

**A Vision for Wildlife and its Use – Goals and Outcomes
2006 – 2012**

**Division of Fish and Wildlife
Minnesota Department of Natural Resources**

July 2005 - June 2012

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Introduction

The status and health of wildlife resources is one of several barometers for the quality of life enjoyed by the people of Minnesota. Wildlife is a shared public asset that all Minnesotans value, whether it's a deer at the edge of a meadow in early morning, drumming ruffed grouse, turkeys gobbling, rafts of ducks on wetlands, a solitary bull moose standing in a northeast Minnesota river, a soaring bald eagle, or the realization that wolves still roam Minnesota. We expect wildlife to be protected and managed so our children will have the same or better opportunities than we have experienced. Life in many communities is centered around water, forests, grasslands and prairies; hunting for deer, waterfowl, and pheasant or wildlife watching. These are the events that, season by season, help define Minnesota's culture and heritage and contribute to Minnesota's quality of life.

The Minnesota DNR is structured into eight divisions or disciplines that have primary responsibility for resource management. Three support bureaus or units provide services to divisions and the public. A four region structure provides leadership, direction and support to interdisciplinary work activities and community partnerships.

As part of the DNR, **the Division of Fish and Wildlife's mission for wildlife resources "is to work with the people of Minnesota to conserve and manage wildlife populations and habitats, to provide wildlife-related recreation, and to preserve Minnesota's hunting and trapping heritage."**

The areas of interest and spheres of responsibility for each of the eight divisions naturally overlap. To illustrate, FAW receives approximately \$20 million annually from hunting and wild rice license sales and the Federal Assistance in Wildlife Restoration Program. By the nature of this dedicated funding for wildlife resources, wildlife game species are the focus of FAW management practices. However, wildlife management practices utilized and proposed by FAW must take into consideration and will benefit threatened, endangered, and nongame species, which are

managed by the Division of Ecological Services. Furthermore, the successful collaboration between FAW and the Divisions of Ecological Services and Forestry is critical for the challenging management of wildlife resources.

Ultimately, FAW's success in accomplishing its mission depends on productive and constructive relationships with other divisions, bureaus, and regions. (See Appendix III which identifies areas

of mutual interest and relationships between FAW and other DNR Divisions).

Example 1.

The FAW mission is to conserve and manage wildlife populations and habitats. The Division has sole responsibility for those wildlife species harvested through regulated seasons. As a major landowner, FAW has a responsibility for habitat management on Wildlife Management Areas to benefit wildlife. Although our principal responsibility is to manage those habitats to benefit harvested species, this work also provides multiple benefits to a wide variety of nonharvested animals as well as native plants and native plant communities. FAW will continue to work with the Division of Ecological Services to examine and implement opportunities to benefit these species and communities.

The mission of the Department of Natural Resources "is to work with citizens to conserve and manage the state's natural resources, to provide outdoor recreation opportunities, and to provide for commercial uses of natural resources in a way that creates a sustainable quality of life."

As many have observed, the term "wildlife" does not have a universally accepted definition. Academia, agencies and the public all utilize different definitions and interpretations of the term.

Example 2.

FAW also works closely with Division of Forestry and other public land managers to manage forest habitat for optimal wildlife values on state, federal, and county lands. Almost one-third of Minnesota's total land area is forested with 42% in private ownership (individuals or industry) and 58% in public ownership (federal, state, county or municipal entities). Collaboration between FAW and the Division of Forestry to cooperatively manage state lands is described in the Wildlife/Forestry Coordination Policy:

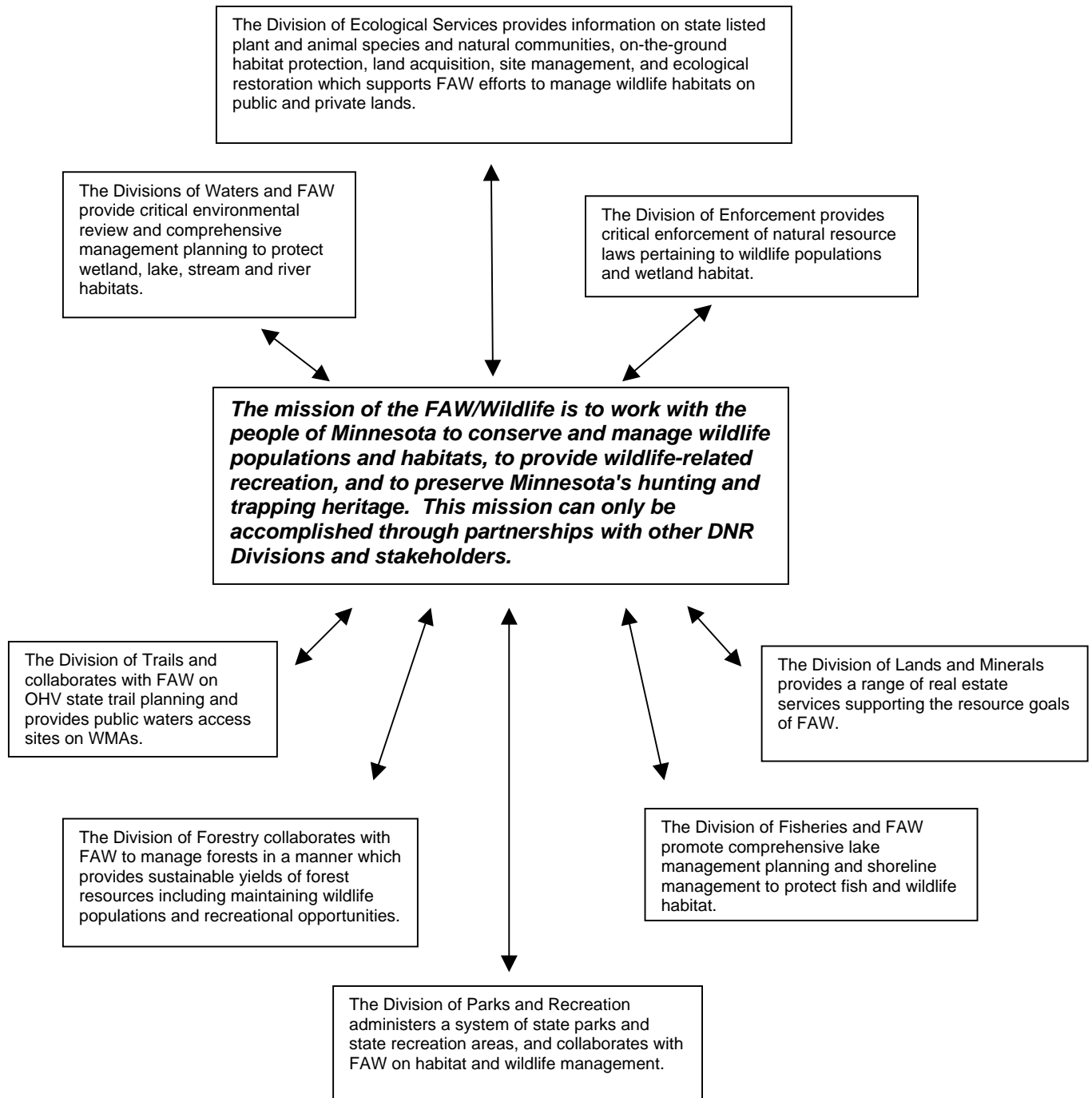
"As state administered lands are to be managed for compatible multiple use benefits, unless otherwise dedicated by law, both the Divisions of Forestry and

Fish and Wildlife are jointly charged with the responsibility of achieving the goal of integrating forest and wildlife management while recognizing other multiple use purposes.... The department shall strive to implement the practice delineated in the Forestry/Wildlife Guidelines To Habitat Management on all state administered lands. Such implementation is important since manipulation of forest vegetation is the key to managing for wildlife as well as timber products."

In summary, this strategic plan is the culmination of work with FAW staff and other DNR divisions, as well as the public. It will guide FAW in a specific direction, consistent with its mission for wildlife resources, and will help allocate human and financial resources. In addition, citizens will be able to use it to measure progress and as a tool for accountability of public resources.

Our gratitude for work on this wildlife resources strategic plan extends to Bruce Hawkinson, Dynamic Solutions Inc., for his guidance in designing and carrying out public and staff participation processes, to staff in FAW and other DNR divisions for their time spent contemplating outcomes and reviewing several drafts of the plan, and finally to wildlife stakeholder groups and the general public for providing their visions on the health and status of wildlife populations and their habitats. This plan attempts to capture your thoughts and hopes for the future of wildlife resources in Minnesota.

FAW Relationships Within DNR



Core Functions

Five core functions for FAW related to wildlife management activities provide products and services to the people of Minnesota. Minnesota Statutes (M.S.) providing direction for these activities are identified.

