Meeting State and National Wetland Goals:

A Wetland Conservation Strategy for Michigan

QH75.M5M44 1993

QH
75
.M5
M44
1993

Michigan Department of Natural Resources
Land and Water Management Division

July 1993

AUTHENTICATED
U.S. GOVERNMENT
INFORMATION
GPO

Acknowledgements

Meeting State and National Wetland Goals: A Wetland Conservation Strategy for Michigan was completed to provide information regarding the status of Michigan's Wetland Conservation Strategy and to solicit participation from people and groups throughout the State. Funding was provided by the Michigan Department of Natural Resources through Section 319 of the Federal Clean Water Act.

The Department of Natural Resources would like to thank the following individuals who assisted in the preparation and review of this publication:

Lois Wolfson, Institute of Water Research, Michigan State University

Rick Comstock, Michigan Department of Natural Resources, Land and Water Management Division, Volunteer

Department staff participating in the review and preparation of this publication were:

Lisa Warner, Land and Water Management Division

Peg Bostwick, Land and Water Management Division

Steve Sadewasser, Land and Water Management Division

Cover Photo by Jody Kubitz

Typing/Layout by Terry Heineman-Baker

Printing by University Printing, Michigan State University

MSU is an Affirmative Action/Equal Opportunity Institution

Printed on Recycled Paper

Meeting State and National Wetland Goals:

A Wetland Conservation Strategy for Michigan

INTRODUCTION

In 1988, the National Wetlands Policy Forum issued a final report recommending that:

> *"the nation establish a national wetlands protection policy to achieve no overall net loss of the nation's remaining wetlands base, as defined by acreage and function, and to restore and create wetlands, where feasible, to increase the quality and quantity of the nation's wetland resource base."*

The Forum was convened at the request of the U.S. Environmental Protection Agency to address major policy concerns about how the nation should protect and manage its valuable wetland resources. The 20 members of the Forum included three governors, a state legislator, heads of state agencies, a town supervisor, chief executive officers of environmental groups and businesses, farmers and ranchers, and academic experts. This diverse group concluded that wetland management would be most effectively carried out at the state and local level, and further recommended that:

> *"state and local governments and regional agencies, with the support and cooperation of the relevant federal agencies, undertake wetlands planning to achieve the goal of no net loss."*

In accordance with the Forum's recommendations, Michigan has received a major grant from the U.S. Environmental Protection Agency to develop a statewide comprehensive wetland conservation strategy. This booklet will serve both to inform you of the status of this ongoing project, and to invite your participation by adding information regarding your organization to an inventory of statewide wetland management interests and activities. In return for your participation, your

Mission

"The State of Michigan, in recognition that wetlands are a critical and integral component of the State's natural resources, and given the extent of historic wetland losses, will protect remaining wetlands and restore wetland functions and values to areas which have been altered or lost where socially, economically, and ecologically feasible. The Michigan Department of Natural Resources, with assistance from the Wetland Advisory Committee, will develop a comprehensive State Wetland Conservation Strategy to achieve the commitment of state, local and federal agencies and organizations to actively protect and restore Michigan's wetlands." *(Adopted September 21, 1992, Michigan's Wetland Advisory Committee)*

organization will be kept informed of the development of Michigan's Wetland Conservation Strategy.

The Process For Developing A Statewide Wetland Strategy: Current Status

The development of a comprehensive wetland conservation strategy for Michigan will complement and expand wetland management and protection beyond existing State Laws and private initiatives. Michigan's Wetland Conservation Strategy will be designed to focus on nonregulatory aspects of wetland management and will incorporate the following five interrelated components:

- **an aggressive education/outreach program**
- **promulgation of wetland water quality standards**
- **regulatory protection of certain critical wetlands**
- **a wetland reclamation initiative, and**
- **overall development, coordination, and distribution of a comprehensive action strategy.**

These elements are intended to establish ways for achieving no overall net loss of wetland functions. Support for the development of this strategy is being provided by the U.S. Environmental Protection Agency.

A diverse 12-member Wetland Advisory Committee has been formed to assist the Michigan Department of Natural Resources (MDNR) with the strategy development. To date, the Advisory Committee has adopted a strategy mission and a wetland reclamation initiative goal. A workable Wetland Conservation Strategy for Michigan citizens is scheduled for publication by December 1994.

PUBLIC VALUES OF WETLANDS

Long perceived as wastelands with few redeeming characteristics, wetlands are now recognized as valuable natural resources with diverse functions. Biologists and ecologists are studying the values of wetlands as habitats for diverse plant and animal life as well as suitable habitats for many endangered species. Hydrologists have begun to understand the relationships between wetlands and groundwater. Municipalities are recognizing the importance of wetlands for water storage and for preventing costly flood damage. Wetlands have been found to provide a myriad of other functions including water quality maintenance, erosion control, recreational opportunities, and an aesthetic quality.

