Restoration Administrator Flow Recommendation

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CC: Michael Jackson, Rufino Gonzalez, Gary Bobker, Steve Ottemoeller, Ian Buck-Macleod, TAC, FWC
Date: April 26, 2024
From: Tom Johnson, Restoration Administrator
Subject: Updated Recommendation for 2024 Restoration Flows

The following is a Restoration Flow Recommendation (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 Updated 2024 Restoration Allocation (Allocation) dated April 11, 2024, which designates 2024 as a **Normal-Wet** Water Year Type with an Unimpaired Inflow hybrid forecast of 1,753 thousand acre-feet (TAF) and provides an allocation of Restoration Flows of 325.804 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 2024. Recently relieved seepage constraints in Reach 4A have increased the target for GRF and SDP to about 650 cfs and 500 cfs of Restoration Flows, respectively. This Recommendation accommodates those changed seepage limitations.

Recommendation for 2024 Restoration Year

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

1. Provides a short duration pulse of flow (limited by seepage constraints at GRF, and in Reaches 3 and 4A) to attract Spring-Run Chinook into the Restoration Area. This will be achieved by increasing the total release from Friant Dam by 580 cfs for 24 hours (from 570 cfs to 1150 cfs), then dropping flows by 300 cfs (from 1150 cfs to 850 cfs) and holding at that level with the intent to stabilize at 650 cfs of Restoration Flows at GRF in a few day's time (the duration of time required to stabilize at 650 cfs is unknown). On Monday May 6th, releases from Friant Dam will decrease by 50 cfs, and will decrease by an additional 50 cfs per day until Friant Dam total flows are 450 cfs which should result in Restoration Flows of about 200-250 cfs, depending on Holding Contract demands. From May 29, Restoration Flows will be 185 cfs at GRF.
2. This Recommendation utilizes shifted spring flexible flows from May 29 through October 31, 2024, to maintain a connected river (targeting at least 60 cfs at EBM); after October 31, base flows will be greater than 70 cfs.
3. A total of 8,700 acre-feet of exchanges are called upon for the May 29 – October 31 period.
4. Resumes Exhibit B base flows from November 1, 2024, through February 28, 2025.

5. Additionally, the fall pulse will likely be deployed in two parts in November and December 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.

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, 2024, through February 28, 2025.

Restoration Flow Period	***Date Range***	***Friant Release (est., varies due to Holding Contracts)***	***URF Exchange Release***	***Restoration Flows at Gravelly Ford***	***Total Flow at Gravelly Ford[1]***	***Target Restoration Flow at Sack Dam (est.)[2]***
2024 Spring Flex. Flow Period[3]	April 25, 2024	As necessary, est. 570 cfs	0 cfs	375 cfs	380 cfs	265 cfs
	April 26, 2024	Increase Friant Dam by 580 cfs to 1150 cfs for 24 hrs.	0 cfs	As occurs	As occurs	As occurs
	April 27 – May 5, 2024	Friant Dam at 850 cfs	0 cfs	As occurs until 650 cfs, then hold at 650 cfs	As occurs	Up to 500 cfs
	May 6, 2024	Reduce Flows by 50 cfs/day to 450 cfs	0 cfs	As occurs	As occurs	As occurs
	May 29, 2024	As necessary, est. 390 – 450 cfs	0 cfs	180 cfs	185 cfs	90 cfs
Base Flow + Shifted Spring Pulse	June 1 – June 30, 2024[4]	As necessary, est. 395 – 450 cfs	30 cfs	150 cfs	185 cfs	90 cfs
	July 1 – July 31, 2024	As necessary, est. 415 – 465 cfs	30 cfs	155 cfs	190 cfs	95 cfs
	August 1 – Sept. 30, 2024	As necessary, est. 415 – 465 cfs	30 cfs	160 cfs	195 cfs	100 cfs
	October 1 – October 31, 2024	As necessary, est. 395 – 450 cfs	30[5] cfs	155 cfs	190 cfs	95 cfs

Restoration Flow Period	*Date Range*	*Friant Release (est., varies due to Holding Contracts)*	*URF Exchange Release*	*Restoration Flows at Gravelly Ford*	*Total Flow at Gravelly Ford[1]*	*Target Restoration Flow at Sack Dam (est.)[2]*
Base Flows + Fall Pulse	November 1 – Dec. 31, 2024	As necessary, est. 410 – 475 cfs	0 cfs	230 cfs	235 cfs	110 to 130 cfs
	TBD, estimated Nov 13 and Dec 13, 2024	Two pulses of 650 cfs for 8 days	0 cfs	As occurs, up to 455 cfs	As occurs, up to 460 cfs	As occurs, up to 320 cfs
	January 1, 2025 – February 28, 2025	As necessary, est. 410 – 475 cfs	0 cfs	250 cfs	255 cfs	160 cfs

