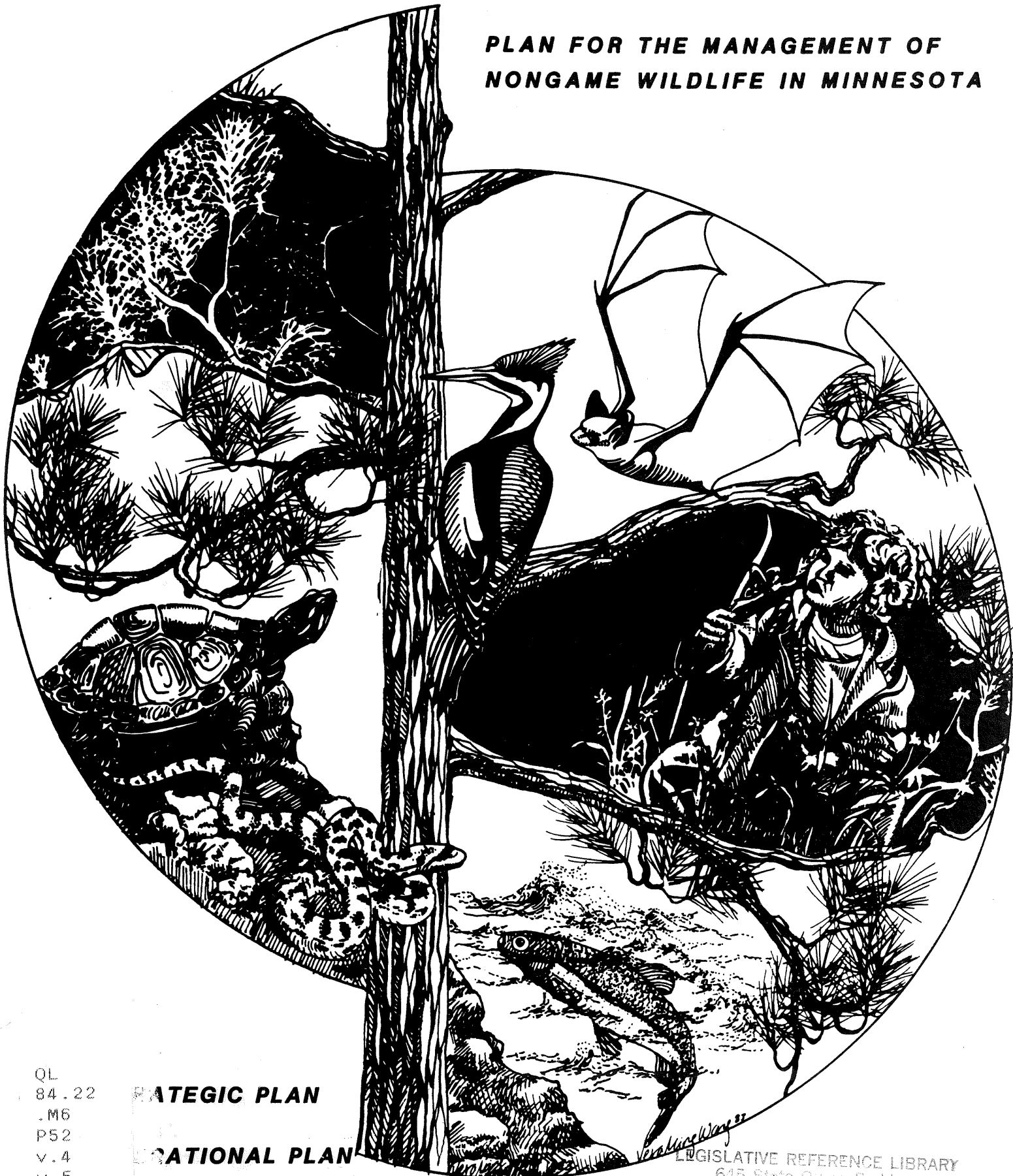




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PLAN FOR THE MANAGEMENT OF NONGAME WILDLIFE IN MINNESOTA



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STRATEGIC PLAN

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Nongame Wildlife Program

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Plan Volumes

Vol. 1 The Planning Concept - Issued 2/83

Vol. 2 Resource Analysis - draft Issued 9/15/83

Vol. 3 Issues - Issued 10/84

Vol. 4 Goals and Strategies - Issued 11/86

Vol. 5 The Operational Plan-11/86

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Plan for the Management of Nongame Wildlife
In Minnesota

Volume 4 - The Strategic Plan

Volume 5 - Operational Plan

Date: November 1, 1986

Minnesota Department of Natural Resources

Division of Fish and Wildlife

Nongame Wildlife Program

St. Paul, Minnesota

Funded by: Minnesota citizens through their donations to the Nongame
Wildlife Fund.



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INTRODUCTION

This document is the final and most important part of the Plan for the Management of Nongame Wildlife in Minnesota. It is based on the three preceding planning documents that have described the planning process (Volume 1 - The Planning Concept), reviewed the condition of the nongame resource (Volume 2 - Resource Assessment), and identified eight major resource management issues (Volume 3 - Issues.)

