

TECHNICAL REPORT TITLE PAGE

1. REPORT NO.

TR-485
<http://webdev.iuhr.uiowa.edu/ESCM/index.htm>

2. REPORT DATE

January 2005

3. TITLE AND SUBTITLE

Erosion Control for Highway Applications -
Phase II: Development & Implementation of a
Web-Based Expert System for Erosion & Sediment
Control Measures

4. TYPE OF REPORT & PERIOD COVERED

Web-Based Final, August 2002 to September 2003

5. AUTHOR(S)

Marian Muste,
Associate Research Engineer

6. PERFORMING ORGANIZATION ADDRESS

The University of Iowa
IIHR-Hydroscience & Engineering
323E Maxwell Stanley Hydraulics Lab
Iowa City, Iowa 52242

7. ACKNOWLEDGMENT OF COOPERATING ORGANIZATIONS/INDIVIDUALS

8. ABSTRACT

The Iowa Highway Research Board (IHRB) Erosion and Sediment Control Measure (ESCM) database is a simplified version of an expert system (ES) intended to aid state, county, and municipal engineers in the selection, design, construction/installation, and inspection/maintenance of the best management practices for erosion and sediment control. The ES is a user-friendly tool enabling efficient interaction with minimum user preparation. ES firstly identifies appropriate ESCMs for the site to be protected using the input received from the user. Subsequently, ES provides detailed specifications regarding the selected ESCMs. The ES knowledge database comprises a structured synthesis compiled through a comprehensive review of the available ESCM literature (guidelines and design manuals from federal and state government and industry). The database can be efficiently and quickly updated through centralized internet-based management.

9. KEY WORDS

erosion control, highway, soils, geotechnical
engineering

10. NO. OF PAGES

N/A - Web address:
<http://webdev.iuhr.uiowa.edu/ESCM/index.htm>