

## Restoration Administrator Flow Recommendation

**To:** Anne Lubas-Williams, Chad Moore, Emily Thomas, Adam Nickel, Don Portz  
**CC:** Michael Jackson, Rufino Gonzalez, Doug Obegi, Steve Ottemoeller, Jeff Payne, TAC  
**Date:** June 8, 2018  
**From:** Tom Johnson, Restoration Administrator  
**Subject:** Updated Recommendation for 2018 Restoration Flows

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The following is an updated recommendation by the Restoration Administrator (RA) for 2018 Restoration Flows, pursuant to the December 2013 Restoration Flow Guidelines (RFG), as amended, and Exhibit B of the Settlement.

### **Background**

I am in receipt of the Restoration Allocation (Allocation) dated May 22, 2018 which designates 2018 as a **Normal Dry** Water Year Type and provides an allocation of Restoration Flows of 280,258 acre-feet as measured at Gravelly Ford. The Allocation also specifies certain contractual and operational constraints on Restoration Flow releases (Recommendation) for 2018.

### **Additional Considerations**

In addition to receiving the Allocation and analyzing hydrologic conditions and forecasts, I have consulted with the Technical Advisory Committee (TAC), Reclamation, and the Settling Parties with regards to potential recommendations, operational and biological implications, and water supply impacts. Several considerations factored in the Restoration Flow Recommendation.

- A key focus of this 2018 Restoration Flow Recommendation is to retain flow connectivity through all reaches. Flow connectivity provides water to support the extant non-salmonid native fish populations, support riparian vegetation, the opportunity to evaluate microhabitat and water temperatures under low flow conditions, and evaluate flow losses under steady-flow conditions across seasons. Maintaining river connectivity via a target flow downstream of Sack Dam remains a focus of this Recommendation.
- The SJRRP is planning on releasing tagged spring-run Chinook salmon adults below Friant Dam during the summer (June to September time frame, dates TBD). This release will be a repeat of last year's successful release of adult spring-run Chinook salmon, and will support additional studies of movement, spawning location, and spawning and emergence success. Dam release temperatures for 2018 are anticipated to be cooler than in 2017; analysis supporting this Recommendation considered preservation of the Millerton Lake cold water pool to support the adult release and holding through the summer in Reach 1A.
- Buffer Flows are not utilized in this Recommendation, but may be utilized in updated Recommendations later this year depending on flow conditions.

This Recommendation is for the balance of Restoration Year 2018.

**Recommendation for the Balance of Restoration Year 2018**

For the balance of the 2018 Restoration Year, I am recommending the following:

<i>Date Range</i>	<i>Friant Release</i>	<i>Restoration Flows at Gravelly Ford</i>	<i>Holding Contract Release at Gravelly Ford</i>	<i>Total Flow at Gravelly Ford</i>
June 1, 2018 through Oct 31, 2018	As necessary	190 cfs	5 cfs	195 cfs
November 1, 2018 through November 10, 2018	700 cfs	As occurs	5 cfs	As occurs
November 11, 2018 through December 31, 2018	As necessary	230 cfs	5 cfs	235 cfs
January 1, 2019 through February 28, 2019	As necessary	250 cfs	5 cfs	255 cfs

- The SJRRP will monitor actual Restoration Flow deliveries to Mendota Pool, and coordinate adjustment of Mendota Pool and Sack Dam releases to ensure that all Restoration Flow arriving at Mendota Pool is released below Sack Dam (with appropriate loss adjustments). There should be no recapture of Restoration Flow at Mendota Pool whatsoever between March 1, 2018 and February 28, 2019; all Restoration Flows arriving at Mendota Pool should be released downstream unless seepage constraints dictate otherwise.
- This Recommendation shifts approximately 13,369 acre-feet of water from the Spring Flexible Flow Period to the post-June 1 summer base flow period, which has passed the water supply test.
- Previous 2018 Recommendations released 40,000 acre-feet of URF’s for immediate sale (that sale and deliver has been completed) and exchanged 17,923 acre-feet.
- The April 26, 2018 Recommendation created approximately 59,700 acre-feet of URF’s, of which 51,700 acre-feet (net) did not pass a water supply test and thus were released as URF’s (53,700 acre-feet gross) prior to May 28, 2018.
- This Recommendation creates an additional 13,190 acre-feet of URF’s, which can be released for sale by Reclamation after June 15, 2018.
- I understand that this is the final Restoration Flow Allocation for 2018. I will monitor operational conditions and changes in the river as the balance of the Restoration Year unfolds,

