Updated 2026 Restoration Allocation and Default Flow Schedule February 20, 2026

Summary

The updated Restoration Allocation is based on an Unimpaired Runoff Forecast at the 75% probability of exceedance of 1,642 Thousands of Acre-Feet (TAF). This results in a Normal-Wet Water Year Type. This value for the runoff forecast was arrived at by blending the Department of Water Resources (DWR) and National Weather Service (NWS) forecasts with a 20/80 ratio, respectively, and using professional judgment to adjust the forecast to encompass a wider range of possible runoff values. Accordingly, 310.253 TAF is allocated to the Restoration Program as measured at Gravelly Ford. The Restoration Administrator is asked to return a recommendation on February 26, 2026.

Overview

The following transmits the updated 2026 Restoration Allocation and Default Flow Schedule to the Restoration Administrator for the San Joaquin River Restoration Program (SJRRP), consistent with the January 2020 (Version 2.1) Restoration Flow Guidelines (Guidelines or RFG). This Restoration Allocation and Default Flow Schedule provides the following:

- Forecasted water year Unimpaired Runoff: the estimated annual flows that would occur absent regulation on the river. This value is also known as the "Natural River," "Unimpaired Runoff," "Unimpaired Inflow," or "Full Natural Flow," and is utilized to identify the water year type.

- Hydrograph Volumes: the annual allocation hydrograph based on water year Unimpaired Runoff, utilizing Method 3.1 with the Gamma Pathway (RFG-Appendix C, Figure C3) agreed to by the Parties in December 2008.

- Default Flow Schedule: the schedule of Restoration Flows in the absence of a recommendation from the Restoration Administrator.

- Additional Allocations: the hypothetical Restoration Allocations that would result from 50%, 75%, and 90% probability of exceedance (often shortened as "% exceedance") of the Unimpaired Runoff Forecast. The 98%, 25%, 10%, and 2% exceedances may also be included.

- Unreleased Restoration Flows: the amount of Restoration Flows not released due to channel capacity constraints, or without delaying completion of Phase 1 improvements.

- Flow targets at Gravelly Ford: the flows at the head of Reach 2, and estimated scheduled releases from Friant Dam adjusted for the assumed Holding Contract demands and losses in Exhibit B.

- Restoration Budget: the volumes for the annual allocation, spring flexible flow, base flow, riparian recruitment, and fall flexible flow.

- Remaining Flow Volume: the volume of Restoration Flows released, the remaining volume available, and associated limitations and flexibility.

- Operational Constraints: the flow release limitations based on downstream channel capacity, regulatory, or legal constraints.

Consistent with Paragraph 18 of the Settlement, the Restoration Administrator shall make recommendations to the Secretary of the Interior concerning the manner in which the hydrographs shall be implemented. As described in the Guidelines, the Restoration Administrator is requested to recommend a flow schedule showing the use of the entire annual allocation during the upcoming Restoration Year or otherwise identify Unreleased Restoration Flows and categorize recommended flows by account. If a recommendation is not provided by the Restoration Administrator, the Capacity Constrained Default Flow Schedule (Table 8b) or the most recently approved schedule will be implemented. The Restoration Administrator is asked to return a recommendation on February 26.

Forecasted Unimpaired Runoff

Unimpaired Runoff represents the natural water production of a river basin, unaltered by upstream diversions, storage, or by export or import of water to or from other watersheds (a.k.a. "Unimpaired Inflow" or "Natural River" or "Full Natural Flow"). It is calculated for the period of a water year and also for shorter periods (e.g. April–July). The forecast of Unimpaired Runoff for the entire water year determines the volume of Restoration Flows available for the Restoration Year (i.e., the Restoration Allocation) (see Table 1). Information for forecasting the Unimpaired Runoff includes:

- Observation of Unimpaired Runoff into Millerton Lake to support the water supply allocation

- The California DWR Bulletin 120 (B120) latest update for San Joaquin River inflow to Millerton Lake Unimpaired Flow, and/or the most current DWR Bulletin Water Supply Index (WSI)

- The NWS Ensemble Streamflow Prediction (ESP) Water Supply Forecast for the San Joaquin River at Millerton Lake

- Other forecast models, ground-based observations, remotely-sensed observations, hydrologic models, analysis of historic patterns, and short-term weather forecasts as appropriate.

Table 1 shows the 2026 water year (October 1, 2025 to September 30, 2026) observed accumulated and forecasted water year Unimpaired Runoff into Millerton Lake. Table 2 includes

the published DWR forecast (with updates when available), the NWS forecast, and the NWS forecast with a 7-day smoothing function applied to remove the day-to-day variance. Figure 1a plots DWR and NWS forecast values over the entire water year, while Figure 1b shows the most recent period in detail. The DWR B120 forecast for February 1 (issued February 9) is developed from snow course information supported by other information such as snowpack modeling and Airborne Snow Observatory (ASO) surveys.

In 2026, Reclamation's Joint Forecasting Team is using revised forecasting procedures which adjusts monthly runoff forecasts in a different manner than previous years. The steps now being used are described in the section "Creating a Hybrid Forecast" below.

Table 1. **San Joaquin River Water Year Observed Unimpaired Runoff**

Statistic	Value
Accumulated Unimpaired Runoff ("Natural River") February 18, 2026 [1]	396.3 TAF
Accumulated Unimpaired Runoff as percent of normal [2]	140%

1. Full Natural Flow Monthly_MILFN
2. Based on average accumulation of Unimpaired Runoff totaling 1,830 TAF.

Table 2. **Water Year Forecasted Unimpaired Runoff at Millerton Lake (in TAF) for various probabilities of exceedance**

Runoff Forecast	98% [7]	90%	75%	50%	25%	10%	2% [7]
DWR, February 1, 2026 [3,6] (Published Value)	700	830	1,120	1,460	1,970	2,410	—
DWR, February 17, 2026 [3,6] (Updated A-J, converted to Water Year)	—	1,070	1,300	1,580	2,095	2,540	—
NWS, February 19, 2026 [4] (Published Daily Value)	1,520	1,740	1,880	2,170	2,540	2,990	3,530
Smoothed NWS, February 19, 2026 [5] (7-day Smoothing)	1,458	1,610	1,845	2,125	2,504	2,942	3,425