Wildlife population and habitat inventory and monitoring (M.S. 84.941)

FAW inventories and monitors many of the state's wildlife populations and habitats. Basic population and habitat inventories, surveys, monitoring, assessments, and research are essential to effective management. These data are crucial to the management of quota systems, setting hunting seasons, understanding population and habitat management needs, and achieving population objectives. Geographic Information System (GIS) applications help organize data that are applied spatially to population management issues and trends, including effects of land management and land use practices on wildlife and the impacts of human activities and natural events on the management of shallow wetlands, prairies, forests, and other wildlife habitats.

Wildlife population and season management (M.S. 84.027; 97A.028; 97A.045)

FAW regulates harvesting seasons for over 75 game species of wildlife and provides habitat for several hundred additional species of birds, mammals, amphibians, and reptiles. Populations of many game species are at or near all-time highs, including white-tailed deer, wild turkeys, black bear, and locally-breeding Canada geese. Minnesota ranks sixth nationally with nearly 600,000 active hunters, and annual hunting expenditures are estimated at \$483 million as of 2001. An estimated 2.2 million people also participate in wildlife watching in Minnesota, representing an annual expenditure of \$531 million. In conjunction with the Nongame Wildlife Program, considerable efforts are devoted to addressing the needs of rare or declining species. FAW also actively manages programs to address wildlife damage and nuisance problems when locally abundant populations of deer, bear, and geese cause conflicts with humans.

Wildlife Management Areas and Facilities (M.S. 86A.02; 97A.135; 97A.145)

FAW acquires, develops, and maintains Wildlife Management Areas (WMAs) for wildlife habitat, public hunting, trapping, wildlife viewing, and other wildlife-oriented recreation. FAW manages an extensive system of almost 1,400 WMAs on more

than 1,220,000 acres. Habitats are maintained, restored, and improved, and facilities such as water control structures, dikes, dams, roads, parking lots, fences, and signage are developed, operated, and maintained. Facilities such as campsites and primitive trails are provided in some WMAs to support appropriate wildlife-related recreation. Minnesota's WMA system is one of the largest in the country.

Wildlife Habitat Management (M.S. 97A.125; 97A.101)

FAW provides wildlife habitat technical assistance on other public and private lands. Key activities include environmental review to protect existing terrestrial and aquatic habitat, and integration of forest and wildlife management on forest lands administered by the Division of Forestry and FAW. FAW also works with other agencies to provide technical assistance and recommendations for management of public land in northern Minnesota including federal and county lands. Strategies used include the following: wildlife habitat technical assistance for forest managers and private forest owners; wildlife expertise for agricultural land programs like the Conservation Reserve Program (CRP), Conservation Reserve and Enhancement Program (CREP), and Reinvest In Minnesota (RIM) Reserve; environmental review for projects affecting public waters and wetlands and upland habitats; assessment and land planning for individuals and organizations interested in improving their land for wildlife; and technical assistance for exotic species management. FAW also provides cost-share assistance for improving habitats on private lands.

FAW has also formally designated approximately 40 shallow lakes for wildlife management encompassing more than 50,000 acres. This program is unique in the United States and allows the management of these public waters to emphasize aquatic wildlife habitat. These lakes are open to public use through formal and informal public access points. Many of these lakes have state-owned outlet structures to facilitate water level management and provide barriers to undesirable fish such as carp.

Wildlife Business Management (M.S. 84.0911, 97A.028, 97A.071, 97A.075)

FAW wildlife management activities are funded in large part from the Game and Fish Fund, the account which receives game and fish license and stamp sales, wild rice license sales, WMA revenues, and Federal Assistance in Wildlife

Restoration Program reimbursements. Minnesota State Statutes provide specific direction on the use of wildlife license and stamp and wild rice license revenues deposited in the Game and Fish Fund for wildlife resources management. Approximately \$80 million dollars are deposited annually in the Game and Fish Fund from these sources.

Enacted in 1937, the Federal Assistance in Wildlife Restoration Program (also known as Pittman-Robertson Wildlife Restoration Act or “P-R”) is administered by USFWS (16 U.S.C. 669-669i, 50 CFR 80, 43 CFR 12). The program reimburses FAW for qualified expenditures in six grant programs for WMA acquisitions, facilities and habitat management, technical guidance, population management and population surveys. FAW receives approximately six million dollars in reimbursements annually or approximately 20% of its annual budget for wildlife management activities from the P-R program. The P-R program requires that States enact laws for the conservation of wildlife and include a “prohibition against the diversion of license fees paid by hunters for any other purpose than the administration of the State fish and game department.”

In total, the Game and Fish Fund provides approximately 80% of a \$26 million annual budget for wildlife resource management. The use of these funds has very specific expenditure and reporting requirements as described by federal regulations and state statutes and provides a framework within FAW for wildlife management budgeting, spending, accounting and reporting.

FAW has more than 250 employees in offices from Grand Marais to Slayton and from Karlstad to Winona to carry out Wildlife programs. It also has land management responsibilities and a variety of equipment that requires upkeep and maintenance. Coordination and collaboration with public and private organizations requires considerable staff time and resources. Efficient administration, staff training, information systems, and computer support are essential to providing quality customer service and protecting and enhancing investments in human resources, facilities, land, and equipment. Staff training opportunities ensure that the most up-to-date wildlife and habitat management techniques are employed. Organizational effectiveness, efficiency, and accountability require development and use of strategic, long-range, operational, area, and WMA unit plans. Clear and effective communication with stakeholder organizations and the general public are also critical to accomplish FAW’s mission.

Guiding Principles

The following guiding principles provide a framework for FAW to manage wildlife resources in Minnesota.

1. The Department of Natural Resources, Division of Fisheries and Wildlife is an executive agency that is funded by the Legislature and directed by the Governor consistent with law, rules and policy.
2. Public ownership of wildlife is fundamental and partnerships are essential to effective management of wildlife. Public agencies cannot manage these resources alone. Many individuals, private landowners, Indian tribes, counties, other DNR divisions, agencies and non-governmental organizations are essential partners.
3. "Hunting and fishing and the taking of game and fish are a valued part of our heritage that shall be forever preserved for the people and shall be managed by law and regulation for the public good." (1998 constitutional amendment, approved by 77.2% of voters in the general election.)
4. Ecological systems and ecological processes provide the fundamental building blocks for sustaining wildlife resources and habitat. The Ecological Classification System (ECS) will be used as a framework for wildlife population management and policy decisions.
5. Wildlife is a renewable natural resource to be managed, conserved and enhanced through planned scientific management, protection, and use.
6. Wildlife populations, dependent on biological and ecological needs, will be managed within existing social and economic restraints.
7. FAW will foster greater community appreciation for the state's natural resources, conservation, and resource stewardship.
8. Access to wildlife resources must be as fair as possible regardless of economic or social factors.
9. Wildlife resources and their use are an important economic driver for Minnesota's economy.
10. To be effective, FAW will maintain basic funding for strong communication, technical support, land and other

- infrastructure, license sales, enforcement of laws, education, and accountability.
11. FAW will develop and retain a trained, diverse, and skilled workforce.

Wildlife Resource Goals

Wildlife goals can be condensed into three critical themes. Our vision for wildlife resources and their uses in the next six years directly relate to these goals.

1. Minnesota will have high quality and abundant hunting, trapping, and wildlife recreation opportunities.
2. Minnesota will have healthy and productive wildlife populations and habitats managed on a sustainable basis.
3. Minnesota will be a leader in resource stewardship and have effective partnerships with citizens to manage wildlife resources.

Expected Outcomes

The following outcomes are clearly ambitious and depend on collaborations and partnerships with other agencies, private nonprofit groups, and individual conservationists and natural resource enthusiasts. Strategies key to accomplishing these outcomes will be used to achieve these priority outcomes over the next six years. The identified strategies are either state and federal mandates and activities for which FAW is the primary provider or are approaches which support or compliment the efforts of many partners also working to manage wildlife habitats and populations in the state.

Wildlife Resource Goal 1. Minnesota will have high quality and abundant hunting, trapping, and wildlife recreation opportunities.

WMAs

Acquisition of WMA lands will be accelerated from the current rate of 5,000 – 6,000 acres per year to an average of 21,050 acres per year to achieve the goal of 210,500 acres in ten years as outlined in the *Minnesota's Wildlife Management Area Acquisition; the Next 50 Years* prepared by the Citizens' Advisory Committee in 2003.

New WMA lands will be brought up to minimum standards within twelve months after purchase. These minimum standards include updating the Geographic Information Systems (GIS) (e.g., inventory of boundaries, cover types and facilities), boundary identification and facility development so that the WMA is usable by the public. Basic information on WMAs will be available to the public on the DNR website to enhance recreational uses.

WMAs will have management guidance documents to address habitat management needs, maintenance and replacement schedules for facilities, and capital improvements. Facilities include boundary, entrance and information signs, fencing, gates, parking lots, blinds, camp sites, observation platforms, roads, trails, bridges, and water access sites. These guidance documents will be used in and reflect interdisciplinary planning efforts such as the Department's

Subsection Forest Resource Management Plans (SFRMP). SFRMPs are the primary tool for determining the mix of values and products (e.g., wildlife habitat, rare features, timber) that will be provided and sustained through vegetation management on DNR-administered forestlands.