Wetland Reclamation Goal

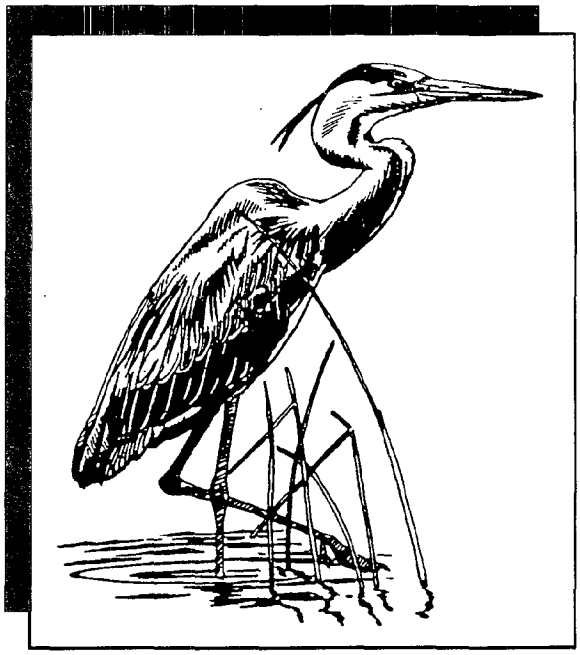
"*To increase Michigan's wetland base by 50,000 wetland acres by the year 2010 and to achieve a long-term goal of restoration, creation, and enhancement of 500,000 wetland acres.*" The reclaimed wetlands will provide habitat and will re-establish public benefits.

Increasing the State wetland base will reclaim flood water storage, water quality protection, ground water recharge, habitat for fish, wildlife, and plant communities, open space, and recreation opportunities. The Michigan Reclamation Initiative will benefit from existing wetland management and protection programs, build new partnerships, and foster new efforts to ensure that the benefits of wetlands are enjoyed by current and future generations. The Michigan Department of Natural Resources, with assistance from the Wetland Advisory Committee, will promote and sustain the Reclamation Initiative." *(Adopted July 21, 1993, Michigan's Wetland Advisory Committee)*

Habitat Diversity

The most commonly recognized wetland functions are providing plant and animal habitats. Marshes are among the most productive wildlife habitats in the world, supporting a variety and abundance of wildlife. Many waterfowl species depend on

wetlands for feeding and resting areas during their spring and fall migration. Resident waterfowl rely on them for nesting and as primary feeding areas.



Wetlands also provide habitat for many of the most important furbearing species in Michigan including muskrats and beaver. These species are enjoyable to watch and also commercially important because their pelts are sold for various fur products.

In northern areas of the state, wetlands can be vital for sustaining white-tailed deer populations through harsh winters by providing high-quality browse and cover. Deer can sustain themselves solely on northern white cedar if enough is available in wetland habitats.

Wetlands provide essential habitat for a wide variety of endangered plant and animal species. Approximately 30% of Michigan's 215 threatened and endangered plants, and approximately 60% of the 65 threatened and endangered animals are wetland species.

Some of Michigan's most popular threatened and endangered wildlife species including the common loon, the osprey, the Kirtland's snake and copperbelly water snake are dependent on wetlands. The endangered and beautiful prairie white-fringed orchid is an obligate wetland species, existing in no other habitats.

Wetlands are also one of the most productive habitats for both aquatic and terrestrial insects, and thus form the base for a rich and diverse food web extending well beyond the wetland boundary. Waterfowl, wading birds, songbirds, and bats depend on these insect-based food webs as do a variety of reptiles and amphibians. Many species of turtles, snakes, frogs, toads, and salamanders live in and are dependent upon wetlands. These species play an important role in the ecological balance of the wetland community.

Major Wetland Values

Fish and Wildlife Habitat Values

- ✓ breeding
- ✓ nursing
- ✓ sources of food
- ✓ providing cover from predators

Maintenance of Water Quality

- ✓ nutrient retention
- ✓ sediment removal
- ✓ groundwater recharge and discharge

Flood Storage and Runoff Delay

- ✓ storage basins for flood waters

Recreation and Aesthetics

- ✓ hunting
- ✓ fishing
- ✓ hiking
- ✓ boating
- ✓ bird watching
- ✓ photography

Many fish species that are important in sport or commercial fisheries spawn in shallow marshes and aquatic plant bed wetlands. Aquatic invertebrates living in emergent and submergent wetlands provide food for all fish that utilize wetlands during some stage in their life cycle. Many freshwater fish prefer vegetated habitats because of the protection they provide from predators. Wetlands provide breeding and nursery grounds, act as sources of food and provide cover from predators, especially young fish.

Water Quality

Another valuable function of wetlands relates to the maintenance of water quality. Wetlands can temporarily or sometimes permanently retain nutrients that would otherwise reach streams, rivers, or lakes, and contribute to increased growth of algae and other plants. Soluble nutrients can settle to the bottom sediments and become attached to soil particles or can be taken up by plants. Nutrients, such as nitrogen, present in organic matter can be converted by microorganisms into nitrogen gas through denitrification, thus removing the nutrient from the wetland. As much as 91% of the phosphorus and 86% of the nitrogen can be retained on at least a seasonal basis by emergent wetlands. Holding or removing these nutrients is beneficial because the the water quality of downstream ponds and lakes is protected from unwanted growth of algae and aquatic weeds during the primary recreational season.