3. B120: Bulletin 120 - WSI. When only April-July runoff forecasts are available, they are converted to Water Year equivalents in this table.
4. CNRFC - Ensemble Products - FRAC1\
5. The NWS smoothed data uses a 7-day triangular weighted moving average, where the most recent day (n) is given greater weight than each previous forecast day (n-1, 2, 3, etc.); this reduces noise stemming from ESP model input. The following formula is used: (($Forecast_n$ * 1) + ($Forecast_{n-1}$ * 0.857) + ($Forecast_{n-2}$ * 0.714) + ($Forecast_{n-3}$ * 0.571) + ($Forecast_{n-4}$ * 0.429) + ($Forecast_{n-5}$ * 0.286) + ($Forecast_{n-6}$ * 0.143)) / 4.
6. DWR values at the 75% exceedance and 25% exceedance are interpolated if they are not published.
7. DWR does not issue a 2% exceedance forecast. Also, DWR uses a 99% exceedance statistic whereas the NWS statistic is closer to 98%. For simplicity, they are labeled as 98% and 2% regardless of origination.
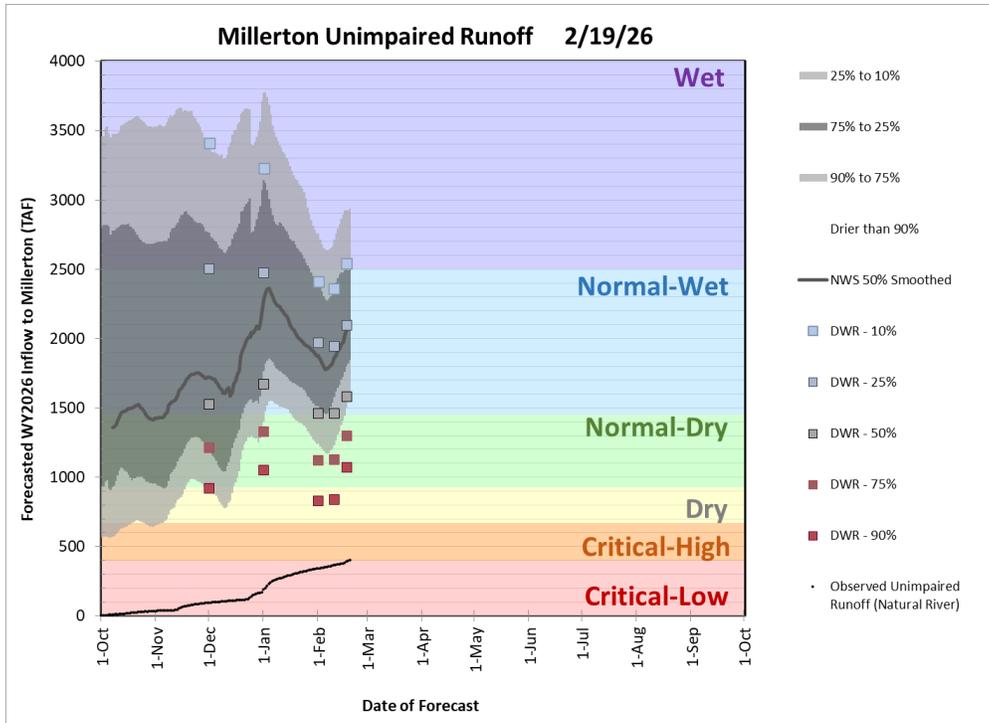
Figure 1a. Plot of 2026 Water Year forecasts. This includes both NWS Ensemble Streamflow Prediction Forecasts and DWR Forecasts at the 90%, 75%, 50%, 25%, and 10% exceedances (shown as shaded bands for NWS and squares for DWR).
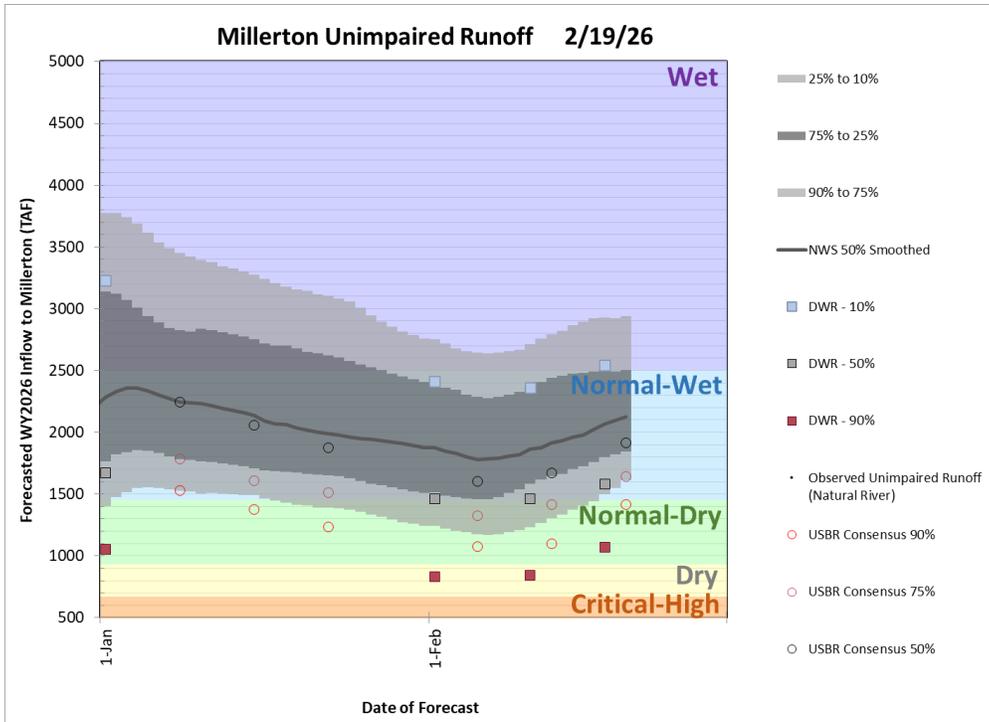

Figure 1b. Detail plot of most recent forecasts. Also shown are Reclamation's "hybrid" forecast with open circles.

Hydrologic Narrative

The Upper San Joaquin watershed has experienced above average precipitation so far in the 2026 water year. The first three months of the water year were each above average with January slightly below average. Each of the first four months of the water year were noted for abnormally high air temperatures in the Sierra Nevada, especially during precipitation events. Through January, the rain-snow line has typically ranged from 6,500' to 9,000', resulting in more rain than snow falling in the watershed.

February 11-19, a series of colder storms substantially increased the snowpack volume. These storms added to the modest snowpack at higher elevations and brought the first snow to the lower elevations. Thus, snowpack at elevations below 8,000' improved substantially. Figure 2 depicts the SWE traces for two representative stations in the Upper San Joaquin watershed, the lower elevation station showing large relative increases in Snow Water Equivalent (SWE).

Snowpack information has improved since the Initial Restoration Allocation. The first comprehensive California Cooperative Snow Surveys in the San Joaquin were completed around February 1, and advanced snowpack models are now fully operational. The first ASO survey for the water year was completed January 27 with snowpack density information supported by the on-the-ground snow course measurements. Prior to the February storm series, snowpack volume declined to 500-550 TAF but has since rebounded to 958 TAF as of February 17 (and has likely exceeded 1,000 TAF by February 19). Table 3 shows a brief summary of snowpack estimates along with Reclamation's consensus estimates.
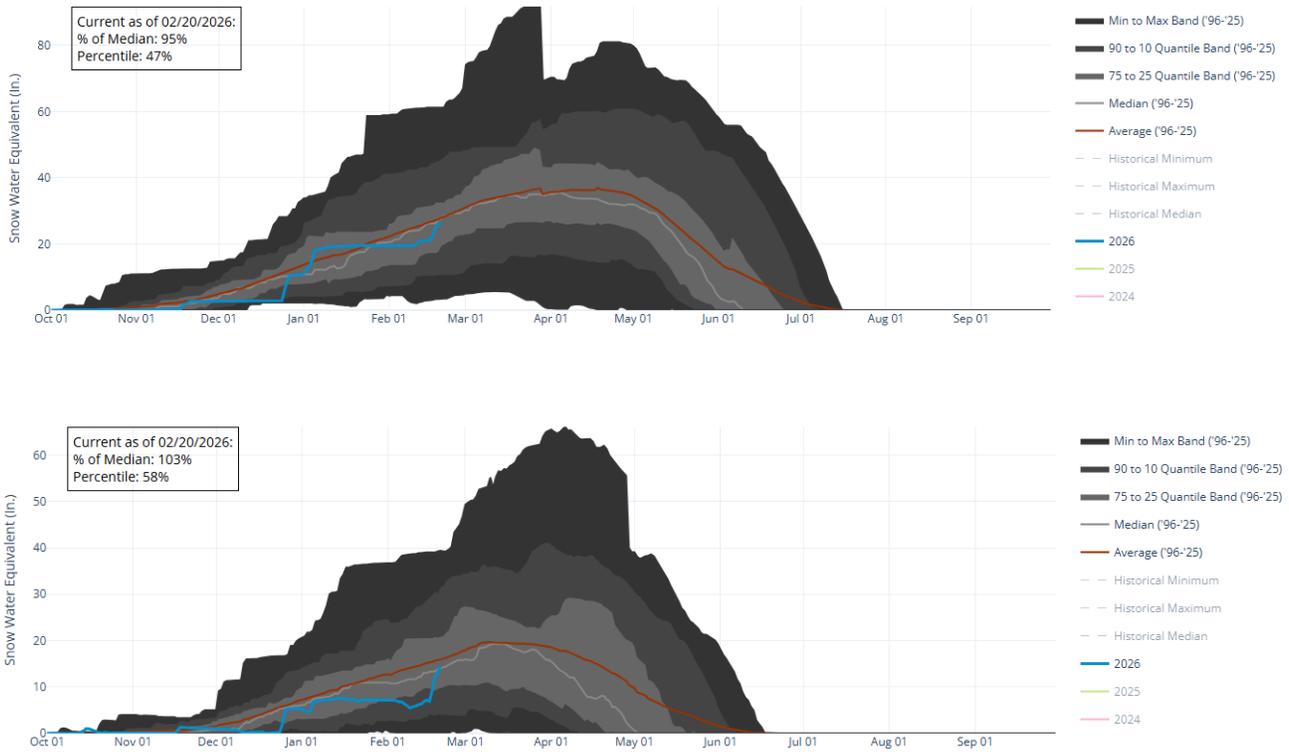
Figure 2. **Mammoth Pass Snow Pillow trace (top) compared to Graveyard Meadow Snow Pillow trace (bottom).** 2026 Snow Water Equivalent (SWE) is plotted here as blue line against historic probabilities at two of the many snow pillows. The orange line traces the 30-year average. Mammoth Pass SWE has recently approached median conditions (gray line) and the station lies at 9,300 feet elevation, whereas Graveyard Meadow SWE is also close to median conditions and the station lies at 6,900 feet elevation.

