

RESOLUTION

of the

Advisory Committee on Water Information

Supporting Maintenance and Development of a Permanent, Publically Accessible Reservoir Sedimentation Database, RESSED, of the Subcommittee on Sedimentation

Whereas: The Advisory Committee on Water Information (ACWI) is charged by the Office of Management and Budget through its Memorandum No. M-92-01 (Dec. 10, 1991) to recommend to the Federal government procedures to coordinate funding, staffing, and the provision of other resources needed to support water-information activities for ensuring the best use of available resources; and

Whereas: OMB Memorandum M-10-30 (July 21, 2010) guides agencies to pursue transformation solutions to the Nation's practical challenges through interagency collaborations that include development and maintenance of datasets that are open to the public in accessible, useful formats; and

Whereas: Knowledge of reservoir capacity-loss rates is important for numerous reasons, including (a) to calculate the useful lifespan of a reservoir, (b) design reservoir sediment-storage allocations, (c) manage sediment deposits, (d) rehabilitate aging or damaged reservoir structures, (e) design sediment-slucing and other sediment-management structures, (f) estimate the mass of captured solid-phase constituents, and (g) assess contributing watershed erosion rates; and

Whereas: Reliable and sufficient reservoir-capacity information is fundamental with respect to irrigation, flood control, power generation, recreation, maintaining sufficient flows for fish and other wildlife, downstream channel morphology, in addition to public water supply; and

Whereas: The ACWI Subcommittee on Sedimentation (SOS) has, within existing SOS-member resources, developed, published, and placed on-line the static Reservoir Sedimentation (RESSED) database (<http://ida.water.usgs.gov/ressed/>) and currently is developing the capability to add new bathymetric-survey information to RESSED, and to provide reports based on the stored data; and

Whereas: The ACWI SOS has demonstrated from existing data for 1,365 RESSED reservoirs through extrapolations of capacity losses to 2010 (mean date of last bathymetric survey – 1960) that 39% of RESSED reservoirs may have lost at least 60% of capacity, and 24% are estimated to be filled with sediment. These national statistical results can be neither confirmed nor refuted based upon readily available information due to the dearth in RESSED data availability over the last quarter century (see the appended handout with figures from the July 2010 ACWI meeting,

"ACWI Subcommittee on Sedimentation's RESSED"); however, use of Google Earth to view some of the reservoirs has shown a number that are sediment-filled; and

Whereas: That after FY 2010, the ACWI SOS has no funding to either maintain the RESSED database, nor expand RESSED into a truly national, dynamic, maximally informative and useful reservoir sedimentation database;

Now Therefore Be It Resolved that the ACWI commends the SOS for publishing and posting online the static RESSED database, and for efforts to develop a means to update the database and to develop credible reports on reservoir sedimentation rates; and

Be It Also Resolved that the ACWI recognizes the value of understanding the rates at which the Nation's reservoirs are losing capacity, so that proactive measures might be taken to ensure the long-term viability of public water supplies and other water needs; and

Be It Also Resolved that the ACWI encourages the USGS to incorporate the RESSED database into an appropriate ongoing program and to provide the requisite financial support to maintain the RESSED database in FY 2011 and thereafter. Further, the ACWI encourages the USGS to collaborate with ACWI's member agencies and organizations in developing and expanding the database.

This resolution was approved by the ACWI membership on July 13, 2011.

Appendix: Modified Handout from the July 14, 2010, ACWI Meeting:

ACWI Subcommittee on Sedimentation's RESSED

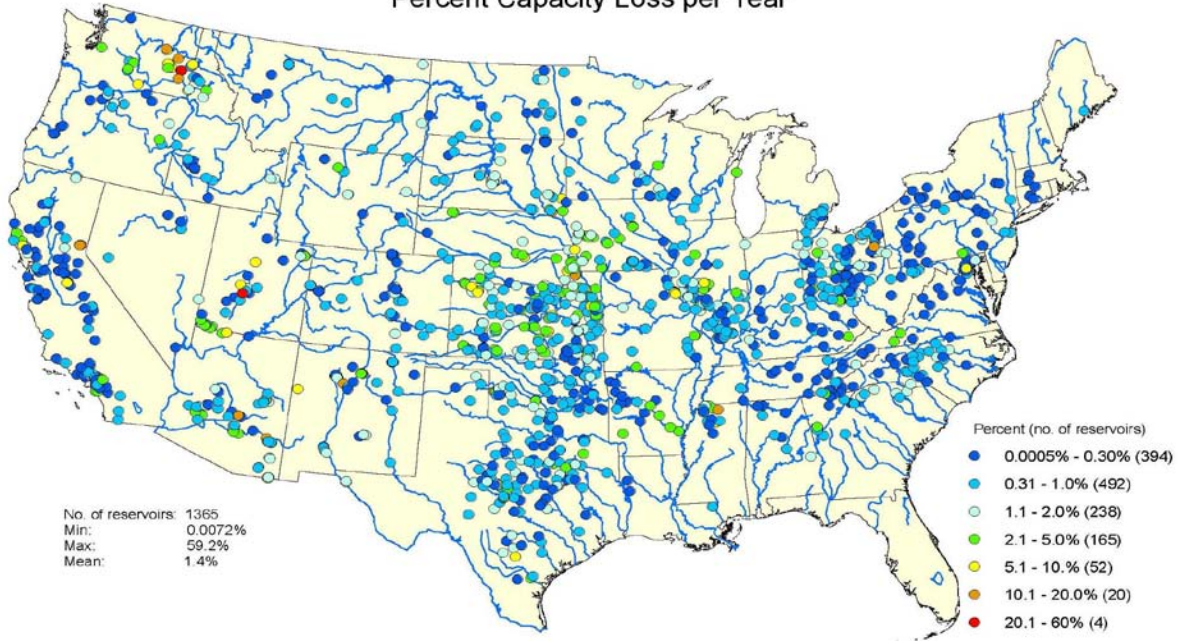
July 14, 2010 – John R. Gray, Chair, SOS – jrgray@usgs.gov