and will consult with Reclamation, the TAC and Implementation Agencies as necessary to provide updated Restoration Flow Recommendations if necessary.

Table 1 below compares the default Exhibit B flow schedule and the Recommended Flow Schedule.

**Additional Consultation**

I will continue to coordinate with the TAC, Program Office, and technical study leads 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.

**Table 1 – Restoration Year 2018 Flow Recommendation**

Normal-Dry Schedule Start	RECLAMATION DEFAULT FLOW SCHEDULE				RA RECOMMENDED FLOW SCHEDULE						Difference from Default Flow Schedule (ac-ft)					
	Friant Default Flow (cfs)	Default Flow Friant Interim Flow (cfs)	Gravelly Ford Flow Targets (cfs)	Exhibit B Riparian Holding Contract Demand (cfs)	Base Flow (acre-ft)	Spring Flexible Flow (acre-ft)	Fall Flexible Flow (ac-ft)	RA Flow Recommendation Friant Dam Release (cfs)	RA Recommendation Gravelly Ford Flow Targets (cfs)	Base Flow (acre-ft)		Spring Flexible Flow (acre-ft)	Fall Flexible Flow (ac-ft)			
1-Mar	500	500	375	130		11,008		300	175		5,058		-5,950			
16-Mar	1,500	1,500	1,375	130		43,478		300	175		5,395		-38,083			
1-Apr	2,500	2,500	2,355	150		69,917		380	235		6,847		-63,070			
16-Apr	350	350	205	150		5,950		350	205		5,950		0			
1-May	350	350	165	190	9,838			380	195	11,683			1,845			
1-Jun	350	350	165	190	9,521			380	195	11,306			1,785			
1-Jul	350	350	125	230	3,570			420	195	5,653			2,083			
16-Jul	350	350	125	230	11,187			420	195	17,712			6,526			
1-Sep	350	350	145	210	8,331			401	196	11,344			3,014			
1-Oct	350	350	195	160			11,683	350	195			11,683	0			
1-Nov	700	700	575	130			6,783	700	575			6,783	0			
7-Nov	700	700	575	130			4,522	700	575			4,522	0			
11-Nov	350	350	235	120			9,124	350	235			9,124	0			
1-Dec	350	350	235	120	14,142			350	235	14,142			0			
1-Jan	350	350	255	100	15,372			350	255	15,372			0			
1-Feb	350	350	255	100	13,884			350	255	13,884			0			
TOTAL RELEASE VOLUME (ac-ft):					85,845	130,354	32,112	TOTAL RELEASE VOLUME (ac-ft):					101,096	23,250	32,112	-91,852
								DIFFERENCE FROM DEFAULT SCHEDULE (ac-ft):					15,252	-107,103	0	
													156,459	2018 RESTORATION FLOW RELEASE VOLUME (ac-ft)		
													811	ACCOUNTING ADJUSTMENT - THROUGH April 24 2018 (from Program)		
													-2,129	EXCHANGE WITH 2017 URF'S (ac-ft)		
													155,141	TOTAL 2018 RESTORATION FLOW RELEASE VOLUME (ac-ft)		
													93,170	DIFFERENCE WITH DEFAULT VOLUME (ac-ft)		
													125,118	DIFFERENCE WITH ALLOCATION VOLUME (ac-ft)		

*Note: Figures approximate, not necessarily corrected to actuals.*