WMAs will be managed to provide habitat for appropriate wildlife populations. Many WMAs, especially those that contain extensive native plant communities, are critically important areas for maintaining both game and nongame species habitats. These habitats especially benefit from application of ecological management principles and provide unique research opportunities for species in their native habitats.

FAW supports the need for adequate funding to complete cooperative stand assessment (CSA) on all DNR forested lands including WMAs. CSA is a DNR stand-level forest inventory which documents overstory and understory tree species, stand age, timber volumes, site productivity, shrub and ground species, insects and diseases, and other specific site conditions.

All WMAs will be approved for third party forest certification. Forest certification evaluates and verifies sustainable forest management practices and will help the DNR to further improve its forest habitat and community management practices.

Recreation-Related Strategies

1. Provide regulated hunting and trapping seasons, hunting access, and satisfying recreational experiences.
2. Acquire, develop, and maintain WMAs for wildlife habitat, public hunting, and wildlife observation. Where appropriate, partner with other divisions or entities to purchase larger parcels.
3. Provide leadership that will inspire the recruitment and retention of hunters and trappers and other recreationists.

Increased Hunter Participation and Satisfaction

The total number of hunters and trappers will increase (597,000 in 2001 according to USFWS *2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation; Minnesota*). The proportion of youth, women, handicapped and other under-represented groups participating in hunting and trapping will also increase.

Overall hunter satisfaction with hunting opportunities and experiences will increase to 90% satisfied as measured in surveys of the general public conducted by DNR and surveys of specific categories of hunters conducted by FAW. Specifically, waterfowl hunter satisfaction rates will improve from 65% of waterfowl hunters reporting being satisfied with their general waterfowl hunting experiences to

90% of waterfowl hunters being satisfied overall. Also, deer hunter satisfaction rates will be maintained. In 2000, 91% of deer hunters rated their experience as "very or somewhat satisfying." Satisfaction rates (very satisfied or satisfied) increased from 60% in 1999 to 67% in 2000 in a survey on hunting importance and hunter satisfaction conducted by the DNR's Bureau of Information and Education (*Awareness and Satisfaction Survey Results, June 2000*).

FAW will survey Minnesota hunters to determine past participation rates and forecast future participation levels.

A survey of WMA users will be conducted to assess the amount of usage, type of recreation, and satisfaction level among WMA users statewide. No information is available at this time on WMA usage.

The quality of turkey and bear hunting as indicated by interference rates among hunters in the field will be maintained. Interference rates reported by turkey hunters from eight permit areas in 1999 ranged from 10.0–33.3% and 0–22.6% in 2002. Turkey hunter interference rates will be maintained below 40% while maintaining overall hunter success above 20%. For black bear hunters in 1998 and 2001, 27% and 33% of hunters felt crowded in their hunted areas. In order to maintain bear hunter satisfaction, this percent will be maintained or decreased while maintaining desired bear population levels.

In addition to the current youth waterfowl hunt, special youth hunts for deer, pheasants and turkeys will be provided or expanded.

FAW will increase opportunities for disabled hunters by expanding accessible facilities and special hunts.

Hunters will have increased access to private lands for big and small game hunting opportunities.

Wildlife Resource Goal 2. Minnesota will have healthy and productive wildlife populations and habitats managed on a sustainable basis.

Long-Range Population Goals

The Department of Natural Resources is mandated to “preserve, protect, and propagate desirable species of wild animals” and to “ensure recreational opportunities for anglers and hunters” (MS 97A.045). Tables 1 and 2 summarize long-range population and harvest goals for some key game species.

Wildlife health

Wildlife diseases that have potential to significantly reduce populations long term, or adversely impact human health, will be monitored statewide. Primary focus will be on chronic wasting disease (CWD), but other diseases of concern include bovine tuberculosis (deer), West Nile virus (upland gamebirds, waterfowl), and botulism, avian cholera, and avian influenza (waterfowl).

Wildlife disease planning efforts will focus on disease prevention, but also include contingency planning so that DNR is prepared to respond to major wildlife disease outbreaks.

Statewide hunter-harvest surveillance of wild deer for CWD was completed in the winter of 2004/2005. Targeted CWD surveillance (i.e., testing of deer showing symptoms consistent with CWD) will be ongoing. Following the detection of CWD in a captive cervid facility in the summer of 2006, FAW will conduct hunter-harvest surveillance of wild deer during the 2006 firearms season.

In response to the detection of bovine tuberculosis in cattle in northwestern Minnesota, FAW, in collaboration with Board of Animal Health, has developed and is implementing a wild deer bovine TB surveillance strategy with the ultimate goal of regaining the state’s USDA livestock TB free status as soon as possible.

FAW will collaborate with other agencies to support development of statewide avian influenza preparedness plans. Specifically, FAW will: (1) coordinate with federal authorities such as United States Fish and Wildlife Service and US Geological Survey at a national level, (2) collaborate with Flyway Committees at a regional level to accomplish early detection in wild bird populations, and (3) develop a statewide surveillance and response plan for wild bird populations in collaboration with Board of Health, Board of Animal Health, Department of Agriculture and Department of Public Safety.

FAW will develop a biennial funding initiative to establish an on-going wildlife health management program and staff.

Animal damage

- Population and Habitat Strategies**
1. Inventory and monitor the state’s wildlife populations and habitats.
 2. Resolve human/wildlife problems and conflicts.
 3. Conduct applied research on species whose populations are managed by regulated harvest.
 4. Monitor and protect wildlife health.
 5. Along with the entire DNR, address the needs of threatened and endangered species, game and nongame species.
 6. Protect wildlife habitat through laws, land use rules, environmental review of development projects, and education.
 7. Improve the habitat quality of Minnesota’s shallow lakes and where possible restore drained wetlands.
 8. Provide wildlife-related information to citizens through educational efforts. Citizens knowledgeable about native species, habitats and ecosystems will help determine and support the best natural resource management practices.
 9. Manage habitat on WMAs and provide technical assistance for private lands to reduce the ecological impacts of exotic invasive species.

A population goal setting process will be established for Canada geese and white-tailed deer incorporating statewide public input.

Wildlife population management and technical guidance will be provided so that the number of wildlife damage complaints are minimized. In fiscal year 2002, 774 animal damage complaints were received, 7,700 hours of technical guidance and assistance were provided, and 50 cooperative damage management agreements with growers for deer, goose and bear damage were completed. Assistance has been provided to owners of vineyards, orchards, apiaries, and other

specialty crop growers.

Wildlife technical guidance will consider agricultural needs, forestry practices, and the incidence of vehicle collisions. These needs are balanced against ecological and recreational interests.

Shallow Lakes/Wetlands

FAW will actively implement the goals of “*The Challenge to Restore Minnesota’s Wetland and Waterfowl Hunting Heritage*” which addresses habitat and security needs for migrating waterfowl and improving recruitment to the state’s waterfowl population.

A duck recovery plan was completed in spring 2006 and identifies further priority efforts for DNR and partners.

Management of shallow lakes will be increased by at least five additional basins each year from the 250 basins in to a total of 300 shallow lakes.

Water levels will be managed on an additional 50 natural wild rice basins, increasing the annual management rate from 80–120 wild rice basins per year to 130–170 basins per year.

FAW has formally designated nearly 40 lakes for wildlife management since 1969 (MS 97A.101) and will designate 30 additional lakes in the next ten years.

Though not under our direct control, FAW is committed to no net loss of wetlands as defined by the Wetlands Conservation Act (MS 103A.201) by 2008, and a net gain in wetlands annually by 2013. To meet this outcome, FAW will support and help develop both more aggressive wetland protection and management programs, and a more comprehensive methodology for monitoring the quantity and quality of wetlands. FAW efforts are coordinated with Division of Enforcement’s Conservation Officer Wetland Specialists.

The North American Wetlands Conservation Act (NAWCA) provides grants to carry out wetland conservation projects through partnerships. FAW will seek more NAWCA grant funding for the long-term benefit of wetland habitats and associated waterfowl and other migratory species.

FAW will actively promote and participate in comprehensive lake management planning opportunities that integrate multiple resource objectives with the DNR’s Divisions of Ecological Services, Waters, and FAW/Fisheries along with the Board of Water and Soil Resources and the Pollution Control Agency.

FAW will continue to work with the Divisions of Ecological Services and Fisheries to improve guidelines for aeration, fish rearing, fish harvest, lake rehabilitation through removal of undesirable

fish, bait harvest, angling, and water level management in shallow lakes and wetlands.

Prairie/Grassland Areas

FAW will work with partners to both implement and increase the conservation provisions and benefits of federal farm programs through technical assistance and communication with landowners with the following goals.