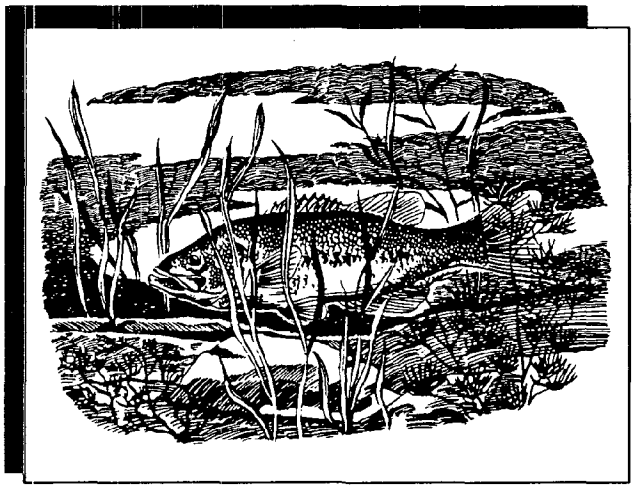
Sediments that are suspended in natural runoff can also be removed by wetlands. As the running water enters a dense vegetated wetland, the water slows and the sediments begin to settle out. Emergent wetlands can retain as much as 94% of the inflowing sediments from natural sources. This protects rivers, ponds and lakes from the accumulation of sediments. Wetlands are often interconnected with the groundwater table. Some wetlands recharge groundwater while others discharge it. Both of these functions can be valuable. Recharge areas provide clean groundwater, which many people use for drinking water. Discharge areas provide sources of high quality water for lakes and streams.

Flood Prevention

Every year floods cause serious damage to property in Michigan. Many wetlands are effective as storage basins for flood waters, helping to reduce flood levels. In addition, because flood waters are held in wetlands instead of flowing directly down rivers and streams, downstream flooding is reduced. Depending on the location of the wetland, the delay can significantly reduce flood peaks and resulting damage. Some government agencies now maintain wetlands for flood control instead of building costly flood control structures.

Recreation

Many recreation activities involve the use of wetlands. Hunting and fishing for wetland dependent species are major recreation activities in Michigan. In addition, there are growing numbers of people who enjoy non-consumptive uses of wetland such as hiking, boating, birdwatching, and photography. These activities generate enormous economic benefits by creating demands for support services such as travel and lodging. The diverse wildlife, beautiful scenery, and quiet solitude attract many people to Michigan's wetlands for recreation.



WETLAND LOSSES

Considerable change in wetland distribution and abundance has taken place since the 1780's. In the conterminous United States, an estimated 104 million acres of wetlands remained as of the 1980's (Figure 1). This amounts to a 53-percent loss from the original acreage total. The 50-state total indicates that an estimated 274 million acres remain. Of that total, 170 million acres are located in Alaska.

The Fish and Wildlife Service has estimated that there are 5,583,400 acres of wetlands in Michigan, representing 15% of the state's surface area (Dahl 1990). According to the Fish and Wildlife Service report, this represents a 50% loss of historic wetland acreage.

In 1992, the Michigan Natural Features Inventory began mapping historical coastal wetlands in Michigan. The extent of lost or damaged wetlands was illustrated in several areas. For example, Monroe County, located in the southeast corner along Lake Erie, was estimated by this mapping to contain only 12.5% of the approximately 164,000 acres of wetlands that were present in 1817.

What this means to Michigan citizens is the loss of essential benefits. Continued development or changes to the natural landscape disrupt the natural water balance within a defined area or basin. Depending on the type and extent of these changes to the landscape, negative impacts to neighboring basins can also result. Construction of impervious surfaces, such as pavement and buildings, combined with reduction in water storage areas, such as floodplains and wetlands will inevitably result in increased costs to the public. Wetland destruction has resulted in increased flood damages, increased erosion, degraded fisheries, degraded water quality, and adverse impacts to wildlife and recreation.

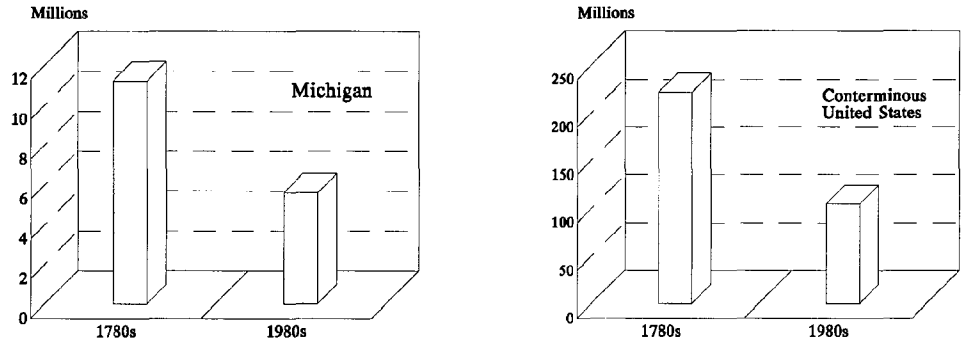


Figure 1. Comparison of total acreage of wetlands in 1780s and 1980s for Michigan and the conterminous United States.

ENHANCEMENT OF WETLAND RESOURCES: *An Invitation for your Participation*

Many public and private organizations are currently protecting and restoring wetlands in Michigan. While some groups focus on fish and wildlife habitat, others are focusing efforts on education, water quality, or water quantity functions.

In August of 1992, the Michigan Department of Natural Resources (MDNR) conducted a survey of existing wetland management practices in Michigan. This survey,

originally sent to 275 organization, categorizes wetland management practices into six general groups: **1) Restoration; 2) Education; 3) Research/Evaluation; 4) Regulation; 5) Protection/Management; and 6) Incentives/Benefits.** Twenty-seven percent of those receiving the survey responded.

