



— BUREAU OF —
RECLAMATION

American River Group

1:30 PM – 3:30 PM

Conference Line: 1.415.594.5500 Access Code: 490-125-520#

Webinar: <https://join.me/kearnswest>

Thursday, May 21, 2020

Agenda

1. Introductions
2. Fisheries Update
 - a. CDFW
 - b. CFS
 - c. PSMFC
3. Operations Forecast
 - a. SMUD
 - b. PCWA
 - c. Central Valley Operations
4. Central Valley Operations
 - a. Temperature Management
 - b. Exceedance Forecast
5. Discussion
 - a. Potential Brown Bag Presentations
 - b. Other
6. Next Meeting: Thursday, June 18, 2020, 1:30-3:30pm



State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
North Central Region
1701 Nimbus Road
Rancho Cordova, CA 95670
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director



Nimbus Hatchery

Fall-run Chinook Salmon Releases

Planned Releases

Date	Location	CWT Code or mark	Fish/lb	Fork length (mm)	With Mark	Total Fish
5/20/20	San Pablo Bay at Mare Island	Ad-clip 06/20/55	46.5	90.25	145,387	581,992
5/21/20		Ad-clip 06/20/56, 06/09/92	60.25	84.5	152,989	612,400

Releases Since ARG April Meeting

Date	Location	CWT Code or mark	Fish/lb	Fork length (mm)	With Mark	Total Fish
4/22/20	Lower American River at Sunrise Boat Ramp	Ad-clip 06/20/51	55	89	200,050	801,058
5/5/20	San Pablo Bay at Mare Island	Ad-clip 06/20/55	55	89	114,990	579,965
5/6/20	Lower American River at Sunrise Boat Ramp	Ad-clip 06/09/52, 06/20/53	65	82	400,000	1,600,000

Lower American River 2020 Steelhead Spawning Survey Summary

Spawning Survey Summary

Table 1. Steelhead, Chinook salmon, Lamprey, unknown, and test redd counts during 2020 spawning surveys.

Dates	Steelhead	Chinook	Lamprey	Unknown	Test	Total
Jan 8-10	8	2	0	1	0	11
Jan 21-23	12	1	0	0	1	14
Feb 4-6	24	1	0	0	0	25
Feb 18-20	3	0	0	0	0	3
Mar 3-5	5	0	0	0	0	0
Mar 16-18	0	0	2	1	0	3
Mar 31-Apr 2	0	0	7	0	0	7
Apr 14-16	0	0	1	0	0	1

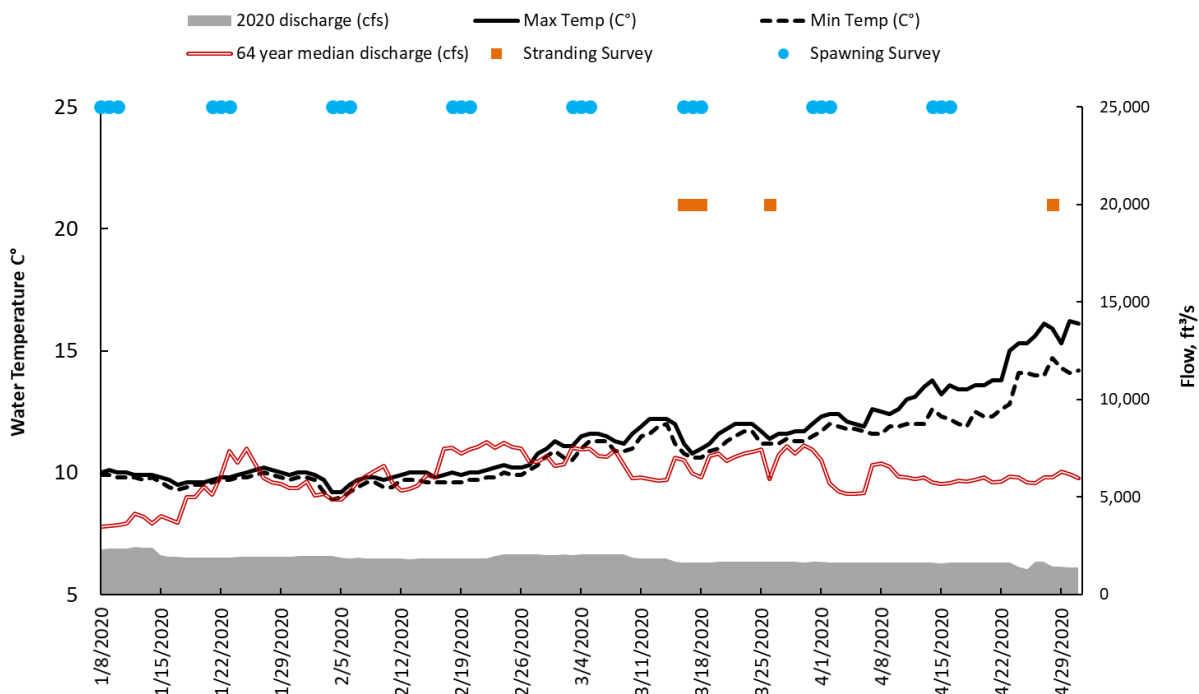


Figure 1. Fair Oaks gauge (USGS 11446500) flow and daily maximum and minimum water temperature from 8 January 2020 – 1 May 2020. Date range includes entire spawning and stranding season. For context, the 64 year median discharge from Fair Oaks gauge is shown as a red line. Timing of stranding and spawning survey dates are displayed across the top of the graph.

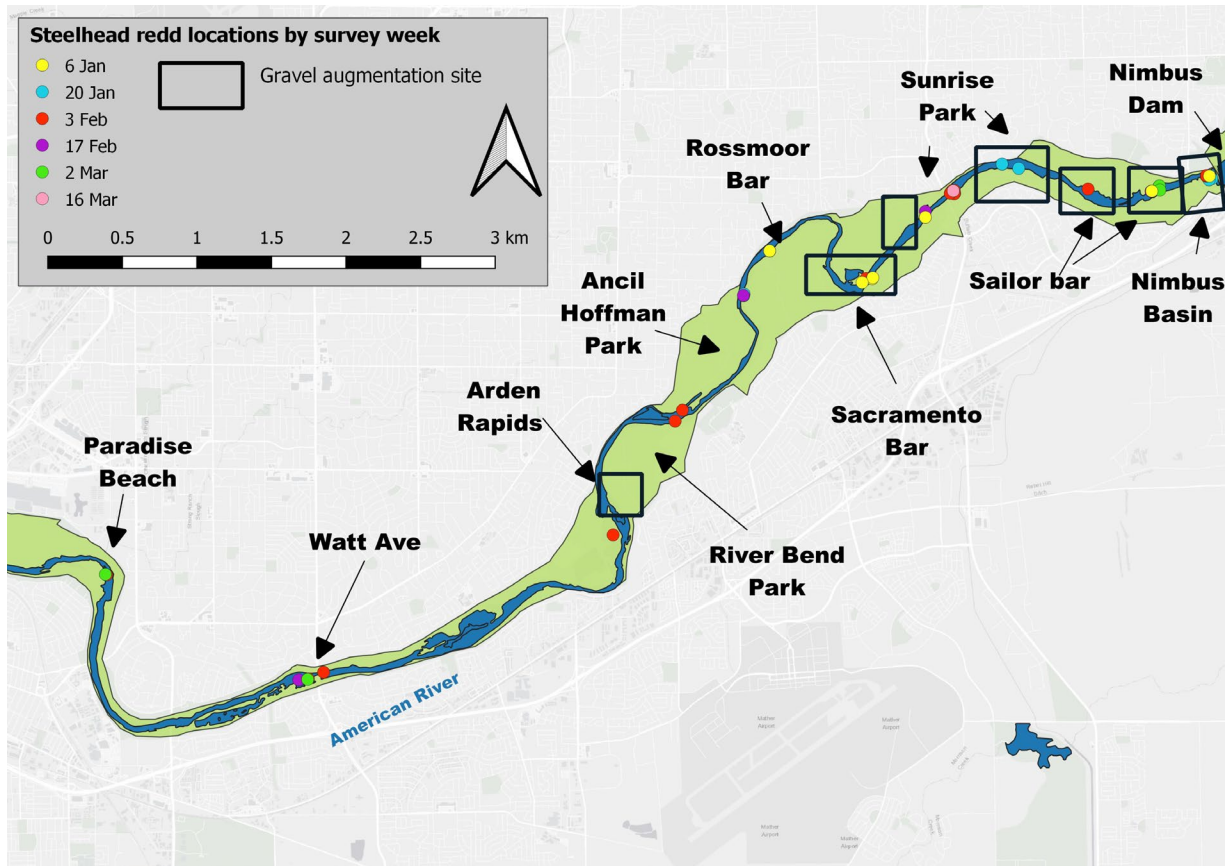


Figure 2. Lower American River steelhead redd distribution and timing in 2020.

