

Minnesota's Wildlife Management Area Acquisition -The Next 50 Years-

Habitat is the Key

**Report to the Department of Natural Resources,
the Wildlife Roundtable, Legislature, and
the Citizens of Minnesota**

**by
The Citizens' Advisory Committee
December 2002**

Lance Ness (Chairman) – Fish & Wildlife Legislative Alliance
Kevin Auslund – Game and Fish Coalition
Corey Class - Minnesota Deer Hunters Association
Matt Holland - Pheasants Forever
Gabe Horner - The Nature Conservancy
Mike LaFleur – Izaak Walton League
Kevin Lines - Board of Soil & Water Resources
Mike McGinty - Minnesota Waterfowl Association
Gordon Meyer - Minnesota Conservation Federation
Jane Prohaska - Minnesota Land Trust
Susan Schmidt - Trust for Public Land

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Director's Message

I wish to thank Chairman Lance Ness and the other committee members for their enormous personal commitment and time to bring this ambitious effort to completion. The Committee clearly met its task, and we greatly appreciate the value of their recommendations to the Division of Wildlife.

The recommendations in this report will help the division and its partners achieve ambitious land acquisition goals for the wildlife management area (WMA) system. The task ahead is large and expensive. Clearly the Department of Natural Resources can't do it alone, and, as a result, we will need to rely on the U.S. Fish and Wildlife Service, counties, townships, cities, the Metropolitan Council, and many private conservation organizations to compliment and amplify our efforts.

The ten year accelerated acquisition challenge is important to achieve because urbanization and increasing land costs are creating more barriers to reaching our goals each year. Our estimates show that to accomplish the citizen recommendations, an additional twenty-two million dollars per year will be required. In addition, the cost of development, management, and maintenance of those lands will result in increasing demands on our staff and funding.

This plan is more than we expected. The Committee clearly provided a set of blue ribbon recommendations and a blue print for WMA acquisition for the next fifty years. The Division of Wildlife will work hard to see that the necessary funding, organizational resources, and direction are given to realize this dream.

Thanks again,

TIMOTHY P. BREMICKER, Director

Division of Wildlife

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Executive Summary

The recommendations of the citizens committee report represents the direction that the Wildlife Management Area (WMA) land acquisition program should take for the next fifty years. The recommendations are both statewide and policy level in nature and detailed on an ecological section basis. Acquisition efforts for the first 10 years should be accelerated because of the effects of increased development in rural areas, the continuing loss of critical wildlife lands, and the escalating cost of lands. WMAs play a key role in providing the opportunities for hunting, fishing, trapping and wildlife watching activities. WMAs also add meaning and value to Minnesotan's and non residents lives. And WMAs provide critical wildlife habitat often lacking in the vicinity due to intensive agricultural, human development, or other activities.

While highly successful, the current WMA system does not meet all of the current and future needs for wildlife habitat, wildlife population management and hunter access. The population of Minnesota increased by over one half million people since 1990, a growth rate of 12.4 percent. More people mean more demands on the wildlife resource and a desire for more wildlife recreational opportunities. The recommendations of this plan are based on the anticipated needs for the next 50 years to preserve additional habitat to meet the needs of all species of wildlife, game as well as nongame species, and the recreational needs for public hunting and wildlife-related recreation.

Minnesota has an outdoor tradition that is demonstrated in the 2001 National Survey of Fishing, Hunting and Wildlife Related Recreation. Fifteen percent of Minnesotans hunt and 52 percent of Minnesota residents watch wildlife, the highest participation rate in the country. Hunting and wildlife watching are a \$1 billion dollar industry in Minnesota. There is no sign of decreasing participation in Minnesota or the Midwest. Since the population continues to increase we can expect participation and the demand for outdoor recreation in Minnesota to continue. The WMA System is an integral part of the outdoor recreational system. WMAs play a key role in providing opportunities for hunting and wildlife watching activities. WMAs also add meaning and value to Minnesotans and non residents lives by protecting critical habitat and public access to it.

Key habitat areas across the state have been identified over the past 50 years by the Division of Wildlife. Completing the acquisition and protection of the 263,000 acres of unacquired lands within these existing WMAs should be a priority. However, to meet the long range needs to ensure adequate wildlife lands for future generations, an additional 439,000 acres of new WMAs will need to be identified and acquired.

WMAs provide critical wildlife habitat often lacking in the vicinity due to intensive agriculture, development, or other activities. WMA acquisition efforts should concentrate in the southern and western portions of the state where the pressure from these these competing land uses is greatest.

The statewide habitat and hunting access needs cannot be accomplished solely through the WMA system. If habitat, wildlife populations and hunter access are priorities for the people of Minnesota, private land owners, the U.S. Fish and Wildlife Service, cities, counties, and other agencies; state and federal farm programs, and short term and permanent easements all need to play their part in protection and management of wildlife land.

Additional dollars will be needed to maintain and enhance habitat quality and public recreational opportunities on newly acquired WMA acres. Ways must be found to ensure the dollars are available to meet the future needs to maintain and enhance both the current and future WMA acres.

The plan is organized into statewide recommendations for the WMA system, then into ecological section recommendations and justification for the recommendations.

Chairman's Report

I wish to express my thanks to the citizens committee members for their time and input into the many hours of meetings that I was able to chair. Your effort was needed and valued and gives credit to an involved citizenry for its concern for our states natural resources and the benefits and uses those resources provide to us all.

This committee was formed out of the survey and discussion at the 2002 Wildlife roundtable at which the 50th anniversary of the WILDLIFE MANAGEMENT AREA SYSTEM (WMA's) was discussed and celebrated. That led to the question of what should be done for the next fifty years and more importantly the next ten years! The lack of quantity and quality of habitat, high current pressures being put on available habitat, and increasing future pressures and demand on Minnesota's habitat were topics of major concern. The Department of Natural Resources (DNR) asked us to form and participate in this citizens advisory committee.

This report is based upon a consensus agreement of those committee members so listed. The committee spent many hours and meetings to come to these recommendations. We wish to thank Kim Hennings and Diana Regenscheid of the DNR-Division of Wildlife and Bruce Hawkinson of Dynamics Solutions for their time and assistance in preparing this report. The Division of Wildlife GIS system, the fall waterfowl plan, the farmland wildlife committee, and the pheasant committee provided valuable sources of information.

The purpose of the Wildlife Management Area Systems is three fold: 1) to provide wildlife habitat, 2) to provide wildlife production, and 3) to provide wildlife recreation, hunting, fishing, and trapping opportunities for the public. In addition, these WMA's provide habitat and production for a multitude of non-game wildlife species, flood control, water storage and filtration, and sedimentation and erosion filters, which are enormous environmental benefits. Those benefits are not the purposes for WMA's but are additional to the primary purposes.

But now the task falls to us to continue this highly successful program. The needs continue to grow along with the demands and pressures upon the existing habitat. The committee recommends a 50 year goal of acquiring 702,200 acres of new WMA lands, nearly equaling the acreage acquired during the first 50 years of the WMA Program. Population and urbanization pressures, continuing loss of habitat, escalating land costs, and the growing cost of maintaining land are ever-increasing threats to wildlife and habitat. Because these factors, the committee recommends a ten year accelerated acquisition plan be adopted and supported by the state legislature over the course of the next five biennials. The ten year acceleration and the total 50 year acquisition plan can not be accomplished without the commitment by the legislature and governor for long term funding, not only for acquisition of land, but also for development, operation, and maintenance of the land.

The committee also recognized that WMA's cannot be the sole supply of habitat but should be an integrated part of a larger plan for wildlife conservation that must include public, private and non-profit partnerships and cooperation, including the federal government.

It is our hope that the people of Minnesota will embrace our vision of the future of wildlife management so that future citizens and their children will also be able to enjoy and participate in our state's great natural outdoors legacy. The quality of life we are so fortunate to have experienced in our lifetimes as citizens of this great state is dependant on ensuring that wildlife is prosperous for the next fifty years and beyond.

LANCE K. NESS, CHAIRMAN

Citizens Advisory Committee Recommendations

Summary of Statewide Recommendations *(not in rank order)*

- The acquisition program should acquire 702,200 acres of additional WMA lands in the next 50 years from willing sellers to provide sustainable and diverse populations of wildlife and greater opportunities for wildlife-related recreation for future generations.
- Acquisitions should concentrate in the southern half and west central portions of the state where changes in land use, development pressures, habitat fragmentation, and increased demand for outdoor recreation create a larger demand and need to expand the WMA system. Emphasis should be on prairie and wetland conservation and restoration for waterfowl, pheasants, prairie chicken, and other grassland species.
- Because of rising land costs and continued habitat loss, acquisition efforts should be accelerated over the next 10 years by purchasing 30% of the 50 year goal, or 210,000 acres in 10 years at a rate of 21,000 acres per year.
- The acquisition in the other parts of the state should be considered when needed to protect endangered, threatened, and rare species habitat; critical wildlife corridors and larger blocks of public land; key tracts needed for wildlife species of special interest; management access; and parcels where important management challenges exist.
- Over the past 50 years, DNR Wildlife Managers have identified key WMA projects across the state. Priority should be given to acquiring the 263,000 acres of lands remaining in private ownership in these existing WMAs (A.K.A., roundouts). However, 439,150 acres of additional lands in new WMAs will be needed to help meet the goals established in this plan.
- The committee recognizes that WMAs alone will not meet the habitat protection needs and public use demands, but should be part of the overall effort to provide the wildlife values and opportunities that citizens want in Minnesota.
- The Division of Wildlife needs to work collaboratively with other agencies and units of government, public and private partners, legislators, landowners, and citizens to seek additional, creative funding to implement the recommendations in this report and find ways to expedite the WMA land acquisition process.
- Ongoing management and maintenance funding for the existing WMA land is inadequate. When significant additional acres of land are added to the system, funding for the ongoing maintenance is essential for the system to meet its full potential and the public's expectations.
- The Division of Wildlife should periodically review the WMA land system to identify which units are meeting the needs of the system and which are no longer viable or productive for wildlife.
- In 2012, another citizens committee should look at the accomplishments of this plan and make adjustments in the 50 years scope and strategies for the next 10 years for WMA land acquisition.