Table 3. **Total snowpack volume (TAF of Snow Water Equivalent) depicted by models and remote sensing, and consensus estimates made by Reclamation**

Date	Snowpack Model SWE Volumes (TAF)						Reclamation Consensus
	NWS CNRFC (Snow-17)	NOHRSC (SNODAS)	CU Boulder (Real-time SWE) [8]	DWR iSnobal	M3W iSnobal [9]	ASO Inc. (Aerial Snow Survey) [10]	
Jan 15, 2026	861	733	Not Available	Not Available	Not Available	Not Available	**773**
Feb 17, 2026	1063	1192	581 (Feb 15)	891	958	573 (Jan 27)	**958**

8. CU Boulder "Real-time SWE" model began issuances February 8.

9. The "iSnobal" model for the San Joaquin is produced by M3Works under a contract with ASO.

10. The first ASO survey is occurred January 27. The total survey volume was 573 TAF without snow cover on frozen water bodies and approximately 584 TAF including snow over frozen water bodies.

Creating a Hybrid Forecast

Staff from the South-Central California Area Office of Reclamation, Reclamation's SJRRP office, and Friant Water Authority jointly track and evaluate the accuracy of runoff forecasts on a regular basis. Based on the age of these forecasts, the historic performance of these forecasts, the short-term and long-term weather forecasts, the climatological outlook, observed Unimpaired Runoff, and other available information, a hybrid forecast is generated. The blending of the different forecasts and any other adjustments are regularly evaluated and selected using the best available information and professional judgment. A new process of combining and adjusting forecasts is in use in 2026. The adjustment steps used to create Reclamation's hybrid forecast is summarized in Table 4 and the resulting hybrid forecast values are shown in Table 5.

Monthly Manual Override

Prior to blending and adjusting, Reclamation may "override" runoff forecasts in particular months of the year based on current runoff trends, runoff models other than the DWR and NWS products, or historic patterns. If a particular month is manually adjusted in this manner, the remaining months are revised such that the total water year runoff volume is unchanged. These manually adjusted values are retained through the hybrid forecast process and are unaffected by subsequent scaling or adjustments. Most commonly this is applied to the current month. **For this allocation (based on an analysis conducted on February 19), a manual override was applied to the month of February. The inserted values were slightly lower at all exceedances than the published values.**

Blending of DWR & NWS Forecasts

Reclamation considers the DWR runoff forecast products and the NWS runoff forecast products as primary sources for guidance. Each has their strengths and weaknesses, and experience has shown that the correct value (in hindsight) often lies between these two forecast products. The next step in creating a hybrid forecast is to blend these two products together using professional judgment and by referencing auxiliary information[1]. **For the current allocation, the DWR WSI forecast for April – July and NWS "smoothed and runoff adjusted" forecast for April – July are combined with a 20/80 blending, respectively (i.e., 20% DWR, 80% NWS) (Table 4). The blending ratio effectively scales the NWS forecast at all exceedances to 96.8% of its original value since the DWR forecast is lower.**

Additional Forecast Scaling

Other runoff forecast products are becoming available for the Upper San Joaquin watershed in recent years. While these are often considered "experimental" in nature or lack a long period of operation to demonstrate their reliability, they nonetheless can provide additional guidance when

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[1] With the new hybrid forecast procedures being implemented in 2026, the NWS forecast is treated as the "backbone" forecast and then adjusted in the manner described. The treatment of the NWS forecast in this manner is because the NWS forecast is issued daily, is available for a broader range of exceedances, and is comprehensive by including water year, A-J, monthly, and daily values at each issuance.

properly evaluated and weighted. Sometimes these additional forecast products lie outside the range bracketed by the DWR and NWS forecast. The Joint Forecast Team may adjust the forecast by applying an additional scaling function to bring the hybrid forecast more in-line with these additional products. **For this allocation, an additional scaling factor of 90% (multiplying by 0.900) was applied to this forecast. This scaling factor was applied to bring the resulting forecast closer in-line with the Reclamation water budget model and WRF-Hydro runoff forecasts, both of which were lower than both the DWR and NWS published forecasts. The cumulative scaling from both the blending and the additional scaling is 87.1%**

Dispersion Adjustment

The term "dispersion" describes the breadth of the values across various probabilities of exceedance. Often this is quantified by finding the range between the 10% and 90% exceedance values. Models which are under-dispersed convey a false sense of confidence in how dry or wet future conditions may be, even if the 50% exceedance is accurately forecasted. Models which are over-dispersed unnecessarily inject uncertainty into the forecast and all operations which rely upon that forecast. Because the NWS runoff forecast product does not incorporate hydrologic uncertainty (for example, it assumes a single soil moisture value and does not ascribe any uncertainty in that parameter), sometimes it is beneficial to increase the dispersion in the hybrid forecast which "stretches" the extreme probabilities. Dispersion adjustments do not affect the 50% exceedance value. **For this allocation, +12% additional dispersion was applied to this forecast. Additional dispersion is often added when a forecast is scaled using a value less than 100%, which compresses the dispersion. Dispersion is also sometimes added to compensate for the NWS runoff model's lack of hydrologic uncertainty.** This results in a range between the 10% April –July (A–J) and the 90% A–J of 889 TAF. This compares to the NWS published range of 911 TAF and the DWR published range of 1150 TAF.

Skew Adjustment

The final step in creating a hybrid forecast is to optionally apply additional skew to the distribution. "Positive skew" describes how the range between the 50% and 10% exceedances is larger than the range between the 90% and 50% exceedances. Occasionally, it may be warranted to increase or decrease the skew in the hybrid forecast suite. Skew adjustments do not affect the 50% exceedance value. **For this allocation, no skew adjustment was applied to this forecast**

Table 4.   **Current Blending and Adjustments to create a Hybrid Forecast**

Adjustment Step	Adjustment Applied to All Probability of Exceedances
Monthly Manual Override	Yes — February
Blending Ratio	20/80 (DWR/NWS) which is equivalent to a 96.8% scaling of NWS
Additional Scaling	90%
Dispersion Adjustment	+12%
Skew Adjustment	none

Table 5.   **Current Hybrid Unimpaired Runoff Forecasts (TAF)**

Runoff Forecast	98%	90%	75%	50%	25%	10%	2%
Reclamation's Hybrid Unimpaired Runoff Forecast	1,264	1,413	1,642	1,915	2,287	2,716	3,189

Restoration Allocation

As per the Guidelines, the **75% probability of exceedance** forecast is used for the allocation under current hydrologic conditions to set the Restoration Flow Allocation. Table 6 below, from the Guidelines Version 2.1, depicts the progression of forecast exceedances used to set the Restoration Allocation. The final allocation issuance is made in May or June as per the Guidelines. First, use the current 50% forecast to select which row is applicable to the current hydrology situation. Then, move across columns to the appropriate month and find the applicable probability of exceedance should be used to generate the Restoration Allocation.

Table 6. Guidance on Percent Probability of Exceedance Forecast to Use for Restoration Allocation.

		January	February	March	April	May	June
If the 50% forecast is:	Above 2,200 TAF	50	50	50	50	50	—
	1,600 to 2,200 TAF	75	**75**	50	50	50	—
	900 to 1,599 TAF	75	75	75	50	50	—
	500 to 899 TAF	90	90	75	50	50	50
	Below 500 TAF	90	90	90	90	75	50

Applying the forecast blending and adjustments determined by Reclamation and using the 75% probability of exceedance forecast dictated by the Guidelines, Reclamation calculates an **Unimpaired Runoff hybrid forecast of 1,642 TAF and a Normal-Wet Water Year Type. This provides a Restoration Allocation of 310.253 TAF as measured at Gravelly Ford (GRF).** Combined with Holding Contracts on the San Joaquin River, **this results in a Friant Dam release of approximately 427.198 TAF (Table 7)**. Other hypothetical allocations are presented in Table 7 and indicate the range of possible forecasts and the resulting Restoration Allocations.

Table 7. SJRRP Water Year Type and Allocation for 2026 Restoration Year (highlighted in blue) shown with other hypothetical values for each probability of exceedance forecast.

	98%	90%	75%	50%	25%	10%	2%
Reclamation's Hybrid Unimpaired Runoff Forecast (TAF)	1,264	1,413	**1,642**	1,915	2,287	2,716	3,189
Water Year Type	Normal-Dry	Normal-Dry	**Normal-Wet**	Normal-Wet	Normal-Wet	Wet	Wet
Restoration Allocation at GRF (TAF)	258.316	278.374	**310.253**	348.499	400.615	556.542	556.542
Friant Dam Flow Releases (TAF)	375.262	359.319	**427.198**	465.444	517.560	673.488	673.488

Unreleased Restoration Flow Pricing

The first allocation issued after March 21 sets the price for 2026 Tier 2 Unreleased Restoration Flows (URFs) which may be made available to Friant Contractors. Tier 1 URF pricing is independent of hydrology and fixed at $25.00 per acre-foot in 2026.