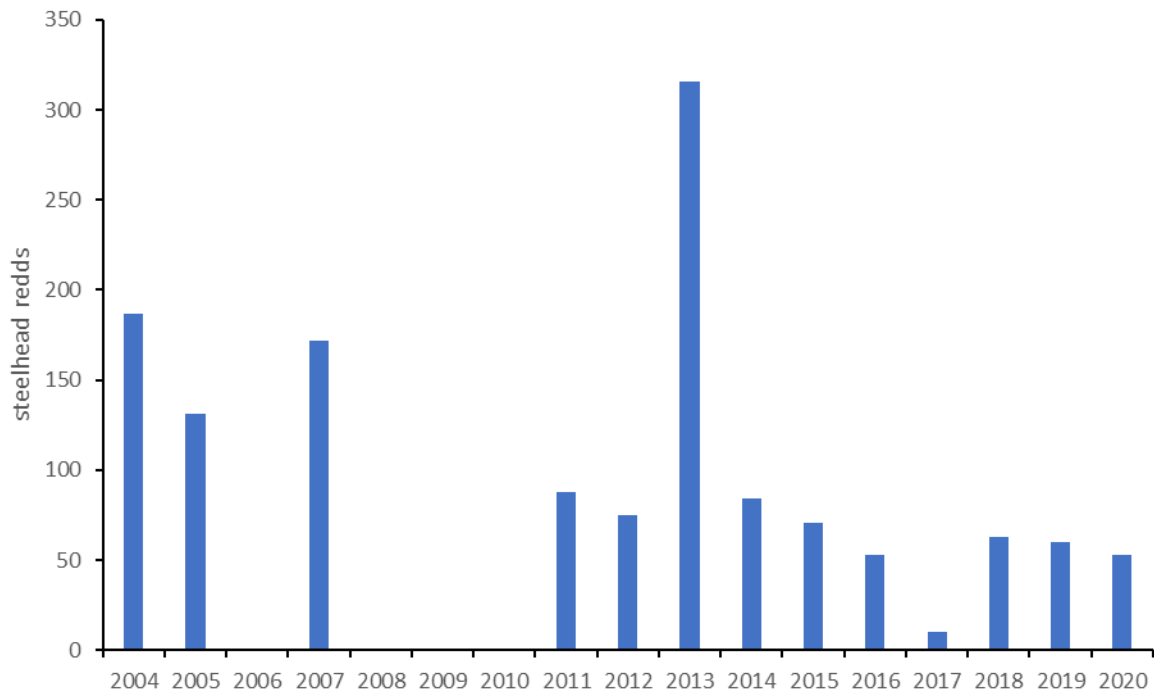


Figure 3. Total number of steelhead redds counted in 2003-2005, 2007, and 2011-2020.

Population Estimates

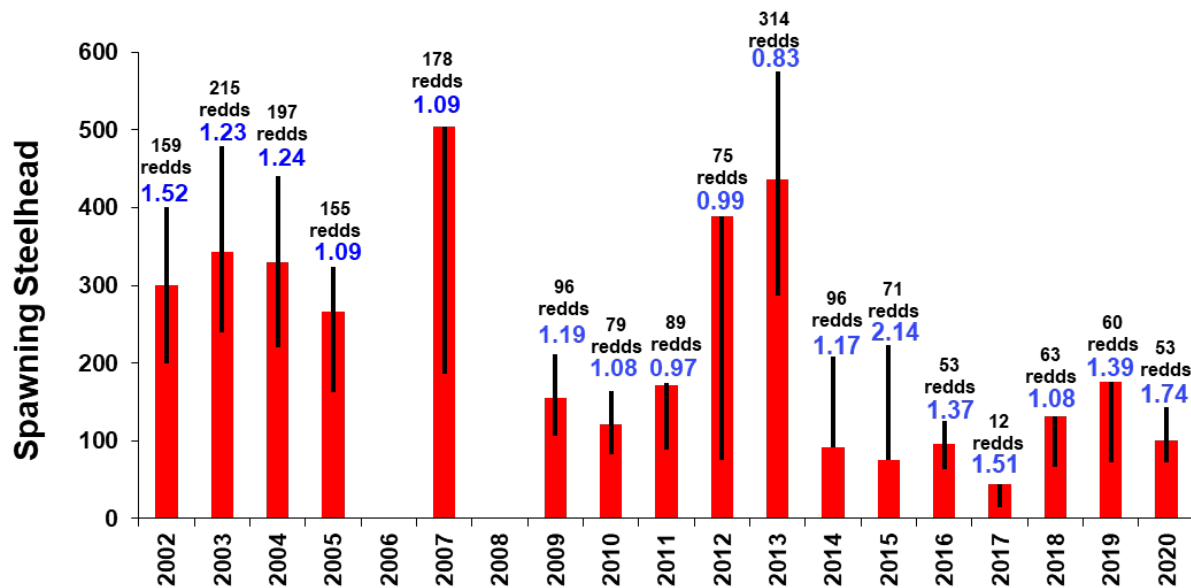


Figure 4. In-river steelhead spawner population estimates based on redd counts and spawning steelhead observations. Error estimates are the range of population estimates using the assumption of either 1 or 2 redds per female (see Table 10). Male to female ratio displayed in blue text above bars. Actual redds observed displayed in black text at bottom of bars. The 2009 and 2010 estimates were based on redd counts only. Note: surveys not conducted in 2006 or 2008. Data taken from CFS (2019).

Annual Stranding Summary

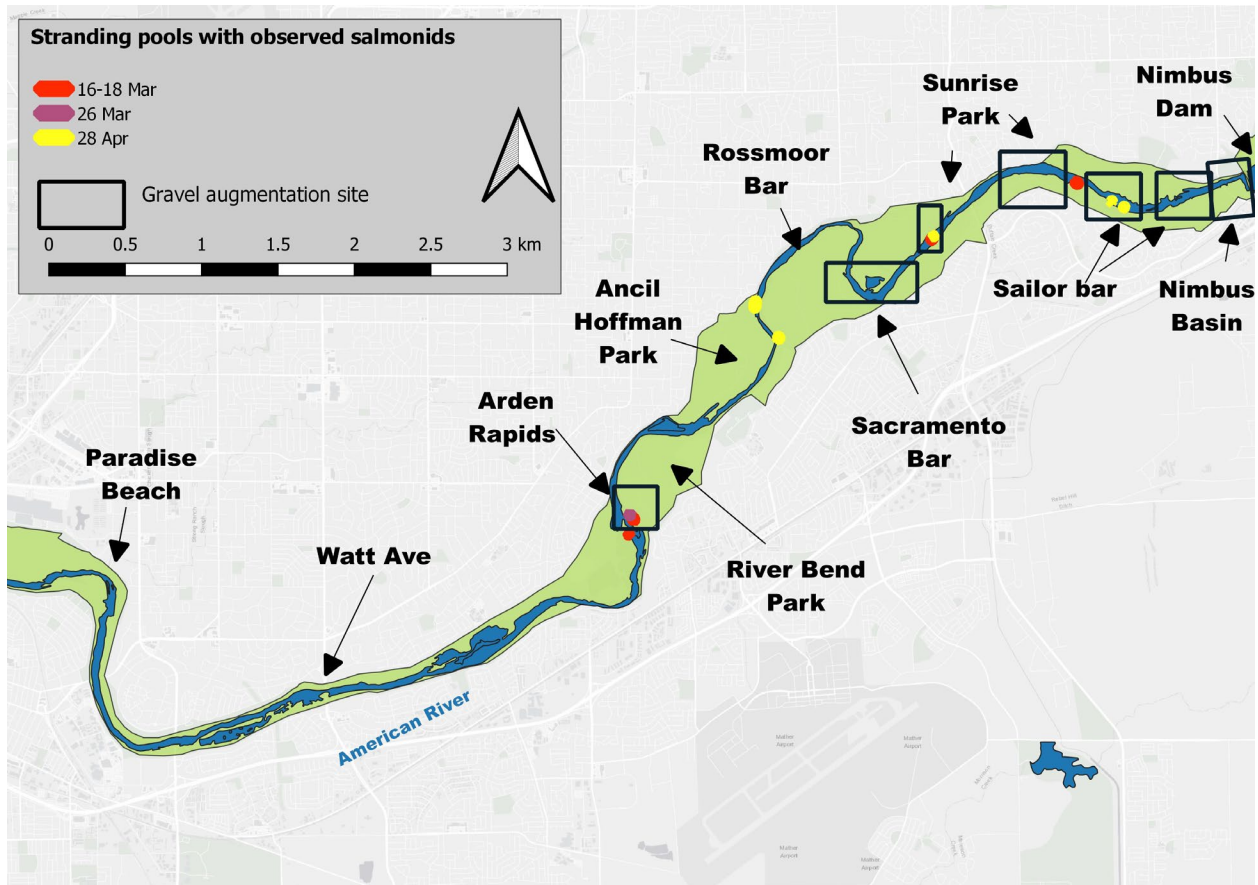


Figure 5. Locations of stranding areas on the Lower American identified 16-18 March, 26 March and 28 April 2020

Table 2. Summary of stranded juvenile salmonids on the Lower American River observed 16 February – 1 May 2020.

Dates	Location (river mile)	Sailor Bar (22)	Lower Sailor Bar Side Channel (21)	Upper Sunrise above side channel (21)	Above Lower Sunrise Side Channel (19)	Lower Sunrise side channel (19)	Below Rossmoor/Ancil Hoffman top (16)	Across Ancil Hoffman (16)	Lower Riverbend Side Channel (13)	Below Riverbend (12)
16 – 18 Mar & 26 Mar	total area (m ²)	0	0	527	0	43	0	0	777	8
	total stranded salmonids (steelhead)	0	0	3597 (23)	0	201 (3)	0	0	2630 (5)	2
28 April	total area (m ²)	20	7	0	3	0	950	350	0	0
	total stranded salmonids (steelhead)	3 (1)	3	0	16 (3)	0	2385	235	0	0

Table 3. Summary of environmental data in the observed stranding pools containing stranded juvenile salmonids during 2020 surveys. Numbers reported are averages across the pools observed within each location.