Regional recommendations

Regional recommendations are broken out within Ecological Classification System sections. Each section has unique soils, weather, and vegetation that produce certain wildlife and recreational experiences. Much of DNR's current management is being influenced by this new way of looking at the landscape. Sections 8 and 9 were combined because of the small size of Section 9 and the fact that it functions similarly to Section 8.

Each section writeup is self-contained and describes that section's focus, goals, needs, recommendations, and justifications. An insert map shows the location of that section in the state. The general characteristics, including huntable and permanently protected acres, are also described for each section.



WMA Acquisition

Ecological Section 1, Arrowhead

General geological, soil, landscape and ecological description: This section consists of large areas of bedrock exposure or shallow, fragile soils over bedrock. Lakes are present in large numbers. Pre-settlement vegetation consisted largely of coniferous upland species such as white pine, red pine, and jack pine. Topography is varied, ranging from level to steep. Landform consists of ground and end moraines, characterized by glacial till over bedrock and exposed bedrock.

Land use is dominated by forests, mining, recreation (hunting, fishing, boating, snowmobiling) and tourism. Seasonal housing on lakes are increasing. The major population centers include: Duluth, Hibbing, Virginia, Ely, Silver Bay, Two Harbors, and Grand Marais.

Section Characteristics:

<i>Huntible Public Acres</i>						<i>State & Federal Conservation Easements</i>	<i>Total Protected Habitat</i>	
Total Acres	WMA	Other State/County	Federal	Total Huntible	%Total Huntible	Permanently Protected Acres	Acres	%Total
5,970,688	8,257	1,707,358	3,703,455	5,419,070	91	0	5,419,070	91

Focus wildlife species: Moose, ruffed grouse, deer, sharp-tailed grouse, wolf

Species population goal: Maintain sustainable populations of forested landscape dependent wildlife.

WMA Land Acquisition needs:

Long term: A 50-year goal of 3,100 acres additional WMA lands based on habitat needs, species population levels, and recreational access to hunt and view wildlife.

Short term: Accelerated acquisition should occur in the first 10 years, with a goal of 900 acres.

Acquisition Strategy: 2,240 acres should be directed at completing the acquisition of existing WMAs and 860 acres of new WMA lands should be identified, planned and acquired.

Habitat focus and management needs:

- Identify and acquire critical habitat for endangered, threatened, and rare species.
- Acquisition efforts should compliment existing state and other public lands to protect critical corridors and larger blocks of habitat.

Public Hunting focus and access needs:

- Provide improved access for public hunting, particularly to inaccessible or landlocked blocks of public land.

Public/private collaborative acquisition needs:

- The Division should collaborate with additional partners to provide the long-term habitat land base through supplemental efforts like LCMR initiatives, other state and federal acquisition programs, non-government investments, private land easements and private efforts.
- WMAs should compliment conservation practices such as private forest programs to maximize wildlife conservation efforts.
- WMAs should be part of the overall effort to provide the wildlife values that citizens want for the future in Minnesota.

Justification for the recommendations:

- Other game species such as rabbits, squirrels, furbearers, and a variety of nongame bird and mammal species benefit from WMA lands.
- Because 91% of this section is in public ownership and available for public recreation, most wildlife habitat and population needs can be met by collaboration and cooperative management efforts with county, state, and federal agencies that control the public lands.



WMA Acquisition Ecological Section 2, Peatlands

General geological, soil, landscape and ecological description: This section consists of lowland bog dominated by spruce and tamarack and an upland transition zone to the Canadian Shield on the east side. Presettlement vegetation consisted of forested and non-forested bog and mixed hardwood-conifer. Topography is level to gently rolling. The primary land is lake plain (part of Glacial Lake Agassiz).

Land use: Low productivity forest, farming on the western side and recreation are the predominant land uses. International Falls, Baudette, Warroad, and Roseau are the main population centers.

Section Characteristics:

<i>Huntible Public Acres</i>						<i>State & Federal Conservation Easements</i>	<i>Total Protected Habitat</i>	
Total Acres	WMA	Other State/County	Federal	Total Huntible	%Total Huntible	Permanently Protected Acres	Acres	%Total
5,309,094	341,214	2,824,944	126,856	3,293,014	62	208	3,293,222	62

Focus wildlife species: Moose, ruffed grouse, deer, sharp-tailed grouse, bear

Species population goal: 1. Maintain sustainable populations of forested landscape dependent wildlife.

2. Increase the huntible population of moose.

3. Increase sharp-tailed grouse populations to levels to sustain a harvest of 30,000 to 40,000 birds annually.

WMA Land Acquisition needs:

Long term: A 50-year goal of 26,700 acres additional WMA lands based on habitat needs, species population levels, and recreational access to hunt and view wildlife.

Short term: Accelerated acquisition should occur in the first 10 years, with a goal of 8,000 acres.

Acquisition Strategy: 18,700 acres should be directed at completing the acquisition of existing WMAs and 8,000 acres of new WMA lands should be identified, planned and acquired.

Habitat focus and management needs:

- Identify and acquire critical habitat for endangered, threatened, and rare species.
- Acquisition efforts should compliment existing state and other public lands to protect critical corridors and larger blocks of habitat.
- Identify and acquire key critical sharp-tailed grouse habitat.
- Round outs to major WMAs should be a high priority.

Public Hunting focus and access needs:

- Provide improved access for public hunting, particularly to inaccessible or landlocked blocks of public land.

Public/private collaborative acquisition needs:

- The Division should collaborate with additional partners to provide the long-term habitat land base through supplemental efforts like LCMR initiatives, other state and federal acquisition programs, non-government investments, private land easements and private efforts.
- WMAs should compliment conservation practices such as private forest programs to maximize wildlife conservation efforts.
- WMAs should be part of the overall effort to provide the wildlife values that citizens want for the future in Minnesota.

Justification for the recommendations:

- Other game species such as rabbits, squirrels, furbearers, and a variety of nongame bird and mammal species benefit from WMA lands.
- Because 62% of this section is in public ownership and available for public recreation, most wildlife habitat and population needs can be met by collaboration and cooperative management efforts with county, state, and federal agencies that control the public lands.
- Sharp-tailed grouse populations have declined statewide dramatically from historic levels in the 1940s. In 1949, over 150,000 sharptails were harvested compared to recent harvests in the 1990s ranging from 8,000 to 33,000 birds.



WMA Acquisition

Ecological Section 3, Northern Prairie Parklands

General geological, soil, landscape and ecological description: This section consists of transition zone between prairie and forest in the northwest portion of the state. It continues to the northwest through portions of Manitoba, Saskatchewan, and Alberta. It is similar to the oak savanna transition zone to the south, except oak is replaced by aspen (due to climate). This section is located totally on a lake plain (Glacial Lake Agassiz). Private land use is primarily agriculture with some forestry activities. There are large areas of various types of public land. Small towns such as Red Lake Falls, Karlstad, and Greenbush provide services. No large populations centers exist.

Section Characteristics:

<i>Huntible Public Acres</i>						<i>State & Federal Conservation Easements</i>	<i>Total Protected Habitat</i>	
Total Acres	WMA	Other State/County	Federal	Total Huntible	%Total Huntible	Permanently Protected Acres	Acres	%Total
2,907,589	305,524	155,571	63,118	524,213	18	7,095	531,308	18

Focus wildlife species: Waterfowl, sharp-tailed grouse, moose, deer, ruffed grouse

- Species population goal:**
1. Maintain sustainable populations of prairie and brushland dependent wildlife species
 2. Increase duck recruitment, with emphasis on species below the long-term average
 3. Maintain a huntible population of moose.
 4. Increase sharp-tailed grouse populations to levels to sustain a harvest of 30,000 to 40,000 birds annually.

WMA Land Acquisition needs:

Long term: A 50-year goal of 43,400 acres additional WMA lands based on habitat needs, species population levels, and recreational access to hunt and view wildlife.

Short term: Accelerated acquisition should occur in the first 10 years, with a goal of 13,000 acres.

Acquisition Strategy: 32,000 acres should be directed at completing the acquisition of existing WMAs and 11,400 acres of new WMA lands should be identified, planned and acquired.

Habitat focus and management needs:

- Identify and acquire critical habitat for endangered, threatened, and rare species.
- Acquisition efforts should compliment existing state and other public lands to protect critical corridors and larger blocks of habitat.
- Identify and acquire key critical sharp-tailed grouse habitat.
- Completion of the acquisition of and consolidation of the major WMAs should be a high priority.

Public Hunting focus and access needs:

- Provide improved access for public hunting, particularly to inaccessible or landlocked blocks of public land.
- Provide more and improved access for waterfowl hunting opportunities.

Public/private collaborative acquisition needs:

- The Division should collaborate with additional partners to provide the long-term habitat land base through supplemental efforts like LCMR initiatives, other state and federal acquisition programs, non-government investments, private land easements and private efforts.
- WMAs should compliment conservation practices such as private forest programs to maximize wildlife conservation efforts.
- WMAs should be part of the overall effort to provide the wildlife values that citizens want for the future in Minnesota.