More than two million acres will be enrolled in conservation practices through the Conservation Reserve Program (CRP) by the end of 2005 and 2.5 million acres by 2010 consistent with the goals identified in the DNR’s strategic plan, *A Strategic Conservation Agenda; 2003 – 2007*. Specifically, this will include a general CRP increase of 250,000 acres. The Continuous Small Farmable Wetland Program will increase by 80,000 acres. The Continuous Buffers will increase by 80,000 acres. New Conservation Reserve Enhancement Programs (CREP) will increase by 100,000 acres. The wetland restoration practice will increase by 40,000 acres. The total acres devoted to conservation practices under the Farm Bill will be increased to 500,000 acres by 2010.

The working lands initiative will partner with conservation and agricultural interests to address water quality and habitat needs in the prairie pothole region of Minnesota. The initiative will use GIS technology, models, and expert opinion to focus conservation work in areas where the fewest possible acres can be managed with the greatest possible benefit provided, and will mobilize partners (agencies, conservation organizations, and the agricultural community) and programs to work more effectively together in these areas. The intent is to develop complexes of wetlands and grasslands that will support desired wildlife populations and improve water quality.

Undisturbed grassland habitats benefiting a multitude of species will increase from the current 3.24 million acres to 3.84 million acres, including lands enrolled in the Farm Bill and public lands managed by DNR and USFWS.

Within the prairie pothole region of Minnesota, the acreage of areas supporting a predicted duck pair density of 30 or more pairs per square mile will double by 2013 from the existing 1.17 million acres to 2.34 million acres.

Waterfowl production levels will maintain or increase population levels when the minimum breeding habitat block is four square miles and at

least 20% of that block is permanently protected grassland. Data provided by USFWS Habitat and Population Evaluation Team indicate that within the prairie pothole region of Minnesota there are 197,120 acres (77 blocks) that currently fit that description. Our goal is to double the number of these habitat blocks to 154 to include 394,240 acres.

Through aggressive conversion of croplands and cool season grass stands to native species and improvement of existing stands of native grasses and forbs on WMAs, noxious weed control will be reduced 50%. Currently, 4,500 acres of WMA land are treated annually for noxious weeds. Noxious weed control is just one of several management tools used on prairie/grassland habitats, in addition to prescribed burning, to enhance and restore remnant or planted prairies and wet meadows, inter-seeding, and removal of woody cover.

FAW will encourage Congress, stakeholders, and United States Department of Agriculture to improve compliance with Swampbuster and Sodbuster provisions of federal legislation and to address contradictions in the commodity program that encourages conversion of uncultivated lands to crop lands.

Savannas

Management and restoration opportunities for savannas and woodlands shall be identified during the SFRMP process. Savannas and woodlands are dynamic and sometimes transitional plant communities found along the prairie-forest border. Savannas are characterized by scattered trees with tallgrass prairie understory. Woodlands by contrast have an open to partially closed tree canopy often found in between prairies and forests. Oaks are typically the dominant tree found in savannas and woodlands, but sometimes aspen or jack pine are tree dominants. Most of Minnesota's savannas and woodlands that were not lost to cultivation have been lost to development or forest succession resulting from fire suppressions thus there is a need to restore and manage these communities on WMAs.

Forests

FAW will work with Forestry and other Divisions to develop Subsection Forest Resource Management Plans (SFRMP) for both Forestry and Wildlife administered lands by 2007 as directed in the DNR's strategic plan, *A Strategic Conservation Agenda; 2003 – 2007*. This insures

that FAW actively participates in the management of all DNR forestlands to achieve common natural resource goals, including healthy and abundant wildlife populations.

FAW will conduct site-specific projects and site-level cooperative management efforts on both forested WMAs and state forests under the DNR's Wildlife/Forestry Coordination Policy which is currently being updated by the Department.

FAW will participate with federal, county, and private land managers and owners in the development of forest management plans that provide wildlife habitat benefits.

Early successional forest types, including aspen, will be actively managed to provide habitat for important game species such as white-tailed deer, ruffed grouse, woodcock, and other species dependent on these habitats. Also, aspen will be maintained and managed in mixed stands with conifers to provide habitat for ruffed grouse and woodcock. SFRMPs will help to determine desired future conditions for these forest types on DNR administered forest lands in order to meet habitat goals for wildlife species.

Coniferous forests will be restored and managed to provide important habitat for white-tailed deer, spruce grouse, pine marten, and other wildlife dependent on coniferous forests. SFRMPs will help to determine desired future conditions for these forest types on DNR administered forest land in order to meet habitat goals for wildlife species.

Older forests will be maintained to provide for important game species including wintering white-tailed deer, moose, cavity-nesting ducks, pine marten, and other wildlife species dependent on older forests. SFRMPs will help to determine desired future conditions for these forest types on DNR administered forest land in order to meet habitat goals for wildlife species. Designated old growth stands on WMAs will continue to be protected. Old forest management complex (OFMC) plans will be completed.

Technical guidance for private land will help realize large patch goals necessary to manage healthy forest ecosystems. Fragmentation and parcelization of private forestlands threatens healthy forest stands.

Table 1. Historical and proposed harvest rates for species actively managed through population monitoring and harvest quotas. Harvest data from *Status of Wildlife Populations, Fall 2005*.

Species	Five Year Average Harvest (2000 - 2004)	Long-Range Goals
Black bear	3,548	Stabilize pre-season population at 20,000 – 30,000 with an annual average harvest of 5,000.
White-tailed deer	240,482	Complete a statewide review of population goals within the context of habitat, deer collisions and forestry and agricultural practices; maintain at least 75% of permit areas within goal levels annually.
Moose NW ¹	0	Increase population levels sufficient to support hunting seasons.
Moose NE ²	112	Improve population levels while maintaining or increasing harvest rates.
Elk ³	NA	Revise management plan which will include review of population and harvest goals for Kittson and Marshall County populations. Maintain viable populations.
Bobcat	475	Maintain stable population of 2,300 and increase average annual harvest to 300.
Otter	2,667	Population has been expanding. Population goal of 17,000 with increased annual harvest goal of 2,400.
Marten	2,926	Population expanding westward. Population goal of 13,000 with annual harvest of 2,200.
Fisher	2,554	Population expanding west and south into aspen parklands. Population goal of 13,000 with annual harvest of 2,400.
Gray wolf	No season	Support federal delisting process. Maintain long-term population greater than or equal to 1,600. Harvest plan to be considered no sooner than 5 years after federal delisting.
Ducks	925,000	Increase Minnesota harvest from current average of 9.4% (1996 – 2000) to 16% of Mississippi Flyway total harvest through increased protection and management of breeding and migratory feeding areas.
Canada geese ⁴ (resident)	173,158	Manage breeding population of giant Canada geese (estimated 304,000) to provide quality hunting experiences and reduce agricultural depredation and urban nuisance situations.
Canada geese EPP (migrant)	15,931	Manage the Minnesota harvest to help maintain breeding populations while providing stable or increased harvest rates and opportunities at major WMAs used for migration.
Lesser snow geese/ Ross' geese	11,000	Continue to provide hunting opportunities and maintain harvest rates. Continue to participate in federal light goose conservation actions to manage populations and protect arctic habitats.
Ring-necked pheasant	386,200	Increase pre-season population from 1.23 to 1.8 million through increased habitat. Increase annual average harvest rate from 307,600 to 450,000.
Wild Turkey	7,752	Increase populations from 55,000 to 80,000 while increasing annual harvest average from 5,800 to 10,000.
American woodcock	34,200 ('00-'04) 48,600 ('95-'04)	Average annual harvest 1990-1994 was 90,400. Increase population as part of Great Lakes regional efforts; increase annual average harvest from the current level to 75,000.
Ruffed grouse ⁵	194,000-946,000	Manage grouse habitat to maintain an annual average harvest rate of 650,000 over the ten year cycle. This is the historic average grouse population.
Sora and Virginia rail	1,200	Manage habitat to maintain sustainable harvests.
Common snipe	2,600	Manage habitat to maintain sustainable harvests.
American coot	15,600	Manage habitat to maintain sustainable harvests.
Sharp-tailed grouse	11,400	Increase populations through brushland habitat management; increase annual average harvest to 40,000.
Greater prairie chicken	Total of 92 in 2003, 2004	Increase pre-season populations from current estimate of 5,000 to 6,000. Maintain annual average harvest of 300. Season opened 2003.
Mourning dove	97,000/2004 season	Season opened in 2004. Maintain fall population of 12 million while providing an annual average harvest of 0.5 million.

1. Moose NW – last open season 1996
 2. Moose NE & NW – seasons cancelled in 2000
 3. Limited elk seasons opened in 2003/2004 and 2004/2005

4. USFWS harvest data estimates
 5. Ruffed grouse harvest range for period from 1995 – 2004

Table 2. Historical harvest rates for species managed by providing quality habitat. Populations and harvest opportunities will be provided through management of habitat on public lands. Harvest data from *Status of Wildlife Populations, Fall 2005*.

