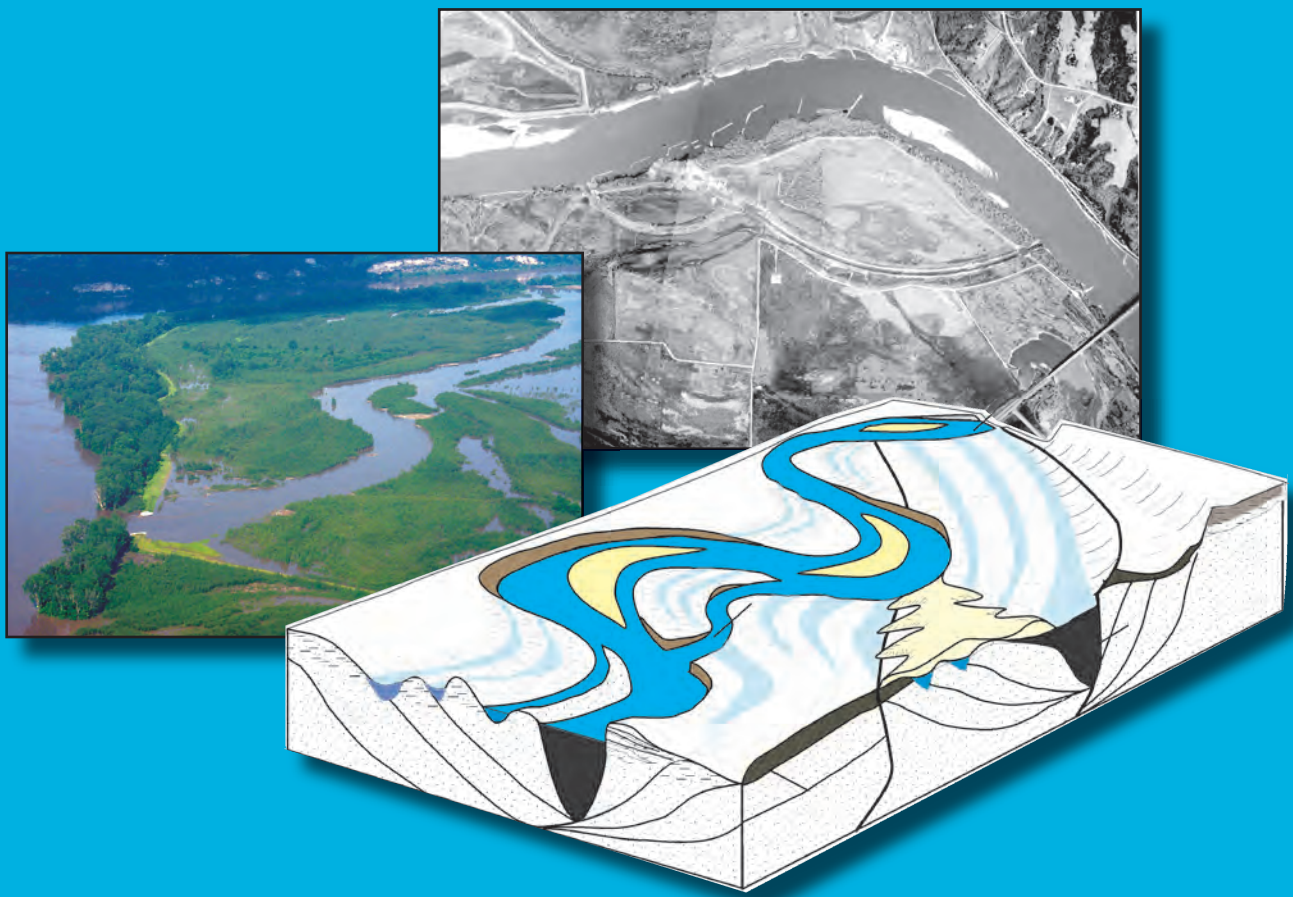


Prepared in cooperation with the U.S. Fish and Wildlife Service

# Science to Support Adaptive Habitat Management: Overton Bottoms North Unit, Big Muddy National Fish and Wildlife Refuge, Missouri



Scientific Investigations Report 2006-5086

**Cover:** Top–Areal view of Overton Bottoms North Unit, Big Muddy National Fish and Wildlife Refuge, Missouri; Left–Areal view of the first-generation side-channel chute at Overton Bottoms North Unit; Right–Architecture of the Lower Missouri River Valley bottom.

