



# Friant Dam Flood Control Requirements

15 Dec 2009

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## Team Effort!

- U.S. Bureau of Reclamation
- U.S. Army Corps of Engineers
- Friant Water Authority
- Lower San Joaquin Levee District
- San Joaquin River Exchange Contractors
- California / Nevada River Forecast Center
- National Weather Service
- Joint State/Federal Flood Center

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## Overall Flood Control Objectives

- Releases from Friant Dam shall be restricted to quantities which will not cause downstream flows to exceed, insofar as possible, any one of the following:
  - A combined flow to the San Joaquin River from Friant Dam, Cottonwood Creek, and Little Dry Creek of 8,000 cfs
  - A flow of 6,500 cfs at the “near Mendota” gage below Mendota Dam.
- The maximum space in Millerton Lake below elevation 578 ft. allocated to flood control is 170,000 ac-ft during the rain flood season (Oct to Jan) and 390,500 ac-ft during the snowmelt season (Feb to Jul) in accordance with the Flood Control Diagram in force.

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## Additional Variables Considered

- Credit Space in upstream Reservoirs
  - Rainflood Season (Oct to Jan): maximum of 85,000 ac-ft of space in Mammoth Pool.
  - Snowmelt Season (Feb to Jul): Total space available in Thomas Edison, Florence Lake, Huntington Lake, Bass Lake, Shaver Lake, Redinger Lake and Kerckhoff Reservoir reduced by up to 100,000 ac-ft to account for operational uncertainty in these reservoirs.
- Additional Snowmelt season variables considered
  - Remaining Runoff from the snowpack (typically take between a given date and 31 July. (50% Chance Exceedence Forecast)
  - Estimated releases between a given date and 15 June.
- Flows from the Kings River North (Fresno Slough and James Bypass) have an impact on what should be released from Friant to meet 6500 cfs @ the Mendota Gauge.
- Operational requirements that need to be met with the assistance of Friant Dam to manage conditions further downstream on the San Joaquin River mainstem.

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# Friant Flood Control Diagram

