

Restoration Administrator Flow Recommendation

To: Don Portz, Chad Moore, David van Rijn, Regina Story
CC: Michael Jackson, Rufino Gonzalez, Dan Cavanaugh, Doug Obegi, Steve Ottemoeller, Ian Buck-Macleod, TAC
Date: February 5, 2023
From: Tom Johnson, Restoration Administrator
Subject: Recommendation for 2023 Restoration Flows

The following is a Restoration Flow Recommendation by the Restoration Administrator (RA) for the 2023 Restoration Year Flows pursuant to the Restoration Flow Guidelines (RFG) Ver. 2.1, as amended, and Exhibit B of the Settlement. *This February 5th Recommendation includes minor edits (in red) from the February 1 Recommendation and replaces the February 1 Recommendation.*

Background

The SJRRP has issued a Restoration Allocation Update (Allocation) dated January 20, 2023, which designates 2023 as a **Wet** Water Year Type with an Unimpaired Inflow hybrid forecast of 3,403 thousand acre-feet (TAF) and provides an allocation of Restoration Flows of 556.542 TAF as measured at Gravelly Ford (GRF) based on the 50% exceedance forecast. The Allocation also specified certain contractual and operational constraints on Restoration Flow releases for 2023.

Additional Considerations

The South-Central California Area Office (SCCAO) has declared 'Uncontrolled Season' and is currently making flood control releases to the San Joaquin River (SJR). Both Uncontrolled Season and flood control releases to the river are expected to continue into late February, although duration will be adjusted depending on weather and hydrological conditions.

Recommendation for 2023 Restoration Year

At this time, I am recommending a flow schedule for the 2023 Restoration Year as shown in Table 1. This Recommendation:

1. Provides maximum flow to the river (limited by seepage constraints below Sack Dam) through May 28,
2. Then utilizes Riparian Recruitment flows to maintain a connected river (targeting at least 50 cfs at EBM) through July 29,
3. Then utilizes URF exchange water to maintain a connected river through September, and
4. Then generally returns to Exhibit B flows for the balance of the 2023 Restoration Year.

This Recommendation is intended to a) release the maximum possible volume of Restoration Flows down the river, as limited by seepage considerations, and b) keep the river connected for the entirety of the year, although with reduced summertime flows to preserve cold pool to the extent possible.

No recapture other than de-minimus amounts are planned in the Restoration area. All Restoration Flow releases are to flow through the entirety of the Restoration Area. If there are operational or other constraints that preclude Restoration Flows traveling the entire length of the Restoration Area, the Restoration Recommendation will be adjusted to reduce Restoration Flow releases to the level of the controlling operational constraint.

Table 1. Summary of Restoration Flow Recommendations for March 1, 2023, through February 28, 2024.

Restoration Flow Period	Date Range	Friant Release	URF Exchange Release	Restoration Flows at Gravelly Ford	Total Flow at Gravelly Ford¹	Target Restoration Flow at Sack Dam (est.)
2022 Restoration Year & Flows	February 1 through February 28, 2023 ²	Follow accepted 2022 Recommendation				
2023 Spring Flex. Flow Period	February 10 – February 28, 2023 ³	For February 10 – 28, 2023, utilize 125 cfs/day of 2023 Restoration Flows to augment 2022 Flow Recommendation				
		As necessary, but not less than 480 cfs ⁶	0 cfs	375 cfs	380 cfs	280 cfs
	March 1 – March 31, 2023 ³	As necessary, but not less than 510 cfs ⁶	0 cfs	375 cfs	380 cfs	295 cfs
	April 1 – April 30, 2023 ³	As necessary, but not less than 540 cfs ⁶	0 cfs	385 cfs	390 cfs	295 cfs
	May 1 – May 21, 2023 ³	As necessary, but not less than 590 cfs ⁶	0 cfs	395 cfs	400 cfs	295 cfs
	May 22 – May 31, 2023 ³	Ramp down flows from Friant Dam at Operator’s discretion, to achieve a <u>total</u> flow target of 180 cfs at Gravelly Ford by June 1, 2023	0 cfs	As occur, down to 175 cfs	As occur, down to 180 cfs	As occur