Contractual Obligation Considerations

Consistent with Section 10004(j) of the San Joaquin River Restoration Settlement Act, the Settlement and the Settlement Act do not modify the rights and obligations of the United States under the Purchase Contract between Miller and Lux and the United States (Purchase Contract) and the Second Amended Exchange Contact (Exchange Contract), between the United States Department of the Interior, Bureau of Reclamation and Central California Irrigation District (CCID), San Luis Canal Company (SLCC), Firebaugh Canal Water District (FCWD), and Columbia Canal Company (CCC). These four districts are collectively known as the San Joaquin River Exchange Contractors (SJREC). Reclamation's obligations in the Purchase Contract and Exchange Contract remain unchanged by this allocation, which is consistent with Condition 17 of Reclamation's 2013 Water Rights Order addressing Restoration Flows.

Hydrologic conditions in Northern California, where the SJREC water supply is typically generated, are trending above average. 2026 is expected to be a "Non-Shasta Critical" allocation for SJREC. Federal storage in San Luis Reservoir is on track to meet the 2026 Exchange Contract supply.

Default Flow Schedule

The Default Flow Schedule, derived from Exhibit B in the Settlement, identifies how Reclamation will schedule the Restoration Allocation for the current Water Year Type and Unimpaired Runoff volume absent a recommendation from the Restoration Administrator. The Guidelines provide detail on how a Default Flow Schedule is parsed from the allocation volume. This approved method of distributing water throughout the year is referred to as "Method 3.1" with the "gamma pathway."

Exhibit B Method 3.1 Default Flow Schedules

Table 8a shows the Basic Default Flow Schedule flows and corresponding Restoration Allocation volumes for the entire year absent channel capacity and seepage constraints, including releases from Friant Dam and Restoration Flow releases in excess of Holding Contracts. Volume is distributed as various flow rates across the year as per methods explained in the Guidelines.

Table 8a. Basic Default Flow Schedule

Flow Period	Friant Dam Release Flow (cfs)	Holding Contracts [11] Flow (cfs)	Flow Target at GRF Flow (cfs)	Restoration Flow at GRF Flow (cfs)	Friant Dam Release Volume (TAF)	Restoration Flow at GRF Volume (TAF)
Mar 1–Mar 15	500	130	375	370	14.876	11.008
Mar 16–Mar 31	1500	130	1375	1370	47.603	43.478
Apr 1–Apr 15	2500	150	2355	2350	74.380	69.917
Apr 16–Apr 30	2432	150	2287	2282	72.356	67.893
May 1–May 28	350	190	165	160	19.438	8.886
May 29–Jun 30	350	190	165	160	22.909	10.473
July 1–July 29	350	230	125	120	20.132	6.902
Jul 30–Aug 31	350	230	125	120	22.909	7.855
Sep 1–Sep 30	350	210	145	140	20.826	8.331
Oct 1–Oct 31	350	160	195	190	21.521	11.683
Nov 1–Nov 6	700	130	575	570	8.331	6.783
Nov 7–Nov 10	700	130	575	570	5.554	4.522
Nov 11–Nov 30	350	120	235	230	13.884	9.124
Dec 1–Dec 31	350	120	235	230	21.521	14.142
Jan 1–Jan 31	350	100	255	250	21.521	15.372
Feb 1–Feb 28	350	100	255	250	19.438	13.884
				Totals:	427.198	310.253

11. In recent years, Holding Contract demands have been higher than assumed under Exhibit B of the Settlement, in which case, flows at Friant are increased to achieve the Gravelly Ford Flow Target.

Table 8b shows the Capacity Constrained Default Flow Schedule volumes with all expected operational constraints, primarily controlled by seepage limitations in Reach 4A. Any volume within the Spring Flexible Flow Account and Fall Flexible Flow Account that cannot be released on the default schedule is shifted to other times during the flexible flow period with available capacity as per the Guidelines. This Capacity Constrained Default Flow Schedule depicted in Table 8b will be implemented in the absence of a specific recommendation by the Restoration Administrator. Table 8b uses Exhibit B losses; actual losses are greater in most cases. **With these known constraints[1], a Restoration Flow volume of 76.489 TAF is generated that cannot be scheduled for release without shifting outside of the flexible flow periods (which would require a Water Supply Test). This volume would become URFs under the Capacity Constrained Default Flow Schedule using Exhibit B losses.** Note that this estimate is based on the newly set Reach 3 seepage capacity of approximately 895 cfs and a raised Reach 4A seepage capacity of approximately 950 cfs[2] (see section on Channel Capacity). This is an estimated volume of water, actual URF volumes will depend on several factors including the Restoration Administrator Recommendation, flow schedule to date, recapture of Restoration Flows at Mendota Pool, any Friant Dam releases made for the Exchange Contract, real-time assessments of groundwater constraints, actual river losses, and in-river construction projects.

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[1] As shown by Table 14, the estimated seepage capacity in Reach 3 is dynamic because it is dependent upon water deliveries to Arroyo Canal. For the purposes of Table 8b, an annual mean Reach 3 capacity for Restoration Flows was assumed to be 600 cfs.

[2] Reach 4A seepage limitation of 950 cfs is an approximate seepage capacity flow rate. Higher flows conducted in 2026 may help refine this estimate. As always, seepage constraints are driven by real-time groundwater conditions and may be above or below the estimated flow rates shown here.

Table 8b.   Capacity Constrained Default Flow Schedule

Flow Period	Flow (cfs)				Volume (TAF)		
	Friant Dam Release	Holding Contracts [12]	Flow Target at GRF	Restoration Flow at GRF	Friant Dam Release	Restoration Flow at GRF	Unreleased Restoration Flow [13]
Mar 1–Mar 15	847	130	722	717	25.189	21.322	-10.313
Mar 16–Mar 31	847	130	722	717	26.869	22.743	20.735
Apr 1–Apr 15	867	150	722	717	25.784	21.322	48.596
Apr 16–Apr 30	867	150	722	717	25.784	21.322	46.571
May 1–May 28	907	190	722	717	50.352	39.800	-30.917
May 29–Jun 30	346	190	161	156	22.630	10.194	0.279
Jul 1–Jul 29	346	230	121	116	19.887	6.658	0.245
Jul 30–Aug 31	346	230	121	116	22.630	7.576	0.279
Sep 1–Sep 30	346	210	141	136	20.573	8.077	0.253
Oct 1–Oct 31	346	160	191	186	21.259	11.421	0.262
Nov 1–Nov 6	739	130	614	609	8.795	7.248	-0.464
Nov 7 –Nov 10	696	130	571	566	5.520	4.489	0.034
Nov 11–Nov 30	346	120	231	226	13.715	8.955	0.169
Dec 1–Dec 31	346	120	231	226	21.259	13.880	0.262
Jan 1–Jan 31	346	100	251	246	21.259	15.110	0.262
Feb 1–Feb 28	346	100	251	246	19.202	13.648	0.236
				Totals:	350.709	233.764	76.489

12. In recent years, Holding Contract demands have been higher than assumed under Exhibit B of the Settlement, in which case, flows at Friant are increased to achieve the Gravelly Ford Flow Target.

13. This estimate of URF volume is based on the most constraining reach, with Spring Flexible Flows redistributed March 1 through May 28 as necessary and Fall Flexible Flows redistributed September 3 through December 28 as necessary up to channel capacity constraints. Constrained values are based on actual losses, not Exhibit B losses. Actual URF volume will depend on the Restoration Administrator's recommendations.

Exhibit B Restoration Flow Budget

Table 9 shows the components of the annual water budget for February 1, 2026, through February 28, 2027 (i.e., the Restoration Year including the spring flexible flow period). The Continuity Flow Account, Spring Flexible Flow Account, Riparian Recruitment Flow Account, and Fall Flexible Flow Account reflect the Exhibit B hydrograph for the current Restoration Allocation. The Exhibit B value of 116.945 TAF for Holding Contracts is shown. The volume for each flow account may change with subsequent Restoration Allocations.

Table 9.   **Restoration Budget with Flow Accounts**

Period	Holding Contract Demand (TAF)	Continuity Flow Account (TAF)	Spring Flexible Flow Account (TAF)	Riparian Recruitment Flow Account (TAF)	Fall Flexible Flow Account (TAF)
Feb 1–Feb 28	–	0	166.868	–	–
Mar 1–Apr 30	16.919	25.428		–	–
May 1–May 28	10.552	8.886		0	–
May 29–Jul 29	25.666	17.375	–	0	–
Jul 30–Aug 31	15.055	7.855	–	–	–
Sep 1–Sep 30	12.496	8.331	–	–	6.942
Oct 1–Nov 30	17.177	25.170	–	–	
Dec 1–Dec 31	7.379	14.142	–	–	
Jan 1–Feb 28	11.702	29.256	–	–	–
Totals	**116.945 [14]**	**136.443**	**166.868**	**0**	**6.942**
		310.253 (Base Flow volume)			
		427.198 (Approximate Friant Release Volume) [14]			

14. Since the early 2000s, Holding Contract demands have been higher than assumed under Exhibit B of the Settlement, in which case, flows at Friant are increased to achieve the Gravelly Ford Flow Target.

