BUREAU OF RECLAMATION

Stanislaus Stepped Release Plan Water Year 2026 – Fall Pulse Flow Operations Plan

October 03, 2025

This Stanislaus Stepped Release Plan (SRP) – Water Year (WY) 2026 Fall Pulse Flow Operations Plan (Fall Ops Plan) details the U.S. Bureau of Reclamation's (Reclamation) plan for operating the Stanislaus River to meet WY 2026 Fall Pulse Flow requirements. The Fall Ops Plan incorporates feedback from the Stanislaus Watershed Team (SWT) who discussed a pulse flow alternative on August 20, 2025, during its scheduled monthly meeting.

Background

A fall pulse flow is one component of the daily flow schedule in the 2023 SRP, as proposed in Reclamation's October 2024 Biological Assessment (2024 BA), evaluated in National Marine Fisheries Service (NMFS) December 2024 Biological Opinion (2024 BiOp), and implemented per the December 2024 Record of Decision (ROD). As noted in the 2024 BA (p. 3-84), the "…2023 SRP includes the ability to shape monthly and seasonal flow volumes…" The 2024 BA further notes (p. 3-85) that Reclamation, through the SWT, will coordinate the scheduling of the fall pulse flow volumes consistent with the volumes in the 2023 SRP, while considering other system objectives.

Term and condition 4.b.ii for the East Side Division (pp. 906-907 of the 2024 BiOp), states: "Scheduling of Fall Pulse Flows will consider and prioritize shaping flow volumes to simulate more natural variability in the hydrograph to maximize the effectiveness of adult salmonid attraction cues. In consideration of other system objectives, the SWT may provide advice on how best to meet multiple beneficial objectives, where Reclamation shall prepare a summary of considerations affecting the shaping of the Fall Pulse Flow volume. That summary shall be provided to the members of the SWT as well as the WOMT".[1]

[1] WOMT stands for Water Operations Management Team.

Below, Reclamation summarizes the Operations Plan for implementation of the Fall Pulse Flow for WY 2026.

Water Volume Accounting

Reclamation intends to use the water accounting framework (which accommodates water year type changes in the winter and spring) used by the SWT to implement the 2023 SRP. Once snow surveys and hydrologic forecasting begins, the water year type is generally updated mid-month based on the snow surveys completed earlier in the month. To accommodate those potential changes in year type, the framework calculates the total required instream flow volume for a given period based on the default flow schedule in the 2023 SRP from the 16th of Month A to the 15th of Month B, based on the water year type determined by the Month A forecast. During the summer and fall, the water year type does not change, but SWT will account for the SRP volume using this framework for consistency throughout the year.

To determine the water year type, Reclamation uses the San Joaquin Valley "60-20-20" Water Year Hydrologic Classification (60-20-20 Index) based on a 90% Probability of Exceedance forecast, per the 2024 ROD.

Based on the May 2025 90% forecast, the water year type was "Dry". The total required instream flow volume pursuant to the 2023 SRP for the October 01 through November 15, 2025, period is detailed below (**Table 1**).

Table 1. Details of the SRP for Dry water year type per month in comparison to the proposed alternate Dry schedule

Date range	Water Year Type	Total water volume in default schedule in SRP (acre-feet)	Total water volume in Alt-1 (acre-feet)
10/01/25 - 10/15/25	Dry	6,545	7,041
10/16/25 - 11/15/25	Dry	38,479	37,983
N/A	**Total***	45,025	45,025

*The total acre-feet of 45,025 is one acre-foot more than the sum of the subtotals because both subtotals were rounded down.

Reshaping

For WY 2026, Reclamation intends to implement a reshaped fall pulse flow according to the flow schedule described in Alternative 1 (Alt-1) (see details in **Figure 1** and **Table 3**).

At the August 20, 2025, SWT meeting, the technical team discussed the alternative for the fall pulse flow schedule. Through discussion, SWT provided feedback on how Reclamation could shape the fall pulse flow volume to accommodate, to the extent possible, the fish and other considerations summarized in **Table 2**.

Table 2. Factors considered in the reshaping of the fall pulse flow volume for the Stanislaus River.