	Location (river mile)	Sailor Bar (22)	Lower Sailor Bar Side Channel (21)	Upper Sunrise above side channel (21)	Above Lower Sunrise Side Channel (19)	Lower Sunrise side channel (19)	Below Rossmoor/Ancil Hoffman top (16)	Across Ancil Hoffman (16)	Lower Riverbend Side Channel (13)	Below Riverbend (12)
16 – 18 Mar & 26 Mar	Temperature (°C)	-	-	10.3	-	11.3	-	-	12.4	9.7
	Dissolved oxygen (mg/l)	-	-	10.3	-	6.8	-	-	9.41	10.6
	Turbidity (ntu)	-	-	1	-	0.5	-	-	18	7.3
28 April	Temperature (°C)	16.3	19.5	-	_ ¹	-	22	26.7 ²	-	-
	Dissolved oxygen (mg/l)	8.35	9.17	-	_ ¹	-	12.64	6.26	-	-
	Turbidity (ntu)	1.2	5.2	-	_ ¹	-	1.6	4.6	-	-

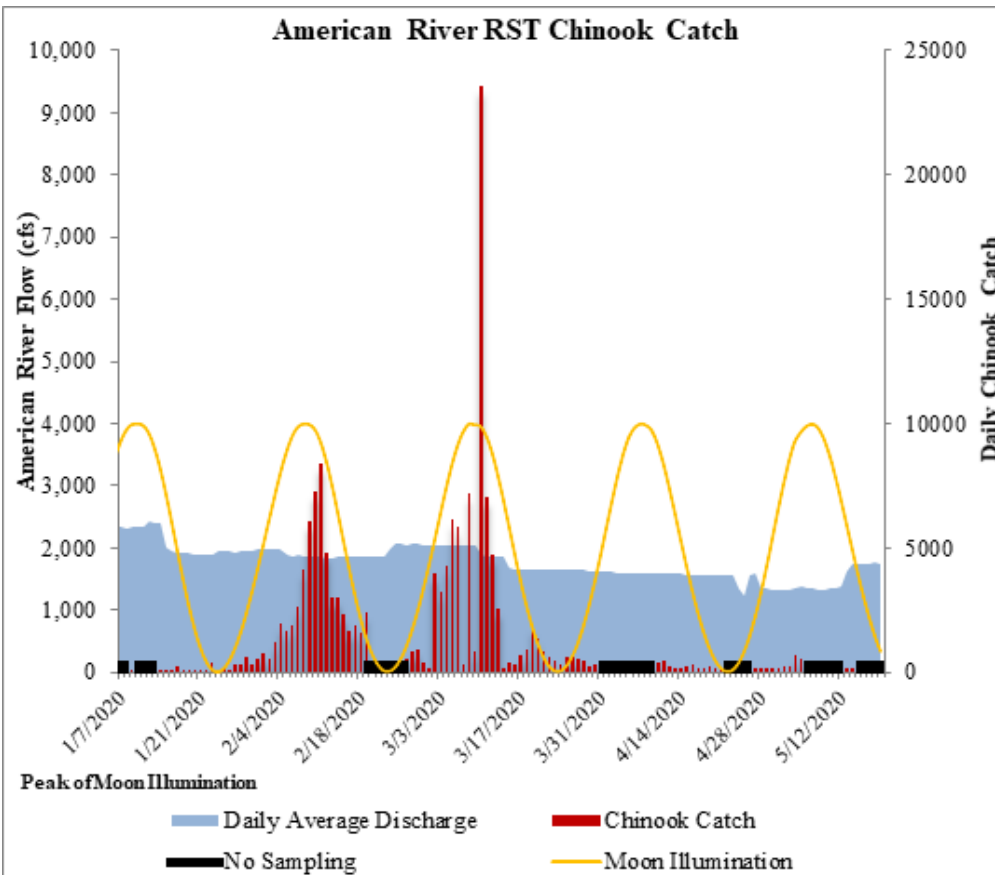
¹Too shallow to take environmental data

²Temperature taken in shallow area, salmonids likely utilizing deeper part of the stranding pool which may have had cooler temperatures

From:
To: Figures for ARG meeting Wednesday,
Subject: May 20, 2020 9:15:45 AM
Date: [image001.png](#)
Attachments: [image002.png](#)
[image003.png](#)

Date Started	Mark Type	Origin	Recapture Efficiency
2/4/2020	BBY	Natural	13.6%
2/13/2020	BBY	Natural	15.5%
3/19/2020	BBY	Natural	15.13%
4/15/2020	VIE	Natural	6.67%
4/30/2020	VIE	Hatchery	1.93%
5/11/2020	VIE	Hatchery	3.49%

Table 1. American River screw trap mark-recapture trials and efficiencies during the 2020 season that utilized Bismark brown dye (BBY) or visual implant elastomer (VIE) marking methods.



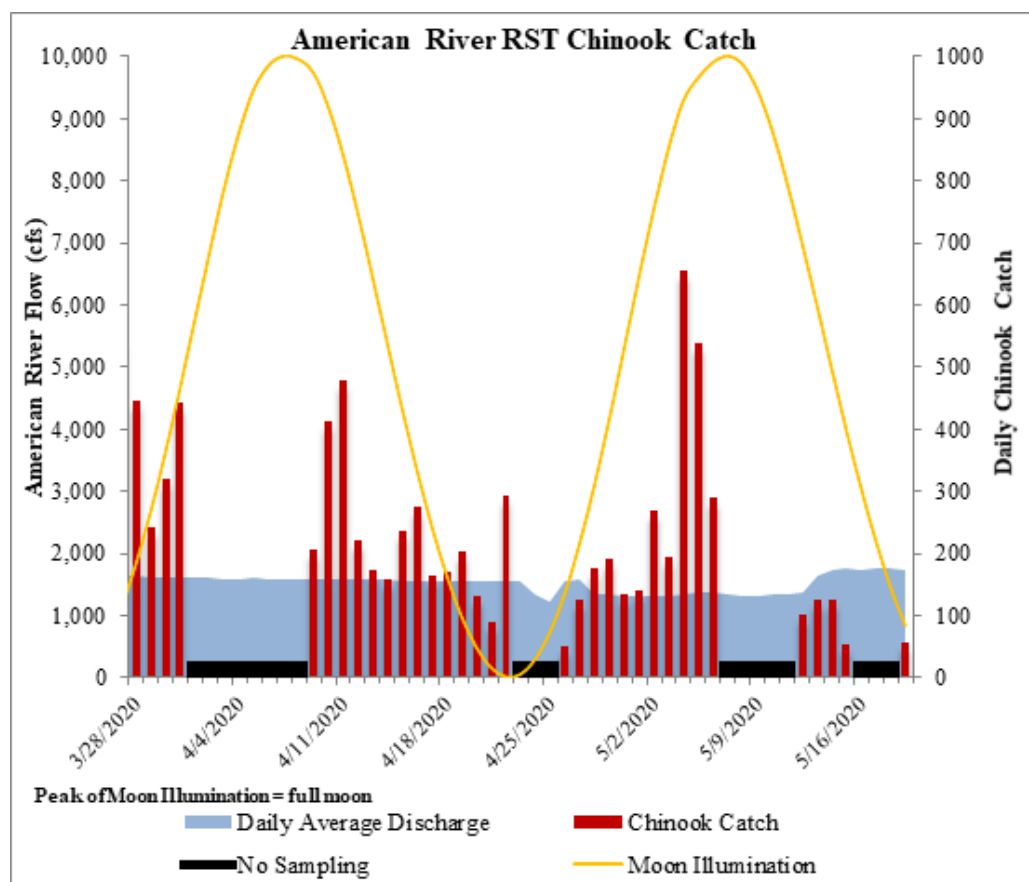


Figure 1: American River screw trap daily catch against discharge and moon illumination.