Species	Estimated Five Year Average Harvest (2000 - 2004)
Squirrels (Gray and Fox)	214,000
Eastern Cottontail	74,600
White-tailed Jack Rabbit	6,600
Snowshoe Hare ¹	8,000 – 27,000
Raccoon	78,000
Red fox	13,600
Gray fox	1,200
Badger	1,000
Muskrat	80,600
Beaver	62,800
Mink	22,000
Opossum	8,600
Gray partridge	14,600
Crow	82,000
Spruce grouse	14,200
Urban Wildlife ²	

1. Snowshoe hare harvest range from 1994-2004.
2. The long-range goal is to decrease urban nuisance situations through decreased populations and increased harvest rates.

Brushlands

Forty open landscapes will be identified and designated statewide through SFRMP for management of species dependent on open lands. On average, open landscapes are approximately 185,000 acres in size (range 12,000-500,000 acres, N = 292) and are characterized by having a "portion of land supporting an open to semi-open complex of vegetation consisting of less than two-thirds trees" as described in *An Assessment of Open Landscapes for the*

Management of Brushland Wildlife Habitat in Northern and Central Minnesota (MDNR Wildlife Resource Assessment Report 1, 2002).

Brushland habitat on 5,000 acres of private lands will be improved.

OHV Management

FAW will designate 90 miles of all terrain vehicle trails on select WMAs in the northwest as required by Minnesota Statute 97A.133, Subdivision 3.

FAW will actively participate in the department's designation of OHV trails on state forests and review grant-in-aid trails throughout the state to address issues related to wildlife habitats and populations, and use of OHVs by hunters and trappers.

Prescribed Burning

FAW will increase the total acreage of wildlife habitat burned annually from an average of 55,000 acres to 85,000 acres. Prescribed burning is a management tool used for the purposes of improving or maintaining wildlife habitat and desired vegetative communities by maintaining or regenerating vegetation, removing undesirable plant species, reducing wildfire potential or changing the cover type. Staffing levels, financial resources and weather conditions limit the number of prescribed burning projects each spring.

Other Conservation Efforts

The Divisions of Ecological Services and FAW will develop a collaborative and comprehensive approach to implement the "Bird Conservation Minnesota" initiative.

Minnesota is an ecologically diverse state with over 1,100 known wildlife species. About a quarter of the known species are being identified

as "species in greatest conservation need" by the Minnesota Comprehensive Wildlife Conservation Strategy (CWCS) project because they are rare, their populations are declining, or they face serious threats of decline. The U.S. Congress has mandated that partnerships within states and territories develop a CWCS to manage their "species in greatest conservation need". The Minnesota CWCS project is the DNR response to this congressional mandate and *Tomorrow's Habitat for the Wild and Rare: An Action Plan for Minnesota Wildlife* was published in 2006. FAW will provide ongoing assistance to the Division of Ecological Services to implement this conservation strategy for species in greatest need.

Stewardship and Partnership Strategies

1. Secure necessary, long-term, stable funding sources for wildlife conservation in Minnesota.
2. Partner with organizations, individuals, non-government organizations, Indian tribes, and agencies to accomplish mutual objectives.
3. Cooperatively manage with and provide technical assistance to Division of Forestry within an ecological framework and using Minnesota Forest Resource Council's site level guidelines.
4. Manage habitats and provide wildlife technical assistance to managers of public forestlands and other public lands and waters including (a) manage habitat on WMAs, (b) jointly develop with Divisions of Forestry and Ecological Services management direction for forested land administered by Forestry, (c) cooperatively implement management on some forest lands administered by Forestry and other administrators, and (d) provide technical assistance for other public forestlands (County and Federal properties).
5. Integrate the private lands wildlife habitat programs administered by FAW, which provide habitat management support and technical assistance to private landowners, with the Division of Forestry's Stewardship Program and Division of Ecological Services' Landowner Incentive Program.

Wildlife Resource Goal 3. Minnesota will be a leader in resource stewardship and have effective partnerships with citizens to manage wildlife resources.

All licensed hunters will be more knowledgeable about wildlife management programs through the hunting and trapping regulations booklet, direct mail, and the DNR website.

The Division of Fish and Wildlife will work with Division of Enforcement to address problems created through license procedures, striving to simplify license procedures for hunters and trappers.

FAW will continue to provide educational information and materials to the general public through technical guidance efforts, brochures and publications, collaboration with Division of Enforcement on hunter education programs, support of Becoming an Outdoor Woman and Southeast Asian programs, annual State Fair programs, and public information opportunities with schools and other groups. The Division will continue to explore opportunities to create and expand programs for educating citizens on wildlife related issues and subjects.

Banding programs, population surveys, and habitat surveys will be statistically and procedurally improved to provide information needed for managing populations.

Better information will be provided to stakeholders on the use of dedicated funds and overall annual accomplishments.

Clear, accurate, easily understood expenditure and outcome information will be provided to the

Game and Fish Fund Citizen's Budget Oversight Committee and Subcommittees.

FAW will continue to meet all fiscal, programmatic and environmental compliance requirements necessary for participation in the Pittman-Robertson Wildlife Restoration ("federal assistance") program which provided Minnesota with \$5.5 to \$6.5 million each year from 2000 – 2003 from excise taxes on hunting equipment and ammunition.

Information on species, habitats, and ecological systems and processes will be easily available to the general public and land managers through the DNR website and publications.

FAW will improve the integration of wildlife programs with other divisions within the DNR.

FAW will foster better working relationships with all partners both within and outside the DNR.

FAW will enhance opportunities to apply habitat management practices by private parties through the expanded use of grants to individuals and conservation groups, as well as through direct funding.

FAW will increase program review and assessment in order to maintain and increase their effectiveness and efficiency.

Through environmental review of development permits, FAW will seek to reduce loss of wildlife habitat, ensure long-term health of ecosystems and natural communities, and incorporate

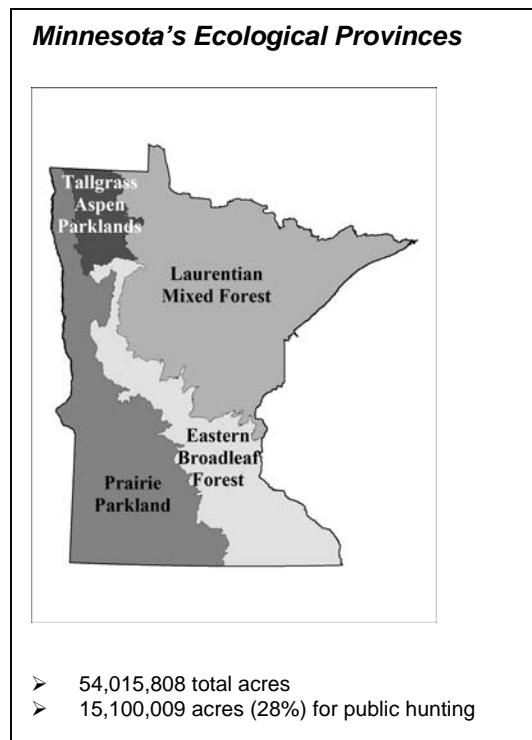
consideration of natural resources and environmental health into project designs.

Stewardship and Partnership Strategies

6. Integrate wildlife activities with other Divisions and units to insure that wildlife values are considered throughout the Department. Wildlife values are influenced by factors which enhance or inhibit wildlife habitat and populations.
7. Collaborate with other DNR Divisions (especially Divisions of Ecological Services, Enforcement, FAW/Fisheries, Forestry, Parks, Waters, Lands and Minerals, and Trails and Waterways) to develop and achieve common natural resource (including wildlife resource) goals and results. Interdisciplinary collaboration and teamwork are critical to effective and efficient management of natural resources while maintaining and respecting the diverse missions and functions of other DNR Divisions (see Appendix II).
8. Insure interdisciplinary review of WMA acquisitions using existing department, statewide, and regional review processes to identify opportunities for multiple uses and interests.
9. Collaborate with partners in the prairie pothole region of Minnesota by developing complexes of wetlands and grasslands that will support desired wildlife populations and improve water quality.

Appendix I. Province Descriptions and Challenges

Eastern Broadleaf Forest



The State of Minnesota has a very diverse ecological setting. It is unique in that three biomes, the broadleaf forest, the coniferous forest, and the prairie, come together. There are 4 ecological provinces in the state; the Tallgrass Aspen Parklands, the Laurentian Mixed Forest, the Eastern Broadleaf Forest, and the Prairie Parkland Provinces. Soils, climate, land-use, habitat composition, wildlife species, and public land abundance vary tremendously across the state and across these provinces.

Minnesota's ecological provinces have distinct geological and climatic differences causing distinct wildlife populations and human uses, and, ultimately, distinct management challenges in each province.