Remaining Flow Volumes

The amount of water remaining for scheduling is the volume of flows released from Friant Dam in excess of releases required to meet Holding Contract demands, less past releases. Table 10 tracks these balances among the four flow accounts. Tracking these four flow accounts is necessary for application of the Water Supply Test. The released-to-date volumes are derived from quality assurance/quality control (QA/QC) daily average data when available, and partly from provisional data posted to CDEC, and thus may have future adjustments. Such adjustments may also affect the remaining flow volume.

Table 10. Estimated Restoration Flow Volume Remaining and Released to Date

Flow Account		Yearly Allocation (TAF)	Released to River to Date [15] (TAF)	Removed as URFs to Date [15] (TAF)	Remaining Flow Volume (TAF)
Base Flows	Continuity Flow Account (Mar 1– Feb 28)	136.443	0	0	136.443
	Spring Flexible Flows (Feb 1–May 28)	166.868	0	0	166.868
	Riparian Recruitment Flows (May 1–Jul 29)	0	0	0	0
	Fall Flexible Flows (Sep 3–Dec 28)	6.942	0	0	6.942
Buffer Flows [16]		—	—	0	0
Unreleased Restoration Flows (Returned Exchanges)		—	—	0	—
Purchased Water		—	—	0	—
	Totals:	**0**	**0**	**310.253**

15. These are "Base Flow" releases through February 19, 2026

16. Buffer Flow volumes are based on actual releases, and are not an allocated volume per se.

Unreleased Restoration Flows

Unreleased Restoration Flows are created when inadequate channel capacity exists or other limitations which prevent the release of the entire Restoration Allocation volume. This extra volume may be sold or exchanged in a manner which benefits the Restoration Goal of the Settlement. URFs which are exchanged become available at another time (typically in the future) and thus may augment the current Restoration Allocation volume. Occasionally, URF exchange agreements may be structured in such a way to require a commitment of URFs in the future. The accounting of URF involved in exchanges is described below.

Available URF Exchange Returns

SJRRP has renegotiated two URF Exchange Agreements which are available for calling upon in 2026. SJRRP is working on extending a third agreement (Table 11).

Table 11.   Volume available from URF Exchange Returns

Exchange Partner	Period of Return [16]	Minimum Required Return (TAF)	Maximum Annual Return (TAF)	Notes
FID	Apr–Sep [17]	— [17],	Up to 2.362 TAF	Return volume decreased 10% per year. Expires at end of Restoration Year 2027. Available Critical-High through Wet year types. 60-day advanced notice
AEWSD	Apr–Feb [17]	— [17]	Up to 5.521 TAF 3,312 TAF in Dry 2,366 TAF in C-H	Expires at end of Contract Year 2029. Available Critical-High through Wet year types. Must notify prior to July 1
OCID		— [17], [18]		Currently being renegotiated

17. Unused water is purchased by District

18. Unless otherwise by mutual agreement or modification of agreement

URF Exchange Commitments

There are currently no commitments or encumbrances to any URF inventory (Table 12).

Table 12.   Volume Committed to URF Exchanges

Exchange Partner	Exchange Terms	Notes
—	—	—

Operational Constraints

Operating criteria, such as channel conveyance capacity, ramping rate constraints, scheduled maintenance or construction, reservoir storage, flood management, contractual obligations, and downstream seepage concerns, may restrict the release of Restoration Flows. Table 13 summarizes known 2026 Restoration Year operational constraints (and also covers the last month of the 2025 Restoration Year).

Table 13.   Summary of Operational Constraints

Type of Constraint	Period	Flow Limitation
Levee Stability	Currently in effect	1,210 cfs in Reach 2B
	Currently in effect	2,600 cfs in Middle Eastside Bypass
	Currently in effect	2,350 cfs in Reach 5
Seepage Limitation	Currently in effect	Reach 3: Approximately 895 cfs at MEN [19]
USFWS Biological Opinion	Until consultation for "Phase 2"	1,660 cfs of Restoration Flows released at Friant Dam
Construction — Arroyo Canal Fish Screen and Sack Dam Fish Passage [20]	February 1–May 25, 2026	Contract requires ability to pass a minimum of 230 cfs. Actual flow limitation is higher for this period. Reclamation is currently working with the construction contractor to accommodate higher flows at Sack Dam which would then be limited by seepage (see above)
	May 26, 2026–August 31, 2026	Contract requires ability to pass a minimum of 0 cfs. Actual flow limitation may be higher and is dependent on dewatering plan. Reclamation intends to engage construction contractor to pass higher flows during this period
	September 1, 2026–October 31, 2026	Contract requires ability to pass a minimum of 150 cfs. Actual flow limitation may be higher
	November 1, 2026–February 28, 2027	Contract requires ability to pass a minimum of 230 cfs. Actual flow limitation may be higher

19. A seepage easement was signed in March 2025 increasing the seepage limitation to the current estimate of 895 cfs at MEN. Reach 3 must accommodate both Arroyo Canal water deliveries and Restoration Flows, see Table 14 for estimated rate for only Restoration Flows. Seepage constraints are driven by real-time groundwater conditions and may be above or below the estimated flow rates shown here.

20. Flow limitations will be iterative and determined in coordination with the construction contractor so as not to delay completion of the Phase 1 Settlement improvements (Paragraph 11(a) and Paragraph 13(i) of the Settlement).

The 2026 Channel Capacity Report identifies a maximum flow in Reach 2B of 1,210 cfs due to levee stability constraints. This results in a maximum release from Friant Dam between 1,460 cfs and 1,590 cfs depending on the time of year. The 2026 Channel Capacity Report also identifies a maximum flow in the Middle Eastside Bypass of 2,600 cfs, which was increased from the 2022 Channel Capacity Report value of 1,070 cfs due to the completion of the DWR Reach O levee improvements project and the removal of two weirs within the Eastside Bypass.

With active construction in the San Joaquin River corridor to complete Settlement Phase 1 projects, there are expected to be periods over the next several years where channel capacity

through construction sites becomes the most limiting constraint. Reclamation will coordinate with construction contractors to maximize the amount of Restoration Flows that can be passed through project sites but will also ensure that completion of Phase 1 projects are not delayed by Restoration Flow passage. As with other aspects of channel capacity, flow constraints through construction sites cannot be guaranteed or predicted far into the future. Reclamation will periodically update flow limitations imposed by construction.

For the period February 1 – May 25, 2026, Reclamation has confidence that the Arroyo Canal Fish Screen and Sack Dam Fish Passage construction site can accommodate flows of at least 700 cfs, which would result in the Reach 3 seepage limitation being controlling for that period of time. Since Reach 3 must accommodate Restoration Flows as well as water deliveries to Arroyo Canal, the expected flow rate specific to Restoration Flows is complex. Table 14 uses historic delivery patterns to Arroyo Canal and assumed Reach 3 losses and flow variability to arrive at an estimated Restoration Flow rate at the end of Reach 3. Fluctuations in Arroyo Canal water deliveries may occasionally result in the need to reduce Restoration Flows at Friant Dam or recapture Restoration Flow at Mendota Pool to remain below seepage limitations, which are themselves dynamic and respond to local groundwater conditions.

Table 14. Expected Reach 3 capacity for Restoration Flows. Since Arroyo Canal deliveries can be forecasted based on historical data, one can estimate what remaining capacity in Reach 3 is available to Restoration Flows. Actual capacity may be limited by other factors.