Data collected from this effort was put into a computer database and is being used by MDNR and Michigan's Wetland Advisory Committee to strengthen the development of Michigan's Wetland Conservation Strategy. Participating groups receive up-to-date news on the Committees' progress and are encouraged to provide comments directly to the committee's members.

Many groups within the state are assisting with wetland protection and management efforts. The Chippewa Nature Center (Midland County), Leelanau Conservancy (Leelanau County), U.S. Fish and Wildlife Service, and the MDNR, are acquiring, preserving, and managing wetland areas for the social and economic benefits of Michigan's citizens.

Nature centers, schools, and non-profit organizations are also developing wetland materials, providing wetland training programs, and speaking to interested groups about the importance of wetlands. For example, the Wetlands Conservation Association (St. Joseph, MI) is in the process of developing a wetland public service announcement (PSA) for television. This PSA will address important wetland values and will be broadcast over portions of Indiana and southwest Michigan.

Many organizations also have been involved in wetland restoration efforts. For example, the Wege Foundation of Grand Rapids, The Tip of the Mitt Watershed Council of Conway, and the Michigan Wildlife Habitat Foundation of Lansing, are involved in funding or developing wetland restoration projects, providing technical assistance, and more.

The charts of existing wetland management efforts (Appendix A) can be used to identify organizations with similar interests. Given the great diversity of interest and investment of resources by organizations concerned with wetlands, these charts can aid in networking among groups throughout the state and contribute significantly to a more unified Wetland Conservation Strategy for Michigan.

A list of groups involved or interested in various aspects of wetland management is listed in Appendix B. Interested persons wishing to participate in the survey of existing wetland management practices in Michigan can do so by filling out the tear out survey (page 19) and returning it to the address shown.

Results of the survey show that federal agencies lead the way in being the most active in wetland management efforts. Groups indicating new interest in wetland management efforts include game and park organizations, municipalities, and watershed councils.

Survey information is shared in order to address many problems that arise from fragmented, uncoordinated projects that otherwise share common goals. Each organization can play an important role by reporting their goals, interests, and projects that apply to wetlands.

Participating groups of this survey represent a citizenry that is aware of the need to restrain wetland loss. Combining proactive efforts with resources of government, businesses, academics, and interested citizens will generate opportunities to maintain and increase Michigan's wetland base.

The Michigan Department of Natural Resources and Michigan's Wetland Advisory Committee will use the information supplied in this survey to identify gaps and weaknesses in existing wetland protection efforts in order to identify program needs, and to identify opportunities for improved coordination among programs, agencies, organizations, industry, and individual citizens.

An evaluation of ways to communicate among groups with similar interest is in process. This evaluation process will assist in the access to information about funding and technical sources and keep groups/agencies aware of each other's activities. It will provide notification of important actions being taken such as changes in state law or rules and availability of new documents or funding sources. The MDNR plans to consolidate information about existing wetland management efforts and develop ways to allow users easy access.

Michigan's Wetland Advisory Committee

Peg Bostwick
DNR, Land & Water Mgmt
PO Box 30028
Lansing, MI 48909
517-355-2694

Carolyn Bury
Project Officer- EPA Region V
Wetlands &Watersheds
Branch (5WQW-16J)
77 West Jackson Blvd
Chicago, IL 60604
312-886-3020

Wil Cwikiel
Tip of the Mitt Watershed
Council
PO Box 300
Conway, MI 49722
616-347-1181

Steve Eldredge
DNR, SWQD
PO Box 30028
Lansing, MI 48909
517-335-4177

John Johnson
Mead Paper Co
Publishing Paper
Div/Woodland Dept
PO Box 1008
Escanaba MI 49829
906-786-1660

Chad McIntosh
Environmental Advisor
Office of the Governor
Lansing, MI 48909
517-373-7949

Gerald Martz
DNR, Wildlife Division
PO Box 30028
Lansing, MI 48909
517-373-1263

Rick Moore
MUCC
PO Box 30235
Lansing, MI 48909
517-371-1041

Vicki Pontz
Michigan Farm Bureau
7373 W Saginaw Hwy
Lansing, MI 48909
517-323-7000

William H. Rosebush
Bay County Drain
Commissioner
Bay County Bldg
Bay City, MI 48706
517-895-4290

Lynn Sampson
US Dept of Agriculture
Soil Conservation Service
1405 S Harrison Rd - Rm 101
East Lansing, MI 48823-5202
517-337-6701

Helen Willis
MI Society of Planning
Officials
414 Main St - Suite 202
Rochester, MI 48307
313-651-3339

APPENDIX A

	UNIVERSITIES							SCHOOLS				
	U of M-Ecol Div	MSU-MI Sea Grant	MSU-Kellogg	U of M-School of NR	MSU-F&W Dept.	Mich Tech	MSU-CES	Birmingham Env Ctr	Ebersole Env Ed Ctr	Hartley Outdoor Ed Ctr	Hopkins-FFA	YMCA-Camp Copreconie
Restoration												
Developing restoration plans					X					X	X	O
Funding restoration projects											X	
On-site restoration labor											X	
Can provide technical assistance for research		O		X	X					O		
Education												
Developing wetland publications		O			X	X						
Available funds for publication and printing costs												
Provides training programs		X	X		X	X			X			
Offer presentations or speaking services		X	X		X							O
Distribution and interpretation service of wetland materials		X			X			X	X	O		O
Research/Evaluation												
Wetland functions & values		X		X	X	X			X	X	X	X
Wildlife management			X	X	X	X			X	X	X	O
Mapping/inventory	X			X	X	X					X	O
Tracking wetland restoration & loss					O	X						
Economic benefits/quality of life		O							X	X		X
Regulation												
Developing local regulation/ordinance												
Administration of wetland regulation												O
Assist individuals with regulatory information					O				X			
Protection/management												
Acquisition												O
Management of areas									X	X	X	O
Providing information to landowners		X			X						X	
Negotiating easements												
Wildlife enhancement			X		X					X	X	O
Incentives/Benefits												
Ability to contribute wetland recognition by using tools such as: signs, patches, certificates, audio & visual publicity, etc.												
Ability to cost share expenses for specific wetland projects												
Can provide low interest loans/grants												

