



WATER RESOURCES RESEARCH GRANT PROPOSAL

Project ID: 2002GA7B

Title: Reservoir Shoreline Erosion and Sedimentation Analysis

Project Type: Research

Focus Categories: Sediments, Non Point Pollution, Surface Water

Keywords: reservoir sedimentation, reservoir bank erosion, sediment transport, reservoir circulation, contaminated sediments, polychlorinated biphenyls (PCBs), cohesive sediments

Start Date: 03/01/2002

End Date: 02/28/2003

Federal Funds: \$14,000

Non-Federal Matching Funds: \$28,232

Congressional District: 1st, GA

Principal Investigator:

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Abstract

The project addresses three important problems in water resources: 1) reservoir sedimentation, which affects reservoir efficiency (from both economic and flood control perspectives), 2) the presence and transport of contaminated sediments, in this case contaminated with polychlorinated biphenyls (PCBs), and 3) reservoir shoreline erosion, which can affect water quality, aquatic habitat, reservoir efficiency, and even real estate values.

The reservoir to be studied through this research (Hartwell Lake, GA/SC) is nearly 40 years old, yet the main pool has not been surveyed for sedimentation in nearly 30 years (since 1973), despite the known presence of sediments contaminated with PCBs (and an EPA Superfund site on Twelve-Mile Creek, a major tributary), due primarily to a lack of funding (Joseph Hoke, U.S. Army Corps of Engineers, Savannah, pers. comm.). The study will reveal the degree of sedimentation via a field survey, the presence or absence of PCBs at selected locations, and provide data for validation of a numerical model that has been applied for prediction of circulation, sedimentation, and shoreline erosion within the reservoir.