

THE MIDWEST FLOOD OF 1993: DID TREES PROTECT LEVEES

ALONG THE MISSOURI RIVER?

John P. Dwyer, Douglas Wallace, and David R. Larsen¹

Abstract: Following the Midwest flood of 1993, a study was initiated along a 39-mile segment of the Missouri River to determine if there was an association between woody corridors and levee stability. A systematic sample of levee failures revealed that primary levees which did not fail had a significantly wider woody corridor than failed levees. Analysis of the total inventory of failed levees revealed that as the width of the woody corridor decreased, the length of the levee failure increased. Number of levee failures and their severity of damage could be reduced if woody corridors were at least 300 feet wide.

¹ Associate Professor, The School of Natural Resources, University of Missouri, 1-30 Agriculture Building, Columbia, MO 65211; Forester, USDA Natural Resources Conservation Service, State Office Parkade Center, Columbia, MO 65203; Assistant Professor, The School of Natural Resources, University of Missouri, 1-30 Agriculture Bldg., Columbia, MO 65211, respectively.