X = Active/participating groups; O = Interest in areas, but not actively involved.

	FEDERAL AGENCIES					MUNICIPALITIES					
	Corps of Eng	Nat Parks Ser	Ottawa Nat Forest	Shiawassee Nat Wld Ref	USFWS	City of Gr Rapids	MI Soc of Plan Off	MI Munic League	MI Township Assoc	Rotary-Trav City	SEMCOG
Restoration											
Developing restoration plans	X		X	X	X				X		
Funding restoration projects			X	X	X					O	
On-site restoration labor			X	X	X						
Can provide technical assistance for research		X	X	X	O						
Education											
Developing wetland publications	X	O	X	X	O		X		O		X
Available funds for publication and printing costs			X	X			X			X	
Provides training programs	X			X	O		X	X	O		
Offer presentations or speaking services	X	X	X	X	O		X	X	O		X
Distribution and interpretation service of wetland materials		O	X	X		O			O	X	X
Research/Evaluation											
Wetland function & values	X	X	X	X	X	O			X	O	
Wildlife management		X	X	X	X	O				O	
Mapping/inventory	X	X	X	X	X				X	O	
Tracking wetland restoration & loss	X		X								
Economic benefits/quality of life			X						X	O	
Regulation											
Developing local regulation/ordinance					O		X	X	X	X	
Administration of wetland regulation	X	X			X				X		
Assist individuals with regulatory information	X				X		X		X	X	X
Protection/management											
Acquisition		X	X	X	X				X		
Management of areas		X	X	X	X	O			X	O	
Providing information to landowners	X	X	X	X					X	X	X
Negotiating easements	X		X		X				X		
Wildlife enhancement			X	X		O					
Incentives/Benefits											
Ability to contribute wetland recognition by using tools such as: signs, patches, certificates, audio & visual publicity, etc.			X	X							
Ability to cost share expenses for specific wetland projects		X	X	X	X						
Can provide low interest loans/grants											

X = Active/participating groups; O = Interest in areas, but not actively involved.

	WATERSHED COUNCILS				GAME AREAS & PARKS-STATE/COUNTY							
	Clinton River	Galien River	Kalamazoo River	Tip of the Mitt	Genessee Co	Huron/Clinton Metro	Mackinac Island	Oakland Co	Porcupine Mts	Washtenaw Co	Wayne Co	MapleRiver-DNR
Restoration												
Developing restoration plans		O		X					X	X	X	X
Funding restoration projects									X		X	O
On-site restoration labor									X	X		X
Can provide technical assistance for research		O		X						X	O	X
Education												
Developing wetland publications	X	O	O	X	O	X		X		X	O	X
Available funds for publication and printing costs				X				X				
Provides training programs	X	X/O		X	O	X		X			O	O
Offer presentations or speaking services	X		O	X	O	X		X		X	O	X
Distribution and interpretation service of wetland materials	X	X/O	O	X		X	O	X	O	X	O	X
Research/Evaluation												
Wetland function & values		O		X	O			O			O	X
Wildlife management		O	X/O	X	O			X		X	O	X
Mapping/inventory		X	O	X			X	X		X	O	X
Tracking wetland restoration & loss	O	O	O	X				O			O	X
Economic benefits/quality of life			X/O	X				X			O	X
Regulation												
Developing local regulation/ordinance	X	O		X				O		O		
Administration of wetland regulation	X			X			X	O	X	O		
Assist individuals with regulatory information	X	X	O	X				O		X	O	
Protection/management												
Acquisition	X					O	O	X				X
Management of areas	X	O		X		X	X	X		X	X	X
Providing information to landowners	X	X	O	X	O			X		X		X
Negotiating easements	X									X		
Wildlife enhancement	X		O	X	O		X	X				X
Incentatives/Benefits												
Ability to contribute wetland recognition by using tools such as: signs, patches, certificates, audio & visual publicity, etc.				X	O	X		X	O			X/O
Ability to cost share expenses for specific wetland projects								X				X
Can provide low interest loans/grants								O				

X = Active/participating groups; O = Interest in areas, but not actively involved.

