Restoration Administrator Flow Recommendation

To: Don Portz, Chad Moore, Emily Thomas, Heather Casillas
CC: Michael Jackson, Rufino Gonzalez, Doug Obegi, Steve Ottemoeller, Ian Buck-Macleod, TAC
Date: March 1, 2022
From: Tom Johnson, Restoration Administrator
Subject: Recommendation for 2022 Restoration Flows

The following is a Restoration Flow Recommendation (Recommendation) by the Restoration Administrator (RA) for the 2022 Restoration Year Flows pursuant to the Restoration Flow Guidelines (RFG) Ver. 2.1, as amended, and Exhibit B of the Settlement.

Background

The SJRRP has issued a Restoration Allocation Update (Allocation) dated February 18, 2022, which designates 2022 as a **Normal-Dry** Water Year Type with an Unimpaired Inflow hybrid forecast of 1,235 thousand acre-feet (TAF) and provides an allocation of Restoration Flows of 254.413 TAF as measured at Gravelly Ford (GRF) based on the 75% exceedance forecast. The Allocation also specified certain contractual and operational constraints on Restoration Flow releases for 2022.

Additional Considerations

Between the first and second Allocations (January 13 and February 18), the 75% forecast of Unimpaired Flow dropped by 443 TAF, or over 12.5 TAF/day. the Restoration Allocation dropped by 60.9 TAF, or nearly 1.75 TAF/day. With less than half an inch of precipitation over the past ten days since the February 18 Allocation, it is likely that a current-moment Restoration Allocation would be in the vicinity of 249 TAF and continue to decline. With only minimal amounts of rain and snow projected over the coming ten days, this Recommendation will continue to be conservative. Of note, withheld URF's have fallen from approximately 130 TAF to approximately 70 TAF, and remain on a steep downward trajectory at this time.

As specified in the RFG's, the current Allocation utilizes the 75% exceedance forecast to determine the Allocation volume. Due to the recent dry conditions, it is anticipated that the next Allocation (anticipated on or around March 15th, 2022) will be lower, and potentially substantially lower, than the current February 18, 2022 Allocation. February 18, 2022 Allocation volumes for the 75%, 90%, 95% and 99% exceedances are listed below.

Exceedance	USBR Forecasted Natural River	Allocation (TAF)
75%	1,235	254.413
90%	1,054	230.047
95%[1]	990	221.432
99%[1]	910	208.892

[1] These are unofficial values provided by SJRRP for planning purposes

At this time, my Recommendation does not fully release available Restoration Flow volumes to the river or make URF's available due to uncertainty in upcoming runoff forecasts and Allocations. There is still sufficient time to release all Restoration Flows in a timely manner through 2022 based on subsequent, more refined runoff forecasts and Allocations.

Recommendation for Restoration Year 2022

At this time, I am recommending a flow schedule for the 2022 Restoration Year as shown in Table 1. This Recommendation provides maximum flow magnitude to the river (limited by seepage constraints below Sack Dam) through May 20, then provides flow to maintain a connected river (targeting at least 50 cfs at EBM) for the balance of the 2022 Restoration Year.

I anticipate forwarding a revised Recommendation after receipt of the next Allocation in the coming weeks.

Table 1. Summary of Restoration Flow Recommendations for March 1, 2022, through February 28, 2023.