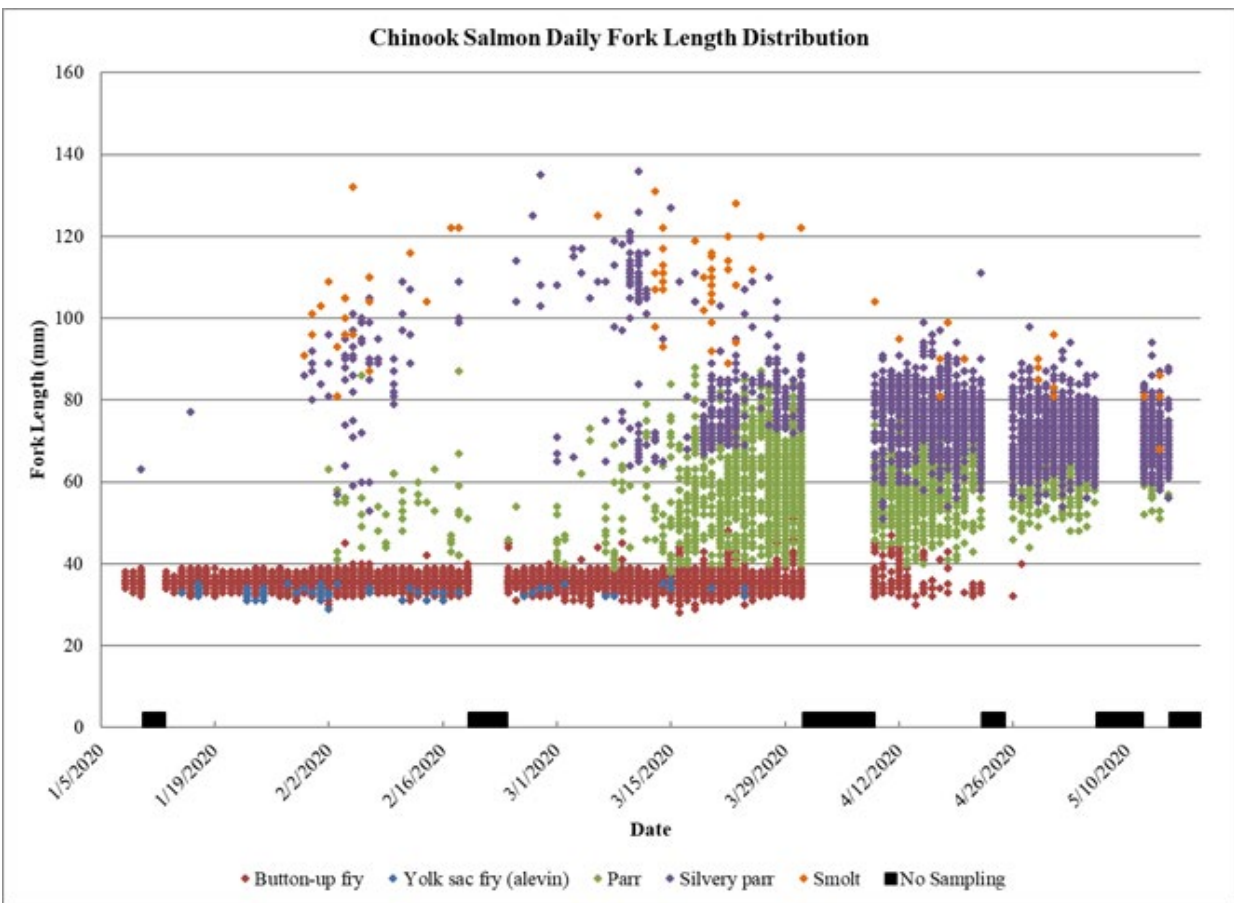


Figure 2. American River screw traps daily fork length distribution for measured Chinook Salmon.

SMUD Upper American River Project Update

Conditions – 19 May 2020:

May precipitation through 5/19/2020 7:00:00 AM is 3.65 in., which is 123% of the May average of 2.97". Precip for the water year to date is 35.03" which is 65% of average to date (54.08") and 61% of the entire water year average of 57.32". Approximately 1.2" of precipitation is forecasted for the area in the next two weeks.

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

- 336,791 acre feet
- 89% capacity
- 100% of historical average (19 May historical average: 336,877 AF / 89%)
- 5% increase in storage since last week

Individual reservoir storage:

- Loon Lake: 67,949 AF
- Ice House: 26,216 AF
- Union Valley: 242,626 AF

Last year today, storage was at 95% (360,468 AF).

**Total WINTER capacity of the three reservoirs is 329,210 acre feet.*

April 2020 releases:

- 1,514 cfs average flows below Chili Bar
- 90,131 total AF released below Chili Bar

May releases (May 1-18):

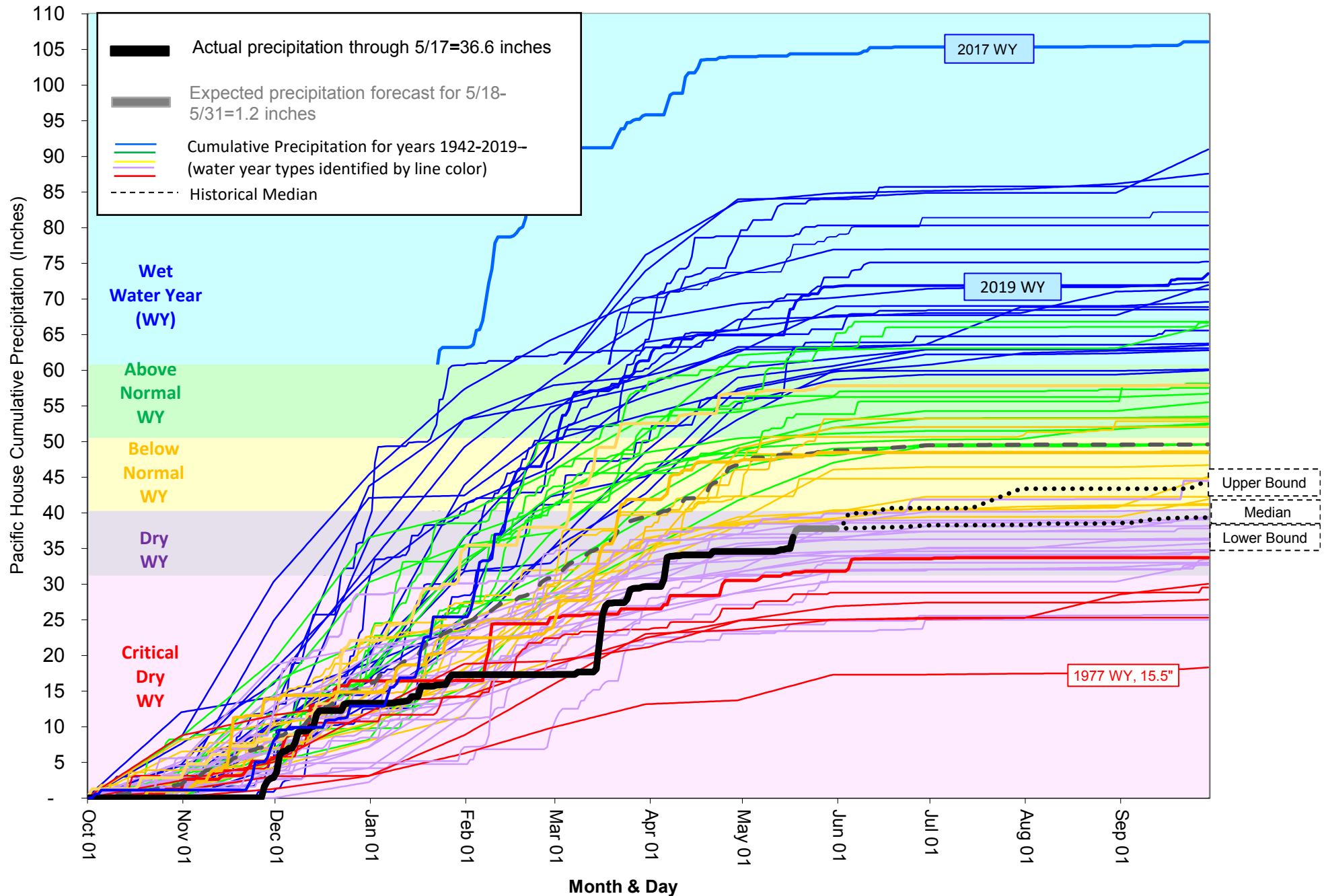
- 1,301 cfs average flows below Chili Bar
- 46,448 total AF released below Chili Bar
- On 5/18, Chili Bar was releasing an average of 2,247 cfs

Runoff into the storage reservoir basins is 75% of median to date through May 18. The snowpack is 0% of average at selected snow sensors.

Runoff Forecast (in cfs, daily average forecast) (Figure 1)

BASIN	Fri 5/22	23- May	24- May	25- May	26- May	27- May
SFA above Slab	887.9	854.8	856.7	903.9	927.1	917.4
Slab Creek	252.0	233.8	222.0	213.5	207.1	202.2
Combined South Fork	1140	1089	1079	1117	1134	1120

Comparison of 2020 WY Precipitation to History (1942-2019 WYs)



PCWA MFP OPERATIONS OVERVIEW for American River Operations Group (Real Time Data as of May 19, 2020)

- ❖ **French Meadows Storage = 105,000 AF of 136,405 AF = 77% Capacity**
 - MFAR above FM Inflow (R24) = ~400 cfs
- ❖ **Hell Hole Storage = 159,000 AF of 207,590 AF = 77% Capacity**
 - Five Lakes Inflow (R23) = ~550 cfs
 - Rubicon Inflow (R22) = ~200 cfs
- ❖ **Combined Storage (FM+HH) = 264,000 AF/342,590 AF = 77% Capacity = 93% of AVG**
- ❖ **POWER PRODUCTION** – ~ 3 HRS per day; conservation of storage operations.
- ❖ **MFAR @ R11:** Currently at 1,050 cfs
- ❖ **Recreation flows for rafting will start this Saturday May 23, and run every day this summer, ending Monday September 7. Oxbow/Ralston Afterbay will release **1000 CFS** from **0900-1200** each day to meet this requirement.**