	NATURE CENTERS									
	Belle Isle	Blanford	Chippewa	DeGroof	Fernwood	Kingman Mus of N Hist	Nichols-U of M	Saret	Slayton Arboretum	Thorne swift
Restoration										
Developing restoration plans			X				X	X		
Funding restoration projects							O			
On-site restoration labor	O		X	X			O			
Can provide technical assistance for research								X		O
Education										
Developing wetland publications			X				X			O
Available funds for publication and printing costs										
Provides training programs	O		X		O					
Offer presentations or speaking services	X/O		X	X	X	X		X		X
Distribution and interpretation service of wetland materials	X	O		O	X	O	O	O		X/O
Research/Evaluation										
Wetland function & values			X	X			O			
Wildlife management	O		X	O			O			
Mapping/inventory	O						X	X		
Tracking wetland restoration & loss	O							X		
Economic benefits/quality of life				X			O			
Regulation										
Developing local regulation/ordinance										
Administration of wetland regulation										
Assist individuals with regulatory information	O							X		
Protection/management										
Acquisition								X		
Management of areas		X	X	X	O			X		X
Providing information to landowners	O	O						X		
Negotiating easements				O						
Wildlife enhancement	O	O	X	O			X	X		X
Incentives/Benefits										
Ability to contribute wetland recognition by using tools such as: signs, patches, certificates, audio & visual publicity, etc.		O					X	O		
Ability to cost share expenses for specific wetland projects										
Can provide low interest loans/grants										

X = Active/participating groups; O = Interest in areas, but not actively involved.

	CONSERVATION GROUPS																
	Audubon Society-Det	Audubon Society-MI	Ducks Unlimited	Leelanau Conserv	MI Duck Hunters	MI Waterfowl Assoc	MI Wildlife Hab Found	MI Assoc of Conserv	Multi-Lakes Cons Assoc	Nature Conservancy	Pheasants Forever	Pte Mouillee Wtrfowlers	Shiawassee Flats	Trout Unlimited	Waterfowl USA	Wetland Conserv Assoc	Wildlife Unlimited
Restoration																	
Developing restoration plans	O		O		X	O	X	X		X		X	X	X	X	X	X
Funding restoration projects			X		X		X	O		X	X	X	X	X	X	O	O
On-site restoration labor			O		X		X	O	O	X		X	X	X	X		
Can provide technical assistance for research	O	X					X	X		X	X		X				
Education																	
Developing wetland publications	X		X	O	O		X	X			O			O	X	X	
Available funds for publication and printing costs	X							X			O			O	X	X	
Provides training programs	X						X	X						O			
Offer presentations or speaking services	X	O		X	O	O	X	X				X		O	O	X	
Distribution and interpretation service of wetland materials	X	X	X			X		X	O		O	X		O	O	O	
Research/Evaluation																	
Wetland function & values								X		X		X	X	X	X		O
Wildlife management			X		O	X		X	O	X	O	X	X		O	X	X
Mapping/inventory								X		X						O	
Tracking wetland restoration & loss	O				O			O		X				O	O	O	O
Economic benefits/quality of life					O			X		O		X		O	X	X	
Regulation																	
Developing local regulation/ordinance				O	O			O	O	O		X		X	O	X	
Administration of wetland regulation								O						X	O		
Assist individuals with regulatory information	X	X		X				X			O			O	O	X	
Protection/management																	
Acquisition		X	X	X				X		X		X		O	O		
Management of areas	X	X		X				X		X		X	X	O	X		O
Providing information to landowners	X	X		X	O		X	X		X	X	X	X	O	O	X	O
Negotiating easements	X			X				O		X		X		O	O		
Wildlife enhancement			X	X	O	X	X	X	O	X	X	X	X		X	X	X/O
Incentives/Benefits																	
Ability to contribute wetland recognition by using tools such as: signs, patches, certificates, audio & visual publicity, etc.								X	X	X		X		O	O	X	
Ability to cost share expenses for specific wetland projects			X	X			X	O		X	X		X	X	X		O
Can provide low interest loans/grants								O			X			X			

X = Active/participating groups; O = Interest in areas, but not actively involved.

	ADVOCACY/LOBBYING						BUSINESS				
	CACC	Clean Water Action	Lake MI Fed	MI Farm Bur	NMEAC	WEGE Fnd	Cliffs Mining	MI Assoc of Realtors	R E Olds-Anderson	Real Est Dev & Env Co	Second Nat Bank
Restoration											
Developing restoration plans	O						X			X	O
Funding restoration projects						X	X				
On-site restoration labor							X		O		
Can provide technical assistance for research								O			
Education											
Developing wetland publications	X	X	O	O				O			
Available funds for publication and printing costs				O		X					
Provides training programs	O			O				O	X	X	O
Offer presentations or speaking services	O	X	X	O	X					X	
Distribution and interpretation service of wetland materials	O	X	X	O	X						O
Research/Evaluation											
Wetland function & values			O						O		X
Wildlife management											X
Mapping/inventory			O				X				X
Tracking wetland restoration & loss		O	O								O
Economic benefits/quality of life		O	O					O			O
Regulation											
Developing local regulation/ordinance		X	X					X/O	O		O
Administration of wetland regulation		X					X			X	
Assist individuals with regulatory information		X	X	X	X			O		X	X/O
Protection/management											
Acquisition						X					
Management of areas											O
Providing information to landowners	X	X		X	X				O	X	X
Negotiating easements										X	O
Wildlife enhancement	X		O				X				X
Incentives/Benefits											
Ability to contribute wetland recognition by using tools such as: signs, patches, certificates, audio & visual publicity, etc.				O		X			O	X	
Ability to cost share expenses for specific wetland projects						X					
Can provide low interest loans/grants											

X = Active/participating groups; O = Interest in areas, but not actively involved.