The Strategic Plan

The first part of this document constitutes Volume 4 - The Strategic Plan for the management of the state's nongame wildlife resources. The purpose of the strategic plan is to present the mission, goals, objectives, strategies, policies, and operational guidelines that the Division of Fish and Wildlife's Nongame Wildlife Program will pursue in order to meet its mandates and address the eight resource management issues. In so doing, the Strategic Plan will define the Department of Natural Resources' direction in nongame resource management through 1989.

The information is presented in eight chapters which correspond to the eight issues identified in Volume 3. The order in which the chapters are presented reflects the priority of the issues as expressed during public review of the draft version of Volume 4. A summary of the public review comments regarding priorities and preferred strategies is available for review in the St. Paul office.

The chapters are introduced by an Issue Statement and a Goal Statement. The issues and goals have been delineated by Program staff with the assistance of a Technical Advisory Committee of Department of Natural Resources personnel and through review by interested citizens and agencies. The goal statements represent the Nongame Wildlife Program's general management direction for identified issues. The goals are based in part on the Department's statutory responsibilities for the state's wildlife resources.

The strategic plan is the framework within which the Nongame Wildlife Program's annual work plans will be implemented. The objectives serve as targets against which the Program's performance and activities will be evaluated over the next four years. These objectives have been established by Program staff, based in part on the past five years of experience.

The objectives are followed by a discussion of the strategies and activities or plan of action the Nongame Wildlife Program will pursue during fiscal years 1986 through 1989. The strategies were developed by Program staff in consultation with Department administrators and representatives of various divisions. The strategies are based on citizen preferences and on personnel, fiscal, statutory or other considerations reflected in the management policies or operational guidelines. Recommendations for actions that others might implement to assist the Program's efforts on behalf of the nongame resources are also presented.

The Operational Plan

The second part of the document constitutes Volume 5 - The Operational Plan which identifies the actual jobs or actions the Nongame Wildlife Program will undertake during 1986-1989. Throughout the planning effort, Program staff and citizen participants have been identifying these specific actions, termed "Opportunities" in Volume 3, which government agency personnel or even private citizens might undertake to address a particular resource management issue. These opportunities have been variously combined and integrated in Volume 5 as specific Program actions. The operational plan converts the objectives and strategies of Volume 4 to management actions by allocating money and manpower to specific projects. A more detailed operational plan is now being prepared as part of the Division of Fish and Wildlife's Comprehensive Plan.

The Department of Natural Resources Goal

To achieve optimum and beneficial natural resources planning, protection, and development responsive to public need, consistent with resource potentials, and for the social, spiritual and economic well being of both present and future generations through an effective and efficient organization.

Policy Directive No. 19

May 22, 1972

Mission Statement

Division of Fish and Wildlife

TO PROTECT AND MANAGE MINNESOTA'S FISH, WILDLIFE, AND NATIVE
PLANTS AND THEIR COMMUNITIES FOR THEIR INTRINSIC VALUES AND
LONG TERM BENEFITS TO THE PEOPLE OF MINNESOTA.

Mission Statement

Nongame Wildlife Program

- * To conserve Minnesota's native nongame wildlife resources for their functional value in ecosystems so that genetic diversity and richness of the natural world are maintained.
- * To enhance, maintain, and/or restore self-sustaining populations of endangered and threatened wildlife to prevent their extinction. To prevent the decline of additional wildlife populations to endangered or threatened status.
- * To enhance citizen awareness, appreciation, understanding and concern for wildlife so that constructive actions will result on behalf of the nongame resource and citizens will derive greater pleasure and enjoyment from the presence of that resource.
- * To foster comprehensive stewardship for all natural resources through programs that recognize the interdependence and limits of the natural environment.

NONGAME WILDLIFE PROGRAM FUNDING

Issue: The Nongame Wildlife Program is financed by voluntary donations to the nongame wildlife management account and has generated significant support from Minnesota citizens. However, wildlife checkoff programs are vulnerable to declines in revenue due to competing checkoffs, changes in tax forms and tax structure, and problems associated with sustaining citizen participation. Long-term stability and success of the Program will depend on expanded funding to include additional revenue sources. Significant increases in revenue cannot be expected without new legislative initiatives.

Goal: TO BROADEN AND MAINTAIN THE FUNDING BASE SO THAT THE NONGAME WILDLIFE PROGRAM MAY CONTINUE TO PROVIDE EFFECTIVE, LONG TERM BENEFITS TO THE NONGAME RESOURCE AND TO THE PUBLIC.

Objectives: FY 1986 - 1989

- * To develop and operate a statewide nongame wildlife resource management program with an annual budget of \$1.5 million, with half of the funding to be derived from voluntary donations to the nongame management account.
- * To increase total revenue from citizen donations by at least 5% annually in order to maintain funding at a minimum equivalent to \$750,000.00 in 1985 dollars.
- * To secure an additional \$750,000.00 of annual operating revenues from sources other than citizen donations.