See: http://ida.water.usgs.gov/ressed/references/Gray_ressed_9fisc_header_3_4_2010.pdf

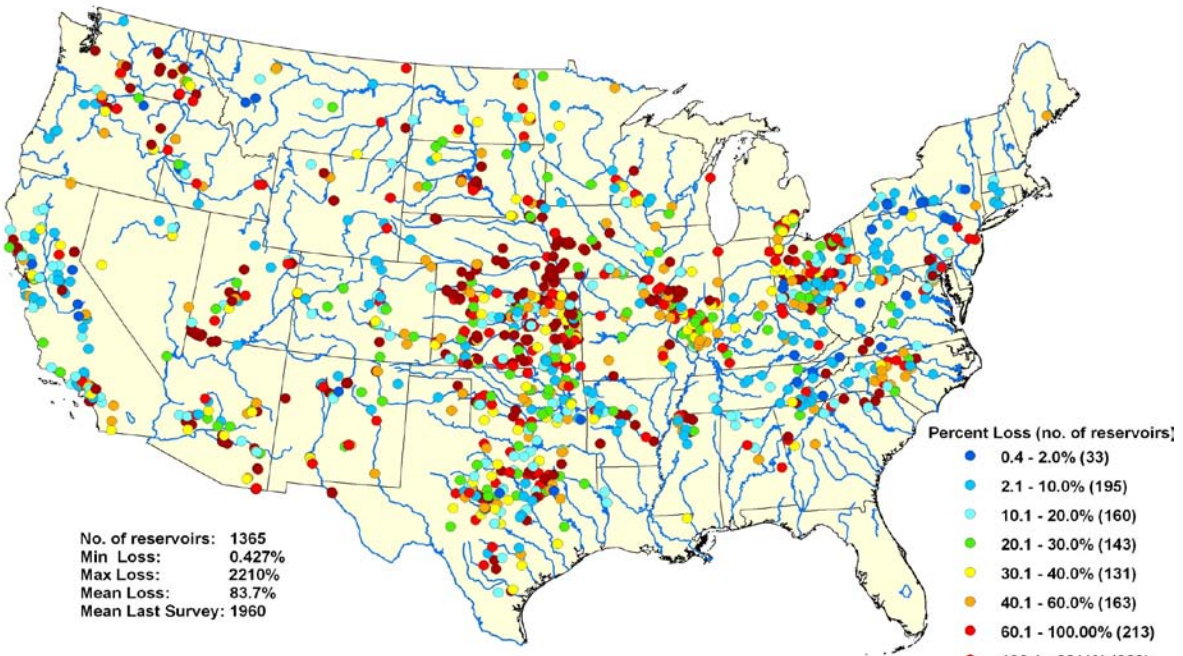
This provisional/subject to revision handout supplements the RESSED Presentation to ACWI, 7/14/2010. See the plots on the next page. The top plot shows percent capacity of 1,365 RESSED reservoirs lost as of the date of the last bathymetric survey (the average date of last survey for these reservoirs is 1960). The lower plot is extrapolated percent capacity lost in 2010 based on the mean annual loss rate calculated from the capacity of the first survey minus that for the last survey.

The U.S. Geological Survey doubts the veracity of the lower plot, but can neither verify nor refute these broad-based results, although use of Google Earth to “spot check” reservoirs indicates that some reservoirs are full of sediment.

Percent Capacity Loss per Year



Extrapolated to 2010 Total % Capacity Loss



~39% have lost > 60% capacity (535/1,365 reservoirs)