

Report to Congress

An Evaluation of the Upper Mississippi River System Environmental Management Program

Main Report

December 1997



**US Army Corps
of Engineers**
Rock Island District

Cover Photos (from upper left)

- Aquatic Vegetation Sampling
- Multi-Agency Habitat Project Planning Meeting
- New, Off-Channel Aquatic Habitat (Potters Marsh, Illinois)

(RTC1-F)



The Mississippi River at Guttenberg, Iowa.

Foreword

The Upper Mississippi River System (UMRS) has a long history of providing many social and economic needs and supporting a tremendous diversity and abundance of fauna and flora. It is the only river system in the United States formally recognized by Congress both as a nationally significant ecosystem and commercial navigation system. This designation underscores the great importance that we, as a nation, place

upon the economic and ecological values of this magnificent resource.

The effects of river regulation and modifications to the system's watersheds, floodplains, and tributaries present constant challenges to the ecological integrity of the Upper Mississippi and Illinois Rivers. To meet these challenges, better information and knowledge must be pursued, habitat protection, restoration and enhancement must be accomplished, and increasingly effective partnerships must be nurtured and maintained. Only then may our common goal, to assure a healthy, sustainable Upper Mississippi River ecosystem for future generations while accommodating the vital economic and recreational functions it provides and society expects, be realized.

The Upper Mississippi River System - Environmental Management Program (EMP) was established to help maintain the multiple use character of the river. In the eyes of many individuals, the program has since evolved into a national model for the management of large floodplain river ecosystems. The EMP's extensive monitoring and focused research activities are significantly advancing our understanding of the complex physical, chemical, and biological interrelationships that define and determine the Upper Mississippi River ecosystem. Many of the habitat projects being constructed as part of the EMP represent real progress toward regional, national, and international ecological objectives, while others demonstrate innovative measures that bring us closer to realizing ecosystem sustainability.

Finally, everyone involved in implementing the EMP acknowledges that it has brought a new level of partnership to the UMRS. This is one of the program's truly invaluable outputs. The Corps, the U.S. Fish and Wildlife Service, the U.S. Geological Survey, and the five UMRS States (Illinois, Iowa, Minnesota, Missouri, and Wisconsin) have formed a partnership to collectively implement the EMP. This partnership is fundamental to our successfully maintaining and enhancing all of the river system's environmental and economic values into the 21st century.

A handwritten signature in black ink, appearing to read 'James V. Mudd'. The signature is fluid and cursive, with a large initial 'J'.

James V. Mudd
Colonel, U.S. Army
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Acknowledgments

The U.S. Army Corps of Engineers would like to take this opportunity to express its appreciation to the representatives and other staff members of the following Federal and State agencies and non-governmental organizations who participated in the many workshops and meetings requisite to the development of this report and accomplished the extensive coordination and document reviews its preparation necessitated. Although many other individuals should be recognized here, only the names of the principal point(s)-of-contact are identified.

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United States Fish and Wildlife Service
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American Rivers
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Abbreviations and Acronyms

AHAG	Aquatic Habitat Appraisal Guide	LERRD	Lands, Easements, Rights-of-Way, Relocations, and Disposal Sites
ASA(CW)	Assistant Secretary of the Army (Civil Works)	LTRM	Long Term Resource Monitoring
A-Team	Analysis Team	LTRMP	Long Term Resource Monitoring Program
BEST	Biomonitoring of Environmental Status and Trends	MDOC	Missouri Department of Conservation
BRD	Biological Resources Division	MRC	Management Review Committee
CAR	Coordination Act Report	MSC	Major Subordinate Command
cfs	cubic feet per second	MTNWR	Mark Twain National Wildlife Refuge
CIA	Computerized Inventory and Analysis	MVD	Mississippi Valley Division, U.S. Army Corps of Engineers
CPUE	Catch-Per-Unit Effort	MVP	St. Paul District, U.S. Army Corps of Engineers
DO	Dissolved Oxygen	MVR	Rock Island District, U.S. Army Corps of Engineers
DOC	Department of Conservation	MVS	St. Louis District, U.S. Army Corps of Engineers
DPR	Definite Project Report	NBII	National Biological Information Infrastructure
EMP	Environmental Management Program	NED	National Economic Development
EMPCC	Environmental Management Program Coordinating Committee	NEPA	National Environmental Policy Act
EMTC	Environmental Management Technical Center	NRCS	Natural Resources Conservation Service
EPA	Environmental Protection Agency	NSSC	Navigation System Support Center
FEMA	Federal Emergency Management Agency	O&M	Operation and Maintenance
FGDC	Federal Geographic Data Committee	OMRR&R	Operation, Maintenance, Repair, Rehabilitation and Replacement
FY	Fiscal Year	PCA	Project Cooperation Agreement
GEM	General Equilibrium Model	P&G	Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies
GIS	Geographic Information Systems	PL	Public Law
GPS	Global Positioning Systems	PMS	Performance Monitoring System
GREAT	Great River Environmental Action Team	POS	Plan of Study
HEP	Habitat Evaluation Procedures	SAST	Scientific Assessment and Strategy Team
HNA	Habitat Needs Assessment	SAV	Submerged Aquatic Vegetation
HQUSACE	Headquarters, U.S. Army Corps of Engineers	SRC	Science Review Committee
HREP	Habitat Rehabilitation and Enhancement Project	GAP	Gap Analysis Project
HSI	Habitat Suitability Index	UMR	Upper Mississippi River
HU	Habitat Unit		
IA DNR	Iowa Department of Natural Resources		
IL DNR	Illinois Department of Natural Resources		
IRC	Issues Resolution Conference		
LAN	Local Area Network		

UMRBA	Upper Mississippi River Basin Association	USGS	United States Geological Survey
UMRBC	Upper Mississippi River Basin Commission	WDNR	Wisconsin Department of Natural Resources
UMRNWFR	Upper Mississippi River National Wildlife and Fish Refuge	WEEM	Waterway Economic Efficiency Model
UMRS	Upper Mississippi River System	WES	Waterways Experiment Station
USACE	United States Army Corps of Engineers	WHAG	Wildlife Habitat Appraisal Guide
USFWS	United States Fish and Wildlife Service	WMA	Wildlife Management Area
		WRDA	Water Resources Development Act
		WWW	World Wide Web

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