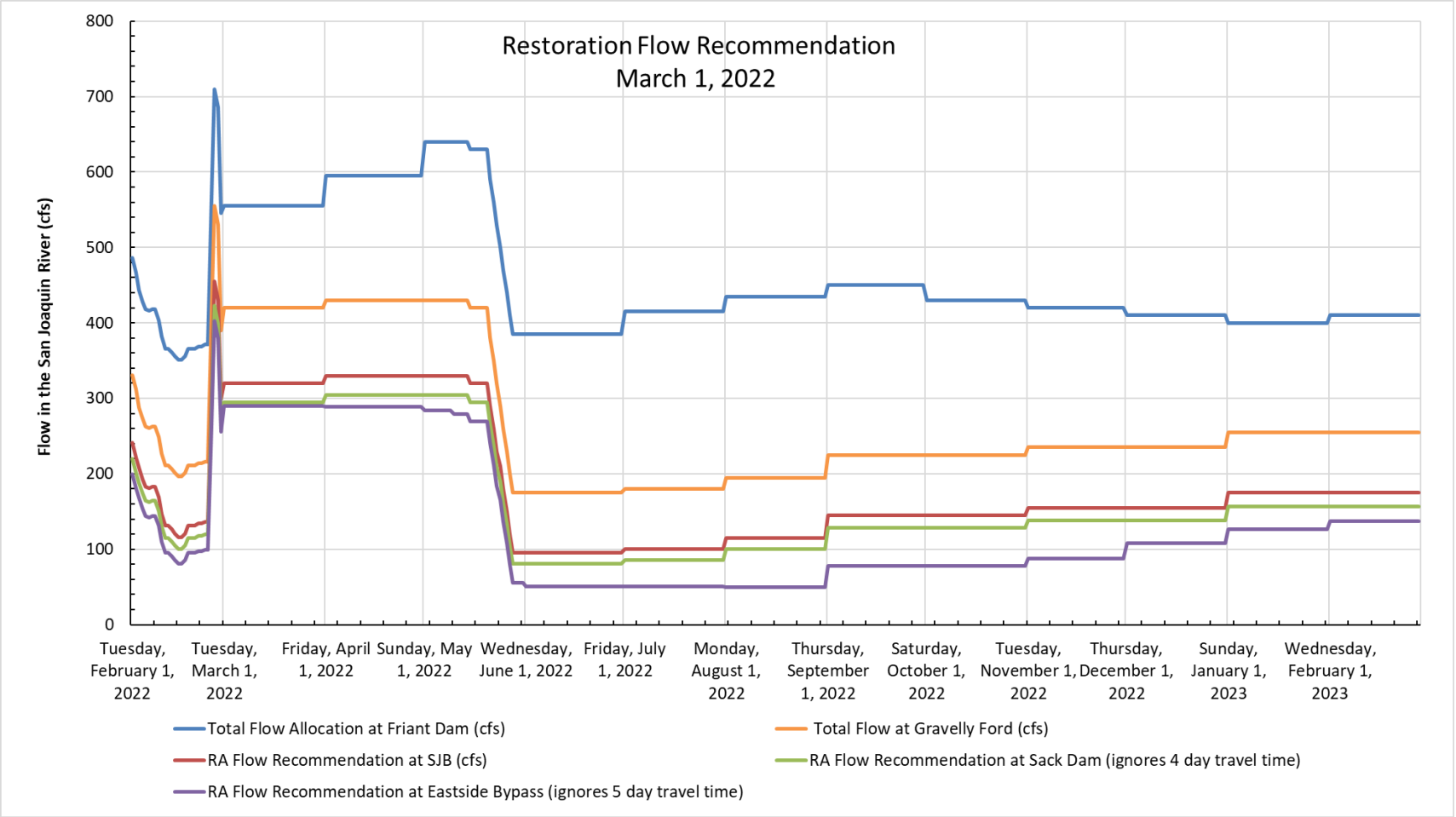
Date Range	*Friant Release*	*Buffer Flow Release*	*Restoration Flows at Gravelly Ford*	*Total Flow at Gravelly Ford**	*Target Flow at Sack Dam (est.)*
March 1 – March 31, 2022	As necessary	0 cfs	415 cfs	420 cfs	300 cfs
April 1 – April 30, 2022	As necessary	0 cfs	425 cfs	430 cfs	300 cfs
May 1 – May 20, 2022	As necessary	0 cfs	425 cfs	430 cfs	300 cfs
May 21 – May 28, 2022	Ramp down flows from Friant Dam at Operator's discretion, to achieve a <u>total</u> flow target of 175 cfs at Gravelly Ford by May 28, 2022				
	As necessary	0 cfs	As occur, down to 170 cfs	As occur, down to 175 cfs	As occur
May 29 – June 30, 2022	As necessary	0 cfs	170 cfs	175 cfs	50 cfs
July 1 – July 31, 2022	As necessary	0 cfs	175 cfs	180 cfs	50 cfs
August 1 – August 31	As necessary	0 cfs	190 cfs	195 cfs	50 cfs
September 1 – November 30	As necessary	0 cfs	220 cfs	225 cfs	As occur, 80 - 90 cfs
December 1, 2022 – December 31, 2022	As necessary	0 cfs	230 cfs	235 cfs	110 cfs
January 1, 2023 – February 28, 2023	As necessary	0 cfs	250 cfs	255 cfs	As occur, 125 - 130 cfs