Restoration Flow Period	Date Range	Friant Release	URF Exchange Release	Restoration Flows at Gravelly Ford	Total Flow at Gravelly Ford¹	Target Restoration Flow at Sack Dam (est.)
2023 Riparian Recruitment	June 1 – July 29, 2023 ⁴	As necessary, but not less than 390 cfs⁶	0 cfs	175 cfs	180 cfs	75 cfs
Base Flow + Exchanges	July 30 – August 31, 2023	As necessary	70 cfs	195 cfs	200 cfs	65 cfs
Base Flow + Exchanges	September 1 – September 31, 2023	As necessary	50 cfs	195 cfs	200 cfs	60 cfs
Base Flows	October 1 – October 31, 2023	As necessary	0 cfs	195 cfs	200 cfs	60 cfs
	November 1 – December 31, 2023	As necessary	0 cfs	235 cfs	240 cfs	95 to 115 cfs
	January 1, 2024 – February 6, 2023	As necessary	0 cfs	235 cfs	240 cfs	95 to 115 cfs
Base Flows + Shifted Fall Pulse	February 7 – February 28, 2024 ⁵	As necessary	0 cfs	305 cfs	310 cfs	190 cfs

¹Total Flow includes the minimum Holding Contract flows of 5 cfs required at Gravelly Ford

²February 2023 flows are as per accepted 2022 Recommendation, as modified herein

³March 1 through May 28 flows are as per Flexible Flow period rules, see RFG 2.1, Sec 4.1.2

⁴May 29 – July 29 flows are as per Riparian Recruitment period rules, see RFG 2.1, Sec 4.1.4

⁵Shift of Fall Pulse is per Exhibit B, 4(d), see RFG 2.1, Sec 4.1.5

⁶Friant Dam targets reflect the GRF targets plus the Exhibit B Riparian Release amounts for that time period

