

USGS Sediment Monitoring for 2013

During spring 2013 Interim Flows, USGS collected suspended-sediment, bedload, bed size-distribution data, and stream discharge one time at six locations and two times at Highway 41 location (Table 1). These sampling sites, listed in the downstream direction, are as follows:

1. 11252275 Highway 41
2. 11252975 Skaggs Bridge
3. 113058 Gravelly Ford
4. 364619120144701 1.3 miles west of Napa Ave.
5. 11253115 Below the Chowchilla Bypass Bifurcation Structure (Below Bifurcation)
6. 11254000 Near Mendota Dam

Table 1. USGS Sediment Sampling Dates

Sample	Week	Friant Dam Release (cfs)
2013 USGS Suspended-Sediment and Bedload Sampling		
1	*April 29	1,030
2	May 6	266

Key:
cfs = cubic foot per second
USGS = U.S. Geological Survey

*Sampled only Highway 41 site on April 29. All sites were sampled on the week of May 6.

During each site visit, USGS collected one set of suspended sediment samples, one set of bed material samples, one set of bedload samples (unless no bedload movement was observed), and one stream-flow measurement. Being a generally dry year only one visit was made to each site in 2013, except for Highway 41, which had two visits.

USGS analyzed suspended sediment samples for concentration and the sand/fine split. All suspended sediment, bedload and bed material sampling was conducted according to USGS protocols.

Sample analysis is conducted at the USGS Marina Sediment Laboratory. USGS tested instrumentation for suspended sediment and particle size distribution at the Gravelly Ford gage. The LISST-Streamside package manufactured by Sequoia Scientific consists of a laser-diffraction instrument on shore connected to a pumping system. Continuous records of concentration and particle size allow for a more detailed assessment of changes in sediment supply, especially during high-flow releases from Friant Dam.

Sediment data for 2013 have been approved for publication. Sediment data are currently available for download from USGS website at <http://waterdata.usgs.gov/nwis> . Annual Data Reports will be available at <http://ca.water.usgs.gov/data/waterdata/> .

The SJRRP continues to collect data to manage channel capacity through development of an annual sediment hydrograph for the Restoration Area. Next steps for this effort include regular monitoring at the six established locations, and investigation of sediment contributions from the Cottonwood Creek and Little Dry Creek tributaries in Reach 1A to the San Joaquin River.