Justification for the recommendations:

- Other game species such as rabbits, squirrels, furbearers, and a variety of nongame bird and mammal species benefit from WMA lands.
- Although 62 percent of this section is under cultivation, 18% is in public ownership and available for public recreation and most wildlife habitat and population needs can be met by collaboration and cooperative management efforts with county, state, and federal agencies that control the public lands.
- Sharp-tailed grouse populations have declined statewide dramatically from historic levels in the 1940s. In 1949, over 150,000 sharptails were harvested compared to recent harvests in the 1990s ranging from 8,000 to 33,000 birds.



WMA Acquisition

Ecological Section 4, Red River Valley Prairie

General geological, soil, population, landscape and ecological description: This section consists of the northern portion of the tall grass prairie in Minnesota. It is separate from the southern portion due to the shorter growing season. Topography is level to gently rolling. The dominant land form is a large glacial lake plain.

Land use is primarily intensive agriculture of sugar beets, potato, wheat, sunflower and other specialty crops. Recreation is winter snowmobiling, bird watching, summer fishing and fall hunting. Population centers include Crookston, Thief River Falls, Moorhead and Breckenridge.

Section Characteristics:

<u>Huntible Public Acres</u>						<u>State & Federal</u>	<u>Conservation Easements</u>		<u>Total Protected Habitat</u>
Total Acres	WMA	Other State/County	Federal	Total Huntible	%Total Huntible	Permanently Protected Acres	Acres	%Total	
3,950,521	30,056	5,943	51,257	87,256	2	56,320	143,576	4	

Focus wildlife species: Waterfowl, deer, prairie chicken, pheasants

- Species population goal:**
1. Expand prairie chicken range and provide for a huntible population
 2. Increase duck recruitment, with emphasis on species below the long-term average
 3. Double the pheasant population

WMA Land Acquisition needs:

Long term: A 50 year goal of 25,300 additional WMA acres based on habitat needs, species population levels, and recreational access to hunt and view wildlife.

Short term: Accelerated acquisition should occur in the first 10 years, with a goal of 7,600 acres.

Acquisition Strategy: 18,120 acres should be directed at completing the acquisition of existing WMAs and 7,180 acres of new WMA lands should be identified, planned and acquired.

Habitat focus and management needs:

- Identify and acquire critical habitat for endangered, threatened, and rare species.
- Emphasis should be placed on habitat in larger complexes of grassland/wetland that benefit the grassland species. The objective should be to optimize the production of multiple grassland species.
- Priority should be placed on the acquisition of native prairie, grassland, restorable wetlands, and existing wetlands with adjacent uplands.
- Identify and acquire a minimum of 10 core grassland complexes greater than 2,000 acres, based on research on prairie chicken populations and other species requiring large expanses of grassland.
- Identify and acquire critical core wintering areas for resident wildlife species, needed nesting habitat and other limiting habitat for grassland species based on the most current information and research.
- Acquisition efforts should compliment existing state and other public lands to protect critical corridors and larger blocks of habitat.
- Accelerate acquisition to protect and improve shallow lakes, seasonally flooded wetlands, and other key waterfowl migration habitat.
- Identify and acquire key lands that will establish continuous or complete wildlife habitat corridors.
- Acquisition efforts should focus on those portions of Section 4 still containing natural habitat in sufficient quantity and quality to provide the basic requirements of key wildlife species. Little or no acquisition should be targeted for areas that are intensively farmed or converted to other uses.

Public Hunting focus and access needs:

- Expand opportunities for hunting of prairie chickens.
- Double public hunting opportunities for pheasant
- Provide more & improved access for waterfowl hunting opportunities.

Public/private collaborative acquisition needs:

- The Division should collaborate with additional partners to provide the long-term habitat land base through supplemental efforts like LCMR initiatives, other state and federal acquisition programs, non-government investments, private land easements and private efforts.
- WMAs should compliment short-term conservation practices like CRP and other farm and private forest programs to maximize wildlife conservation efforts.
- WMAs should be part of the overall effort to provide the wildlife values that citizens want for the future in Minnesota.

Justification for the recommendations:

- Other game species such as deer, rabbits, squirrels, furbearers, and a variety of nongame bird and mammal species benefit from WMA lands.



- Wildlife populations in the agricultural landscape need assistance with providing minimum habitat needs. Approximately 87 percent of this section is under intensive cultivation.
- Less than 1 percent of the tall grass prairie remains and prairie dependant species are in decline.
- Less than 20 percent of the presettlement wetlands remain in this section. Losses have been highest in agricultural counties, with some counties losing 90% or more of their pre-settlement wetlands.
- Increased wildlife populations and hunting opportunities will provide additional benefits to the local economy.
- Within Minnesota's primary pheasant range, potential nesting cover declined 3.2 percent per year from 1987 to 1997, despite the addition of 1.2 million acres of Conservation Reserve Program (CRP) land.
- Future land costs continue to rise for both agricultural and recreational purposes.
- Prairie chickens, once the predominant grassland game species in this section, have made a come back to levels permitting a limited hunting season.
- Less than one third of the shoreline in the state is protected. From 1967 to 1982, the number of homes on lakes larger than 145 acres in size increased by 74%.
- Waterfowl migration use and the quantity and quality of waterfowl food resources have declined in Minnesota due to wetland losses, degradation of shallow lakes, conflicting wetland uses, shoreline development, and greater wetland connectivity leading to a higher exchange of exotic plant species and other detrimental organisms.

WMA Acquisition Ecological Section 5, Northern Lakes

General geological, soil, landscape and ecological description: This section consists of an area in north central Minnesota. Presettlement vegetation was primarily forest. Conifers (white pine, red pine, and jack pine) and hardwoods (aspen, birch, and mixed oak) predominated. Topography varies from level to rolling. Landforms include end and ground moraines, outwash plains, lake plains, and drumlin fields. Population centers include Aitkin, Deer River, Pequot Lakes, Walker, Bemidji, Black Duck, Park Rapids, and Wadena.

Section Characteristics:

<i>Huntible Public Acres</i>						<i>State & Federal Conservation Easements</i>	<i>Total Protected Habitat</i>	
Total Acres	WMA	Other State/County	Federal	Total Huntible	%Total Huntible	Permanently Protected Acres	Acres	%Total
8,390,291	104,291	2,828,387	1,589,350	4,522,028	54	943	4,522,028	54

Focus wildlife species: Ruffed grouse, deer, waterfowl, bear, sharp-tailed grouse

Species population goal: 1. Increase duck recruitment, with emphasis on species below the long-term average

2. Increase sharp-tailed grouse populations to levels to sustain a harvest of 30,000 to 40,000 birds annually

3. Maintain sustainable populations of forested landscape dependent wildlife.

WMA Land Acquisition needs:

Long term: A 50-year goal of 33,700 additional WMA acres based on habitat needs, species population levels, and recreational access to hunt and view wildlife.

Short term: Accelerated acquisition should occur in the first 10 years, with a goal of 10,000 acres.

Acquisition Strategy: 23,240 acres should be directed at completing the acquisition of existing WMAs and 10,460 acres of new WMA lands should be identified, planned and acquired.

Habitat focus and management needs:

- Identify and acquire critical habitat for endangered, threatened, and rare species.
- Accelerate acquisition to protect and improve shallow lakes, seasonally flooded wetlands, and other key waterfowl migration habitat.
- Acquire and protect sensitive natural habitat areas threatened by development or other uses.
- Acquisition efforts should compliment existing state and other public lands to protect critical corridors and larger blocks of habitat.
- Identify and acquire key critical sharp-tailed grouse habitat.
- Round outs to major WMAs should be a high priority.

Public Hunting focus and access needs:

- Provide higher quality hunting experiences by lowering hunter density and alleviating overcrowding on WMA lands.
- Provide more and improved access for waterfowl hunting opportunities.

Public/private collaborative acquisition needs:

- The Division should collaborate with additional partners to provide the long-term habitat land base through supplemental efforts like LCMR initiatives, other state and federal acquisition programs, non-government investments, private land easements and private efforts.
- WMAs should compliment short-term conservation practices such as private forest programs to maximize wildlife conservation efforts.
- WMAs should be part of the overall effort to provide the wildlife values that citizens want for the future in Minnesota.

Justification for the recommendations:

- Other game species such as rabbits, wild turkeys, squirrels, furbearers, and a variety of nongame bird and mammal species benefit from WMA lands.
- Because 54% of this section is in public ownership, many wildlife habitat and population needs can be met by collaboration and cooperative management efforts with county, state, and federal agencies that control the public lands.
- Sharp-tailed grouse populations have declined dramatically from historic levels in the 1940s. In 1949, over 150,000 sharptails were harvested compared to recent harvests in the 1990s ranging from 8,000 to 33,000 birds.
- Many critical wild rice lakes and waterfowl migration staging areas are located in this section that need protection or enhancement.
- Only 34.5% of shoreline in the state is publicly owned. From 1967 to 1982, the number of homes on lakes larger than 145 acres in size increased by 74%.
- Waterfowl migration use and the quantity and quality of waterfowl food resources have declined in Minnesota due to wetland losses, degradation of shallow lakes, conflicting wetland uses, shoreline development, and greater wetland connectivity leading to a higher exchange of exotic plant species and other detrimental organisms.



WMA Acquisition Ecological Section 6, Deciduous Transition

General geological, soil, population, landscape and ecological description: This section consists of the transition zone between prairie and forest through central and southeastern Minnesota. It includes areas of prairie, savanna, and hardwood forest. Land forms are diverse. They include end moraines, ground moraines, outwash plains, and drumlin fields.

Land use is predominantly agriculture with accelerating suburbanization along transportation corridors. A vast majority of Minnesotan this section. The population centers include, Rochester, St. Paul, Minneapolis, St. Cloud, Little Falls, Motley and Park Rapids.