Driver	Location	Life Stage	Notes
Agriculture	Lower Tributary	N/A	Avoid a reshaped flow that exceeds 1,500 cfs to minimize seepage.
Dissolved Oxygen (D.O.)	Vernalis	Adult	The combined pulse should, ideally, provide sufficient flow to achieve a D.O. of at least 7 parts per million in the deepwater ship channel.
Migration Window	Vernalis	Adult	Provide temperature and D.O. suitable for salmonid window upmigration for at least several weeks.
Monitoring	Riverbank	N/A	Weir operation is impacted when flows exceed 1,500 cfs, or last for more than a few days at 1,500 cfs.
Redd Scour / Stranding	Tributary / Spawning Area	Redd/Eggs/Fry	The main pulse should occur before a significant number of the season's redds are created. Historically, peak spawning occurs mid-November.
Redd Stranding	Tributary / Spawning Area	Redd/Eggs/Fry	The pulse should avoid sustained flows that would encourage redd construction in areas that will be dewatered during post-attraction-pulse flows.
Temperature	Vernalis	Adult	Pulse should be late enough to provide cool enough temperatures for upmigrants through the San Joaquin to avoid egg mortality within migrating adults.
Temperature	Tributary / Spawning Area	Adult	Pulse should be shaped and timed to provide and maintain instream temperatures sufficient to avoid egg mortality for returning adults.
Preferred Rafting Flows	Goodwin Canyon to Knights Ferry	N/A	Preferred rafting flows from the Canyon to Knights Ferry during October weekends are between 800 and 1,200 cfs, ideally occurring between 10 a.m. and 4 p.m.

The Alt-1 schedule (**Figure 1** and **Table 3**) has the same total volume (45,025 AF), including base flows, for the October 01 through November 15 period as the default 2023 SRP Dry schedule. Reclamation and the SWT believe that the Alt-1 reshaping optimizes biological benefits by improving instream conditions and providing an attraction cue for adult salmonids returning to spawn in the Stanislaus River. Higher flows are expected to reduce water temperature (or at least buffer daily maximum water temperature) to provide conditions suitable for the migration and holding of adult salmonids. By starting the fall pulse flow on October 15th and extending it to November 04th, SWT expects the higher-than-base flows will help buffer water temperatures during the seasonal transition to cooler air temperatures. Scheduled flows in Alt-1 are down to base flows by the 5th of November, before peak spawning is expected to occur. The higher flows will also inundate some shallow water habitat which may provide rearing juvenile steelhead with short-term growth benefits as well as potential refuge from some sources of predation.

Some key features of the Alt-1 fall pulse include:

- As in the default schedule, **higher Fall flows** (compared to base flows) are intended to provide an attraction cue for salmonids returning to spawn.
- Reshaping the single pulse identified in the default SRP schedule into a **three-peak** pulse period **increases flow variability** within the season. This variability is expected to deter spawning at the higher flows that will not be sustained through egg incubation and fry emergence.
- The **time frame** of the Alt-1 pulse (which is slightly longer in duration, compared to the default 2023 SRP schedule) is expected to provide temperature buffering from mid-October into early November.
- Other considerations for in-basin interests:
    - No flows >1,500 cfs are scheduled in consideration of concerns regarding agricultural seepage.
    - Weekend flows are designed to provide flows suitable for recreational rafting.

