	1904	1300	1300	1300

American River Base Flow Table

Month	Index Used for Index-based MRR	Index Based MRR	RDPA-based MRR for fall-run Chinook salmon (applicable in January and February)	RDPA-based MRR for steelhead (applicable February through May)	Controlling MRR	Actual Average Monthly Nimbus release ¹
October	May ARI ² (50% exceedance)	515 cfs	N/A	N/A	515 cfs	627 cfs
November	May ARI ² (50% exceedance)	515 cfs	N/A	N/A	515 cfs	583 cfs
December	May ARI ² (50% exceedance)	515 cfs	N/A	N/A	515 cfs	890 cfs
January	January SRI (75% exceedance)	1750 cfs	515 cfs	N/A	515 cfs	3787 cfs
February	February ARI (50% exceedance)	1750 cfs	1750 cfs	500 cfs	1750 cfs	2047 cfs
March	March ARI (50% exceedance)	1,7333 cfs	1, 215 cfs	500 cfs	1, 197 cfs	1620 cfs
March	March ARI ³ (90% exceedance)	1,197 cfs	1, 215 cfs	500 cfs	1, 197 cfs	1620 cfs
April	April ARI (50% exceedance)	1142 cfs	Not applicable	1215 cfs	1215 cfs Operating to 1000 cfs) ³	1037 cfs
April	April ARI ³ (90% exceedance)	1006 cfs	Not applicable	1215 cfs	1215 cfs Operating to 1000 cfs) ³	1037 cfs
May	May ARI (50% exceedance)	1270 cfs	Not applicable	1215 cfs	1270 cfs	1404 cfs
May	May ARI (90% exceedance)	1209 cfs	N/A	1215 cfs	1270 cfs	1404 cfs
June	May ARI ² (50% exceedance)	1269 cfs	Not applicable	Not applicable	1269 cfs	2516 cfs
Jul	May ARI ² (50% exceedance)	1702 cfs	Not applicable	Not applicable	1702 cfs	4487 cfs
Aug	May ARI ² (50% exceedance)	1702 cfs	Not applicable	Not applicable	1702 cfs	N/A

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

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

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 through December of the next water year unless there is an update to the ARI after May.

³ Due to critical CVP system wide ops, MRR 90% was considered and implemented.