Section Characteristics:

<u>Huntatable Public Acres</u>						<u>State & Federal Conservation Easements</u>		<u>Total Protected Habitat</u>	
Total Acres	WMA	Other State/County	Federal	Total Huntatable	%Total Huntatable	Permanently Protected Acres	Acres	%Total	
9,191,829	84,860	56,903	101,976	243,739	3	92,578	336,317	4	

Focus wildlife species: Pheasants, waterfowl, turkey, deer, ruffed grouse

Species population goal: 1. Double the pheasant population in Section 6

2. Increase duck recruitment, with emphasis on species below the long-term average

3. Maintain sustainable populations of forested landscape dependent wildlife.

WMA Land Acquisition needs:

Long term: A 50-year goal of 122,000 additional WMA acres based on habitat needs, species population levels, and recreational access to hunt and view wildlife.

Short term: Accelerated acquisition should occur in the first 10 years, with a goal of 36,600 acres.

Acquisition Strategy: 53,520 acres should be directed at completing the acquisition of existing WMAs and 68,480 acres of new WMA lands should be identified, planned and acquired.

Habitat focus and management needs:

- Priority should be placed on the acquisition of native prairie, grassland, forested habitat, restorable wetlands, and existing wetlands with adjacent uplands.
- Identify and acquire critical habitat for endangered, threatened, and rare species.
- Emphasis should be placed on habitat in larger complexes of grassland/wetland that benefit the grassland species. The objective should be to optimize the production of multiple grassland species.
- Accelerate acquisition to protect & improve shallow lakes, seasonally flooded wetlands, and other key waterfowl migration habitat.
- Identify and acquire critical core wintering areas for resident wildlife species, needed nesting habitat and other limiting habitat for grassland species based on the most current information and research.
- Acquire and protect sensitive natural habitat areas threatened by development or other uses.
- Acquisition efforts should compliment existing state and other public lands to protect critical corridors and larger blocks of habitat.
- Identify and acquire high quality WMA lands within significant focus areas in the 7 county metro area including northern Anoka County, Carlos Avery WMA, the Mississippi and Vermillion River corridors, and the Minnesota River valley.
- Identify and acquire core hardwood forest complexes, greater than 1,700 acres each, to sustain breeding populations of forest-dependent species
- WMAs in close proximity to high population areas should be larger enough to provide a buffer from adjacent development and provide for safe hunting conditions.

Public Hunting focus and access needs:

- Double public hunting opportunities for pheasant and waterfowl.
- Provide higher quality hunting experiences by lowering hunter density and alleviating overcrowding and habitat damage on WMA lands.
- Provide additional WMA lands in closer proximity to the major population centers to increase hunter access and opportunities.
- Provide more and improved access for waterfowl hunting opportunities.

Public/private collaborative acquisition needs:

- The Division should collaborate with additional partners to provide the long-term habitat land base through supplemental efforts like LCMR initiatives, other state and federal acquisition programs, non-government investments, private land easements and private efforts.
- WMAs should compliment short-term conservation practices like CRP and other



- farm and private forest programs to maximize wildlife conservation efforts.
- WMAs should be part of the overall effort to provide the wildlife values that citizens want for the future in Minnesota.
- The key to acquisition efforts in the seven-county metro area will be the ability to leverage additional non-DNR dollars and partner with other participants to help fund key purchases.

Justification for the recommendations:

- Land costs will continue to increase rapidly over time in this area and it is imperative that key acquisitions be completed before land prices become too prohibitive. The value of tillable land in Carver, Dakota, Scott, and Sherburne Counties more than doubled from 1993 to 2002. In Washington County, tillable land tripled in value during the same time period.
- Increasing populations in Section 6 create a higher demand for public hunting, trapping, and other wildlife-related activities in close proximity. Between 1990 and 2000, Dakota, Scott, Carver, Washington, Wright, and Sherburne Counties experienced the highest population growth rate (25% to 54.7%) in the state.
- Other game species such as deer, wild turkeys, Hungarian partridge, rabbits, squirrels, furbearers, and a variety of nongame bird and mammal species benefit from WMA lands.
- Wildlife populations in the agricultural landscape need assistance to provide minimum habitat needs. Over 50 percent of this section is under intensive cultivation and another 8 percent is urban or rural development.
- Additional opportunities for quality public hunting are needed to alleviate overcrowding on many WMAs and increase hunting and wildlife viewing satisfaction.
- Less than 1 percent of the tall grass prairie remains and prairie dependant species are in decline.
- The degree of wetland drainage varies considerably across this ecological section, with 33 to 94 percent of the presettlement wetlands remaining in the northerly half and only 1 to 43 percent remaining in the southerly portion. Losses have been highest in agricultural counties, with some counties losing 90% or more of their pre-settlement wetlands.
- Increased wildlife populations and hunting opportunities will provide additional benefits to the local economy and recreational opportunities.
- Within Minnesota's primary pheasant range, potential nesting cover declined 3.2 percent per year from 1987 to 1997, despite the addition of 1.2 million acres of Conservation Reserve Program (CRP) land. The 1996 Farm Bill modified CRP enrollment rules, resulting in the loss of one-third of the CRP acreage in Minnesota's pheasant range.
- Future land costs continue to rise for development, agricultural and recreational purposes.
- Only an estimated 88,000 acres of unprotected, regionally significant natural areas still remain in the metro area.
- Less than one third of the shoreline in the state is protected. From 1967 to 1982, the number of homes on lakes larger than 145 acres in size increased by 74%.
- Waterfowl migration use and the quantity and quality of waterfowl food resources have declined in Minnesota due to wetland losses, degradation of shallow lakes, conflicting wetland uses, shoreline development, and greater wetland connectivity leading to a higher exchange of exotic plant species and other detrimental organisms.

WMA Acquisition Ecological Section 7, Minnesota River Prairie

General geological, soil, population, landscape and ecological description: This section consists of the southern portion of the tall grass prairie. Topography is rolling or flat. The southern portion (the Coteau) is significantly higher in elevation than the rest.

Land use is very intensive agriculture with cattle confinement facilities growing. Pheasant, waterfowl and deer hunting are major recreational experiences in the section. Agricultural services and small manufacturing dominate the small population centers. Major population centers include: Alexandria, Mankato, New Ulm, Fairmont, Windom, Worthington, Marshall, and Ortonville.

Section Characteristics:

<i>Huntible Public Acres</i>						<i>State & Federal Conservation Easements</i>	<i>Total Protected Habitat</i>	
Total Acres	WMA	Other State/County	Federal	Total Huntible	%Total Huntible	Permanently Protected Acres	Acres	%Total
12,146,197	153,042	4,013	123,323	280,378	2	139,445	419,823	3

Focus wildlife species: Pheasants, waterfowl, deer, prairie chicken, wild turkey

- Species population goal:**
1. Double the pheasant population
 2. Increase duck recruitment, with emphasis on species below the long-term average
 3. Expand prairie chicken range and provide for a huntible population

WMA Land Acquisition needs:

Long term: A 50-year goal of 372,000 additional WMA acres based on habitat needs, species population levels, and recreational access to hunt and view wildlife.

Short term: Accelerated acquisition should occur in the first 10 years, with a goal of 111,600 acres.

Acquisition Strategy: 99,770 acres should be directed at completing the acquisition of existing WMAs and 272,230 acres of new WMA lands should be identified, planned and acquired from willing sellers.

Habitat focus and management needs:

- Priority should be placed on the acquisition of native prairie, grassland, restorable wetlands, and existing wetlands with adjacent uplands.
- Identify and acquire critical habitat for endangered, threatened, and rare species.
- Emphasis should be placed on habitat in larger complexes of grassland/wetland that benefit the grassland species. The objective should be to optimize the production of multiple grassland species.
- Accelerate acquisition to protect & improve shallow lakes, seasonally flooded wetlands, and other key waterfowl migration habitat.
- Identify and acquire a minimum of 30 core grassland complexes, greater than 2,000 acres, based on the most current information and research on prairie chicken populations and booming grounds.
- Identify and acquire critical core wintering areas for resident wildlife species, needed nesting habitat and other limiting habitat for grassland species based on the most current information and research.
- Acquire and protect sensitive natural communities and habitat areas threatened by development or other uses.
- Acquisition efforts should compliment existing state and other public lands to protect critical corridors and larger blocks of habitat.
- Completion of the acquisition to the Lac qui Parle and Talcot Lake WMAs should be a high priority.

Public Hunting focus and access needs:

- Double public hunting opportunities for pheasant and waterfowl.
- Provide higher quality hunting experiences by lowering hunter density and alleviating overcrowding on WMA lands.
- Expand opportunities for hunting of greater prairie chickens.
- Provide more & improved access for waterfowl hunting opportunities.

Public/private collaborative acquisition needs:

- The Division should collaborate with additional partners to provide the long-term habitat land base through supplemental efforts like LCMR initiatives, other state and federal acquisition programs, non-government investments, private land easements and private efforts.
- WMAs should compliment short-term conservation practices like CRP and other farm and private forest programs to maximize wildlife conservation efforts.
- WMAs should be part of the overall effort to provide the wildlife values that citizens want for the future in Minnesota.

Justification for the recommendations:

- Additional quality habitat is needed in Section 7 because 83 percent is under



intensive cultivation.