Period	Reach 3 Seepage Limitation (cfs)	HMRD Typical Historic Max Delivery (cfs)	Reach 3 Losses (cfs)	Assumed Flow Variability (cfs)	Estimated Capacity for Restoration Flows at Sack Dam (cfs)
Feb 1–15	Approx. 895	200	50	25	630
Feb 16–28	Approx. 895	320	50	25	510
Mar 1–15	Approx. 895	320	50	25	510
Mar 15–31	Approx. 895	160	50	25	670
Apr 1–15	Approx. 895	160	50	25	670
Apr 16–30	Approx. 895	240	50	25	590
May 1–15	Approx. 895	280	50	25	550
May 16–25	Approx. 895	360	50	25	470
May 26–31	Approx. 895	400	50	25	430
Jun 1–15	Approx. 895	480	50	25	350
Jun 16–30	Approx. 895	520	50	25	310
Jul 1–15	Approx. 895	540	50	25	290
Jul 16–31	Approx. 895	540	50	25	290
Aug 1–15	Approx. 895	540	50	25	290
Aug 16–31	Approx. 895	540	50	25	290
Sep 1–15	Approx. 895	300	50	25	530
Sep 16–30	Approx. 895	360	50	25	470
Oct 1–15	Approx. 895	360	50	25	470
Oct 16–31	Approx. 895	340	50	25	490
Nov 1–15	Approx. 895	300	50	25	530
Nov 16–30	Approx. 895	260	50	25	570
Dec 1–15	Approx. 895	200	50	25	630
Dec 16–31	Approx. 895	180	50	25	650
Jan 1–15	Approx. 895	100	50	25	730
Jan 16–31	Approx. 895	100	50	25	730
Feb 1–15	Approx. 895	200	50	25	630
Feb 16–28	Approx. 895	320	50	25	510

2026 Allocation History

The Restoration Allocation is adjusted multiple times between the date of the initial allocation and the final allocation; issuances will generally take place on a monthly schedule but may also be issued based on rapidly changing hydrologic conditions. The Restoration Administrator is responsible for contingency planning and managing flow schedules to stay within the current allocation to the extent possible, in accordance with the Guidelines. Table 15 summarizes the full allocation history for this Restoration Year.

Table 15.   Allocation History

Allocation Type	Issue Date	DWR: NWS Blending	Cumu-lative Scaling	Dispersion Adj.	Unimpaired Runoff Forecast (at forecast exceedance)	Year Type	Restoration Allocation at Gravelly Ford	Restoration Flows and URFs Expended
Initial	January 16, 2026	20/80	95.6%	+10%	1,606 TAF (@ 75%)	Normal-Wet	305.210 TAF	0 TAF (through 1/16/2026)
Updated	February 20, 2026	20/80	87.1%	+12%	1,642 TAF (@ 75%)	Normal-Wet	310.253 TAF	0 TAF (through 2/19/2026)

Appendix A: Abbreviations, Acronyms, and Glossary

AEWSD	Arvin–Edison Water Storage District
af	acre-feet
A-J	April through July period
ASO	Airborne Snow Observatory
B120	DWR Bulletin No. 120 which forecasts water supply
CCC	Columbia Canal Company
CCID	Central California Irrigation District
CDEC	California Data Exchange Center
cfs	cubic feet per second
CVP	Central Valley Project
DEID	Delano–Earlimart Irrigation District
Delta	Sacramento–San Joaquin Delta
DWR	California Department of Water Resources
ESP	Ensemble Streamflow Prediction
Exhibit B	Exhibit B of the Settlement depicting Default Hydrograph
FCWD	Firebaugh Canal Water District
GRF	Gravelly Ford Flow Gauge
FID	Fresno Irrigation District
Guidelines	Restoration Flow Guidelines
NWS	National Weather Service
QA/QC	Quality Assurance/Quality Control (i.e., finalized)
OCID	Orange Cove Irrigation District
Reclamation	U.S. Department of the Interior, Bureau of Reclamation
Restoration Year	the cycle of Restoration Flows, March 1 through February 28/29
RFG	Restoration Flow Guidelines
RWA	SJRRP Reclaimed Water Account
Secretary	U.S. Secretary of the Interior
Settlement	Stipulation of Settlement in NRDC, et al., v. Kirk Rodgers, et al.
SJREC	San Joaquin River Exchange Contractors
SJRRP	San Joaquin River Restoration Program
SLCC	San Luis Canal Company
SMP	Seepage Management Plan

SWE	Snow Water Equivalent
TAF	thousand acre-feet
URF	Unreleased Restoration Flows
WSI	DWR Water Supply Index
WY	Water year, October 1 through September 30

Appendix B: Previous Year (2024) Flow Accounting

Table B1.   Annual Restoration Flow Accounting and Unreleased Restoration Flows, and Holding Contracts, for the period February 2024 through February 2025. The Restoration Allocation had a year-end balance of +0.158 TAF.

Gravelly Ford 5 cfs Requirement (TAF)	Other Flows Passing GRF (TAF)	URF Sold or Exch	Released Restoration Flow Volumes (TAF)						
			Continuity Flow	Spring Flexible Flow	Fall Flexible Flow	Riparian Recruitment Flow	Buffer Flow	Flexible Buffer Flow	URF Returned
150.520 [A1]	12.623	150.473	141.068	34.788	2.539	0	3.822	0.625	8.700
			178.395 (Base Restoration Flows)				4.447 (all Buffer Flows)		
			182.842 (Restoration Flows affecting Friant water supply)						
			191.542 (Restoration Flows released to river)						
		328.868 (Restoration Allocation used)							
			355.515 (Friant Dam releases — excludes removed URFs, Restoration Flows advanced info February, and excludes contributions from tributary inflows)						

A1. Calculations of the 5 cfs requirement are sensitive to gauge error at GRF or imprecision in Friant Dam release.

Table B2. **Monthly Restoration Flow Accounting and Unreleased Restoration Flows, and Holding Contracts, for the period February 2024 through February 2025.** Flood management releases to San Joaquin River occurred January 5–February 5, 2023, and March 8–July 26, 2023. No releases for the Exchange Contract occurred during this Restoration Year. The final Restoration Allocation was 557.038 TAF. URF Sales and Exchanges removed from the Allocation totaled 373.849 TAF. Additionally, Unreleased Restoration Flow exchange returns of 10.167 TAF were released to the San Joaquin River, and 0 TAF of Buffer Flows. A total of 0 TAF was advanced into February 2024.

Flow Period	Gravelly Ford 5 cfs Requirement (TAF)	Other Flows Passing GRF (TAF)	URF Sold or Exch	Released Restoration Flow Volumes (TAF)							Combined Released Restoration Flow
				Continuity Flow	Spring Flexible Flow	Fall Flexible Flow	Riparian Recruitment Flow	Buffer Flow	Flexible Buffer Flow	URF Returned	
Feb 1–Feb 29	–	–	–	–	0	–	–	–	–	–	0
Mar 1–Mar 31	9.935	0	0	13.527	9.558	–	–	0	–	0	23.086
Apr 1–Apr 30	10.530 [A1]	0	42.105	11.901	11.619	–	–	0	–	0	23.520
May 1–May 31	17.040 [A1]	9.989	108.368	9.927	13.611	–		0		0	23.538
Jun 1–Jun 30	12.760	2.634	0	9.642	–	–	0	0.571		0.238	10.451
Jul 1–Jul 31	14.229	0	0	7.529	–	–		0.738	0.625	3.259	11.526
Aug 1–Aug 31	15.134	0	0	7.597	–	–	–	0.738		3.715	12.050
Sep 1–Sep 30	14.384	0	0	8.279	–	10626	–	1.160		1.488	13.178
Oct 1–Oct 31	13.240	0	0	11.476	–	0.099	–	0.615		0	12.190
Nov 1–Nov 30	12.254	0	0	13.470	–	0.367	–	0	0	0	13.837
Dec 1–Dec 31	11.449	0	0	14.231	–	0.446	–	0		0	14.678
Jan 1–Jan 31	11.228	0	0	15.421	–	–	–	0	–	0	15.421
Feb 1–Feb 28	8.337	0	0	18.067	–	–	–	0	–	0	18.067

Appendix C: History of Millerton Unimpaired Runoff

Table C. Water Year Totals in Thousand Acre-Feet

Water Year [A2]	Unimpaired Runoff [A3]	SJRRP Water Year Type [A4]
1873	1063.6	Normal-Dry
1874	1743.0	Normal-Wet
1875	837.0	Dry
1876	2493.0	Normal-Wet
1877	758.0	Dry
1888	2218.0	Normal-Wet
1889	1452.2	Normal-Wet
1890	3117.0	Wet
1891	2626.5	Wet
1892	1670.4	Normal-Wet
1893	1286.7	Normal-Dry
1894	3207.8	Wet
1895	1175.5	Normal-Dry
1896	3905.0	Wet
1897	1412.0	Normal-Dry
1898	906.0	Dry
1899	1517.0	Normal-Wet

Water Year [A2]	Unimpaired Runoff [A3]	SJRRP Water Year Type [A4]
1900	1337.1	Normal-Dry
1901	2988.8	Wet
1902	1704.0	Normal-Wet
1903	1727.0	Normal-Wet
1904	2062.0	Normal-Wet
1905	1795.4	Normal-Wet
1906	4367.8	Wet
1907	3113.9	Wet
1908	1163.4	Normal-Dry
1909	2900.7	Wet
1910	2041.5	Normal-Wet
1911	3586.0	Wet
1912	1043.9	Normal-Dry
1913	879.4	Dry
1914	2883.4	Wet
1915	1966.3	Normal-Wet
1916	2760.5	Wet
1917	1936.2	Normal-Wet
1918	1466.8	Normal-Wet
1919	1297.5	Normal-Dry