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Edited by Robert B. Jacobson

Volume comprises Chapters 1, 2, 3, 4, 5, and 6

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**U.S. Department of the Interior**  
**U.S. Geological Survey**

**U.S. Department of the Interior**  
P. Lynn Scarlett, Acting Secretary

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## Foreword

Many of the current issues faced by land and water management agencies are complex and often have resulted from past management practices and the competition among users for limited resources. Decisions about resource use often require an understanding of the potential results of alternative management actions. This understanding is based upon knowledge about the interactions of the many components which make up a watershed or ecosystem, and the science necessary to develop this foundation requires experts from many disciplines working together. At USGS, our mission to provide reliable scientific information is enhanced through this interdisciplinary approach to science problems and provides managers with a more complete understanding on which to base their decisions. This report is the result of applying an interdisciplinary approach to the issues of ecosystem function in the channel and flood plain of the Lower Missouri River.

Thomas J. Casadevall  
Regional Director, Central Region  
U.S. Geological Survey

## Acknowledgements

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## Volume Contents

1. Introduction: Science to Support Adaptive Habitat Management, Overton Bottoms North Unit, Big Muddy National Fish and Wildlife Refuge, Missouri .....	1
by Robert B. Jacobson	
2. Surficial Alluvium and Topography of the Overton Bottoms North Unit, Big Muddy National Fish and Wildlife Refuge in the Missouri River Valley and its Potential Influence on Environmental Management .....	17
by John Holbrook, Greg Kliem, Chima Nzewunwah, Zen Jobe, and Ron Goble	
3. Hydrologic Interactions Among Rainfall, Side-Channel Chutes, the Missouri River, and Ground Water at Overton Bottoms North, Missouri, 1998-2004 .....	33
by Brian P. Kelly	
4. Retrospective Analysis of Land Cover at Overton Bottoms, Missouri .....	69
by Jeffrey D. Spooner and Keith F. Landgraf	
5. Cottonwood ( <i>Populus deltoides</i> ) Growth Response to Hydrologic Alteration, Overton Bottoms North, Missouri River Flood Plain .....	91
by Thomas M. Faust, Robert B. Jacobson, and Stephen G. Pallardy	
6. Implications for Adaptive Habitat Management of the Overton Bottoms North Unit, Big Muddy National Fish and Wildlife Refuge, Missouri .....	107
by Carol A. Finn and Robert B. Jacobson	
Glossary and Acronyms .....	114

## Conversion Factors

Multiply	By	To obtain
Length		
centimeter (cm)	0.3937	inch (in)
meter (m)	3.281	foot (ft)
kilometer (km)	0.6214	mile (mi)
Area		
hectare (ha)	2.471	acre (ac)
hectare (ha)	0.003861	square mile (mi <sup>2</sup> )
square mile (mi <sup>2</sup> )	2.590x10 <sup>0</sup>	square kilometer (km <sup>2</sup> )
square kilometer (km <sup>2</sup> )	247.1	acre (ac)
square kilometer (km <sup>2</sup> )	0.3861	square mile (mi <sup>2</sup> )
acre-foot (acre-ft)	1.223x10 <sup>-6</sup>	cubic kilometer (km <sup>3</sup> )
Flow rate		
cubic meters per second (m <sup>3</sup> /s)	35.31	cubic foot per second (ft <sup>3</sup> /s)