- Section 7 is the primary production area for pheasants and waterfowl as well as a corridor for migrating waterfowl.
- Other game species such as deer, wild turkeys, Hungarian partridge, rabbits, squirrels, furbearers, and a variety of nongame bird and mammal species benefit from WMA lands.
- Wildlife populations in the agricultural landscape need assistance with providing minimum habitat needs.
- Additional opportunities for quality public hunting are needed to alleviate overcrowding on many WMAs and increase hunting and wildlife viewing satisfaction.
- Less than 1 percent of the tall grass prairie in the state remains and prairie dependant species are in decline.
- Wetland losses have been the second highest in this ecological section, with less than 1 to 4 percent of the presettlement wetlands remaining.
- Increased wildlife populations and hunting opportunities will provide additional benefits to the local economy.
- Within Minnesota's primary pheasant range, potential nesting cover declined 3.2 percent per year from 1987 to 1997, despite the addition of 1.2 million acres of Conservation Reserve Program (CRP) land. The 1996 Farm Bill modified CRP enrollment rules, resulting in the loss of one-third of the CRP acreage in Minnesota's pheasant range.
- Future land costs continue to rise for both agricultural and recreational purposes.
- Less than one third of the shoreline in the state is protected. From 1967 to 1982, the number of homes on lakes larger than 145 acres in size increased by 74%.
- Waterfowl migration use and the quantity and quality of waterfowl food resources have declined in Minnesota due to wetland losses, degradation of shallow lakes, conflicting wetland uses, shoreline development, and greater wetland connectivity leading to a higher exchange of exotic plant species and other detrimental organisms.

WMA Acquisition Ecological Section 8 & 9, Superior Uplands

General geological, soil, landscape and ecological description: This two-section area consists of two distinct landforms. One is the lake plain in section 8 and the other being end and ground moraines, outwash plains, and drumlin fields in section 9. Section 8 is only 118,480 acres. Section 9 is 3,870,769 acres. Presettlement vegetation in both is dominantly forest. Species include white pine, red pine, jack pine, aspen, birch, red oak, basswood, and balsam fir.

Land use is dominated by forestry and recreation. Grouse, woodcock, and deer hunting are important recreational uses. Duluth, Hinckley, Aitkin, Mora, and Cloquet are the major towns. Lakeshore and wetland shore development is expanding.

Section Characteristics:

<u>Huntible Public Acres</u>						<u>State & Federal Conservation Easements</u>	<u>Total Protected Habitat</u>	
Total Acres	WMA	Other State/County	Federal	Total Huntible	%Total Huntible	Permanently Protected Acres	Acres	%Total
3,501,513	65,264	538,905	1,243	606,412	17	2,604	609,016	17

Focus wildlife species: Deer, ruffed grouse, waterfowl, turkey, pheasant

Species population goal: 1. Increase sharp-tailed grouse populations to levels to sustain a harvest of 30,000 to 40,000 birds annually
2. Maintain sustainable populations of forested landscape dependent wildlife.

WMA Land Acquisition needs:

Long term: A 50-year goal of 12,800 additional WMA acres based on habitat needs, species population levels, and recreational access to hunt and view wildlife.

Short term: Accelerated acquisition should occur in the first 10 years, with a goal of 3,800 acres.

Acquisition Strategy: 8,800 acres should be directed at completing the acquisition of existing WMAs and 4,000 acres of new WMA lands should be identified, planned and acquired.

Habitat focus and management needs:

- Identify and acquire critical habitat for endangered, threatened, and rare species.
- Acquire and protect sensitive natural habitat areas threatened by development or other uses.
- Acquisition efforts should compliment existing state and other public lands to protect critical corridors and larger blocks of habitat.
- Identify and acquire key critical sharp-tailed grouse habitat.
- Completion of the acquisition of the Mille Lacs WMA should be a high priority.

Public Hunting focus and access needs:

- Provide more and improved access for waterfowl hunting opportunities.

Public/private collaborative acquisition needs:

- The Division should collaborate with additional partners to provide the long-term habitat land base through supplemental efforts like LCMR initiatives, other state and federal acquisition programs, non-government investments, private land easements and private efforts.
- WMAs should compliment short-term conservation practices such as private forest programs to maximize wildlife conservation efforts.
- WMAs should be part of the overall effort to provide the wildlife values that citizens want for the future in Minnesota.

Justification for the recommendations:

- Other game species such as rabbits, wild turkeys, squirrels, furbearers, and a variety of nongame bird and mammal species benefit from WMA lands.
- Sharp-tailed grouse populations have declined dramatically from historic levels in the 1940s. In 1949, over 150,000 sharptails were harvested compared to recent harvests in the 1990s ranging from 8,000 to 33,000 birds.
- Many critical wild rice lakes and waterfowl migration staging areas are located in this section that need protection or enhancement.
- Less than one third of the shoreline in the state is protected. From 1967 to 1982, the number of homes on lakes larger than 145 acres in size increased by 74%.
- Waterfowl migration use and the quantity and quality of waterfowl food resources have declined in Minnesota due to wetland losses, degradation of shallow lakes, conflicting wetland uses, shoreline development, and greater wetland connectivity leading to a higher exchange of exotic plant species and other detrimental organisms.



WMA Acquisition Ecological Section 10, Southeast Blufflands

General geological, soil, population, landscape and ecological description: This section consists of the transition zone in the southeast corner of the state. Presettlement vegetation consists of hardwood forest, oak savanna, and prairie. Topography is varied, with the ridgetops level to gently rolling and areas adjacent to rivers and creeks very steep. Landforms consist of ground moraines to the very west, a loess covered plateau; and an unglaciated, stream dissected limestone plateau on the eastern side. Population centers include Caledonia, LaCrescent, Lanesboro, Winona, Rochester, Plainview, Byron, Zumbrota, Cannon Falls, and Red Wing.

Land use is agricultural on the flat top and bottom land. The steep side hill is forested with oak, black walnut and cherry being the primary species. Trout fishing, turkey hunting, deer hunting and bird watching are common recreational pursuits.

Section Characteristics:

<u>Huntible Public Acres</u>						<u>State & Federal Conservation Easements</u>	<u>Total Protected Habitat</u>	
Total Acres	WMA	Other State/County	Federal	Total Huntible	%Total Huntible	Permanently Protected Acres	Acres	%Total
2,648,086	39,474	48,870	35,555	123,899	5	4,104	128,003	5

Focus wildlife species: Turkey, deer, pheasants, waterfowl, and ruffed grouse

- Species population goal:**
1. Increase population levels of wild turkeys by a minimum of 30 percent.
 2. Double the pheasant population in Section 10.
 3. Increase duck recruitment, with emphasis on species below the long-term average
 4. Maintain sustainable populations of forested landscape dependent wildlife.

WMA Land Acquisition needs:

Long term: A 50-year goal of 63,200 additional WMA acres based on habitat needs, species population levels, and recreational access to hunt and view wildlife.

Short term: Accelerated acquisition should occur in the first 10 years, with a goal of 19,000 acres.

Acquisition Strategy: 6,660 acres should be directed at completing the acquisition of existing WMAs and 56,540 acres of new WMA lands should be identified, planned and acquired.

Habitat focus and management needs:

- Priority should be placed on the acquisition of native prairie, grassland, restorable wetlands, and existing wetlands with adjacent uplands.
- Identify and acquire critical habitat for endangered, threatened, and rare species.
- Emphasis should be placed on habitat in larger complexes of grassland/wetland that benefit the grassland species. The objective should be to optimize the production of multiple grassland species.
- Acquire and protect sensitive natural habitat areas threatened by development or other uses.
- Identify and acquire a minimum of 10 core hardwood forest complexes, greater than 1,700 acres each, to sustain breeding populations of forest-dependent species located mainly in the eastern part of Section 10.
- WMAs in close proximity to high population areas should be larger enough to provide a buffer from adjacent development and provide for safe hunting conditions.
- Completion of the acquisition of the Whitewater WMA should be a high priority
- Acquisition efforts should compliment existing state forest and other state lands to protect critical corridors and larger blocks of habitat.

Public Hunting focus and access needs:

- Double public hunting opportunities for pheasant, waterfowl, and turkeys.
- Provide higher quality hunting experiences by lowering hunter density and alleviating overcrowding on WMA lands.
- Provide additional WMA lands in closer proximity to the major population centers to increase hunter access and opportunities.
- Provide more and improved access for waterfowl hunting opportunities.

Public/private collaborative acquisition needs:

- The Division should collaborate with additional partners to provide the long-term habitat land base through supplemental efforts like LCMR initiatives, other state and federal acquisition programs, non-government investments, private land easements and private efforts.
- WMAs should compliment short-term conservation practices like CRP and other farm and private forest programs to maximize wildlife conservation efforts.
- WMAs should be part of the overall effort to provide the wildlife values that citizens



want for the future in Minnesota.

Justification for the recommendations:

- Land costs will continue to increase over time in this area and it is imperative that key acquisitions be completed before land prices become too prohibitive. The value of tillable land in this section increased from 86% to 149% from 1993 to 2002.
- Increasing populations in Section 10, particularly around the Rochester area, create a higher demand for public hunting, trapping, and other wildlife-related activities in close proximity. From 1990 to 2000, Olmsted County experienced a 16.7 percent increase in population.
- Other game species such as Hungarian partridge, rabbits, squirrels, furbearers, and a variety of nongame bird and mammal species benefit from WMA lands.
- Wildlife populations in the agricultural landscape need assistance with providing minimum habitat needs.
- Additional opportunities for quality public hunting are needed to alleviate overcrowding on many WMAs and increase hunting and wildlife viewing satisfaction.
- Less than 1 percent of the tall grass prairie remains and prairie dependant species are in decline.
- Wetland losses have been the highest in this ecological section, with less than 1 percent of the presettlement wetlands remaining.
- Increased wildlife populations and hunting opportunities will provide additional benefits to the local economy.
- Within Minnesota's primary pheasant range, potential nesting cover declined 3.2 percent per year from 1987 to 1997, despite the addition of 1.2 million acres of Conservation Reserve Program (CRP) land. The 1996 Farm Bill modified CRP enrollment rules, resulting in the loss of one-third of the CRP acreage in Minnesota's pheasant range.
- Future land costs continue to rise for development, agricultural and recreational purposes.
- Less than one third of the shoreline in the state is protected. From 1967 to 1982, the number of homes on lakes larger than 145 acres in size increased by 74%.
- Waterfowl migration use and the quantity and quality of waterfowl food resources have declined in Minnesota due to wetland losses, degradation of shallow lakes, conflicting wetland uses, shoreline development, and greater wetland connectivity leading to a higher exchange of exotic plant species and other detrimental organisms.