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

[2]Flows in the Eastside Bypass (EBM) should always remain above 60 cfs

[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 Flexible Flow is per Exhibit B, 4(d), see RFG 2.1, Sec 4.1.5

[5]Exchange Flows in October until Exchange is fulfilled, estimated to be October 30, 2024

[6]Shift of Fall Flexible Flow is per Exhibit B, 4(d), see RFG 2.1, Sec 4.1.5

Additional Elements of this Recommendation

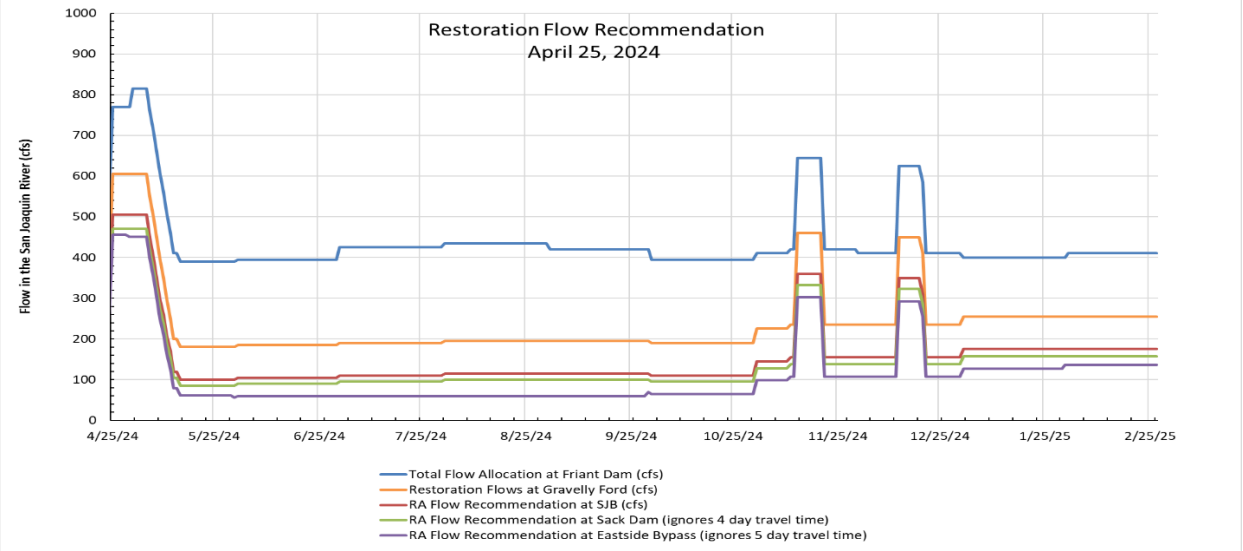
This Recommendation anticipates the release of 180.764 TAF of Restoration Flows to the river, leaving approximately 145 TAF as Unreleased Restoration Flows (URF's), depending on Restoration Flow utilization during the April/May pulse. 42.105 TAF (gross, 40.000 TAF net at turnouts) of URF have been released; leaving approximately 103 TAF of URF's to be released. *Note that these volumes may change, depending on hydrologic and fishery conditions, future Allocations, and future Recommendations.*

40 TAF (net) of URF's are released immediately for disposition by Reclamation. The balance of potential URF's are held to accommodate for changing hydrologic conditions, and to support an extended period of flow releases to the river if Millerton Reservoir cold water pool and downstream water temperature conditions are suitable.

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, 2024 - Feb 28, 2025):		334.504 TAF	189.461 TAF	145.043 TAF
Restoration Allocation Flow		**325.804 TAF**	**180.764 TAF**	**145.040 TAF**
Exchange Flow		8.700 TAF	8.698 TAF	**0.002 TAF**
Buffer Flows		0.000 TAF	0.000 TAF	**0.000 TAF**
	URF's Disposed of as of		**2/29/2024**	42.105
Use Buffer Flows?	**no**		**Net Alloc Remainder**	**102.935 TAF**

ACCOUNTS SUMMARY at Gravelly Ford, this Restoration Year			
	Available	**Used**	**Balance**
Continuity (Baseflows):	136.443 TAF	134.102 TAF	2.34050 TAF
Spring Flexible Flows:	182.419 TAF	33.868 TAF	148.551 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	5.891 TAF	5.891 TAF
Total:	**325.804 TAF**	**180.764 TAF**	**145.040 TAF**