Restoration Administrator Flow Recommendation

To: Don Portz, Chad Moore, Emily Thomas
CC: Michael Jackson, Rufino Gonzalez, Doug Obegi, Steve Ottemoeller, Ian Buck-Macleod, TAC
Date: July 12, 2022
From: Tom Johnson, Restoration Administrator
Subject: Updated 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 San Joaquin River Restoration Program (Program) has issued a Restoration Allocation Addendum (Addendum) on July 12, 2022, to supplement the Final 2022 Allocation (Final Allocation) issued on May 13, 2022, which designates 2022 as a **Normal-Dry** Water Year Type with an Unimpaired Inflow hybrid forecast of 1,072 thousand acre-feet (TAF) and provides an allocation of Restoration Flows of 232.470 TAF as measured at Gravelly Ford (GRF) based on the 50% exceedance forecast.

As described in the Addendum, Millerton Reservoir releases to the San Joaquin River to meet the Exchange Contract, Restoration Flow releases ceased in the river as of April 11th. Releases for the Exchange Contract are ending now, and Restoration flows could resume sometime around July 15, 2022, pending confirmation of lowering shallow groundwater levels in the relevant seepage monitoring wells.

The Millerton Reservoir releases to meet Exchange Contractor flows were much higher than and on a substantially different schedule than what releases to meet Riparian Holding contracts or Restoration Flows would have optimally been. Because these higher and longer duration Exchange Contractor flows were released from the river outlet, the cold-water pool in Millerton Reservoir is much diminished from what would have otherwise been available at this time of year under a typical Restoration Flow schedule. Accordingly, a revised Flow Recommendation to account for current conditions is warranted. Reservoir temperature data and water temperature modeling has indicated that the best approach to preserve cool water until critical spawning and incubation periods is to minimize releases from the river outlet to the extent possible. As a result, the Recommendation for this summer looks very similar to last year, with no Restoration Flows to be released until October 2022.

The timing of resumption of Restoration Flows is tentatively set for early October; however, the RA, TAC, and the Program will closely monitor reservoir and in-river water temperatures, conduct reservoir and in-river water temperature modeling as warranted, and monitor spring-run Chinook salmon spawning progress, and may adjust the resumption of Restoration Flows based on river and biological conditions.

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 assumes resumption of Restoration Flows in October and includes 3.5 TAF returned from URF exchanges.

Table 1. Summary of Restoration Flow Recommendations for April 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.)****
July 10 – September 30	As necessary	0 cfs	0 cfs	5 cfs	0 cfs
October 1-October 2	On October 1, increase releases at Friant Dam to deliver a target Restoration Flow of 200 cfs to GRF by October 3				
October 3 (approx.) – October 31	As necessary	0 cfs	200 cfs	205 cfs	110 cfs
November 1 – November 30, 2022	As necessary	0 cfs	260 cfs	265 cfs	165 cfs
December 1, 2022 – December 10, 2022	As necessary	0 cfs	300 cfs	305 cfs	195 cfs
December 11, 2022 – December 20, 2022	As necessary	0 cfs	350 cfs	355 cfs	242 cfs
December 21, 2022 – December 31, 2022	As necessary	0 cfs	400 cfs	405 cfs	280 cfs
January 1, 2023 – February 28, 2023	As necessary	0 cfs	400 cfs	405 cfs	280 cfs

Restoration Flows at Gravelly Ford include both 2022 allocated flows and URF exchange returns