The Eastern Broadleaf Forest Province

bridges the transition zone between prairie to the west and forest to the east. This landscape includes the hardwood forests of southeastern Minnesota and extends through the prairie-coniferous transitional zone in the central part of the state up to the Aspen Parkland in northwestern Minnesota. Most of the province's geological character is glacial, including glacial moraines, the Mississippi River Valley and its sand plain outwash, and the St. Croix River with its valley, kames, eskers, drumlins, and kettle lakes. Topography varies from level in the unglaciated "driftless" area in the plains to very steep trout stream valleys in the southeast. The landscape includes a mosaic of agricultural fields, prairie, savanna, forest, and wetland communities. Prairie grasslands, savannas, and wetlands once occupied today's best croplands. It is an important area for Minnesota's remaining glacial-created wetlands and shallow lakes, including wild rice lakes. Diminishing access to private lands for the purposes of hunting is a very significant issue despite a significant public land base in this province, notably the Thief Lake, Roseau River,

Carlos Avery, and Whitewater Wildlife Management Areas, the Richard Doerr Memorial Hardwood Forest, and several national wildlife refuges. Hunting pressure on public land and waters is intense.

More than half of Minnesota's population lives in this ecological province and extensive rural development is occurring in the 19 county high population "growth corridor" from Saint Cloud to the Twin Cities to Rochester. In many cases, DNR land acquisitions may be the only option to protect critical habitats remaining in this area.

Increasing human populations also create a higher demand for public hunting, trapping, and other wildlife-related activities in close proximity. Only 7% of the acquired WMA lands in Minnesota are located in the 19 county area, although 66% of Minnesota's 4.9 million citizens reside in these counties. At the same time, many private landowners are acquiring land for wildlife values. Private partnership opportunities abound and expectations are high, often challenging FAW resources.

Maintaining and improving waterfowl values on shallow lakes is important for resident waterfowl, and for waterfowl resting and feeding on their migration. Much of the province supports high white-tailed deer populations that are challenging FAW and private landowners.

Characteristic and important wildlife species include wild turkey, white-tailed deer, red fox, ruffed grouse, woodcock, pheasant, Canada goose, mallard, blue-winged teal, wood duck and ring-necked duck, along with unique nongame birds such as trumpeter swan and remnant habitats. This province has the highest diversity of reptiles and amphibians in the entire state (timber rattlesnake, bullsnake, fox snake, softshell turtles, map turtle, six-lined race-runner) and hosts the state's and midwest's largest Blanding turtle populations.

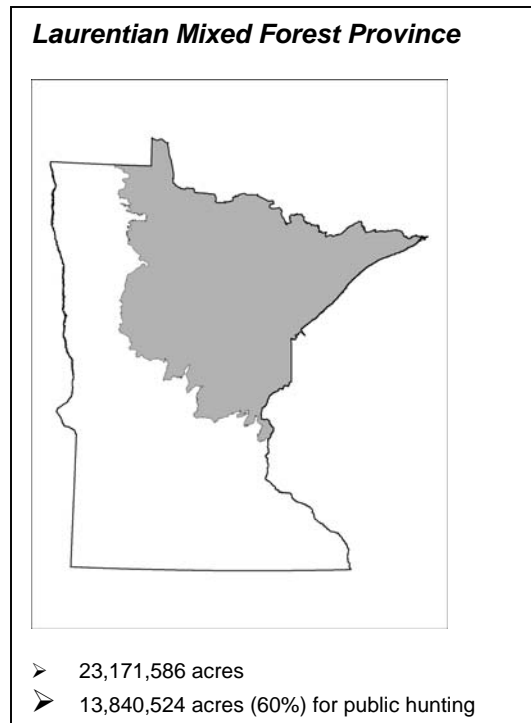
Regional Challenges:

- Areas of natural habitat are reduced and fragmented by human development along the corridor between Rochester and Saint

Cloud and around the Twin Cities. In addition, housing and development reduce the DNR's ability to manage land and access for hunting. It will be an ongoing challenge to maintain high quality habitats in this area in light of existing development pressures.

- People moving into these habitat areas are uninformed about wildlife and their needs.
- Tremendous recreational pressure, especially multi-use pressure, is being put on public lands.
- Some species of wildlife have adapted well to living in close proximity to humans, but cause additional problems. Local ordinances preclude hunting, which is FAW's primary management tool. High populations and numerous damage problems exist.
- It is difficult to provide assistance to small acreages and numerous landowners.
- High land values and local resistance make land acquisition difficult.
- WMA acreage open for hunting and trapping in this area should increase from current levels in the next ten years.
- There is potential for more cities to manage populations with hunting.
- Zoning, buffers, and land use rules should protect hunting and trapping use of WMAs in the 7-county metro area and 8 collar or ring county growth corridor.
- There is potential for open Space in metro corridors in the 7-county metro region to increase in size.

Laurentian Mixed Forest



The Laurentian Mixed Forest Province

comprises a large portion of the forested region of Minnesota and covers the northeastern two-fifths of the state. Before settlement, the region consisted of conifer, conifer-hardwood mix, or hardwood forest vegetation interspersed with meadows, openings, brushlands and open bogs. Once mountainous, this rugged area claims both the highest and lowest points in the state. Glaciers sculpted this landscape, leaving relatively thin deposits of till blanketing the bedrock in the northeast and deeper deposits in the southern and western portions. Boulders, outcrops, hills, numerous lakes, bogs, and vast tracts of forestland comprise Minnesota's scenic and much beloved "up north." Dense forests occupy the uplands, with bedrock lakes in the northeast, ice block lakes in the south and west, and large, open peat lands at lower elevations. This area contains the most important concentration of natural wild rice lakes in the United States, which are important cultural and natural resources.

Very large areas of public land exist in this landscape in the form of state, county, and

national forests, the Boundary Waters Canoe Area Wilderness, several national wildlife refuges, the Mille Lacs WMA, and others. Forming partnerships and coordinating with other public land managers is an important core function, as is involvement in forest policy and planning. Working to help ensure that a diversity of forest types, ages, and patch sizes exist in this landscape in order to sustain all native wildlife remains a challenge to FAW. Concerns regarding access for hunting are not as pronounced here as in other areas of the state; however managing conflicting uses poses a significant challenge. Generally, deer population management has been more effective in this province, but it remains a challenge.

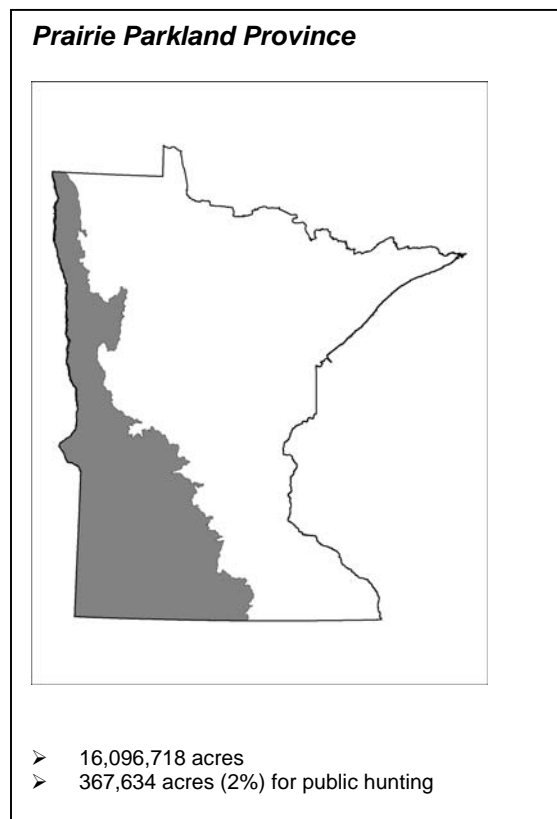
Characteristic and important wildlife species of the province include white-tailed deer, moose, ruffed grouse, sharp-tailed grouse, woodcock, loon, Canada goose, mallard, wood duck, ring-necked duck, black bear, timber wolf, beaver, fisher, marten, northern goshawk, boreal owl, black-throated green warbler, three-toed woodpecker, wood turtle, bald eagle, peregrine falcon.

Regional Challenges:

- Subsection Forest Resource Management Plans require significant commitment and staff time by wildlife managers to complete assessment, coordination, input, and review. Conflicting wildlife and vegetative objectives are challenging to resolve in landscape planning processes.
- WMAs need continual maintenance, GIS mapping, unit planning, development of habitat, and facilities.
- RIM, RIM Match, bonding, Heritage, and General Funds have been insufficient to maintain newly acquired wildlife habitat.
- Growing deer, bear, goose and beaver populations create damage and depredation complaints. Population goals and management of these species need additional attention.
- Large areas of industrial forests, mining lands, and power company lands are being sold or leased leading to more limited hunter access in the north.
- Forest resources continue to be fragmented and impacted by recreational demand and conflict, motorized vehicles, and rural development.

- Management of open landscapes of importance to sharp-tailed grouse and other species often conflicts with food management programs and requires intensive management.
- The scattered land base requires coordination efforts and partnerships with other governmental units and the private sector.