Total Flow includes the minimum Holding Contract flows of 5 cfs required at Gravelly Ford

Depending on actual seepage losses downstream of Gravelly Ford and future hydrologic and runoff conditions, this Recommendation will likely produce URF's. However, given the early season uncertainty as to forecast and allocation, and the fact that URF pricing will not be finalized until the March 2022 Allocation, ***no URF's are released for exchange or sale at this time***.

Additional Consultation

I will continue to coordinate with the TAC, Program Office, and Implementing Agencies to monitor hydrologic conditions, fish population conditions, uncontrolled season releases, operational conditions, and other factors, and will update the Restoration Flow Recommendation as conditions change.


Restoration Flow Recommendation
March 1, 2022
Flow in the San Joaquin River (cfs)
800
700
600
500
400
300
200
100
0
Tuesday, February 1, 2022
Tuesday, March 1, 2022
Friday, April 1, 2022
Sunday, May 1, 2022
Wednesday, June 1, 2022
Friday, July 1, 2022
Monday, August 1, 2022
Thursday, September 1, 2022
Saturday, October 1, 2022
Tuesday, November 1, 2022
Thursday, December 1, 2022
Sunday, January 1, 2023
Wednesday, February 1, 2023
Total Flow Allocation at Friant Dam (cfs)
Total Flow at Gravelly Ford (cfs)
RA Flow Recommendation at SJB (cfs)
RA Flow Recommendation at Sack Dam (ignores 4 day travel time)
RA Flow Recommendation at Eastside Bypass (ignores 5 day travel time)

GRAVELLY FORD FLOWS AVAILABLE VERSUS RA RECOMMENDATION				
		Available	**Used**	**Balance**
Total GRF River Flow Target without 5 cfs (March 1, 2021 - Feb 28, 2022):		**272.115 TAF**	**194.888 TAF**	**77.227 TAF**
Allocation Flow		254.413 TAF	194.888 TAF	**59.525 TAF**
Exchange Flow		0.000 TAF	0.000 TAF	**0.000 TAF**
Buffer Flows		17.702 TAF	0.000 TAF	**17.702 TAF**

ACCOUNTS SUMMARY at Gravelly Ford, this Restoration Year			
	Available	**Used**	**Balance**
Continuity (Baseflows):	136.443 TAF	136.443 TAF	0.000 TAF
Spring Flexible Flows:	111.028 TAF	51.503 TAF	59.525 TAF
Fall Flexible Flows:	6.942 TAF	6.942 TAF	0.000 TAF
Riparian Recruitment Flows:	0.000 TAF	0.000 TAF	0.000 TAF
Extra Summer Flow (Water Supply Test):	0.000 TAF	8.003 TAF	8.003 TAF
Total:	**254.413 TAF**	**202.891 TAF**	**51.522 TAF**
URF Exchanges Scheduled:	0.000 TAF	0.000 TAF	0.000 TAF
Buffer Flows:	17.702 TAF	0.000 TAF	17.702 TAF
Last Year Feb Flows:	0.000 TAF	0.000 TAF	0.000 TAF