2020 Water Year Dashboard

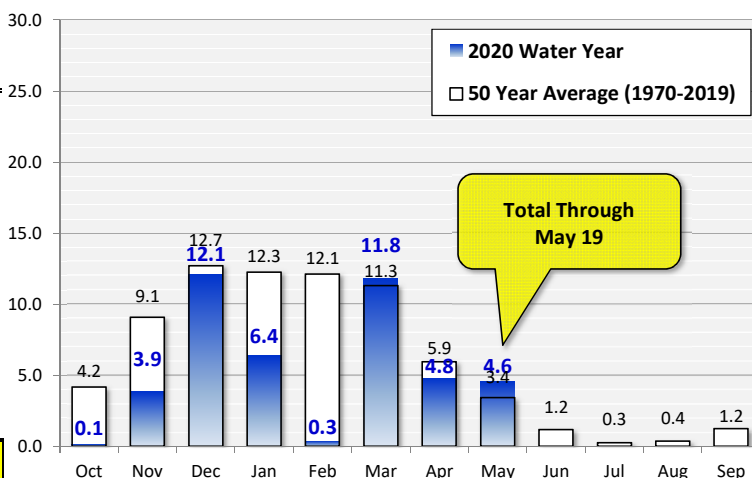
Updated through: May 19, 2020



Lake Spaulding Precipitation

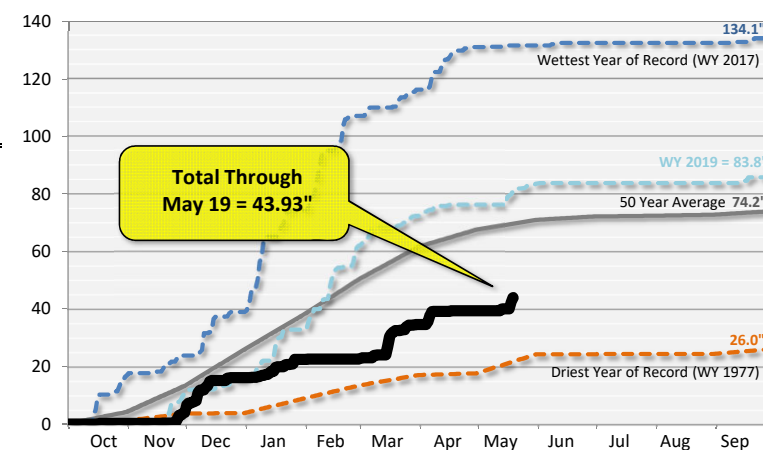
Monthly Totals (values in inches of precipitation):

	Historical Average ^{2/}	Actual This Year	Percent of Average
October	4.17	0.13	3%
November	9.07	3.85	42%
December	12.70	12.11	95%
January	12.26	6.36	52%
February	12.11	0.32	3%
March	11.31	11.82	104%
April	5.94	4.79	81%
May	3.41	4.55	133%
June	1.18	--	--
July	0.25	--	--
August	0.37	--	--
September	1.23	--	--
October		43.9 inches	



Cumulative Totals (values in inches of precipitation):

Through Month of:	Historical Cumulative Average ^{2/}	Accumulation to Date	% of Average to Date
October	4.17	0.13	3%
November	13.24	3.98	30%
December	25.94	16.09	62%
January	38.20	22.45	59%
February	50.32	22.77	45%
March	61.63	34.59	56%
April	67.57	39.38	58%
May	70.99	43.93	62%
June	72.16	--	--
July	72.42	--	--
August	72.79	--	--
September	74.02	--	--



Sierra Snow Survey Summary (Snow Water Equivalent)^{3/}

	% of Average					Courses Reported to Date
	Jan 1	Feb 1	Mar 1	Apr 1	May 1	
DWR Statewide (224 courses)	79%	74%	43%	50%	39%	125 of 224
American River Basin (20 courses)	83%	81%	46%	65%	42%	19 of 20
Yuba River Basin (19 Courses)	59%	72%	42%	77%	55%	19 of 19
PCWA Middle Fork of the AR (4 courses)	n/a	70%	42%	--	--	0 of 4

End of Month Reservoir Storage Summary (values in acre-feet)^{4/}:

As of 5/18/2020	Capacity	March Storage	April Storage	April Average	Percent of Capacity	Percent of Average
Bowman Lake	68,500	42,875	54,179	42,558	79%	127%
Jackson Meadows	69,200	43,338	53,893	44,810	78%	120%
Lake Spaulding	74,773	0	28,748	57,670	38%	50%
Fordyce Lake	49,900	9,159	11,088	27,854	22%	40%
Rollins Lake	66,000	63,522	65,007	64,183	98%	101%
Folsom Lake	977,000	476,336	696,789	729,491	71%	96%
Hell Hole	207,590	95,194	134,606	149,361	65%	90%
French Meadows	135,000	64,698	86,962	91,981	64%	95%

Footnotes:

1/ Cumulative total since October 1, 2020 reported at California Data Exchange Center (http://cdec.water.ca.gov/cgi-progs/stationInfo?station_id=LSP).

2/ Based on 50 year average for Lake Spaulding (1970 through 2019). Station ID = LSP

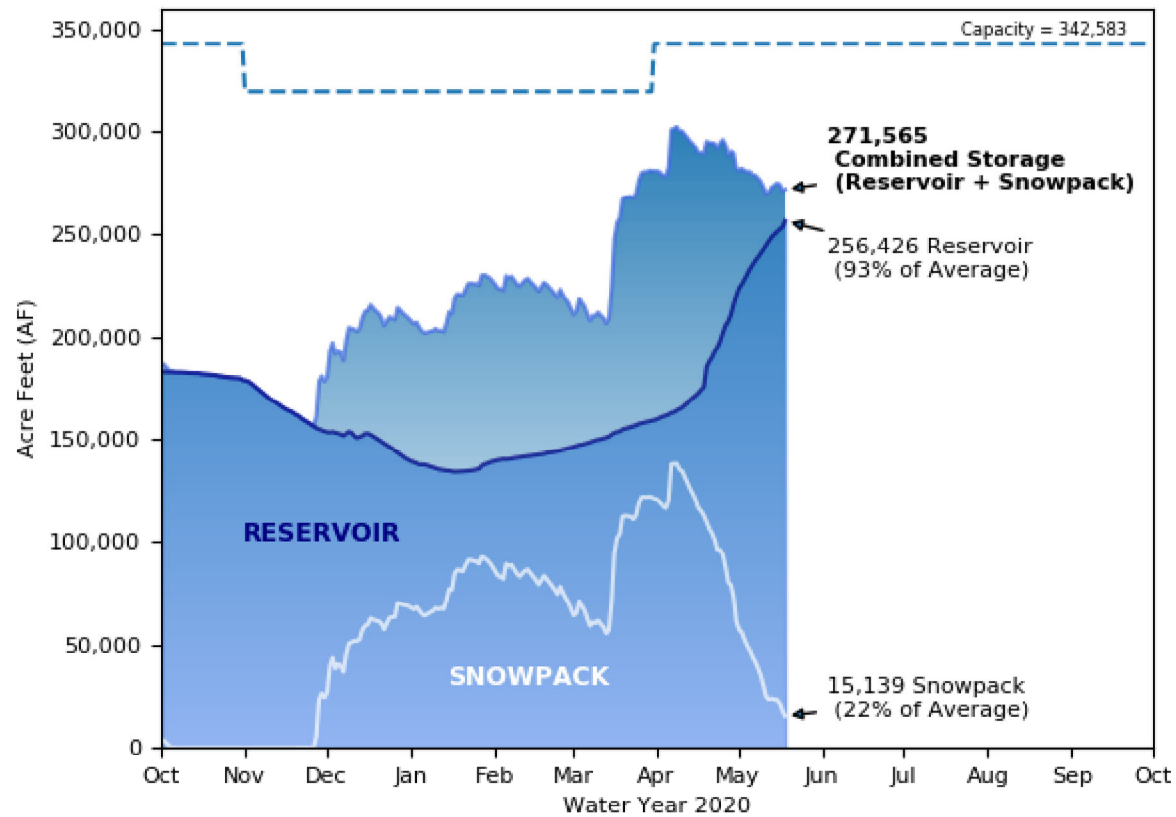
3/ Monthly snow water equivalent for DWR & American River Basin are reported at California Data Exchange Center (<http://cdec.water.ca.gov/cgi-progs/snow/COURSES>). PG&E and PCWA results can be found on CDEC but are also provided by PG&E. PCWA Station ID's are WBM, MCB, DMN, and TBC.

4/ Monthly reservoir storage reported at California Data Exchange Center (<http://cdec.water.ca.gov/staInfo.html>). Station IDs are BWN, JCK, FOL, HHL, and FMD. Lake Spaulding, Fordyce Lake, and Rollins Lake storage provided by PG&E.

* Information on this report is provisional and subject to change.

MFP Reservoir and Snowpack Storage

As of 5/18/2020



American River Summary Conditions – May (On-going):

- Had two small precipitation events in May.
- Just had a decent precipitation event for May, Folsom storage is now over 764 TAF.

Storage/Release Management Conditions

- Releases continue cut to 1250 cfs to conserve storage while we can.

Temperature Management:

- All shutters are installed.
- With hot temperatures forecast for next week, will be watching instream temperatures at Watt Ave in case a shutter change is needed.

