

PROGRESS TOWARD DEVELOPING A NATIONAL, DYNAMIC RESERVOIR- SEDIMENTATION DATABASE

John Gray, Scientist Emeritus, USGS, Office of Surface Water, Headquarters, Reston, VA
jrgray@usgs.gov

Progress toward efforts to develop publically accessible and updatable REServoir-
SEDimentation survey information (RESSED) database – last described in the Proceedings of
the 9th Federal Interagency Sedimentation Conference – is encouraging. Since 2009, RESSED
has:

- Been successfully ported from Microsoft Access to the user- and web-friendly FilemakerPro database management system.
- A completely revised, logical, and modern schema.
- A beta-tested data-entry module.
- A quality-control function to ensure security for data-entry.
- A reports-production module.
- Data describing changes in capacities for hundreds of additional reservoirs as part of thousands of capacity surveys.
- Most reservoir capacity data available from the U.S. Army Corps of Engineers and the Bureau of Reclamation.
- Acquired permanent maintenance-level support of the U.S. Geological Survey.
- Interest and vocal support from Senior Staff, U.S. House of Representatives.

A number of challenges in the RESSED database-development effort remain. These include:

- A vexing number of ingrained, mostly historical errors in the stored data, although many errors have been identified and culled out.
- A desire expressed among some collaborators to enable porting of spreadsheet-based reservoir sedimentation data directly to RESSED, which raises a number data-transfer and data-quality issues.
- Insufficient resources to expand the development effort to include public-data entry, or to continue development of the version of RESSED envisioned to be most useful in the 21st century.

The eventual goal for the RESSED database is to provide an access for any valid user to enter and retrieve reservoir capacity-change and related data, and to interface it where advantageous with other applications, including the National Inventory of Dams, National Hydrography Dataset, and StreamStats. The time for enhancement of RESSED is now, given the need for early warning on reservoir-storage losses resulting from the inevitable and inexorable accumulation of sediment.