Summary of focus wildlife species, acreage goals, and estimated acquisition costs by ecological section.

Section	Focus Wildlife Species	50 year WMA Goal (acres) ¹	10 year WMA Goal (acres)	Completing Existing WMAs (acres)	New WMAs (acres)	Estimated Cost/Year (10 year accelerated goal) ²
1	Moose, ruffed grouse, deer, sharp-tailed grouse, wolf	3,100 ^a	900	2,240	860	\$45,000
2	Moose, ruffed grouse, deer, sharp-tailed grouse, bear	26,700 ^a	8,000	18,700	8,000	\$362,400
3	Waterfowl, sharp-tailed grouse, moose, deer, ruffed grouse	43,400 ^a	13,000	32,000	11,400	\$258,700
4	Waterfowl, deer, prairie chicken, pheasants	25,300	7,600	18,120	7,180	\$278,920
5	Ruffed grouse, deer, waterfowl, bear, sharp-tailed grouse	33,700 ^a	10,000	23,240	10,460	\$543,000
6	Pheasants, waterfowl, turkey, deer, ruffed grouse	122,000	36,600	53,520	68,480	\$5,716,920
7	Pheasants, waterfowl, deer, prairie chicken, wild turkey	372,000	111,600	99,770	272,230	\$12,030,480
8 & 9	Deer, ruffed grouse, waterfowl, turkey, pheasant	12,800 ^a	3,800	8,800	4,000	\$153,140
10	Turkey, deer, pheasants, ruffed grouse, waterfowl	63,200	19,000	6,660	56,540	\$2,713,200
TOTALS		702,200	210,500	263,050	439,150	\$22,101,760

All acreage figures are rounded.

¹50 year goal:

Sections 1, 2, 3, 5, 8 & 9 = acres to complete approved WMAs + 33 percent additional acres for new WMA acquisition to address habitat and wildlife species needs.

Sections 6 & 10 = estimated additional WMA acres needed to double pheasant population + larger core hardwood forest blocks (1,700 acres and greater) needed for sustainable breeding populations of forest-dependent species such as cerulean warbler, wood thrush, red-headed woodpecker. Assume 20 core areas within Sections 6 and 10 = 34,000 acres distributed ½ to Section 6 and ½ to Section 10.

Sections 4 & 7 = estimated additional WMA acres needed to double pheasant population + larger core grassland complexes (2,000 acres and greater) needed for populations of grassland species dependent on larger, contiguous blocks of habitat (bird conservation areas = BCAs) (eg prairie chicken, northern harrier, western meadowlark, marbled godwit, upland sandpipers). Assume 40 BCAs targeted within Sections 4 & 7 that average 2,000 each = 80,000 acres distributed as follows:

Section	Land Area	Percent total land area	Percent x total BCA acres
7	12,146,197	75	60,000
4	3,959,521	25	20,000
Total	16,105,718	100	80,000

All sections: The above acreage goals were increased for each section a percentage relating to the number of people residing in each section.

² Acres/year (10 year goal) times average WMA land costs/acre by ecological section for the past five years.

^a Unacquired private lands only.

Summary of habitat, public access, and collaborative recommendations by ecological section.

Recommendations	Section									
	1	2	3	4	5	6	7	8 & 9	10	
Habitat focus and management needs										
Acquire critical habitat for endangered, threatened, and rare species	X	X	X	X	X	X	X	X	X	
Priority should be placed on the acquisition of native prairie, grassland, restorable wetlands, and existing wetlands with adjacent uplands.				X		X	X		X	
Emphasis on habitat in larger complexes of grassland/wetland that benefit the grassland species. The objective should be to optimize the production of multiple grassland species.				X		X	X		X	
Identify and acquire critical core wintering areas for resident wildlife species, needed nesting habitat and other limiting habitat for grassland species based on the most current information and research.				X		X	X			
Identify & acquire core grassland complexes, greater than 2,000 acres, based on the most current information and research on prairie chicken populations and booming grounds.				X			X			
Acquire and protect sensitive natural habitat areas threatened by development or other uses.					X	X	X	X	X	
Identify and acquire core hardwood forest complexes, greater than 1,700 acres each, to sustain breeding populations of forest-dependent species						X			X	
WMAs in close proximity to high population areas should be larger enough to provide a buffer from adjacent development and provide for safe hunting conditions.						X			X	
Acquisition efforts should complement existing state and other public lands to protect critical corridors and larger blocks of habitat.	X	X	X	X	X	X	X	X	X	
Accelerate acquisition to protect & improve shallow lakes, seasonally flooded wetlands, and other key waterfowl migration habitat.				X	X	X	X			
Identify and acquire key critical sharp-tailed grouse habitat.		X	X		X			X		
Round outs to major WMAs should be a high priority.		X	X		X	X	X	X	X	
Public Hunting focus and access needs										
Double public hunting opportunities for pheasant and waterfowl.				X		X	X		X	
Provide higher quality hunting experiences by lowering hunter density and alleviating overcrowding on WMA lands.					X	X	X		X	
Expand opportunities for hunting of greater prairie chickens.				X			X			
Provide more & improved access for waterfowl hunting opportunities.			X	X	X	X	X	X	X	
Provide additional WMA lands in closer proximity to the major population centers to increase hunter access and opportunities.						X			X	
Public/private collaborative acquisition needs										
The Division should collaborate with additional partners to provide the long-term habitat land base through supplemental efforts like LCMR initiatives, other state and federal acquisition programs, non-government investments, private land easements and private efforts.	X	X	X	X	X	X	X	X	X	
WMAs should complement short term conservation practices like CRP and other farm and private forest programs to maximize wildlife conservation efforts.	X	X	X	X	X	X	X	X	X	
WMAs should be part of the overall effort to provide the wildlife values that citizens want for the future in Minnesota.	X	X	X	X	X	X	X	X	X	

Minnesota's Wildlife Management Area System

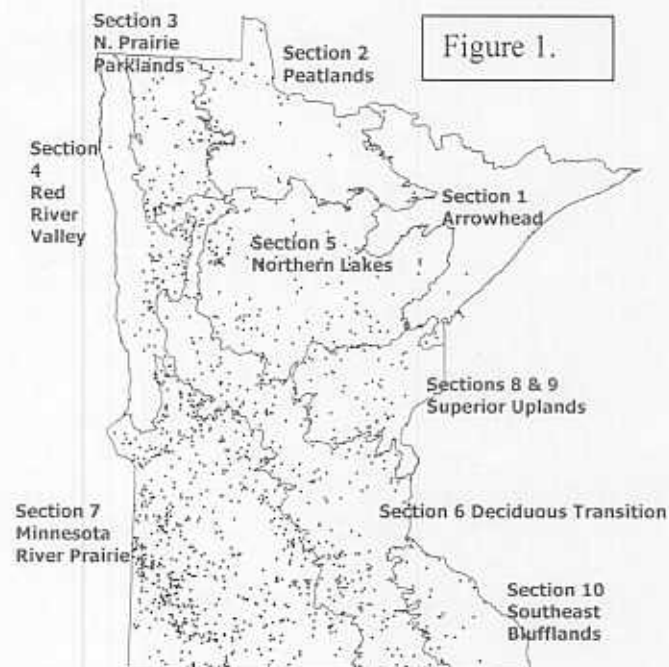
History and Current Status of the WMA System

The WMA system started in 1951, when the state established its "Save the Wetlands" Program to buy wetlands and other habitats from willing sellers in order to preserve them. Initiated by a handful of visionary wildlife managers, that program eventually evolved into Minnesota's present-day system of WMAs. As a result of 50 years of support by conservationists, hunters and legislators, 1.1 million acres of land were brought under the control and management (776,000 acres of actual ownership) of the Division of Wildlife as WMAs, making it one of the best and largest WMA systems in the country.

The original goal was to acquire 200,000 acres of wetlands and surrounding uplands. This goal has changed over the decades to reflect changes in habitat losses, population growth, and recreational demand. The last long-range WMA land acquisition plan was developed in 1975 under "Resource 2000," a program authorized by the Minnesota Legislature to accelerate natural resource land acquisition. The goal of that plan was based on the habitat needs of Minnesota's wildlife species, the disappearance of habitat on private lands, the future demands for wildlife related recreational opportunities, and the availability of remaining significant wildlife lands in the state. The long-range goal established in the plan was to acquire 1 million acres of wildlife habitat by the year 2,000.

In 1975, approximately 450,000 acres of WMA lands had been acquired. Since that time, Minnesota's WMA acquisition program has added 326,000 acres, bringing the total acquired WMA acres up to 776,000. The Division of Wildlife cooperatively manages an additional 324,000 acres of state lands in WMAs, bringing the total acquired and controlled WMA lands to 1.1 million acres. These lands make up 1,355 WMAs scattered through 86 of Minnesota's 87 counties. Seven of these are major units with resident managers and total more than 228,700 acres. The 1,348 smaller wildlife areas average about 400 acres in size. These smaller WMAs are concentrated in the agricultural areas of the state because of the continuing elimination of wildlife habitat in these areas caused by draining, clearing, and intensive agricultural practices. Figure 1 illustrates the statewide distribution of Minnesota's WMAs. During the past 5 years, WMA land acquisition has averaged between 4,000 to 5,000 acres per year at a cost of \$3 to 3.5 million per year.

