# Restoration Administrator Flow Recommendation

**To:** Don Portz, Chad Moore, Adam Nickel
**CC:** Michael Jackson, Rufino Gonzalez, Doug Obegi, Steve Ottemoeller, Jeff Payne, TAC
**Date:** October 28, 2019
**From:** Tom Johnson, Restoration Administrator
**Subject:** Updated Recommendation for Fall 2019 Restoration Flows

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The following is an updated Flow Recommendation by the Restoration Administrator (RA) for Fall 2019 Restoration Flows pursuant to the February 2017 Restoration Flow Guidelines (RFG), as amended, and Exhibit B of the Settlement.

**Background**

The current accepted Restoration Flow Recommendation (Recommendation) for 2019 is dated May 14, 2019. Several minor adjustments to that Recommendation have been implemented since May 14 to respond to operational or water supply conditions. At this time a revised Recommendation for the balance of the Restoration Year is warranted to capture these minor modifications and to adjust the timing of the fall pulse release.

I am in receipt of the Final Restoration Allocation (Allocation) from Reclamation dated May 20, 2019 which designates 2019 as a **Wet** Water Year Type and provides an allocation of Restoration Flows of 556,542 acre-feet as measured at Gravelly Ford. The Allocation also specifies certain contractual and operational constraints on Restoration Flow releases for 2019.

**Additional Considerations**

Several operational considerations have influenced this revised Recommendation, including:

- Seepage constraints will limit flows both in Reach 3 and in Reach 4A. Initial flow bench evaluations have been undertaken in both reaches, resulting in approval of flows of 800+ cfs in Reach 3 and 235 cfs in Reach 4A.
- The Program released adult spring-run Chinook salmon in Reach 1 of the San Joaquin River; in addition, some 23 adult spring-run Chinook salmon have returned to the San Joaquin River and were captured at the Eastside Bypass Control Structure as a part of Implementing Agency monitoring efforts. Several hundred additional spring-run Chinook moved volitionally up the San Joaquin River or the Chowchilla Bypass during flood control operations, as evidenced by the 204 redds counted in Reach 1.
- Monitoring of spring-run Chinook redds, and the associated monitoring of fry emergence and juvenile migration, is a focus of biological monitoring efforts by the Program for this fall and winter.
- Flow-stage measurements in Reach 4 and Middle Eastside Bypass are planned for October 19 through 24$^{th}$ and October 26 through November 4. These measurements will require recapture

of a small volume of water (estimated at around 320 AF) at Mendota Pool during Oct 19-24, and a release slightly in excess of Exhibit B base flows (15 cfs) for October 28 – Nov 4.

Several longer-term considerations are factored into this Restoration Flow Recommendation, including:

- A key focus of this 2019 Restoration Flow Recommendation is to retain year-round flow connectivity through all reaches.
- The Program is focusing research efforts on spring-run Chinook again this year, as was the case in 2017 and 2018. Redd monitoring, escapement survey, redd capping and emergence traps, and juvenile migration timing will be the focus of research from now through the spring months. At this time, in-river study work requires level rather than pulse flows, so the fall pulse will be postponed to the spring.
- The February pulse or flow bench may be used for early-season pulses to move juveniles out of the season, to measure losses in Reach 2A and 2B under a range of flow conditions, or to conduct a flow bench evaluation below Sack Dam to ascertain the maximum permissible flow level for the spring.

**Updated Recommendation for Restoration Year 2019**

For the balance of the 2019 Restoration Year, in order to support maintaining fish in good condition in the San Joaquin River, I recommend Restoration Flows in Table 1 and the additional conditions below.

**Table 1. Summary of Restoration Flow Recommendations for November 1, 2019 through February 29, 2020.**

| *Date Range* | *Friant Release* | *Restoration Flows at Gravelly Ford* | *Holding Contract Release at Gravelly Ford* | *Total Flow at Gravelly Ford*[1] | *Total Flow below Sack Dam* |
|---|---|---|---|---|---|
| October 28, 2019 through November 4, 2019 | As necessary | 245 cfs | 5 cfs | 250 cfs | 150 cfs |
| November 5, 2019 through December 31, 2019 | As necessary | 230 cfs | 5 cfs | 235 cfs | 147 cfs |
| January 1, 2020 through February 19, 2020 | As necessary | 250 cfs | 5 cfs | 255 cfs | 166 cfs |
| February 20, 2020 through February 29, 2020 | As necessary | 515 cfs | 5 cfs | 520 cfs | As Allowed by Seepage Constraints[2] |

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

[2] Recapture at Mendota Pool may be required.

**Additional Conditions**

The following additional conditions are included in this Recommendation:

- Releases from Friant Dam should not fall below 350 cfs at any time between November 1, 2019 and February 29, 2020, to ensure sufficient flow depth to protect spring-run Chinook salmon redds.
- With the exception of February 20-28, 2020, there should be no recapture of Restoration Flows at Mendota Pool or Arroyo Canal.
- As necessary, flow bench evaluations should be conducted in Reaches 3 and 4A to confirm the limits of Restoration Flow releases. Depending on the results of those flow bench evaluations, Restoration Flow releases may be adjusted up or down.
- During performance of the flow bench evaluations, the SJRRP will monitor actual Restoration Flow deliveries to Mendota Pool, and coordinate adjustment of Mendota Pool releases to ensure that Reach 3 Restoration Flows are held steady, and any Restoration Flows arriving at Mendota Pool in excess of the Reach 3 conveyance/seepage constraints are recaptured.

**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.