Water Year [A2]	Unimpaired Runoff [A3]	SJRRP Water Year Type [A4]
1920	1322.5	Normal-Dry
1921	1604.4	Normal-Wet
1922	2355.1	Normal-Wet
1923	1654.3	Normal-Wet
1924	444.1	Critical-High
1925	1438.7	Normal-Dry
1926	1161.4	Normal-Dry
1927	2001.3	Normal-Wet
1928	1153.7	Normal-Dry
1929	862.4	Dry
1930	859.1	Dry
1931	480.2	Critical-High
1932	2047.4	Normal-Wet
1933	1111.4	Normal-Dry
1934	691.5	Dry
1935	1923.2	Normal-Wet
1936	1853.3	Normal-Wet
1937	2208.0	Normal-Wet
1938	3688.4	Wet
1939	920.8	Dry

Water Year [A2]	Unimpaired Runoff [A3]	SJRRP Water Year Type [A4]
1940	1880.6	Normal-Wet
1941	2652.5	Wet
1942	2254.0	Normal-Wet
1943	2053.7	Normal-Wet
1944	1264.4	Normal-Dry
1945	2134.633	Normal-Wet
1946	1727.115	Normal-Wet
1947	1121.564	Normal-Dry
1948	1201.390	Normal-Dry
1949	1167.008	Normal-Dry
1950	1317.457	Normal-Dry
1951	1827.254	Normal-Wet
1952	2840.854	Wet
1953	1226.830	Normal-Dry
1954	1313.993	Normal-Dry
1955	1161.161	Normal-Dry
1956	2959.812	Wet
1957	1326.573	Normal-Dry
1958	2631.392	Wet
1959	949.456	Normal-Dry

Table C. Water Year Totals in Thousand Acre-Feet

Water Year [A2]	Unimpaired Runoff [A3]	SJRRP Water Year Type [A4]	Water Year [A2]	Unimpaired Runoff [A3]	SJRRP Water Year Type [A4]	Water Year [A2]	Unimpaired Runoff [A3]	SJRRP Water Year Type [A4]	Water Year [A2]	Unimpaired Runoff [A3]	SJRRP Water Year Type [A4]
1960	826.021	Dry	1980	2973.169	Wet	2000	1735.653	Normal-Wet	2020	886.025	Dry
1961	647.428	Critical-High	1981	1067.757	Normal-Dry	2001	1065.318	Normal-Dry	2021	521.853	Critical-High
1962	1924.066	Normal-Wet	1982	3317.171	Wet	2002	1171.457	Normal-Dry	2022	1059.492	Normal-Dry
1963	1945.266	Normal-Wet	1983	4643.090	Wet	2003	1449.954	Normal-Dry	2023	4506.923	Wet
1964	922.351	Dry	1984	2042.750	Normal-Wet	2004	1130.823	Normal-Dry	2024	1757.111	Normal-Wet
1965	2271.191	Normal-Wet	1985	1135.975	Normal-Dry	2005	2826.872	Wet	2025	1280.766	Normal-Dry
1966	1298.792	Normal-Dry	1986	3031.600	Wet	2006	3180.816	Wet			
1967	3233.097	Wet	1987	756.853	Dry	2007	684.333	Dry			
1968	861.894	Dry	1988	862.124	Dry	2008	1116.790	Normal-Dry			
1969	4040.864	Wet	1989	939.168	Normal-Dry	2009	1455.379	Normal-Wet			
1970	1445.837	Normal-Dry	1990	742.824	Dry	2010	2028.706	Normal-Wet			
1971	1416.812	Normal-Dry	1991	1027.209	Normal-Dry	2011	3304.824	Wet			
1972	1039.249	Normal-Dry	1992	807.759	Dry	2012	831.582	Dry			
1973	2047.585	Normal-Wet	1993	2672.322	Wet	2013	856.626	Dry			
1974	2190.308	Normal-Wet	1994	824.097	Dry	2014	509.579	Critical-High			
1975	1795.922	Normal-Wet	1995	3876.370	Wet	2015	327.410	Critical-Low			
1976	629.234	Critical-High	1996	2200.707	Normal-Wet	2016	1300.613	Normal-Dry			
1977	361.253	Critical-Low	1997	2817.670	Wet	2017	4395.400	Wet			
1978	3402.805	Wet	1998	3160.759	Wet	2018	1348.980	Normal-Dry			
1979	1829.988	Normal-Wet	1999	1527.040	Normal-Wet	2019	2734.772	Wet			

A2. Water year is from Oct 1 through Sept 30, for example the 2010 water year began Oct 1, 2009. Unimpaired Runoff is based on Reclamation calculations, and hypothetical water year types are shown here; actual Restoration water year types are based on the final allocation, which may sometimes differ slightly from the calculated water year total.

A3. Also known as "Natural River" or "Unimpaired Runoff into Millerton"–This is the total runoff that would flow into Millerton Lake if there were no dams or diversions upstream. There was a lower level of precision prior to 1945. Friant Dam uses 1.9835 conversion from cfs to AF.

A4. The six SJRRP Water Year Types are based on Unimpaired Runoff and are not updated as climatology changes as per the Settlement. Critical-Low= <400 TAF, Critical-High=400-669.999 TAF, Dry= 670-929.999 TAF, Normal-Dry 930-1,449.999, Normal-Wet 1,450-2,500, Wet>2,500.

Appendix D: Final Restoration Allocations and Errors

Table D1.   History of Restoration Allocations

Year	Type	Date of Final Allocation Issuance [A6]	Unimpaired Runoff Forecast in Final Allocation (TAF)	Final Restoration Allocation (TAF)	Observed Unimpaired Runoff on September 30 (TAF)	Unimpaired Runoff Forecast Error	Allocation Error
2009	Interim Flows			261.5	1,455.379	—	—
2010	Interim Flows			98.2	2,028.706	—	—
2011	Interim Flows			152.4	3,304.824	—	—
2012	Interim Flows			183	831.582	—	—
2013	Interim Flows			65.5	856.626	—	—
2014	Restoration Flows	Mar 3	518	0 [A5]	509.579	+8.421 (+1.6%)	0 [A5]
2015	Restoration Flows	Sep 28	327	0	327.410	-0.410 (-0.1%)	0
2016	Restoration Flows	Sep 30	1,300.986	263.295	1,300.986	0 (0%)	0
2017	Restoration Flows	Jul 10	4,444	556.542	4,395.400	+48.600 (+1.1%)	0
2018	Restoration Flows	May 22	1,427	280.258	1,348.979	+78.021 (+5.8%)	+10.503
2019	Restoration Flows	May 20	2,690	556.542	2,734.772	-44.772 (-1.6%)	0
2020	Restoration Flows	June 19	880	202.197	886.025	-6.025 (-0.7%)	-1.345
2021	Restoration Flows	June 25	529	70.919	521.853	+7.147 (+1.4%)	0
2022	Restoration Flows	May 13	1,072	232.470	1,059.492	+12.508 (+1.2%)	+1.684
2023	Restoration Flows	May 18	4,664	557.038	4,506.923	+157.077 (+3.5%)	0
2024	Restoration Flows	May 17	1,776	329.026	1,757.111	+18.889 (+1.1%)	+2.646
2025	Restoration Flows	May 18	1,346	269.355	1280.766	+65.234 (+5.1%)	+8.602

A5. No water was provided under this Critical-High designation due to necessity for Friant Dam to release flows for the Exchange Contract.

A6. In 2018 with the completion of Version 2.0 of the Restoration Flows Guidelines, the date of final Restoration Allocation issuance was advanced from September 30 to May (or June under dry hydrologic conditions). This results in greater Unimpaired Runoff Forecast error, and sometimes in greater Allocation Error.

