



Fact Sheet

US Army Corps of Engineers
U.S. Army Engineer Research and Development Center

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Detection and Evaluation of Scour Protection for Navigation Dams

Purpose: To identify the most effective method for assessing the condition of the existing scour protection and develop a risk-based analysis procedure to predict scour protection performance.

Background: Scour has occurred upstream and downstream from essentially every navigation dam constructed. The severity of the scour varies greatly from project to project. Periodic inspections have been used in the past to assess the need for repair. Often times, these inspections do not provide enough information to adequately assess the extent of scour and the repair and/or rehabilitation requirements. Establishing a process to better identify the extent of scour and assess repair and rehabilitation requirements will provide the project manager with valuable information for planning project needs and costs.



Facts: In FY01, the Navigation Research and Development Field Review Group for the Corps of Engineers identified that improved scour assessment and repair procedures were needed in many of the field offices. If severe scour exists, rehabilitation of the dam and appurtenant structures may be necessary to maintain the structural integrity of the dam. The objectives of this research are to: 1) identify the most effective method(s) for determining the condition of the existing scour protection and 2) develop a risk based decision process to assist in developing the type and the timing of the repair and/or rehabilitation requirements needed to insure project performance. The process will be patterned after a method developed in the Coastal Navigation Research Program for the work unit “Risk Analysis of Coastal Structures” for evaluating rubble mound breakwaters. The process will be presented in a manner that can be easily used by project personnel responsible for project planning.

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