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

DAILY CVP WATER SUPPLY REPORT

MAY 18, 2020

RUN DATE: May 19, 2020

RESERVOIR RELEASES IN CUBIC FEET/SECOND

RESERVOIR	DAM	WY 2019	WY 2020	15 YR MEDIAN
TRINITY	LEWISTON	4,450	987	3,467
SACRAMENTO	KESWICK	7,983	8,541	9,185
FEATHER	OROVILLE (SWP)	9,500	2,050	2,000
AMERICAN	NIMBUS	9,500	1,730	3,055
STANISLAUS	GOODWIN	2,462	1,207	1,435
SAN JOAQUIN	FRIANT	1,147	534	534

STORAGE IN MAJOR RESERVOIRS IN THOUSANDS OF ACRE-FEET

RESERVOIR	CAPACITY	15 YR AVG	WY 2019	WY 2020	% OF 15 YR AVG
TRINITY	2,448	1,852	2,368	1,884	102
SHASTA	4,552	3,769	4,363	3,578	95
FOLSOM	977	794	926	750	94
NEW MELONES	2,420	1,548	1,994	1,876	121
FED. SAN LUIS	966	631	759	481	76
TOTAL NORTH CVP	11,363	8,594	10,410	8,569	100
MILLERTON	520	354	436	421	119
OROVILLE (SWP)	3,538	2,679	3,396	2,438	91

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

RESERVOIR	CURRENT WY 2020	WY 1977	WY 1983	15 YR AVG	% OF 15 YR AVG
TRINITY	380	144	1,665	920	41
SHASTA	2,425	1,720	8,778	4,136	59
FOLSOM	1,065	254	4,617	2,056	52
NEW MELONES	447	----	1,463	708	63
MILLERTON	551	124	2,144	841	66

ACCUMULATED PRECIPITATION FOR WATER YEAR TO DATE IN INCHES

RESERVOIR	CURRENT WY 2020	WY 1977	WY 1983	AVG (N YRS)	% OF AVG	LAST 24 HRS
TRINITY AT FISH HATCHERY	17.82	12.18	54.59	29.87 (58)	60	0.35
SACRAMENTO AT SHASTA DAM	32.37	15.23	112.07	58.60 (63)	55	1.03
AMERICAN AT BLUE CANYON	38.82	15.64	103.28	63.70 (45)	61	1.65
STANISLAUS AT NEW MELONES	21.56	----	45.33	26.53 (42)	81	0.35
SAN JOAQUIN AT HUNTINGTON LK	27.07	15.70	80.80	39.74 (45)	68	0.57

DATE	Mean Daily Temperatures (°F)							Release (CFS)	Storage (TAF)	Unit Shuter Position / Load Percentage						Isobath Plot				
	Water						Air			Percentage										
	NFA	ARP	AFD ¹	AHZ	AWP	AWB	CSU			Nimbus	Folsom	Unit 1		Unit 2		Unit 3				
Mar	49.4	49.5	52.7	52.5	53.6	53.5	53.7	1690								>70 68-70 66-68 64-66 62-64 60-62 58-60 56-58 54-56 52-54 50-52 48-50 46-48 <46				
04/01	50.8	53.0	53.3	53.5	55.3	55.7	?	54.2	1501	477	B	26	M	37	M	37				
04/02	50.1	50.0	53.6	53.8	55.2	55.2		54.8	1495	480	B	20	M	66	M	14				
04/03	49.6	49.9	53.5	53.8	55.5	55.6		53.1	1488	483	B	38	M	32	M	30				
04/04	48.7	49.4	53.1	53.5	53.9	54.0		50.4	1482	486	B	33	M	39	M	28				
04/05	47.9	49.7	53.1	53.5	53.9	53.4		51.0	1486	505	B	47	M	26	M	27				
04/06	46.4	48.8	53.8	53.2	53.9	53.3		48.1	1487	526	B	20	M	45	M	35				
04/07	47.5	49.2	53.0	!	-	55.0	55.0	54.7	1490	537	B	41	M	41	M	18				
04/08	48.6	49.0	52.6	54.7	54.2	54.4		55.5	1484	546	B	21	M	50	M	29				
04/09	49.5	49.0	52.4	54.7	54.7	54.8		56.3	1476	554	B	42	M	30	M	28				
04/10	50.4	50.1	52.6	54.9	55.6	55.9		59.0	1482	561	B	38	M	44	M	18				
04/11	51.5	50.8	52.4	55.1	55.5	56.0		56.8	1484	569	B	28	M	32	M	40				
04/12	52.5	49.2	52.6	55.3	55.8	56.2		58.8	1481	578	B	26	M	38	M	36				
04/13	52.5	49.2	52.7	54.7	56.4	57.0		61.1	1491	588	B	29	M	34	M	37				
04/14	51.6	49.5	52.9	55.6	56.8	57.2		64.4	1481	595	B	32	M	36	M	32				
04/15	51.4	50.8	52.6	55.2	57.2	57.9		64.4	1468	603	B	29	M	34	M	37				
04/16	52.2	52.2	52.5	55.2	57.2	58.0		64.3	1474	610	B	33	M	38	M	29				
04/17	52.9	52.7	52.6	54.5	56.6	57.6		58.0	1477	618	B	20	M	38	M	42				
04/18	52.9	52.4	52.8	54.9	56.4	56.9		58.6	1466	625	B	30	M	33	M	36				
04/19	52.9	52.6	52.8	55.4	57.0	57.5		58.3	1465	632	B	19	M	47	M	34				
04/20	52.5	52.6	52.8	55.3	56.3	56.7		58.3	1472	637	B	47	M	17	M	36				
04/21	52.3	53.2	54.5	55.3	57.0	57.4		60.3	1468	642	B	26	M	34	M	41				
04/22	53.4	54.7	55.8	55.6	57.7	58.6		65.8	1462	647	B	34	M	32	M	34				
04/23	54.9	55.9	56.7	57.1	58.7	59.6		70.9	1464	653	B	29	M	35	M	36				
04/24	55.6	55.1	56.6	58.3	60.4	61.1		73.8	1213	660	B	28	M	38	M	34				
04/25	56.0	54.8	56.7	58.6	61.1	62.2		73.5	1045	667	B	28	M	51	M	21				
04/26	56.3	55.3	56.3	58.6	61.3	62.5		69.0	1478	674	B	33	M	33	M	33				
04/27	56.9	57.0	56.8	59.5	61.0	61.6		68.8	1505	679	B	34	M	32	M	34				
04/28	57.4	57.1	56.7	59.6	62.4	63.4		73.6	1210	685	B	31	M	38	M	31				
04/29	58.0	57.2	56.3	58.9	61.4	63.0		67.8	1216	691	B	37	M	31	M	32				
04/30	58.0	57.7	56.3	59.6	61.7	62.2		66.8	1179	697	B	24	M	22	M	54				
-																				
Apr	52.4	52.3	54.0	55.8	57.2	57.7	61.0	1429												
Total AF								85031												

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

- AFD is a weighted average using hourly flow values
-
-
-
-
-

D A T E	Mean Daily Temperatures (°F)							Release (CFS)	Storage (TAF)	Unit Shuter Position / Load Percentage						Isobath Plot				
	Water						Air			Percentage										
	NFA	ARP	AFD ¹	AHZ	AWP	AWB	CSU			Nimbus	Folsom	Unit 1		Unit 2		Unit 3				
Apr	52.4	52.3	54.0	55.8	57.2	57.7	61.0	1429								>70 68-70 66-68 64-66 62-64 60-62 58-60 56-58 54-56 52-54 50-52 48-50 46-48 <46				
05/01	57.9	57.2	56.7	59.4	61.3	62.2	64.8	1171	702	B	36	M	41	M	23	Spillway Crest				
05/02	57.9	57.4	56.4	59.2	61.5	62.3	63.8	1178	707	B	23	M	50	M	27		All Shutters Lowered (A)			
05/03	58.0	58.4	56.9	59.6	61.6	62.4	63.8	1208	711	B	29	M	29	M	43					
05/04	58.1	58.1	57.4	60.0	61.7	62.4	65.9	1249	714	B	44	M	34	M	21					
05/05	58.2	58.1	56.8	59.9	62.1	62.9	66.3	1251	717	B	29	M	36	M	35					
05/06	58.4	60.4	56.0	60.3	61.6	62.6	67.8	1251	719	B	38	M	37	M	25	Top Shutter Raised (T)				
05/07	59.3	59.0	55.9	60.7	63.0	63.7	73.5	1240	721	B	29	M	43	M	28					
05/08	60.3	59.1	56.1	60.1	62.8	64.1	75.9	1203	724	B	31	M	31	M	38		Middle Shutter Raised (M)			
05/09	61.1	59.7	55.9	59.9	62.8	64.1	73.9	1203	728	B	41	M	29	M	30					
05/10	61.3	59.2	55.3	60.1	62.7	63.6	63.7	1222	731	B	37	M	32	M	31					
05/11	60.5	58.7	55.8	60.5	62.0	62.4	62.0	1195	734	B	27	M	37	M	37	Bottom Shutter Raised (B)				
05/12	59.8	57.6	55.2	60.0	61.3	61.8	61.1	1215	737	B	30	M	39	M	31					
05/13	58.3	57.8	56.1	59.8	60.8	60.9	59.3	1573	739	B	27	M	40	M	33		<			