Table D2.   History of Restoration Flow Releases

Year	Year Type	Final Restoration Allocation (TAF)	URFs Removed from Allocation (TAF)	URF Exchange Returns (TAF)	Buffer Flows Utilized (TAF)	Restoration Flows Passing Gravelly Ford (TAF) [A7]	Restoration Allocation Utilization (TAF)	Release Error (TAF)
2014	Critical-High	0	0	0	0	0	0	0
2015	Critical-Low	0	0	0	0	0	0	0
2016	Normal-Dry	263.295	*pending*	*pending*	*pending*	*pending*	*pending*	*pending*
2017	Wet	556.542	367.458	0	0	*pending*	*pending*	*pending*
2018	Normal-Dry	280.258	124.791	2.129	0	157.596	280.258	0
2019	Wet	556.542	365.760	0	0	190.666	556.426	-0.116
2020	Dry	202.197	63.502	0.487	0.605	139.517	201.927	-0.270
2021	Critical-High	70.919	0	10.425	0.902	82.247	70.919	0
2022	Normal-Dry	232.470	101.076	3.500	0	135.094	232.670	+0.200
2023	Wet	557.038	373.944	10.167	0	193.263	557.040	+0.002
2024	Normal-Wet	329.026	150.473	8.700	4.447	191.542	328.868	-0.158
2025	Normal-Dry	269.355	87.696	0	0	*pending*	*pending*	*pending*

A7. Restoration Flows passing Gravelly Ford includes flood management releases which were accounted for as meeting the Restoration Flow Schedule at Gravelly Ford.

Appendix E: Unreleased Restoration Flow History

Table E1.   URF Distributions (TAF)

Restoration Year	Gross Volume of URF Sales to Class 1	Gross Volume of URF Sales to Class 2	Net Volume of URF Sales to Class 1	Net Volume of URF Sales to Class 2	Gross Volume of URF put into Exchanges	Net Volume of URF put into Exchanges	Gross Volume of URFs Spilled	Gross Total URF
2013	—	—	—	—	12.694	12.694	—	12.694
2014	11.219	—	11.219	—	—	—	0.206	11.425
2015	—	—	—	—	—	—	—	0
2016	70.860	56.959	67.317	54.111	18.947	18.000	—	146.766
2017	5.474	364.967	5.200	346.716	2.491	2.366	—	372.932
2018	65.249	40.000	61.986	38.000	19.543	18.565	—	124.792
2019	—	326.954	—	310.607	16.298	15.482	22.509	365.761
2020	43.500	—	41.325	—	20.002	19.697	—	63.502
2021	—	—	—	—	—	—	—	0
2022	75.178	—	71.419	—	26.951	25.603	—	102.128
2023	—	372.048	—	353.446	—	—	—	372.049
2024	—	150.474	—	142.950	—	—	—	150.474
2025	42.100	37.894	39.995	35.999	7.702	7.321	—	87.696
2026	—	—	—	—	—	—	—	—
Total	**313.58**	**1349.296**	**298.461**	**1281.829**	**124.628**	**119.728**	**22.715**	**1810.219**

2026: URF actions are not completed for this year

Table E2.   Expected URF Revenue for the Restoration Fund

Restoration Year	Revenue Expected from URF Sales	Revenue Expected from URF Exchanges	Total Expected URF Revenue
2013	—	—	—
2014	$3,470,650	—	$3,470,650
2015	—	—	—
2016	$9,686,790	—	$9,686,790
2017	$6,990,680	—	$6,990,680
2018	$6,123,858	$494,504	$6,618,362
2019	$6,393,286	$306,680	$6,699,966
2020	$8,922,481	$1,251,630	$10,174,111
2021	—	$525,000	$525,000
2022	$13,488,907	$1,909,267	$15,398,173
2023	$8,129,258	—	$8,129,258
2024	$3,287,850	$188,870	$3,476,720
2025	$7,103,145	—	$7,103,145
2026	—	—	—
Total	**$73,596,905**	**$4,675,951**	**$78,272,855**

Table E3.   URF Exchanges Returned to the Program

Restoration Year	Volume Returned (TAF)	Notes
2013	0	—
2014	11.425	From 2013 URF Exchange with FID, used for 2014 sales
2015	0	—
2016	0	—
2017	5.474	Returned from San Luis Reservoir, 5.200 net URF sold
2018	2.129	Returned from 2018 DEID exchange
2019	9.000	Returned to SLR from 2019 AEWSD and LTRID exchange, transferred to CVO for San Luis Unit supply
2020	0.487	Returned from FID from 2019 exchange
2021	10.425	Returned from multi-party 2020 exchange
2022	3.500	From 2016 URF Exchange with AEWSD
2023	10.167	3.500 AEWSD, 2.000 FID, 4.667 OCID
2024	8.700	3.500 AEWSD, 0.822 DEID, 0.378 SWID, 3.000 OCID
2025	0	—
2026	*Pending*	
Total	**61.307**	

Appendix F: Water Management Goal

Table F1. Final Friant Water Contract Supply

| Contract Year | Class 1 Total Supply 800 TAF | | Class 2 Total Supply 1,401.475 TAF | |
	Class 1 Declaration	Volume of Class 1 as Uncontrolled Season	Class 2 Residual Declaration	Volume of Class 2 as Uncontrolled Season
2009	100%	0%	10%	21%. Including residual allocation is equivalent to 31%
2010	100%	0%	10%	32%. With residual allocation is equivalent to 42%
2011	100%	0%	5%	38%. With residual allocation is equivalent to 43%
2012	57%	0%	0%	0%
2013	62%	0%	0%	0%
2014	0%	0%	0%	0%
2015	0%	0%	0%	0%
2016	75% Residual	12.5% (100 TAF used, mostly in April)	0%	7%
2017	100%	0%	3%	30%. UcS through mid-July. With residual allocation equivalent to 33%
2018	88% Residual	11% (88 TAF used April-May)	0%	9%.
2019	100%	0%	0%	49%
2020	65%	0%	0%	0%
2021	40%	0%	0%	0%
2022	35%	0%	0%	0%
2023	100%	0%	15%	18%. UcS through late-July. With residual allocation equivalent to 33%
2024	90%	*pending*	0%	*pending*
2025	100%	0%	0%	0%

Notes

2009: C1/C2 declaration on 6/12/209 was 77/18, increased to 100/10 once SJRRP Interim Flows were scheduled for 10/1/2009 release.

2010: Class 2 declaration changed from 15% to 10%, but this did not impact RWA calculation which uses growing season allocation of 15%.

2011: Class 2 declaration changed from 20% to 5%, but this did not impact RWA calculation which uses growing season allocation of 20%.

2012: Class 1 declaration changed from 50% to 57% on 4/27/2012, but this did not impact RWA calculation which uses growing season allocation of 50%.

2013: Final declaration made 7/15/2013.

2014, 2015: Friant Dam releases to satisfy Exchange Contract at Mendota Pool. 2014 final declaration made 5/13/2014. 2015 final declaration made 2/27/2015.

2016: 12.5% of Class 1 was released as Uncontrolled Season water. Class 1 allocation was reduced from 100% to 87.5% (including UcS) at final allocation on 7/18/2016.

2017: Uncontrolled Season through mid-July. Flood flows 1/42017–7/20/2017.

2018: 11% of Class 1 was released as Uncontrolled Season water. Class 1 allocation was reduced from 100% to 99% (including UcS) before final allocation on 9/26/2018.

2019: Uncontrolled season through 7/15/2019. Flood flows 3/15/2019–4/5/2019 and 5/21/2023–7/10/2019.

2020: Final declaration 6/24/2020.

2021: Class 1 declaration increased from 20% to 25% in November, increased to 40% in December. Late change did not affect apportionment of RWA impact.

2022: Class 1 declaration increased from 30% to 35% in January associated with 2023 flood flows.

2023: Flood flows 1/5/2023–2/5/2023 and 3/8/2023–7/26/2023.
2024: Final Friant declarations are pending verification

Table F2.   Additional Water Supply

Restoration Year	Gross Volume of URF Sales to Class 1	Gross Volume of URF Sales to Class 2	Net Volume of URF Sales to Class 1	Net Volume of URF Sales to Class 2	Gross Volume of URF put into Exchanges	Net Volume of URF put into Exchanges	Gross Volume of URFs Spilled	Gross Total URF
2013								
2014								
2015								
2016								
2017								
2018			Table Under Development					
2019								
2020								
2021								
2022								
2023								
2024								
Total								

Table F3.   URF Reconciliation (URF Distribution to incorrect Class, all values TAF) [A8] [A9]

Restoration Year	URFs Sales Distributed to Class 1 Which Should Have Been Distributed to Class 2	Error Extinguished	URFs Sales Distributed to Class 2 Which Should Have Been Distributed to Class 1	Error Extinguished
2020	0	Not Applicable	0	Not Applicable
2021	0	Not Applicable	0	Not Applicable
2022	0	Not Applicable	0	Not Applicable
2023	0	Not Applicable	0	Not Applicable
2024	0	Not Applicable	Tier 1 (50.474)	Not Applicable
2025	*0*	Not Applicable	0	39.995 Tier 1 extinguished

A8. Reconciliation of URFs was instituted in 2020 and will be codified in Restoration Flow Guidelines Version 2.2.

A9. All values are net (not gross) URF sales.