Restoration Administrator Flow Recommendation

To: Don Portz, Chad Moore, David van Rijin, Regina Story
CC: Michael Jackson, Rufino Gonzalez, Gary Bobker, Steve Ottemoeller, Ian Buck-Macleod, TAC, FWC
Date: January 31, 2024
From: Tom Johnson, Restoration Administrator
Subject: Recommendation for 2024 Restoration Flows

The following is a Restoration Flow Recommendation by the Restoration Administrator (RA) for the 2024 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 an Initial 2024 Restoration Allocation (Allocation) dated January 19, 2024, which designates 2024 as a **Normal-Dry** Water Year Type with an Unimpaired Inflow hybrid forecast of 1,039 thousand acre-feet (TAF) and provides an allocation of Restoration Flows of 228.028 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 2024.

Additional Considerations

In November of 2023, Reclamation entered into a URF exchange agreement with Delano-Earlimart Irrigation District (DEID) to exchange 1,800 acre-feet of 2024 URFs for water stored in San Luis Reservoir. The San Luis stored water was released in late November and early December of 2023, to supplement river flows below Mendota Dam during the Mendota Dam maintenance outage. If the year type remains **Normal-Dry**, included in a future Recommendation will be the release of 1,800 acre-feet of URFs to fulfill the terms of the November 2023 Exchange Agreement with DEID.

Recommendation for 2024 Restoration Year

At this time, I am recommending a flow schedule for the 2024 Restoration Year as shown in Table 1. This Recommendation:

1. Provides maximum flow to the river (limited by seepage constraints below Sack Dam) through April 18, then ramps down to enhanced summer base flow to protect cold pool in Millerton. This spring higher flow period may be extended if reservoir temperature conditions warrant.
2. Then utilizes shifted spring pulse flows to maintain a connected river (targeting at least 50 cfs at EBM) through October 30,
3. Resumes Exhibit B base flows from November 1, 2024 through February 28, 2025. Additionally, the fall pulse will be deployed in two parts in November and December in order to support a river science experiment.

This Recommendation is intended to a) release the maximum possible volume of Restoration Flows down the river, as limited by seepage and cold pool 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.

Depending on how watershed hydrology progresses for the next few months, URF's may be available.

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 Ford[1]***	***Target Restoration Flow at Sack Dam (est.)***
2023 Restoration Year & Flows	February 1 through February 28, 2024[2]	Follow accepted 2023 Recommendation				
2023 Spring Flex. Flow Period	March 1 – March 31, 2024[3]	As necessary	0 cfs	395 cfs	400 cfs	315 cfs
	April 1 – April 18, 2024[3]	As necessary	0 cfs	410 cfs	415 cfs	315 cfs
	April 19 – May 9, 2024[3]	Gradual ramp down, approx. 20 cfs/2 days	0 cfs	As occurs	As occurs	As occurs
	May 10 – May 28, 2024[3]	As necessary	0 cfs	195 cfs	190 cfs	100 cfs
Base Flow + Shifted Spring Pulse	May 29 – June 30, 2024[4]	As necessary	0 cfs	195 cfs	190 cfs	100 cfs
	July 1 – July 31, 2024	As necessary	0 cfs	205 cfs	200 cfs	100 cfs
	August 1 – September 30, 2024	As necessary	0 cfs	205 cfs	200 cfs	100 cfs
	October 1 – October 31, 2024	As necessary	0 cfs	205 cfs	200 cfs	110 cfs

Restoration Flow Period	*Date Range*	*Friant Release*	*URF Exchange Release*	*Restoration Flows at Gravelly Ford*	*Total Flow at Gravelly Ford*[1]	*Target Restoration Flow at Sack Dam (est.)*
Base Flows + Fall Pulse	November 1 – December 31, 2023	As necessary	0 cfs	230 cfs	235 cfs	125 to 140 cfs
	TBD, estimated Nov 13 and Dec 13, 2024	Two pulses of 650 cfs for 8 days	0 cfs	As occurs, up to 450 cfs	As occurs, up to 445 cfs	As occurs, up to 305 cfs
	January 1, 2024 – February 28, 2023	As necessary	0 cfs	255 cfs	250 cfs	165 cfs

[1]Total Flow includes the minimum Holding Contract flows of 5 cfs required at Gravelly Ford
[2]February 2024 flows are as per accepted 2023 Recommendation.
[3]March 1 through May 28 flows are as per Flexible Flow period rules, see RFG 2.1, Sec 4.1.2
[4] Shift of Spring Pulse is per Exhibit B, 4(d), see RFG 2.1,
[5]Shift of Fall Pulse is per Exhibit B, 4(d), see RFG 2.1, Sec 4.1.5