Total AF

35478

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

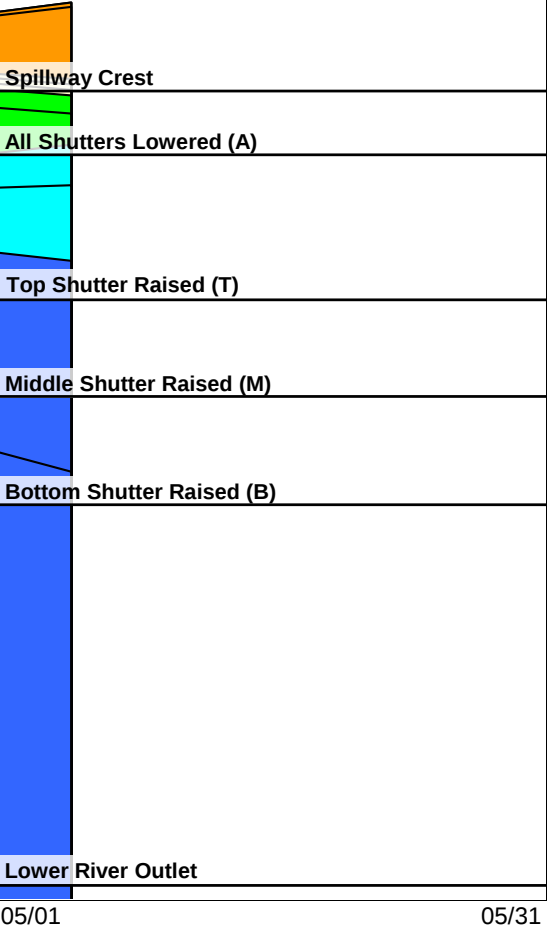
= Bottom Shutter Raised
- O

= Unit Outage

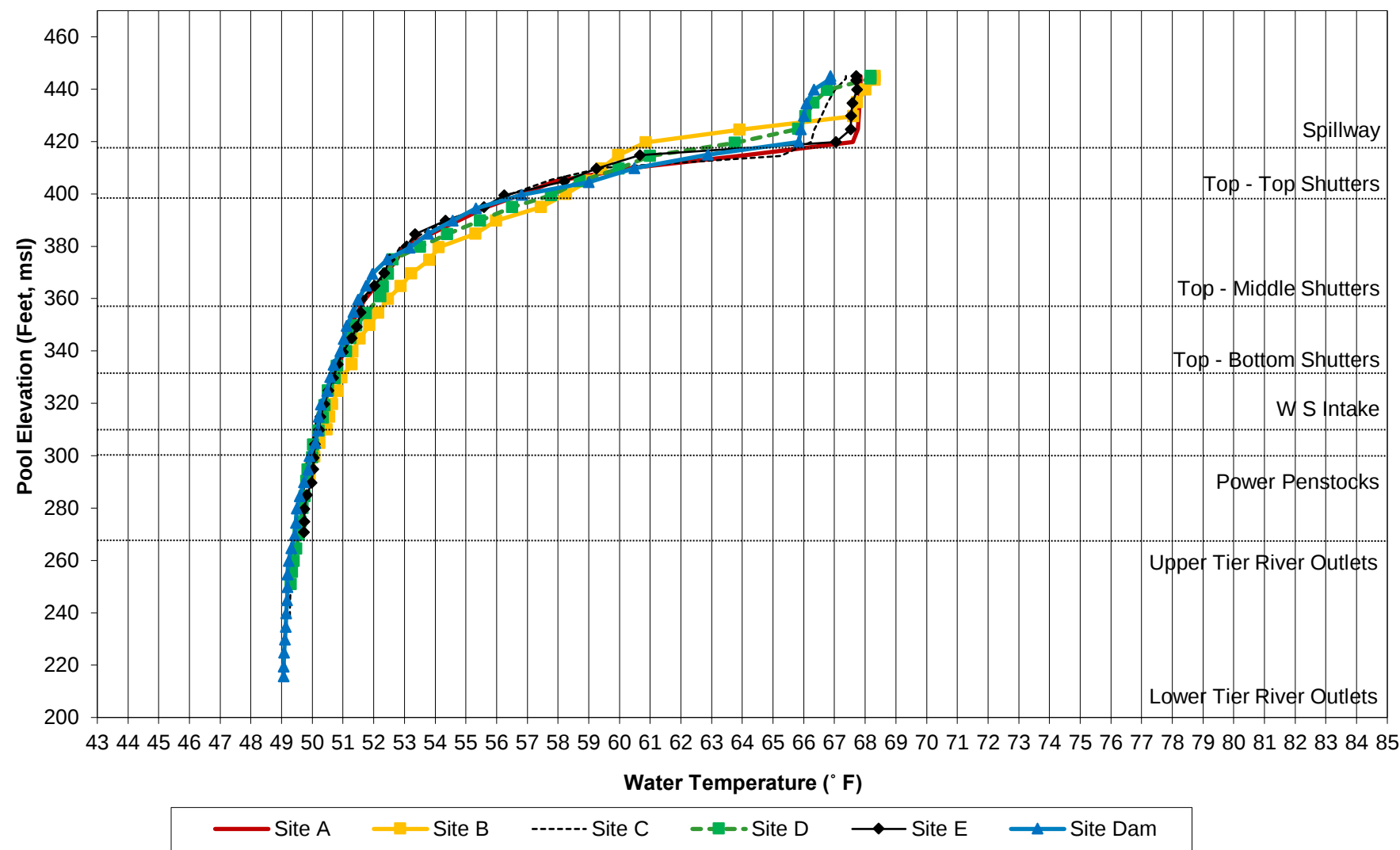
Notes

- 1

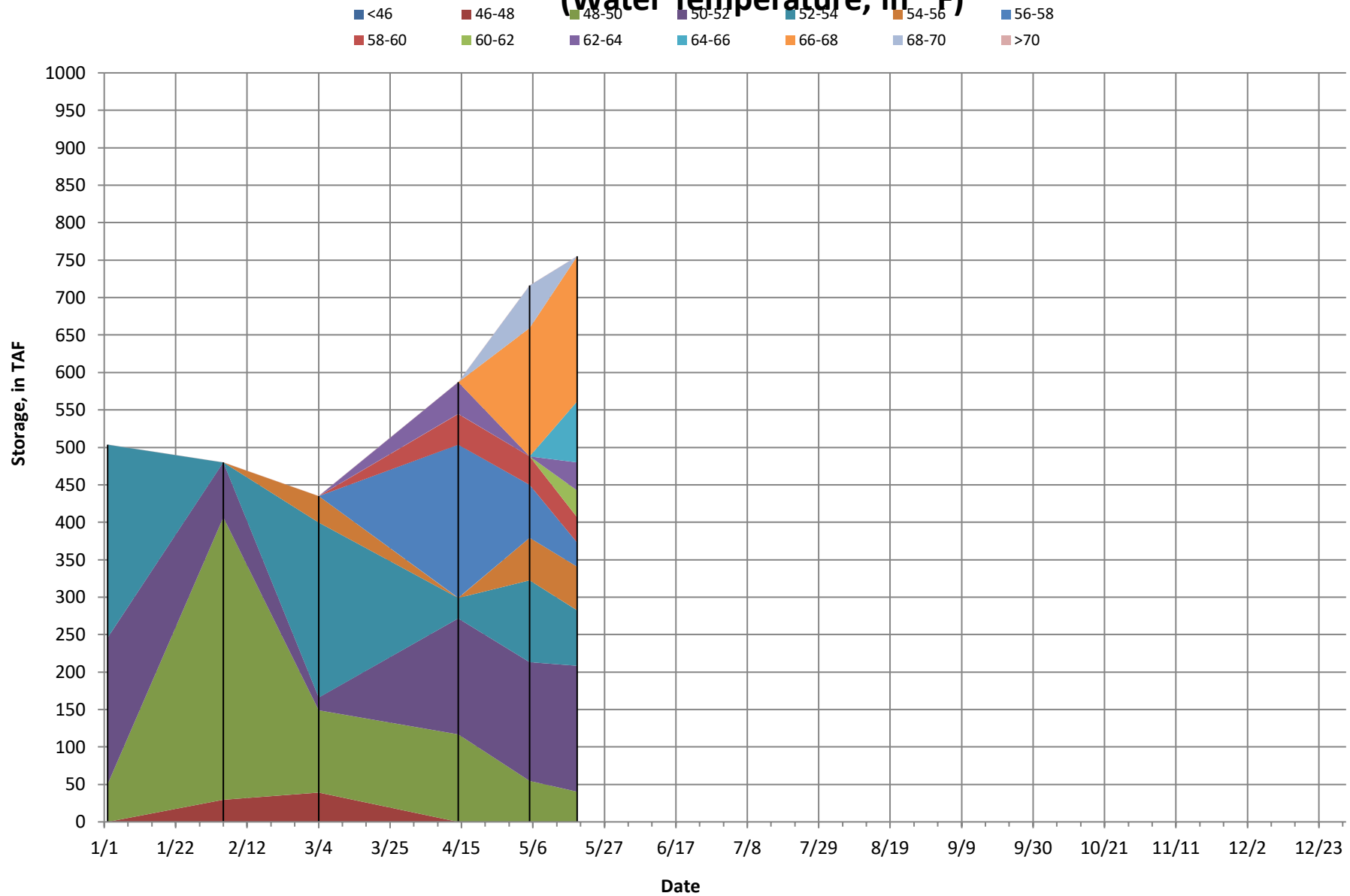
AFD is a weighted average using hourly flow values
- 2
- 3
- 4
- 5
- 6



Folsom Lake Temperature Profiles: 19-May-2020



(Water Temperature, in ° F)



Folsom Cold Water Pool

Folsom Reservoir: Cold Water Volume

Profile Date	Volume less than 58°F (TAF)
5/19/20	372.8

Penstock Elevation (ft)	Volume (TAF)	Approximate Max. Temp (F)
327	83	50.5

Proposed Power Generation Bypass/Lower River Outlet for Temperature Management

Date	Bypass/Lower River Outlet (cfs)	Temperature not to exceed downstream of Nimbus Dam (°F)	Cumulative Use of Cold Water Pool Volume (TAF)

DRAFT May 2020

90% Runoff Exceedance Outlook:

Inflow based on 90% historical average runoff for all months.