Prairie Parklands



The **Prairie Parkland** Province consists of two distinct sections, the Minnesota River Prairie and the Red River Valley. The **Minnesota River Prairie** section consists of the southern portion of the tallgrass prairie in Minnesota. Soils are generally rich and 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 increasing livestock confinement facilities. Agricultural services and small manufacturing dominate the small population centers.

Major wildlife lake/wetland resources include Swan Lake, Heron Lake and Marsh Lake.

Pheasant, waterfowl, and deer hunting are major recreational experiences in this section.

The **Red River Valley** section consists of the northern portion of the tallgrass prairie in Minnesota. It is separate from the southern portion due to the shorter growing season. Soils are rich clay and topography is level to gently rolling. The dominant landform 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 waterfowl and deer hunting.

Wetland drainage has been significant and only 10 percent of pre-settlement wetlands remain in most counties; losses have been the greatest in very intensively farmed areas and continue, especially to temporary or seasonal wetlands. In addition, few remnants of native prairie in Minnesota persist (< 1% remains) and supports populations of grassland species of nongame at low levels; some of which are rare or endangered.

Significant public land base (367,634 acres) exists, notably numerous Wildlife Management Areas including the Lac qui Parle and Talcot Lake WMAs, numerous Waterfowl Production Areas, and several national wildlife refuges.

Diminishing access for the purposes of hunting is a very significant issue. Hunting pressure on public land and waters is intense. Modern agriculture, development pressure, and human population growth have resulted in habitat degradation and loss; this is also creating resource and hunting conflicts. At the same time, many private landowners are acquiring land for wildlife values and hunting. Private partnership opportunities abound and expectations are high, often challenging FAW staff and funding resources. FAW's goal will be to collaborate with additional partners to provide the long-term habitat land base.

Characteristic and important wildlife species for the province include: waterfowl including Canada goose, mallard, blue-winged teal, wood duck; white-tailed deer, pheasants, prairie chicken, wild turkey, and red fox. There are also

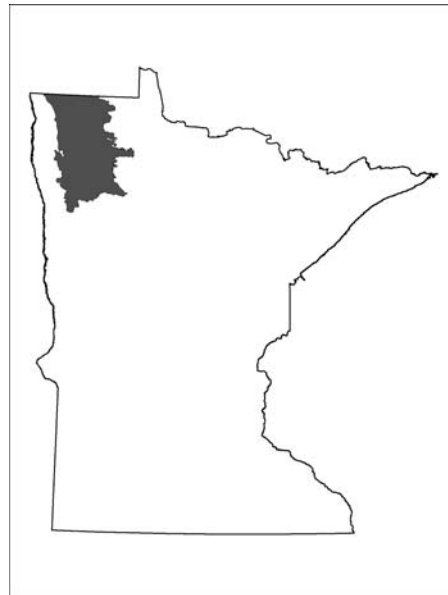
many endangered, threatened and special concern species found in this province, primarily due to scarcity of intact habitats remaining. Nongame and rare species include pelicans, terns, piping plovers, Topeka shiner, and trumpeter swans.

Regional Challenges:

- Intensive agriculture has impacted pheasant populations negatively and populations do not meet hunter expectations. This has been a significant challenge to FAW in southwest and west-central Minnesota.
- Waterfowl values on the remaining shallow lakes for resident and migrating waterfowl have deteriorated. Management of shallow lakes is complex, often controversial, and time consuming.
- Waterfowl migration use and the quantity and quality of waterfowl food resources have declined due to wetland losses, degradation of shallow lakes, conflicting wetland uses, lack of waterway buffers, shoreline development, and greater wetland connectivity (which leads to a higher exchange of exotic plant species, minnows, and other detrimental organisms). The establishment of additional waterfowl refuges will likely be very challenging.
- Hunters want expanded public hunting opportunities for pheasant and waterfowl.
- Securing funding and public support for the acquisition of native prairie, large blocks of grassland, existing wetlands with adjacent uplands, shallow lakes, seasonally flooded wetlands, restorable wetlands, key waterfowl migration habitat, and critical habitat for endangered, threatened, and rare species.
- Wildlife disease outbreaks (e.g., CWD, West Nile Virus, avian cholera) occur and need to be met by FAW.
- The suppression of ecological processes such as fire, in addition to tree planting, has allowed an increase in woody encroachment into native grassland habitats. This continues to negatively affect grassland nesting birds, including waterfowl.
- Native prairies continue to be lost.

Aspen Parklands

Aspen Parklands Tall Grass Prairie



- 2,907,589 acres
- 524,213 acres (18%) for public hunting

The Aspen Parklands Tall Grass Prairie Province is the transition zone between the western prairie of the Red River Valley and the eastern forest. It continues north and west through Manitoba, Saskatchewan, and Alberta. This section gets its name from the vegetation, which is a mosaic of aspen groves, prairies, and wetlands. The province is part of the Glacial Lake Agassiz lake plain. Low dunes, beach ridges, and wet swales mark the western edge. Calcareous fens and saline seeps occur in the west, resulting in special vegetative communities. These wet areas are a barrier that reduced both fire frequency and intensity, resulting in increased dominance by trembling aspen, balsam poplar, and shrubs. Farther east, the former lake bottom is a mosaic of prairie, wet prairie, wetlands, brush prairie and aspen-oak land. The soil often contains large boulders that restrict land use. Total annual precipitation is 20 –22 inches and annual average snowfall is 40 to 44 inches. This low amount of snowfall in combination with extreme cold and desiccating

winds resulted in a high frequency of spring fires.

The drainage network is not well developed. Streams meander and flow slowly. Flooding is common. Drainage is to the west and north to Hudson Bay. The major drainages are the Clearwater, Red Lake, Roseau, and Thief Rivers. Lakes are few, all of which are "wildlife lakes" that provide critical waterfowl migration and breeding habitat. Two very significant large wildlife areas, the Roseau River WMA and Thief Lake WMA, are located in this province, as well as several others including Caribou and Beaches WMAs.

In the past, the province had diverse populations of wildlife. Bison, elk, wolf, prairie chicken, sharp-tailed grouse, jackrabbit, coyote, and fox were all common. Bison were extirpated and elk were restored to a remnant population, but the wolf has returned to the province from northeastern Minnesota. Coyote and fox have become numerous, and prairie chickens and sharp-tailed grouse survive in isolated habitats. Waterfowl populations are greatly reduced except for Canada geese. Sandhill cranes are also common residents. Deer, moose, waterfowl, and sharp-tailed grouse are the major hunting opportunities in this section. Coyotes, fox, fisher, and beaver provide significant trapping opportunities. Rare communities, rare plants and rare animals exist in this unique province; some are endangered.

The emerging bird viewing on SNAs and WMAs is providing a new tourism "industry" from public land holding. Two small herds of elk also provide periodic hunting and additional tourism viewing opportunities.

In the north, large areas have been drained and farmed. Grazing, gravel mining, and agriculture are primary land uses. Some logging of aspen forests in the last 10 years has occurred. Shrubs or trees dominate the remaining unfarmed land as the result of fire suppression.

Agriculture services and small manufacturing has been the mainstay of the small populations centers.

Regional Challenges:

- Aspen has become much more prevalent since the time of settlement; fire suppression has allowed, "brush prairie" to become aspen parklands. Prescribed fire, timber harvesting and other mechanical removal may be required for wildlife management.
- Flood control is an ongoing issue in the Red River Valley that is fed by water from this province. Wetlands and wildlife habitat will relieve some of the flood stresses on the valley if restorations are funded, but could be damaged by inappropriate projects.
- Agricultural development continues to create habitat loss and degradation through direct habitat conversion. In addition, erosion is degrading terrestrial habitats and aquatic systems downstream.
- Agro-forestry is converting previously tilled agricultural land, grasslands and shrublands to short rotation woody crops.
- Gravel mining is disturbing the remaining dry prairie beach ridge native prairies, rare communities, and rare and endangered species.
- Hunting pressure on public lands and waters is intense and increasing. The ability to address wildlife population goals is a challenge because of private landowner values, access issues, and ownership patterns.
- Drainage has been significant. Wetland and prairie habitat restorations are important conservation activities that need to continue, including federal and private restorations.
- The management of elk in a mixed agricultural/natural environment has been controversial.

Appendix II. How Does the FAW Operate?

FAW uses a variety of tools to identify short-term and long-term work priorities and to actually manage wildlife populations and resources. A comprehensive system has been designed and adapted for the past 16 years in response to our dedicated funding and interested stakeholders and is being made incrementally more sophisticated and accountable every year.

This Strategic Plan is the broadest, future-driven perspective of planning for wildlife resources. It reflects the mandates, policy, and authorities prescribed by the legislature, the courts, and the executive branches of Minnesota government. This document takes a ten year perspective on wildlife resource needs and opportunities for the FAW. Long-range and annual work plans identify and direct staff and funding to priority department and FAW issues and mandates.