Additional Elements of this Recommendation

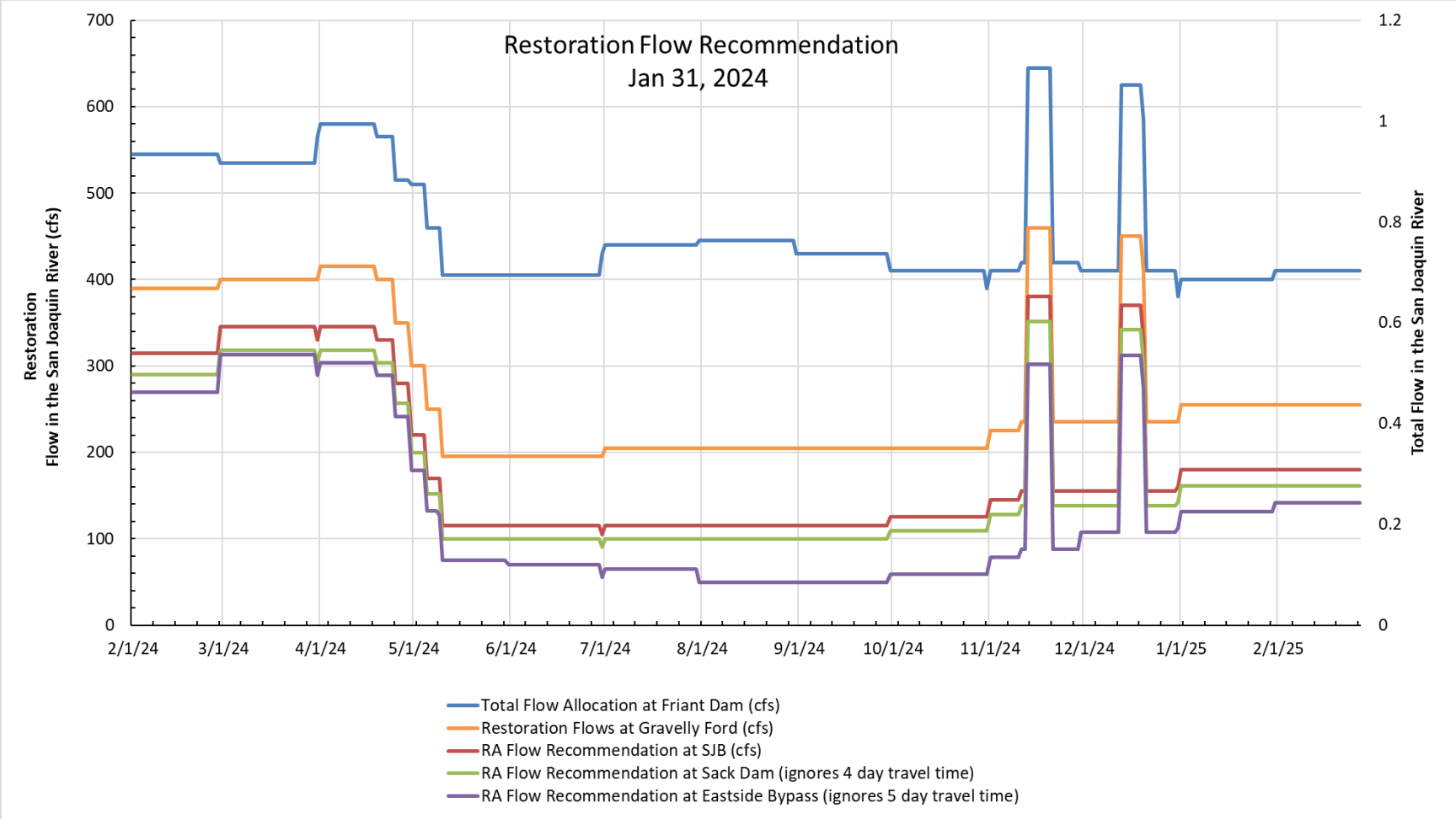
This Recommendation anticipates the release of 184.582 TAF of Restoration Flows to the river, leaving 43.446 TAF as Unreleased Restoration Flows (URF's). *Note that these volumes may change, depending on hydrologic and fishery conditions, future Allocations, and future Recommendations.*

Given the early season and potential for very different hydrological conditions in 30 or 60 days, no URF's are released at this time. It is anticipated that URF's, if available, will be released when subsequent Allocations have confirmed the water year forecast.

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.


Restoration Flow Recommendation
Jan 31, 2024
Restoration Flow in the San Joaquin River (cfs)
Total Flow in the San Joaquin River
700
600
500
400
300
200
100
0
1.2
1
0.8
0.6
0.4
0.2
0
2/1/24
3/1/24
4/1/24
5/1/24
6/1/24
7/1/24
8/1/24
9/1/24
10/1/24
11/1/24
12/1/24
1/1/25
2/1/25
Total Flow Allocation at Friant Dam (cfs)
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)

GRAVELLY FORD FLOWS AVAILABLE VERSUS RA RECOMMENDATION				
		Available	**Used**	**Balance**
Total GRF River Flow Target without 5 cfs (March 1, 2024 - Feb 28, 2025):		228.028 TAF	184.582 TAF	
Restoration Allocation Flow		**228.028 TAF**	**184.582 TAF**	
Exchange Flow		0.000 TAF	0.000 TAF	**0.000 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):	136.443 TAF	136.443 TAF	0.00000 TAF
Spring Flexible Flows:	84.643 TAF	25.250 TAF	59.393 TAF
Fall Flexible Flows:	6.942 TAF	6.902 TAF	0.040 TAF
Riparian Recruitment Flows:	0.000 TAF	0.000 TAF	0.000 TAF
Extra Summer Flow (Water Supply Test):	0.000 TAF	15.987 TAF	15.987 TAF
Total:	**228.028 TAF**	**184.582 TAF**	**43.446 TAF**