APPENDIX B

WETLAND MANAGEMENT CONTACTS

J. David Allen
University of Michigan
School of Natural Resources
Dana Bldg., 430 E. University
Ann Arbor, MI 48109-1115

Paul Babladelis
Ebersole Environmental
Education Center
3400 2nd St.
Wayland, MI 49248

Dr. Burton V. Barnes
University of Michigan
School of Natural Resources
Ecological Diversity Research
Ann Arbor, MI 48109-1115

Jim Goodheart
Pheasants Forever,Inc.
8401 Stoney Creek Ct.
Davison, MI 48423

James Blaschka
Hartley Outdoor
Education Center
12633 Beaver Rd.
St. Charles, MI 48655

Alex Bourgeau
SEMCOG
660 Plaza Dr., Ste. 1900
Detroit, MI 48226

Mike Brock
Trout Unlimited
23410 Beech Rd.
Southfield, MI 48034

Robert Brown
Hopkins FFA
215 Clark
Hopkins, MI 49320

Tanya Cabala
Lake Michigan Federation
425 W. Western Ave. Ste. 201
Muskegon, MI 49440

Loraine Cambell
Michigan Audubon Society
6011 W. St. Joseph
P.O. Box 80527
Lansing, MI 48908-0527

Dr. Rique Campa
Michigan State University
Dept. of Fish & Wildlife
Room 13, Natural Resources
East Lansing, MI 48824-1222

Rob Collier
Rotary Charities of Traverse
12935 W. Bay Shore, Ste. 290
Traverse City, MI 49684

Dr. David Crabtree
Slayton Arboretum
Hillsdale College
Department of Biology
Hillsdale, MI 49242

Wilfred Cwikiel
Tip of the Mitt
Watershed Council
P.O. Box 300
Conway, MI 49740

John W. Cooper
U.S. Fish & Wildlife Service
1405 S. Harrison, Room 302
East Lansing, MI 48823

June de Lorme
YMCA Camp Copreconie
10407 Fenton Rd.
Fenton, MI 48430

David Dempsy
Clean Water Action Council
122 S. Grand, #200
Lansing, MI 48933

Robert Dupras
MI Waterfowl Association
904 Garfield
Marquette, MI 49855

Shirley Dykema
DeGraaf Nature Center
600 Graafs Rd.
Holland, MI 49423

Denise Fehribach
Shiawassee National
Wildlife Refuge
6975 Mower Rd.
Saginaw, MI 48601

Joseph P. Figa, Jr.
Oakland County
Parks & Recreation
2800 Watkins Lake Rd.
Waterford, MI 48328

Dennis Fijalkowski
MI Wildlife Habitat Foundation
6425 S. Pennsylvania, Ste. 9
Lansing, MI 48911

W.E. Frayer
Michigan Tech University
School of Forestry
Houghton, MI 49931

Russell Gabier
Irving S. Gilmore Foundation
136 E. Michigan
Ste. 615
Kalamazoo, MI 49007

Wally Gauthier
U.S. Army Corps of
Engineers, Reg. Fn. Branch
PO Box 1027, 4770 Michigan
Detroit, MI 48231

Matt Heumann
Washtenaw County Parks
& Recreation, P.O. Box 8645
Ann Arbor, MI 48107

Jason Horton
Real Estate Development
& Investment Company
20500 Civic Center Dr., #3000
Southfield, MI 48076

Ann Hunt
CACC
8735 Maple Grove Rd.
Lake, MI 48632-9511

Greg & Kathy Hyde
Waterfowl USA
4920 Lippincott
Lapeer, MI 48446

Daniel E. Johnson
Shiawassee Flats
Citizens & Hunters
15235 E. Street Rd.
Montrose, MI 48457

Joe Johnson
Michigan State University
Kellogg Biological Station
12685 E. C Ave.
Augusta, MI 49012

Peggy G. Johnson
Clinton River Watershed Council
8215 Hall Rd.
Utica, MI 48313

James K. Jordan
Ottawa National Forest
2100 E. Cloverland Dr.
Ironwood, MI 49938

Michele Kristin
Michigan Townships Association
512 Westhsire Dr.
Lansing, MI 48917

Chris Kunkle
University of Michigan
Nichols Arboretum
Dana Bldg. 430 E. University
Ann Arbor, MI 48109-1115

Robert Learner
Kingman Museum of Natural
History
W. Michigan Ave. at 20th St.
Battle Creek, MI 49017

Kathy Lewand
Wayne County Parks
33175 Ann Arbor Trail
Westland, MI 48185

Nancy E. MacCartney
City of Grand Rapids
Parks & Recreation Dept.
201 Market, SW
Grand Rapids, MI 49503

Steven Maniaci
Thorne Swift Nature Preserve
6696 Lower Shore Dr.
Harbor Springs, MI 49740

Diantha Martin
Genesee County Parks
G-5360 E. Potter Rd.
Burton, MI 48506

Edward Q. McCarthy
Wildlife Unlimited - Delta Co.
6604 N Rd.
Escanaba, MI 49829

John G. Meier
Cliffs Mining Services Co.
504 Springs
P.O. Box 1000
Ishpeming, MI 49849-0900

Chuck Nelson
Sarett Nature Center
2300 Benton Center Rd.
Benton Harbor, MI 49022

Carl R. Nold
Mackinac Island
State Park Commission
Box 307
Mackinac Island, MI 49757

Bob Papp
Blandford Nature Center
1715 Hillburn, NW
Grand Rapids, MI 49504

Thomas W. Passow
Second National
Bank-Trust Deposit
101 N. Washington Ave.
Saginaw, MI 48607

