

## Field Activity Advisory Hydraulics and Sedimentation Survey June 28 – 29, 2012

The Bureau of Reclamation will be conducting topographic and bathymetric (mapping the river or channel bottom) surveys on the San Joaquin River and Eastside Bypass near El Nido Road (Reach 4B). The data collected from the surveys will help inform future restoration design decisions, habitat management actions, and monitoring activities for the San Joaquin River Restoration Program (SJRRP).

Who: Bureau of Reclamation Technical Service Center Sedimentation Group

**What:** Since it was last surveyed in January 2011, the Eastside Bypass has experienced a wide range of flows and mechanical manipulations downstream of the Chowchilla Bypass confluence near El Nido Road. No detailed survey of the current low flow channel in this area exists. Using historical aerial photographs, Reclamation located approximately five historical borrow pit sites between the levees outside of the low flow or main channel (overbanks) along the Eastside Bypass upstream of West Chamberlain Road. The pits appear to be locations in the overbanks within the levees where soil was excavated (borrowed) for another use (possibly levee construction or repair). Standing water in these pits prevented the 2007 LiDAR from mapping the bottoms, so the bottom elevations and volumes of these pits are currently unknown. Previous numerical modeling performed identified at least four potential features that control the water surface elevation (hydraulic controls such as hard points, beaver dams, or vegetation blockages) in the San Joaquin River bed within 1 mile upstream of the Sand Slough control structure. Riverbed profiles from previous bathymetric surveys show high points in the bed corresponding to locations of hydraulic controls identified in the numerical models. Location, composition, and existence of these hydraulic controls needs to be confirmed.



A topographic survey of the Eastside Bypass low flow channel near El Nido Road and the San Joaquin River channel near Sand Slough will be conducted on foot using real-time kinematic global positioning system (RTK-GPS) equipment and standard land surveying techniques. Borrow pits in the Eastside Bypass overbanks would be surveyed using RTK-GPS and a depth sounder mounted to a single-person inflatable pontoon raft will be used to map the underwater portions. The above-water portions of the borrow pits would be surveyed using RTK-GPS and standard land surveying techniques.

When: June 28 – 29, 2012

**Where:** The survey area will cover the Eastside Bypass bed and overbanks and the San Joaquin River channel from West Chamberlain Road to a point approximately 2 miles upstream of the Sand Slough control structure.

#### **Considerations:**

Questions about this activity should be directed to the points-of-contact using the information provided below:

#### **Kent Collins**

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Questions about the SJRRP's field activities on public and private land should be directed to the SJRRP Outreach Coordinator using the information provided below.

### Margaret Gidding, Outreach Coordinator

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# Contact the SJRRP Hotline, 916-978-4398, or email InterimFlows@restoresjr.net if you see any problems or have any concerns.

For more information, please visit the SJRRP Web site at www.restoresjr.net.

Field Advisories for activities are available at www.restoresjr.net/activities/field/index.html