FAW focuses on many aspects of management, including: game and potential game species, landscapes, and programs like acquisition and hunter recruitment. In addition, this plan identifies continuing and expanded opportunities for coordinating management efforts for endangered or threatened species and natural communities with the Division of Ecological Services. To meet continuing needs of wildlife, species information and related landscape-based habitat assessment efforts are ongoing. Minnesota Wildlife Resource Assessment Project (MNWRAP) is a framework to link species management with habitats. There are challenges in habitat modeling that will be reflected in future refinements of MNWRAP. MNWRAP will design and implement a wildlife resource information system (e.g., legal status, season of use, habitat relationships, population trend, etc.) on all (550+) vertebrate wildlife species known to occur in Minnesota. The information system will complete a statewide species distribution and wildlife habitat relationship model for all (351) vertebrate wildlife species that are permanent residents or regularly breed in Minnesota. This data system is essential for the planned scientific management, protection, and use of wildlife resources.

In addition, FAW has taken a very aggressive approach to planning for the state WMA system. FAW has begun by using computerized geographic boundary delineation for all units. As the computer work is being reconciled with on-the-ground work, managers are writing management guidance documents. Every piece of property will have a management guidance document and biennially the tasks of land

development, operation, and maintenance can be determined and predicted using this information. The goals identified in completed SFRMPs will be reflected in updated management guidance documents.

The Strategic Plan, long-range species plans, landscape plans, WMA Acquisition Plans, and WMA Management Guidance Documents in addition to the CWCS plan will create a comprehensive wildlife agenda for the future. Every two years the Governor develops and recommends a biennial budget to the legislature. This budget is developed directly from the comprehensive plans of the FAW with guidance from the Executive Branch offices. Budgets are biennial and costs are managed on an annual basis. Throughout the biennium, program and spending course corrections are made so that the biennial cap is not exceeded.

The Wildlife Management System (WMS) is a tool that tracks funding from various federal, state, and private sources; distributes the funds between programs, regions, and areas; accounts for funds that are spent; and reports to the various interest groups that share a stake in the outcomes of Wildlife programs. The WMS is a dynamic system driven by multiple funding sources and their reporting requirements. The implementation of the WMS by every Wildlife staff person through accurate cost coding of time and expenditures insures precise information on FAW's efforts by funding source and activity.

FAW annually receives federal funds through the Pittman-Robertson Wildlife Restoration Act. Often called "PR" or "federal assistance", this money derives from excise taxes paid by manufacturers of firearms, ammunition and archery equipment. FAW received \$5.5 to 6.5 million in Wildlife Restoration Act funds each year in 2000 – 2003 (approximately 20% of its total budget). Federal assistance funds come to the FAW on a reimbursement basis. FAW must spend non-federal funds on approved wildlife management projects to "earn" federal assistance reimbursement. Most Wildlife Restoration Act projects provide a 75% reimbursement of state expenditures. Federal assistance reimbursement funds are deposited in the State's Game and Fish Fund where they are legally protected and can be used only by the DNR. It is very important that FAW's planning and management systems are designed and used to fully meet all the federal fiscal, management and operational, environmental and reporting requirements so that the FAW remains eligible to receive Pittman-Robertson Wildlife Restoration Act funds.

Appendix III. FAW Relationships Within the Department of Natural Resources

DNR Division	Division Purpose	FAW Interaction
Ecological Services	<p>The Division of Ecological Services collects, analyzes, and delivers vital ecological information including, but not limited to, state listed plant and animal species and natural communities, on-the-ground habitat protection, land acquisition, site management and ecological restoration. Ecological Services help citizens, leaders, and decision makers locate and manage rare resources (endangered and threatened species, critical habitats, high quality natural communities); manage threats posed by harmful exotic species, fish and wildlife diseases, and negative environmental impacts of human development; manage and restore important ecological processes in river systems and on key natural areas; and build a deeper understanding about Minnesota's ecosystems and their significance to a sustainable quality of life.</p> <p>Ecological Services is in the process of developing the <i>Comprehensive Wildlife Conservation Strategy</i> for rare, declining and vulnerable wildlife species of greatest need. FAW has supported and been a part of this process. Upon completion, FAW will collaborate with Ecological Services on implementation of this plan.</p>	<p>Natural heritage feature review for WMA habitat and facility projects Natural heritage feature review for environmental reviews and interagency technical guidance Wildlife habitat management on WMAs for hunting, trapping and observations Wildlife habitat and population technical guidance to public and agencies Resolution of wildlife problems and conflicts Wildlife population inventories Monitor and protect wildlife health Comprehensive lake management planning Aeration permits for shallow lakes and wetlands Lake rehabilitation through removal of undesirable fish species Competing uses of wetland and shallow lakes for bait and fish rearing Shoreline management Environmental review ; Wetland Conservation Act (no net loss of wetlands) Collaborate on and support Nongame Wildlife 10 Year Strategic Plan Collaborate on and support State Comprehensive Wildlife Conservation Strategy River restoration and dam modifications FERC relicensing of hydro-electric dams Aquatic Plant Management especially emergent vegetation removal and/or restoration</p>
Enforcement	<p>The Division of Enforcement is responsible for enforcing natural resource laws. This includes state law and regulations related to hunting, commercial and sport fishing, trapping, fur buying; rules pertaining to state parks, campgrounds, and recreational areas under DNR jurisdiction; harvest of wild rice crop. The Division of Enforcement supervises Advanced Hunter Education, Bowhunter Education, Firearm Safety, Snowmobile Safety, Off-Highway Motorcycle and All-terrain Vehicle Safety. The Division provides pilots and aircraft for aerial surveys. . Enforcement also assists with control of wildlife diseases by providing assistance in collecting samples for diagnostic testing. Special hunt assistance is provided to Parks, Wildlife and outside agencies.</p>	<p>Hunting and trapping regulations WMA enforcement Wild rice harvest Firearm Safety, Advanced Hunter Education, Bowhunter Education Programs Aerial surveys of deer, moose, beaver, pheasant, waterfowl</p>
FAW/Fisheries	<p>The FAW/Fisheries is responsible for managing the diverse fisheries in Minnesota's 5,400 game fish lakes and 15,000 miles of streams and rivers. Certain Aquatic Management Areas (AMA) serve similar purposes as WMAs by providing hunting opportunities.</p>	<p>Comprehensive lake management planning Aeration permits for shallow lakes and wetlands Lake rehabilitation through removal of undesirable fish species Competing uses of wetland and shallow lakes for bait and fish rearing Shoreline management</p>
Forestry	<p>The Division of Forestry exists to provide a long-term sustainable yield of forest resources from state forest lands; improve the health and productivity of other public and private forest lands; and protect life, property, and natural resources from wildfires, This is primarily accomplished through fire management, state land management, and cooperative forest management.</p>	<p>Subsection forest resource management planning WMA timber sales Cooperative wildlife habitat improvement projects on state forests Maintain CSA forest inventories on WMAs Annual stand exam lists, stand prescriptions, and forest development projects Forest certification of forestlands on WMAs Participates in Regional Prescribed Fire Teams lead by Forestry Private landowner assistance</p>

FAW Relationship Matrix, continued

DNR Division	Division Purpose	FAW Interaction
Lands & Minerals	The Division of Lands and Minerals manages the state's mineral resources for the benefit of all Minnesotans and provides a range of real estate services supporting the resource goals of the Department. The Division manages mineral exploration and mine development on state-owned and tax-forfeited lands in Minnesota to generate equitable rental and royalty income for the state's School and University trust funds, local communities, and the state's General Fund.	WMA acquisitions WMA land exchanges WMA land sales WMA leases, licenses, easements, cooperative farming agreements WMA gravel sales WMA boundary surveys
Parks and Recreation	The Division of Parks and Recreation administers a system of state parks and state recreation areas. These units are managed to preserve & perpetuate natural, cultural and scenic resources as well as provide appropriate educational and recreational opportunities to the public.	Aerial deer surveys to develop deer management plans for parks Special deer hunts in parks Technical guidance on nuisance wildlife management Rare species protection/management Species re-introductions Shallow lakes management
Trails and Waterways	The Division of Trails and Waterways is responsible for the operation and management of over 1100 state trails, 1560 public water access sites, 280 fishing piers and shore fishing sites, 26 designated canoe and boating routes. Through grants-in-aid funding, with local units of government, the Division administers more than 19,000 miles of snowmobile, recreational motor vehicle, and cross-country ski trails.	OHV state trail planning Public waters access sites on WMAs Maximize efficient use of T&W part-time staff by making available temporary Wildlife assignments on turkey relocation crews and summer WMA projects
Waters	The Division of Waters manages water resources through public water and water appropriation permits, shoreland management, floodplain management, wild and scenic river management, environmental review, local water planning, wetlands conservation, and Project WET education.	Wetland and shallow lake management and technical guidance Environmental review (e.g., public waters and wetlands permit applications) Wetland Conservation Act – no net loss of wetlands Comprehensive lake management planning