

**Dr. Maureen K. Corcoran, Research Geologist
U.S. Army Engineer Research and Development Center**

A Literature Review of Vegetation on Levees

ABSTRACT

At the request of U.S. Army Corps of Engineers Headquarters, the U. S. Army Engineer Research and Development Center (ERDC) conducted an extensive literature review of vegetation on levees. The ERDC team assigned to this task included a multi-disciplinary effort of engineers and scientists within ERDC. The accumulated studies are presented in an unbiased format and are catalogued based on published format. The objective of this compilation and preliminary assessment is to better understand the effect, if any, of vegetation on levee integrity as studied and accepted in open literature. Instead of the traditional method of a literature review that includes just the abstract, the team identified the purpose, study location, vegetation type, observations, and recommendations as defined by the author or authors of each document. The review encompassed journal articles, proceedings, newspaper articles, websites, and guidance documents (federal, local, state, and international). "Gray" literature, those documents not easily or readily accessible by the general public, but accepted in an engineering and scientific community, was also included. While researching the topic of levee vegetation, it was soon recognized that documents outside this realm could offer an insight into the complexity of soil erosion and vegetation. Many of these documents are included in the literature list, but were not considered in the assessment phase.

Co-authors: Pam Bailey, James Leech, Charlie Little, and Freddie Pinkard

Dr. Maureen K. Corcoran, Research Geologist
U.S. Army Engineer Research and Development Center
3909 Halls Ferry Road
Vicksburg, MS 39180
Tel: (601) 634-3334
Email: Maureen.K.Corcoran@erdc.usace.army.mil

Maureen K. Corcoran is a Research Geologist in the Earthquake Engineering and Geosciences Division, Geotechnical and Structures Laboratory, U.S. Army Engineer Research and Development Center, Waterways Experiment Station (ERDC-WES), Vicksburg, MS. She received her Ph.D. from the University of Mississippi in geology and has been employed in a research capacity at ERDC for 15 years. While at ERDC, Dr. Corcoran focuses on projects involving geomorphic processes in fluvial and riverine environments. A recent example is her research on the geomorphic influence and sedimentation patterns of the Woonasquatucket River in Rhode Island. She also served as project lead on data collection efforts of the Interagency Performance Evaluation Team (IPET) to support the Hurricane Katrina research. She served as principal investigator for several work units in the System-Wide Water Resources Program (SWWRP) involving geomorphic responses in fluvial systems and also served as focus area leader under the Sediment Processes Studies for SWWRP. Dr. Corcoran has published her research in technical reports, technical notes, and peer-reviewed journals.