Additional Elements of this Recommendation

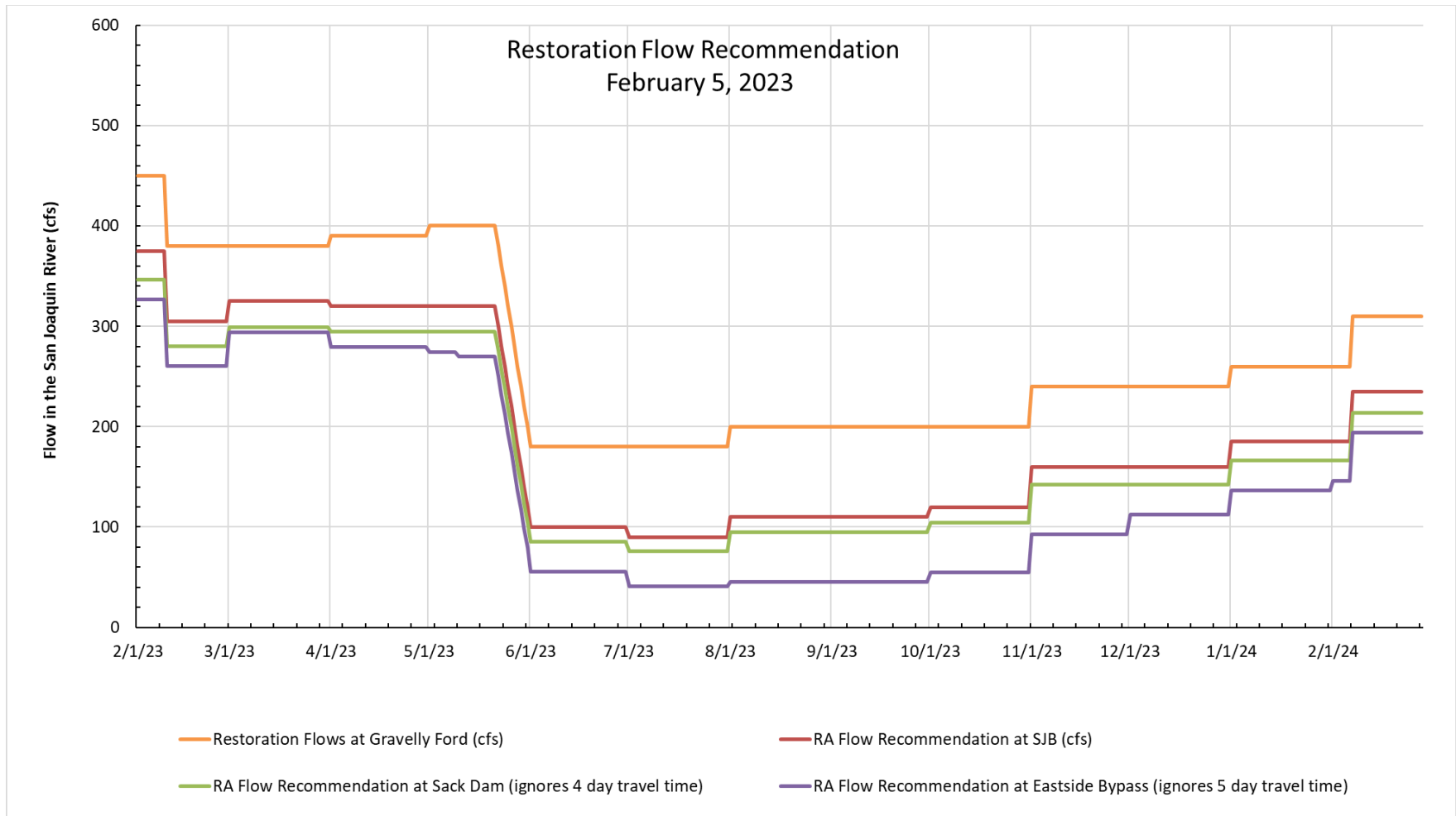
This Recommendation anticipates the release of 184.969 TAF of Restoration Flows **including** 7.5 TAF of URF Exchanges to the river, leaving **nearly 380** TAF as Unreleased Restoration Flows (URF's). Note that these volumes may change, depending on hydrologic and fishery conditions, future Allocations, and future Recommendations.

An initial block of **165** TAF of Unreleased Restoration Flows (URF's) are immediately released. An additional anticipated block of Restoration Flows to be exchanged or released totaling approximately **215** TAF will be held until subsequent Allocations confirm the water year forecast. **It is anticipated that subsequent URF releases will occur after the March 20, 2023 Allocation (half or more of the remaining volume, depending on Allocation), and the balance released prior to end of the Riparian Release period.**

Depending on changing hydrologic conditions, I will adjust or revise this recommendation as necessary.

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.



GRAVELLY FORD FLOWS AVAILABLE VERSUS RA RECOMMENDATION				
		Available	Used	Balance
Total GRF River Flow Target without 5 cfs (March 1, 2021 - Feb 28, 2022):		564.538 TAF	192.446 TAF	372.092 TAF
Allocation Flow		557.038 TAF	184.969 TAF	372.070 TAF
Exchange Flow		7.500 TAF	7.478 TAF	0.022 TAF
Buffer Flows		0.000 TAF	0.000 TAF	0.000 TAF

ACCOUNTS SUMMARY at Gravelly Ford, this Restoration Year				
		Available	Used	Balance
Continuity (Baseflows):		136.939 TAF	136.443 TAF	0.496 TAF
Spring Flexible Flows:		213.521 TAF	37.180 TAF	176.340 TAF
Fall Flexible Flows:		6.942 TAF	3.570 TAF	3.372 TAF
Riparian Recruitment Flows:		199.636 TAF	1.190 TAF	198.446 TAF
Extra Summer Flow (Water Supply Test):		0.000 TAF	0.456 TAF	0.456 TAF
Total:		557.038 TAF	178.840 TAF	378.198 TAF