Each WMA project identifies a **project boundary**, consisting of one or more ownerships that are proposed to be acquired that are needed to make a viable WMA. These ownerships are identified on a WMA project proposal and map as separate tracts. The project boundary, comprised of the tract or tracts, is the "plan" for what the Division of Wildlife would like to acquire and is the **project acreage**. It is the total acreage of the tracts identified in the proposal. Once a tract or tracts in



the project are acquired, these become **acquired WMA acres**.

WMA Purpose and Use

Minnesota's WMAs are part of the State's Outdoor Recreation System (ORA) established in statute (Minnesota Statute 86A) by the Legislature in 1975. The ORA established a system of state units, including WMAs, state parks, state forests, scientific and natural areas, state recreation areas, state trails, water access sites, and defined the purpose and use of each unit.

Subd. 8 of this statute, provides that:

(a) A state wildlife management area [system] shall be established to protect those lands and waters which have a high potential for wildlife production and to develop and manage these lands and waters for the production of wildlife, for public hunting, fishing, and trapping, and for other compatible outdoor recreational uses.

(b) No unit shall be authorized as a state wildlife management area unless its proposed location substantially satisfies the following criteria:

(1) Includes appropriate wildlife lands and habitat, including but not limited to marsh or wetlands and the margins thereof, ponds, lakes, stream bottomlands, and uplands, which permit the propagation and management of a substantial population of the desired wildlife species; and

(2) Includes an area large enough to ensure adequate wildlife management and regulation of the permitted recreational uses.

(c) State wildlife management areas shall be administered by the commissioner of natural resources in a manner which is consistent with the purposes of this subdivision to perpetuate, and if necessary, reestablish quality wildlife habitat for maximum production of a variety of wildlife species. Public hunting, fishing, trapping, and other uses shall be consistent with the limitations of the resource, including the need to preserve an adequate brood stock and prevent long term habitat injury or excessive wildlife population reduction or increase.

Physical development may provide access to the area, but shall be so developed as to minimize intrusion on the natural environment.

There are two types of WMAs. The "major units" have large contiguous areas in state ownership and are managed by permanent unit managers. These include Thief Lake, Lac qui Parle, Mille Lacs, Carlos Avery, Whitewater, Roseau River and Talcot Lake. The rest of the WMA system consists of dispersed units in a wide range of sizes and are managed by area wildlife managers who have many WMA units to develop, maintain and operate in their work areas.

WMA lands are posted with signs identifying the lands as a state wildlife management area and open to public hunting. While almost all of the WMA lands are open to public hunting, small portions of certain WMAs may be established as wildlife sanctuaries and closed to some types of public hunting if it is determined necessary to protect populations of certain wildlife species. The use of WMAs is regulated by Minnesota Rules, Chapter 6210.0110, General Provisions for Use of Wildlife Management Areas.

WMAs have the potential for a variety of uses and products within their boundaries. If the uses are compatible with the WMA policy, the use may be accommodated. In many cases, the harvest of timber is very advantageous to many wildlife species. In other cases, the harvest of old timber is harmful to some wildlife and may be prohibited. Individual WMA unit plans describe the unit objectives and the management that has to be done and the timing of those treatments. Many WMAs also have a history of minnow and leech harvesting and sand and gravel mining being done on them. Only uses compatible with the unit's objectives are permitted. All the revenues generated on WMAs are returned to the Game and Fish Fund.

WMA Values

The 2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation, conducted by the U.S. Fish and Wildlife Service, ranks Minnesota second in the nation for wildlife related activities, with a citizen participation rate of 54 percent. WMAs play a key role in providing the opportunities for these wildlife watching activities. WMAs also add meaning and value to Minnesotan's and non residents' lives. Minnesotans value landscapes with hills, trees, water and wildlife. Many of the WMAs are in close proximity of water. That made them valuable in the past to Native American's and to settlers but also makes them valuable now for hunters, trappers, and outdoor recreationists.

WMAs provide critical wildlife habitat often lacking in the vicinity due to intensive agricultural, development, or other activities. Prairie and grasslands are planted on WMAs to provide prime nesting cover critical to waterfowl and pheasant production. Wetlands are restored and enhanced to benefit waterfowl and other wetland wildlife species. Pheasants also find excellent winter cover in cattails and other marsh vegetation. Grasslands, prairies, and brush lands provide important habitat for sharp-tailed grouse and prairie chickens. Forest openings and regeneration projects benefit ruffed grouse, wild turkeys, deer, and moose. Wildlife food plots feed both resident and migratory wildlife. Woody shelter belts provide winter cover and nesting sites for upland birds and a variety of nongame species as well.

In late August, hunters begin scouting hunting areas and wildlife use areas. Bear season opens in late August followed in mid-September by the small game season. Hunting peaks with waterfowl and pheasant hunting in October and the firearms deer season in November. Hunting has a profound impact on business in Minnesota. Many private businesses make a large portion of their income during the hunting seasons. The U.S. Fish and Wildlife Service survey determined that the estimated 597,000 hunters in Minnesota spent about \$476 million in 2001 for hunting. Hunting equipment retailers, distributors and manufactures, gas stations, restaurants, grocery stores, bars, resorts and motels all benefit from hunters. During other times of the year, wildlife watching, photography, and fishing, can provide additional significant values to Minnesota businesses. The survey showed that wildlife watchers spent \$523 million in the state in 2001 pursuing their activities.

Present Acquisition Priority Setting

Lands to be purchased are currently identified by 40 wildlife managers under the supervision of four regional wildlife managers. All acquisition efforts are coordinated through the St. Paul Office by the Wildlife Land Acquisition Consultant. Within each work area, the individual manager determines priority parcels and identifies willing sellers. The manager rates the parcels and assigns a priority to each tract. The top priority parcels are submitted to the regional wildlife manager for review and regional ranking. Regional priorities are submitted to the St. Paul office for approval and statewide prioritization. The number of parcels approved for purchase at any given time is a function of the amount of acquisition funding, the type of funding, willing sellers, and the statewide priority of available parcels. Final review and approval for all WMA acquisitions are made by the DNR Wildlife Land Acquisition Consultant and the Director of the Division of Wildlife.

The Wildlife Management Area Policy, approved by the DNR in 1983 and revised in 2002, provides a set of guidelines for establishing WMA acquisition priorities (Appendix A). In addition to these

priorities, the Division of Wildlife has implemented other policies pertaining to WMA land acquisition. In response to significant budget cuts in 1995, the Division decided that the purchase of WMA lands with Surcharge, bonding, Environmental Trust Fund, revenue from the sale of land, and wetland mitigation banking funds would be targeted to tracts within units that have existing acquired lands. The purchase of new WMAs was limited to funding through the RIM Match Program or federal funds from the North American Wetland Conservation Act.

In 1989, the Division implemented a policy to not purchase or accept donations of land already under perpetual conservation easement under the RIM Reserve or federal Wetland Reserve Program, except under the following conditions:

1. If a landowner was willing to donate or sell an inholding within a WMA that would "round-out" our existing ownership, or
2. If we are currently purchasing the remaining lands from the landowner who is interested in selling or donating his easement lands to us.

Collaboration

The statewide habitat needs cannot be accomplished solely through the WMA system. If habitat, wildlife populations, and hunter access are priorities for the people of Minnesota, private landowners, the U.S. Fish and Wildlife Service, state and federal farm programs, and short term and permanent easements all need to play their part in the protection and management of wildlife land.

Funding for Wildlife Acquisition

Minnesota's legislature and sportsmen have funded land acquisition in a multitude of different ways. Hunting licenses fees, bonding funds, Reinvest in Minnesota funds, LCMR (Legislative Commission on Minnesota Resources) funds and hunting license surcharges have been used to buy WMAs. In addition, federal and state tax codes make it advantageous for conservationist to donate their land to the Department for wildlife purposes.

The mainstay of funding for the WMA Land Acquisition Program has been the \$4 Surcharge on the small game hunting license. Implemented in 1957, proceeds from the surcharge are dedicated to the Wildlife Acquisition Fund to be used for WMA land acquisition and WMA development. The small game license surcharge generates approximately \$1.4 million per year, half of which is spent for direct land acquisition. Over the years, additional funding for WMA acquisition has come from state bonding dollars and cigarette tax money.

More recent funding sources include monies from the Environmental and Natural Resources Trust Fund (ETF) and the Reinvest in Minnesota (RIM) Program. The ETF fund was established by a constitutional amendment approved in 1988. ETF funds can be used to finance the protection, conservation, preservation, and enhancement of the state's air, water, land, fish, wildlife, and other natural resources. The Division of Wildlife has received \$1,310,000 for direct WMA land acquisition from the ETF fund since 1988.

The Legislature established the RIM Program in 1986. A total of \$3.83 million in RIM funds were appropriated since 1986 for direct WMA land acquisition. As part of this program, a Critical Habitat Matching Account was established that encourages private sector donations that can be matched by appropriations of state funds for the acquisition and development of fish and wildlife habitat. Since 1986, \$30 million in private donations have been matched through the RIM Critical Habitat Matching Program. A greater part of these donations have come from the major conservation organizations and have been used primarily to purchase critical habitat for WMAs. It is anticipated

that these groups will continue to play a key role as partners in the effort to accelerate WMA land acquisition.

Minnesota has played a major role in the U.S. Prairie Pothole Joint Venture under the North American Waterfowl Management Plan (NAWMP). Six major projects, Swan Lake, Heron Lake, Minnesota River, Northern Tallgrass Prairie, Prairie Wetland Heritage, and Great River Corridor, Centennial Pothole, and Red River Projects, have been approved for funding through the North American Wetland Conservation Act (NAWCA). A total of \$9.5 million in NAWCA funds have been approved for the purchase of WMA lands in these project areas.

