

## Southwest Biological Science Center Weekly Highlights April 3, 2006

### **Colorado River Sediment Transport Studies Presented at Sedimentation**

**conference:** David Topping will present two papers at the 8<sup>th</sup> Federal Interagency Sedimentation Conference, April 2-8, in Reno, NV. A paper titled: "High-Resolution Monitoring of Suspended-Sediment Concentration and Grain Size in the Colorado River Using Laser-Diffraction Instruments and a Three-Frequency Acoustic System" describes the benefits of using specialized instrumentation to monitor suspended-sediment transport along the Colorado River. A second paper, "Comparison of Sediment-Transport and Bar-Response Results from the 1996 and 2004 Controlled-Flood Experiments on the Colorado River in Grand Canyon," is a cooperative effort between USGS, Utah State University and Northern Arizona University that presents changes to sandbar morphology resulting from each flood. David Topping, Flagstaff, AZ, 928-556-7445

**Collaborative Weed Management:** USGS-SBSC ecologist Kathryn Thomas gave a presentation to the SE Arizona Cooperative Weed Management Area on March 22, 2006, in Safford, Arizona. The talk "Computer tools for Weed Management and Data Sharing in the Southwest" presented a model for invasive non-native plant occurrence data documentation and sharing among land managers in Arizona and web based tools to aid in data sharing. Cooperative Weed Management Areas in Arizona consist of state, federal, tribal, county, and private weed managers that are collaboratively working to manage weeds in their geographic area. The Southwest Biological Science Center provides a regional database, interactive map, and web query tool of reported weed occurrences on the Southwest Exotic Plant Information Clearinghouse web site (Kathryn Thomas, Tucson, AZ, 520-621-7282 or 520-670-5534)

**US-Mexico Borderlands Working Group:** On April 12 and 13, 2006, USGS-SBSC scientist Charles van Riper will attend a USGS Borderlands working group meeting in El Paso Texas. At this meeting, Charles van Riper will share with other USGS scientists the numerous research activities that the SBSC has been conducting along the US-Mexico Border. The goal of this meeting is to enhance and diversify USGS science activity along the entire US-Mexico border region (Charles van Riper III, Tucson, 520-626-7027).

### **Reconstructing Reservoir Stratigraphy, Englebright Lake, Yuba River, N. California:**

Scott Wright is giving a talk at the 8<sup>th</sup> Federal Interagency Sedimentation Conference, April 2-8, in Reno, NV., titled, "Reconstructing Reservoir Stratigraphy from Hydrologic History and Simple Transport Calculations: Englebright Lake, Yuba River, Northern California," a study conducted by USGS and Boston College. This presentation describes the analysis performed to determine the relative importance of floods and drawdowns in building deltatic deposits using simple calculations of river hydrolics and sediment transport. Scott Wright, Flagstaff, AZ, 928-556-7069

### **Evaluating Modeling Approaches from data collected during the 2004 Colorado**

**River High Flow:** Scott Wright is giving another talk at the 8<sup>th</sup> Federal Interagency Sedimentation Conference, April 2-8, in Reno, NV., titled, "Measurements of Velocity Profiles and Suspended-Sediment Concentrations in a Colorado River Eddy During High Flow" by USGS researchers describes how the Acoustic Doppler current profiler can be a useful toll to characterize suspended-sediment-concentration and velocity structures of an eddy and how the results were applied to evaluate modeling approaches. Scott Wright, Flagstaff, AZ, 928-556-7069