ONE-STOP SHOPPING FOR FLUVIAL-SEDIMENT DATA: THE USGS SEDIMENT-DATA PORTAL

EXTENDED ABSTRACT

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Since the first samples on the Rio Grande in 1889, the U.S. Geological Survey (USGS) has been collecting information on sediment transport in streams and rivers across the United States. Although the USGS maintains an extensive database of sediment and related data through the National Water Information System (NWIS), these data can be difficult to utilize because:

1. It can be challenging to ascertain where and when suspended-sediment data have been collected.
2. It can be difficult to determine if non-representative sampling methods have left suspended-sediment and associated data are prone to bias.
3. There has been limited aggregation of information needed to interpret sediment data, such as information on sediment grain size, streamflow, and landscape conditions.

In 2013, the USGS National Water Quality Assessment Program (NAWQA) took an initial step toward minimizing these problems through release of the USGS Sediment Data Portal (Figure 1). The portal improves the utility and accessibility of USGS suspended-sediment data by providing tools to visualize, filter, and download discrete and daily suspended-sediment data and sampling site characteristics.

Data served through the portal represent the best available compendium of suspended-sediment data for streams and rivers in the United States, serving results from more than 600,000 discrete sediment samples and more than 10,000 years of daily sediment data. An accompanying USGS Data Series Report, “Compilation, Quality Control, Analysis, and Summary of Discrete Suspended-Sediment and Ancillary Data in the United States, 1901-2010” describes methods used to recover and quality control existing USGS suspended-sediment data, and summarizes suspended-sediment and selected ancillary data across the United States with respect to time, streamflow, and landscape condition.

Figure 1. The USGS Sediment Data Portal