Roger L. Pederson
Ducks Unlimited, Inc.
3720 Stonewood Court
Egan, MN 55123

Barbara Pepper
Birmingham Public School
Environmental Center
23400 W. Thirteen Mile
Birmingham, MI 48098

Grant Petersen
National Park Service
Pictured Rocks National
Lakeshore, P.O. Box 40
Munising, MI 49809

Mary B. Powers
Kalamazoo River
Protection Association
917 S. Park St.
Kalamazoo, MI 49001-54604

Vicki Pontz
Michigan Farm Bureau
7373 W. Saginaw, Box 3090
Lansing, MI 48909

Brian Price
Leelanau Conservancy
105 N. First St., Box 1007
Leland, MI 49654

Harold Prince
Dept. of Fish & Wildlife
Michigan State University
East Lansing, MI 48824

Allan S. Puplis
Wetland Conservation Assoc.
1178 W. Marquette Woods
St. Joseph, MI 49085

John D. Rodeman
Michigan Duck Hunters Assoc
Wayne County
31012 Windsor
Westland, MI 48185

John Schwartz
Michigan Sea Grant Extension
Michigan State University
334 Natural Resources Bldg.
East Lansing, MI 48824-1222

Marilyn Shy
Michigan Association of
Conservation
1405 S. Harrison, Ste. 305
East Lansing, MI 48823

Jack Smiley
Detroit Audubon Society
121 S. Main
Royal Oak, MI 48067

Thomas H. Smith
Huron-Clinton Metroparks
13000 Highridge Dr.
Brighton, MI 48116

Philip W. Stephens
Chippewa Nature Center
400 S. Badour
Midland, MI 48640

Al Stewart
MDNR Wildlife Division
8562 E. Stoll Rd.
East Lansing, MI 48823

Donald Stypula
Michigan Municipal League
416 W. Ottawa St.
Lansing, MI 48933

Brad Swinkey
Pte. Mouillee Waterfowlers
MI Duck Hunters Tournament
6428 Cabo
Newport, MI 48166

Mike Traxler
Multi-Lakes Conservation Assoc.
P.O. Box 487
Walled Lake, MI 48390

Robert P. Venner
Fernwood Botanic Garden
13900 Range Lane Rd.
Niles, MI 49120

Bill Wagner
Galien River Watershed Council
P.O. Box 345
New Buffalo, MI 49117

Jack Walker
Michigan Assoc. of Realtors
720 N. Washington
Lansing, MI 48911

William Warren
Waterfowl USA
Saginaw Valley Chapter
P.O. Box 1572
Bay City, MI 48706

Matt Weber
NMEAC
106 S. Union, Ste. 201
P.O. Box 1166
Traverse City, MI 49685-1166

Peter M. Wege
The Wege Foundation
P.O. Box 6388
Grand Rapids, MI 49516

Ron Welton
Porcupine Mountains
Wilderness State Park
599 M-107
Ontonagon, MI 49953

D.J. West
Belle Isle Nature Center
Belle Isle Park
Detroit, MI 48203

Dr. Mike Wiley
University of Michigan
School of Natural Resources
Ann Arbor, MI 48109

Helen S. Willis
Michigan Society of Planning Officials
414 Main St., Ste. 202
Rochester, MI 49307

Tom Woiwode
The Nature Conservancy
2840 E. Grand River
East Lansing, MI 48823

Survey of Existing Wetland Management Practices

Existing Wetland Management Involvement

Mark an "X" for wetland efforts with which your group/agency/organization is currently involved. Mark an "O" for the efforts with which your group/agency/organization is interested in becoming involved.

Restoration

__ developing restoration plans
__ funding restoration projects
__ on site restoration labor
__ can provide technical assistance for research
__ can provide funding assistance for research
__ other_____

Education

__ developing wetland publications
__ funding printing/publication cost
__ available advertisement space for prepared news releases
__ provide training programs
__ offer presentation/speaking services
__ distribution and interpretation service of wetland materials
__ other_____

Research/Evaluation

__ wetland functions & values
__ wildlife management
__ mapping/inventory
__ tracking wetland restoration & loss
__ economic benefits/quality
__ other_____

Regulation

__ developing local regulation/ordinance
__ administration of wetland regulation
__ assist individuals with regulatory information
__ other_____

Protection/Management

__ acquisition
__ management of preserves
__ providing information to landowners
__ negotiating easements
__ wildlife enhancement
__ other_____

Incentives/Benefits

__ ability to contribute wetland recognition by using such tools as: signs, patches, certificates, audio and visual publicity, etc.
__ ability to cost share expenses for specific wetland projects
__ can provide low interest loans and /or grants
__ other_____

Goals/Objectives

State the Goals/Objectives of Your Organization:

Communication

List the Modes and Format of Inside and Outside Communication Your Organization is Using:

Contact Person: _____

Organization: _____

Street Address: _____

City/State/Zip: _____

Telephone Number: _____

***Highlight the Geographic Area on the Michigan Map that your Organization Manages.*

Cut page, fold in thirds, and return to the address shown below.

Postage Stamp Required

Wetland Strategy Survey
Michigan Department of Natural Resources
Land & Water Management Division
P.O. Box 30028
Lansing, MI 48909

Tape here

NOAA COASTAL SERVICES CENTER LIBRARY
3 6668 14100 6710