



**US Army Corps
of Engineers®**
Engineer Research and
Development Center

Research Brief: Framework for Integrated Engineered Solutions in Regional Sediment Management

Issue The U.S. Army Corps of Engineers needs a framework for selecting and evaluating solutions in sediment management from a regional perspective and for documenting lessons learned from existing demonstration projects. The Corps also requires a mechanism that provides for coordination of all program-generated field investigations.

Objective This work will integrate the technologies and procedures developed in the other RSM program studies, providing a framework for sediment management strategies that encompasses the entire sediment system. The primary products of this work will be knowledge of how local project features affect the regional sediment system, a framework for organizing and selecting local solution options, and documentation of lessons learned in demonstration projects.

Research/Design Large-scale, existing sediment management projects will be compiled, compared, evaluated, and documented to provide field personnel with state-of-the-art guidance and proven practices in regional sediment management. The projects studied will include the Demonstration Erosion Control Program, the Northern Gulf of Mexico RSM Demonstration Project, and the California-wide interagency sediment management effort. From these projects and others a draft framework for applying engineered solutions in RSM will be constructed. The framework will provide a basis and structure around which new sediment management practices (engineered solutions) can be evaluated during the RSM R&D Program and installed in the Multi-Level Analysis System created by the work unit of that name. State and Federal regulations will be reviewed, along with the missions and interests of other Federal agencies, and incorporated into the framework in order to maximize the efficiency and effectiveness of Corps RSM activities. The final framework will be applied to a demonstration project to show its usefulness in developing alternative solutions for RSM problems. At least one demonstration, application, and evaluation will be performed in coordination with a Corps District on a planned or existing project, but additional demonstrations with the U.S. Forest Service and U.S. Environmental Protection Agency are anticipated. Demonstration projects participants will share lessons learned from their experiences.

Application Optimization of sediment management practices is expected to substantially reduce project and management costs, ensure environmental benefits, and help the Corps meet its stewardship objectives.

Products Links and information will be posted here. View online at <http://rsm.usace.army.mil>.

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