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

		May	June	July	Aug	Sep	Oct
Folsom	697	767	699	539	394	337	296
Elev.		446	439	421	402	393	386

Monthly River Releases (cfs)

American	1500	2110	3353	3243	1742	1276
MRR	988	988	1541	1541	1541	725

50% Runoff Exceedance Outlook:

Inflow based on 50% historical average runoff for all months.

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

		May	June	July	Aug	Sep	Oct
Folsom	697	749	671	546	442	393	376
Elev.		444	436	422	409	402	399

Monthly River Releases (cfs)

American	1600	2750	3000	2670	1826	1506
MRR	988	988	1541	1541	1541	725

Please note:

CVP actual operations do not follow any forecasted operation or outlook; actual operations are based on real-time conditions.

CVP operational forecasts or outlooks consider general system-wide dynamics and do not necessarily address specific watershed/tributary details.

CVP releases represent monthly averages.

CVP operations are updated monthly as new hydrology information is made available December through May.

Shaded area represents less confident hydrologic inputs of the future water year.

May 2020 Updated Apr Inflow 90%-Exceedance Outlook

USBR Pred.

Temperature Schedule = 35

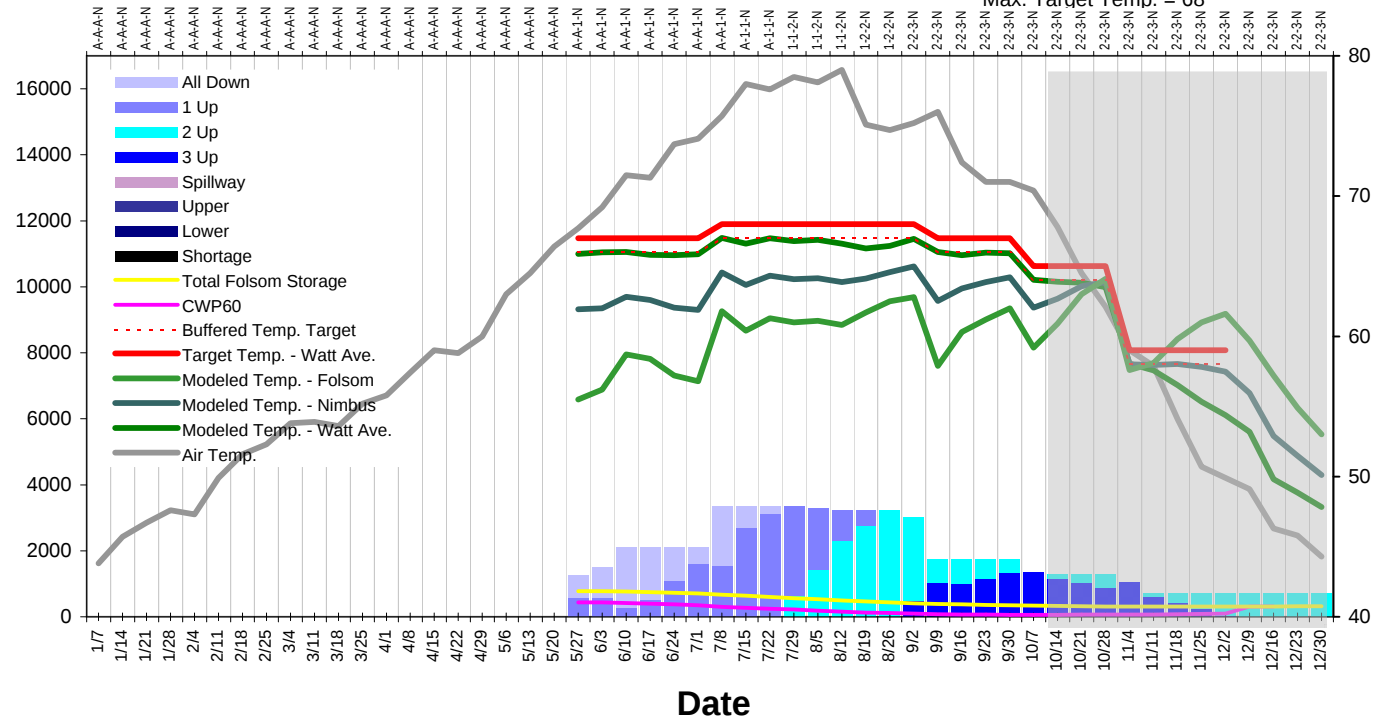
9/30 - CWP<60° (TAF, Constraint = 0) = 58

9/30 - Folsom Storage (TAF) = 350

Number of Excursions = 0

Max. Target Temp. = 68°

Release (cfs) / Volume (TAF)



Temperature (°F)

Date

May 2020 Updated May Inflow 50%-Exceedance Outflo

USBR Pred.

Temperature Schedule = 29

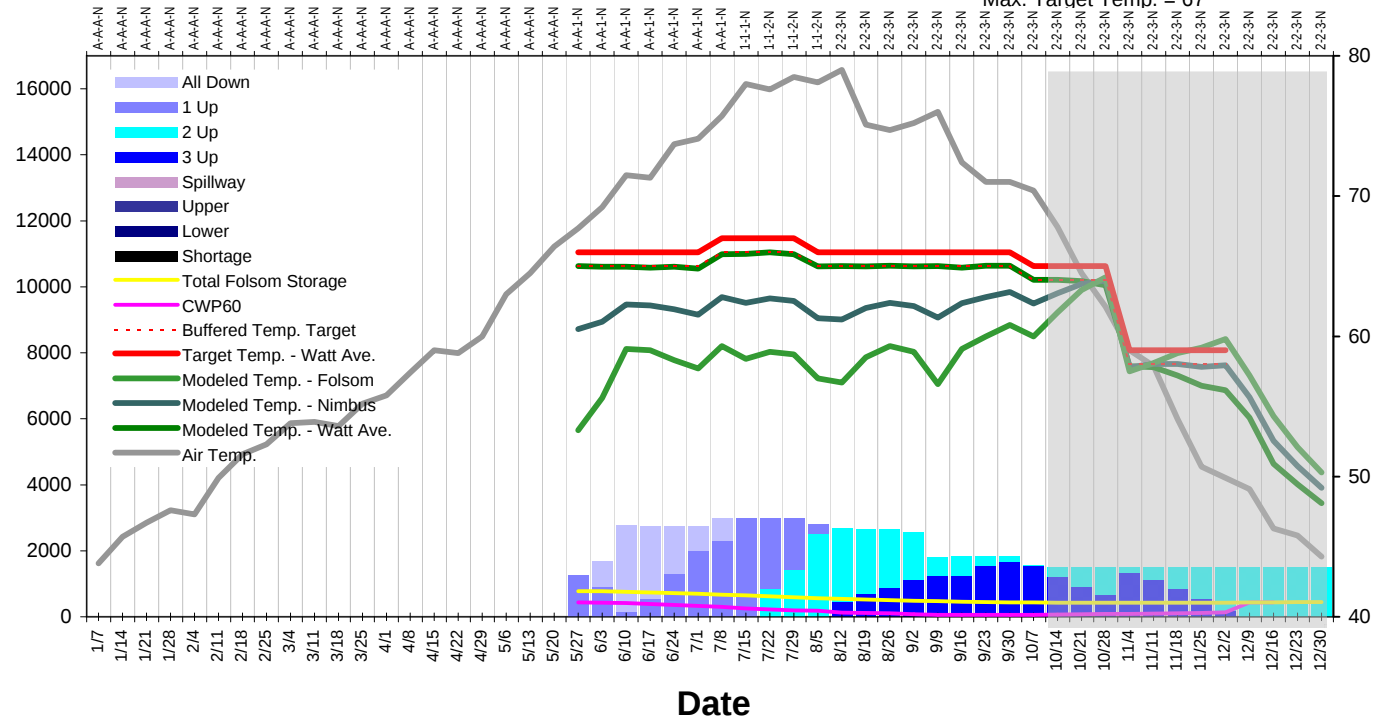
9/30 - CWP<60° (TAF, Constraint = 0) = 57

9/30 - Folsom Storage (TAF) = 438

Number of Excursions = 0

Max. Target Temp. = 67°

Release (cfs) / Volume (TAF)



Temperature (°F)

Date