The 1995 Legislature authorized the issuance of a special critical habitat license plate to motor vehicle applicants who pay, in addition to the normal registration fees, an extra \$10 fee to cover the costs of handling and manufacturing the plate and contribute at least \$30 annually to the Minnesota critical habitat private sector matching account. The contributions are credited to the CHM account and are matched by private donations of cash or land to purchase or develop critical habitat for fish and wildlife. A portion of the plate funds are matched with contributions to the nongame wildlife management account and used for critical nongame acquisition and development projects. To date, the plates have generated \$5 million and the annual projected income is \$1.86 million per year based on 62,000 registrations.

A partnership of 14 private conservation organizations and federal and state agencies have joined together to protect and manage critical fish and wildlife habitats in Minnesota. The program, entitled Restoring Minnesota's Fish and Wildlife Habitat Corridors, received \$11.745 million in funding from the Legislative Commission on Minnesota's Resources in 2001. The primary goal of this project is to connect fragmented high quality habitats by reestablishing a statewide network of corridors to benefits fish, wildlife, and plant communities. The partners will concentrate their efforts in 11 high priority corridor areas and have budgeted \$5.4 to purchase approximately 5,900 acres. Many of these acquired tracts will be transferred to the DNR for management as WMAs.

Acquisition Procedures

Minnesota's WMA Acquisition Program is authorized pursuant to Minnesota Statutes 97A.135 Acquisition of Wildlife Lands and Minnesota Statutes 97A.145 Wetlands for Wildlife. All lands proposed for WMA acquisition must be within an approved WMA project. WMA project proposals and maps are prepared by the area wildlife manager and are approved by the Regional Wildlife Supervisor and the Director of the Division of Wildlife as authorized by the Commissioner of Natural Resources. WMA proposals identify the purpose of the project, project boundary, habitat types, landowners, proposed wildlife development, present wildlife use, improvement possibilities, and any problems, local sentiment, or recommendations.

Private lands for WMAs are purchased only from willing sellers. Qualified real estate appraisers evaluate the property and the DNR - Division of Lands and Minerals reviews and certifies the appraisals to ensure they represent the property's fair market value. Prior to purchasing, an environmental assessment of the property is conducted by the area wildlife manager to determine the existence of any contaminants or other environmental concerns.

Minnesota Statutes 97A.145 requires the Division of Wildlife to notify the respective township and obtain county board approval for any proposed WMA land **purchases**. DNR policy also requires the notification of the respective county board of any land **donations** prior to acceptance by the DNR. County boards have been, overall, very supportive of WMA acquisition. Of the over 1,000 WMA tracts

proposed for purchase within the past 20 years, only a small number were turned down by the county boards.

To offset lost property tax revenue of private lands purchased for WMAs, the DNR makes annual payments in-lieu-of-taxes to counties with acquired wildlife lands. Payments are made from the state general fund and are calculated based on the following formulas, using whichever amount is greatest:

1. Three-quarters of one percent of the appraised value of purchased WMA lands.
2. 50 cents per acre on purchased lands actually used for WMAs.
3. 35 percent of the gross receipts from all special use permits and leases of lands acquired for WMAs.

Payments to the counties for WMA lands are currently about \$2.3 million per year.

In addition to these payments, the DNR also makes in-lieu-of-tax payments to counties for all natural resource lands in the county including other acquired lands such as state park, state forest, SNA, and state trail lands; county tax-forfeited lands; and other state lands such as school trust fund lands. Last year, these payments totaled \$9.51 million.

Future Challenges

Lands with a high potential to provide the primary objectives and urgent preservation needs have been purchased as WMAs. They provide biological and ecological values to the environment, to habitat for game and nongame animals that could not otherwise be preserved in other ownership. In many places WMAs are islands of habitat in an urbanizing or agricultural landscape. But as islands, these lands may not provide their full wildlife or recreational benefits because of adjacent land use. They also are heavily used because of their location. Hunters flock to these WMAs because of their proximity and the lack of other public hunting opportunities.

As urbanization moves further and further into rural landscapes, WMAs become increasing important in providing habitat, public hunting and open space. Extensive rural development in the 18-county high population "growth corridor" from St. Cloud to the Twin Cities to Rochester, threatens sensitive natural resources in this area. In many cases, this may be the last opportunity to protect these critical habitats. Increasing populations also create a higher demand for public hunting, trapping, and other wildlife-related activities in close proximity. Only 7 percent of the acquired WMA lands in Minnesota are located in this 18-county area. Accelerated acquisition within this area would protect valuable wetlands and critical upland wildlife habitat and enhance recreational use, especially public hunting and trapping. Land costs will continue to increase over time in this corridor area and key acquisitions may be lost if land prices become too prohibitive.

Yet, as people move into these areas next to WMAs, the uses and values that WMAs are established for are being limited. When structures or corrals are built next to WMAs, laws limit the discharge of weapons within 500 feet. That limits the WMA use for public hunting. With urbanization come other problems such as uncontrolled pets, illegal dumping, and other illegal uses. In addition, WMAs in urbanizing setting also cost 10 to 100 times more than the same land in an undeveloped or even an agricultural setting. The needs for WMAs in urbanizing settings is great, but the cost of the land, the diminished values are high and concerns by stakeholders are warranted to question the values of WMAs in these settings.

The cost of purchasing additional WMA lands continues to rise. Over the past decade alone, the average farm real estate price per acre has risen from approximately \$700/acre to over \$1,200/acre.

Land values have increased at an even steeper rate around major population centers as residential development spreads out into the surrounding rural areas. Although there are a number of potential funding sources for WMA acquisition, total appropriations during the the past 10 years have been lower than previous decades. The last appropriation for WMA acquisition was in 2002, but at a much reduced level from previous years (Appendix B). Recent projects approved by the Legislative Commission on Minnesota Resources (LCMR) have shown a trend toward funding private conservation groups to purchase wildlife lands rather than directly to DNR.

The Division of Wildlife has increased its capacity to plan and manage its land in the last decade. Area managers are able to describe WMA unit objectives, habitat value and needs of wildlife, priority species of interest, hunting facility needs, and the best land management practices. The region and central office are able to allocate organizational resources to the most pressing needs and account for those resources and the outcomes from those expenditures.

Lands acquired as part of the WMA system present a significant future commitment for maintenance, development and management costs. In the short-term, initial infrastructure costs (boundary survey, posting, parking lot and user facilities, building removal, well sealing, road approaches, etc.) are estimated to be \$13,000 to \$15,000 per unit. In the mid-term and long term there is also a continuing commitment to the Division of Wildlife for development and maintenance on new WMA lands. Habitat restoration costs may include but not limited to grassland development, forest or woody cover development or improvement, brushland management, and food plot development.

The Division of Wildlife has a long range work planning process to establish workloads and the cost of planned maintenance and development on WMAs annually. Area wildlife managers identify maintenance and management needs for WMAs in their work area on a 5 year cycle. The Division allocates funding to the areas and regions based on determining needs and prioritizing the available funds to meet those needs. The Division of Wildlife is able to fund only approximately 27 percent of the current identified maintenance and management needs annually. As new WMA lands are added to the system, the unfunded need to adequately maintain and manage these lands will increase this obligation unless additional sources of funding are available.

Appendix A

Wildlife Management Area Policy – WMA Acquisition Priority Guidelines

Priority 1

- a. Existing high-quality wildlife habitat that is threatened with imminent destruction.
- b. Preservation of habitat for endangered or threatened species or species of special concern.
- c. Tracts within approved projects where acquisition has already occurred (i.e. in-holdings).
The DNR already has a substantial investment in these projects in acquisition and management costs and has an obligation to purchase tracts within existing projects from willing sellers. Project boundaries were established for each WMA to maximize the benefits for wildlife and public use. Acquisition of the remaining parcels in existing projects will improve management capabilities and recreational opportunities. Acquisition efforts concentrate on the following types of parcels within existing WMAs:
 1. Major unit tracts
 2. Significant natural communities that are uncommon or diminishing such as wetlands and native prairie
 3. Parcels needed for major development projects
 4. Parcels that resolve management or access problems
 5. Other key wildlife habitat

Priority 2

- a. An area's wildlife production capabilities.
- b. An area's ability to satisfy the habitat needs of a select species or community of species
- c. The degree to which an area can provide high-quality hunting or other wildlife oriented recreational and educational opportunities, for which there is a demonstrated need.
- d. High-quality wildlife land that is open to the public and threatened with a change in ownership which would preclude public access.
- e. Unique wildlife habitat features within a geographical area.
- f. The cost of acquisition.
- g. Minimal amount of management and development an area will require.
- h. The degree to which a proposed WMA complements or improves connections with other wildlife habitat in the vicinity.
- i. The future impact of potential adjacent land use changes on an area.

Priority 3

- a. Areas that create more easily recognizable boundaries that facilitate appropriate public use and law enforcement.
- b. An area's proximity to major population centers.

APPENDIX B

WMA Acquisition State Funding 1992-2002

Year	Source					TOTAL
	Bonding	Gen. Revenue	Envir. Trust	Future Resources	Surcharge	
1992					\$289,492	\$289,492
1993					\$382,323	\$682,323
1994	\$1,700,000		\$300,000		\$619,600	\$2,319,600
1995					\$919,697	\$1,569,697
1996	\$500,000		\$510,000	\$140,000	\$623,376	\$1,123,376
1997					\$579,102	\$1,079,102
1998		\$1,500,000	\$500,000		\$479,215	\$1,979,215
1999					\$627,075	\$627,075
2000					\$622,830	\$622,830
2001					\$782,170	\$782,170
2002	\$400,000				\$709,500	\$1,109,500
TOTALS	\$2,600,000	\$1,500,000	\$1,310,000	\$140,000	\$6,634,380	\$12,184,380