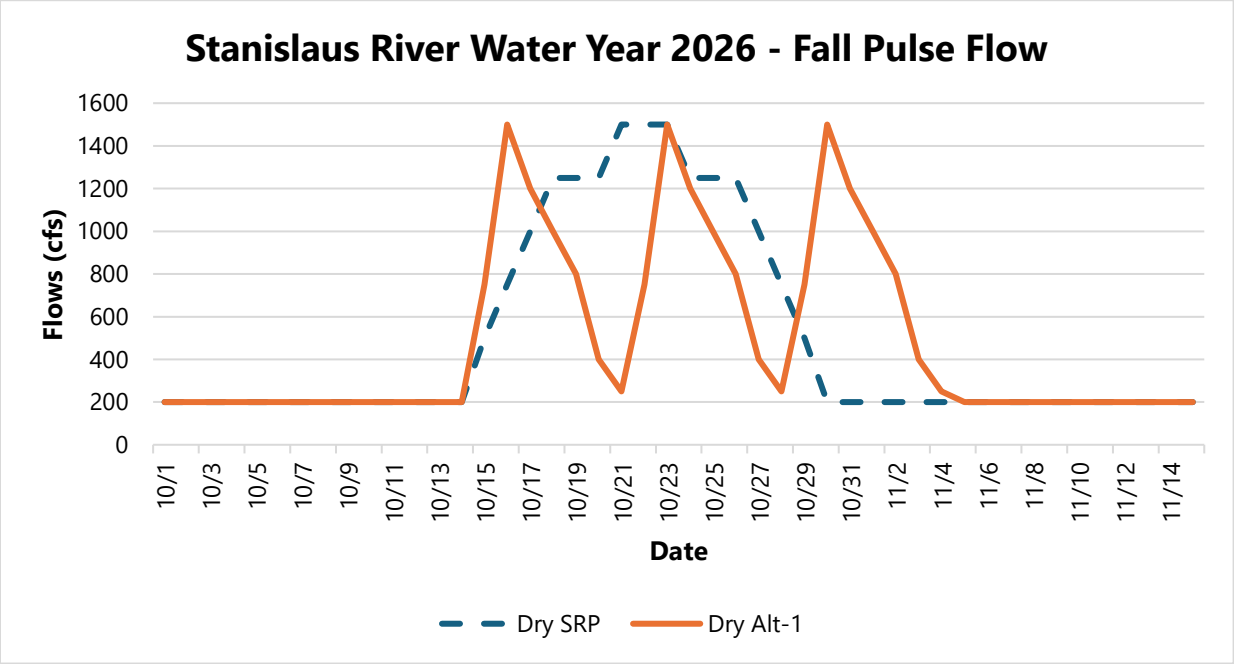

Figure 1. Recommended flows in the default 2023 SRP and proposed Alternative schedule for a Dry water year type.

Figure 1 is a line graph depicting Dry SRP and Dry Alt-1 flow in cfs from October 1st to November 15th. The Dry SRP flows are represented by a dotted blue line that increases up starting October 14th with a stepped increase to 1500 cfs by October 22nd and then steadily decreases starting October 24th until returning to 200 cfs on October 30th. The Dry Alt-1 flows are represented by an orange line and have three sharp peaks of flow at 1500 cfs on October 16th, 23rd, and 31st, before returning to 200 cfs on November 1st.

Table 3. Daily Flow Schedule for the Alternative 1 and the default Dry SRP flow schedule.

Date	Dry SRP	Dry Alt-1
10/1	200	200
10/2	200	200
10/3	200	200
10/4	200	200
10/5	200	200
10/6	200	200
10/7	200	200
10/8	200	200
10/9	200	200
10/10	200	200
10/11	200	200
10/12	200	200
10/13	200	200
10/14	200	200
10/15	500	750
10/16	750	1500
10/17	1000	1200
10/18	1250	1000
10/19	1250	800
10/20	1250	400
10/21	1500	250
10/22	1500	750
10/23	1500	1500
10/24	1250	1200
10/25	1250	1000
10/26	1250	800
10/27	1000	400
10/28	750	250
10/29	500	750
10/30	200	1500
10/31	200	1200
11/1	200	1000
11/2	200	800
11/3	200	400
11/4	200	250
11/5	200	200
11/6	200	200
11/7	200	200
11/8	200	200
11/9	200	200
11/10	200	200
11/11	200	200
11/12	200	200
11/13	200	200
11/14	200	200
11/15	200	200

References

NMFS (National Marine Fisheries Service). 2024. Endangered Species Act Section 7(a)(2) Programmatic Biological Opinion for the Reinitiation of Consultation on the Long-Term Operation of the Central Valley Project and State Water Project. West Coast Regional Office. December 6, 2024.

Reclamation (U.S. Bureau of Reclamation). 2024a. Appendix AB Long-Term Operation Biological Assessment. Final Environmental Impact Statement for the Long-Term Operation of the Central Valley Project and State Water Project. Central Valley Project, Interior Region 10 – California Great-Basin, California. November 15, 2024.

Reclamation. 2024b. Record of Decision for the Long-Term Operation of the Central Valley Project and State Water Project. Central Valley Project, Interior Region 10 – California Great-Basin, California. December 20, 2024.