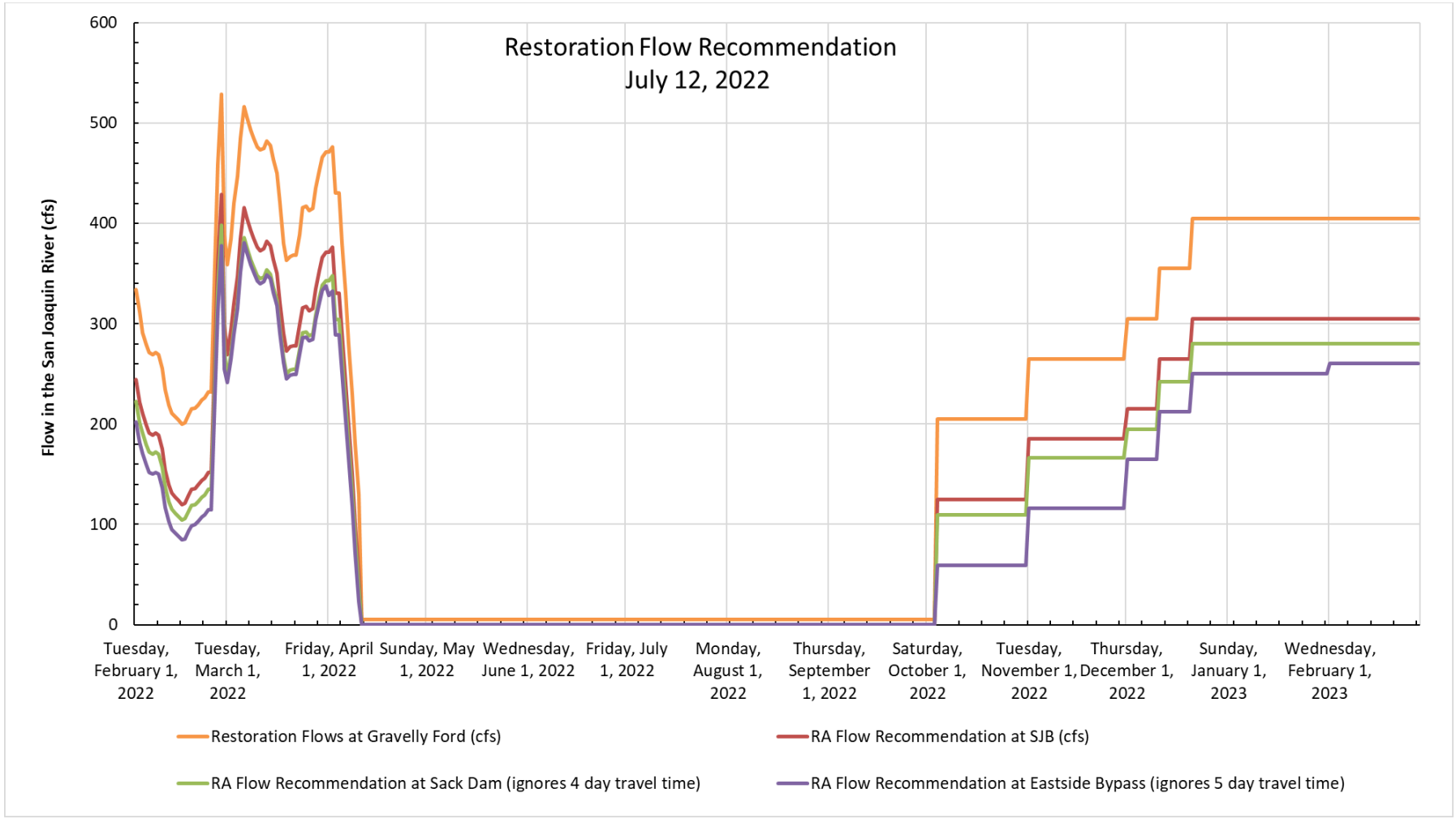
****Total Flow includes the minimum Holding Contract flows of 5 cfs required at Gravelly Ford***

*****Target Flow at Sack Dam uses assumed channel loss rates***

This Recommendation will produce approximately 46.5 TAF of URF's, which result from the inability to release Restoration Flows during the period of Exchange Contractor releases from April 10? to approximately July 15. 7.6 TAF of the URF's are released to apply to the URF exchange proposals received by the Program. The balance of the URF's are released immediately for sale by the Program.

Additional Consultation

I will continue to coordinate with the TAC, Program Office, and Implementing Agencies to monitor hydrologic conditions, fish population conditions, river and reservoir temperatures, and operational conditions, and will update the Restoration Flow Recommendation as warranted as conditions change.


Restoration Flow Recommendation
July 12, 2022
Flow in the San Joaquin River (cfs)
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
Restoration Flows 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)

Summary Volumes				
GRAVELLY FORD FLOWS AVAILABLE VERSUS RA RECOMMENDATION				
		Available	**Used**	**Balance**
Total GRF River Flow Target without 5 cfs (March 1, 2021 - Feb 28, 2022):		253.672 TAF	134.700 TAF	118.973 TAF
Allocation Flow		**232.470 TAF**	**130.272 TAF**	**102.198 TAF**
Exchange Flow		3.500 TAF	3.499 TAF	**0.001 TAF**
Buffer Flows		17.702 TAF	0.000 TAF	**17.702 TAF**
			URF's Disposed of as of	**6/23/2022**	55.350
				Net Alloc Remainder	**46.848 TAF**

ACCOUNTS SUMMARY at Gravelly Ford, this Restoration Year			
	Available	**Used**	**Balance**
Continuity (Baseflows):	136.443 TAF	84.932 TAF	51.511 TAF
Spring Flexible Flows:	89.085 TAF	21.269 TAF	67.816 TAF
Fall Flexible Flows:	6.942 TAF	1.150 TAF	5.792 TAF
Riparian Recruitment Flows:	0.000 TAF	0.000 TAF	0.000 TAF
Extra Summer Flow (Water Supply Test):	0.000 TAF	16.733 TAF	16.733 TAF
Total:	**232.470 TAF**	**124.084 TAF**	**108.386 TAF**
URF Exchanges Scheduled:	3.500 TAF	3.499 TAF	0.001 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