Strategy: There are five aspects to the Nongame Wildlife Program's strategy to assure sufficient revenue and efficient expenditure of fund:

- * Continue, modify and improve the annual checkoff promotion campaign to inform citizens of Program accomplishments and encourage their expanded financial support.
- * Conduct a study to determine motivation for citizen participation in the checkoff and to define the most effective marketing and promotion techniques.
- * Seek substantial new revenue through appropriations from the State's general fund monies or other compulsory revenue sources so all Minnesotans who benefit share the cost.
- * Participate in all opportunities to obtain matching funds or cost sharing from federal, state or private sources.
- * In conjunction with the Division's operational planning effort, establish budget guidelines and spending priorities which assure efficient expenditure of funds.

Management Policy and Operational Guidelines - Maintaining Program funding is the responsibility of the Program Supervisor and Wildlife Section administrators who will monitor program activities within the following guidelines:

- . Checkoff funds shall not be used for game species.
- . Not more than 5% of the checkoff revenue will be direct expenditures for promotion of the checkoff or other fund raising efforts.
- . The Nongame Wildlife Program will minimize use of commercial advertising time or space and instead will use free public service opportunities to inform interested citizens.

Recommendations to others of actions they might undertake to assist in resolving the issue:

MN DNR, Division of Fish and Wildlife - seek expanded federal funds to cost share nongame projects; seek one-to-one match of state funds through RIM or other funding initiatives.

Minnesota Legislature - provide one-to-one match of state funds to checkoff revenues from citizen donations.

Minnesota Citizens - Increase checkoff participation, support state and federal matching fund legislation.

Department of Revenue - Continue cooperation in upgrading tax checkoff program.

U.S. Fish and Wildlife Service - Obtain appropriations to fund the Fish and Wildlife Conservation Act of 1980 which provides federal funding to states for nongame management activities.

DATA ACQUISITION

Issue: Information on the ecological, social, and economic values of nongame species is essential to adequately preserve and protect the nongame resource. Successful conservation requires biological information, accessible data, and knowledgeable personnel trained to interpret the facts.

GOAL: TO OBTAIN ALL INFORMATION NECESSARY TO PROPERLY MONITOR, MANAGE, USE AND MAINTAIN MINNESOTA'S NONGAME RESOURCES.

Objectives: FY 1986 - 1989

- * To formulate and implement an eight year program of basic biological and applied research for priority species and management considerations.
- * To design and implement at least five new inventory and monitoring or other research projects.
- * To compile all new data and to evaluate the status of animals designated endangered, threatened or special concern once every three years as prescribed by Minn. Stat. 84.0895 (see ENDANGERED SPECIES chapter).
- * To encourage a Division research initiative to define the socio-economic benefits of wildlife resources in Minnesota.
- * To publish research results in a format readily available to interested individuals.

Strategy: The approach to resolve the data acquisition issue will be three fold. First the program will free the Nongame Zoologist from 50% of her current administration responsibilities by:

- * Hiring a 90% Natural Resource Specialist 3 to manage the small grants program and undertake all environmental review and technical assistance activities currently accomplished by the Zoologist, and by
- * Continuing the small grants program, but only on a biennial basis, with a request for proposals once every two years.

The intent is to provide the Nongame Zoologist and Program personnel with time to plan the future direction of existing and new research efforts.

Secondly, the Nongame Wildlife Program will continue to build on the advances and success of the data acquisition efforts to date including:

- * Continuation of research that focuses first on endangered, threatened and special concern species, and then on more abundant resources (see ENDANGERED SPECIES chapter).
- * Use of contract researchers to accomplish most research initiatives.
- * Assignment of Regional Nongame Specialists, to: 1) participate in census and survey to a maximum of 25% of their time and 2) to implement management actions defined by research particularly on state lands (see WILDLIFE HABITATS chapter)

Additionally, the Nongame Wildlife Program will encourage participation by the Division of Fish and Wildlife with the U.S. Fish and Wildlife Service and the University of Minnesota in studies to determine the social and economic values of the state's wildlife resources.

Management Policy and Operational Guidelines: The Nongame Wildlife Program cannot possibly collect pertinent data on all nongame species. The research effort must be directed toward the most critical needs first. Consequently, the current focus on biological and applied research leading to management for endangered, threatened, and special concern species will continue. During the next two biennials, priorities for other census, survey, monitoring or research projects will be established, and funded in balance with other program activities and as new revenues become available. The following guidelines will apply to the Nongame Wildlife Program's research efforts:

- . Seek opportunities to cooperate and cost share with other agencies and individuals in efforts to generate the necessary information.
- . Select cost effective means for acquiring specific data and seek expertise within and outside the state wildlife agency.
- . Address all vertebrate classes as well as selected invertebrates, wildlife habitats, and communities in data acquisition efforts.
- . Design data acquisition efforts to address specific resource problems and provide direction for subsequent management actions by the Nongame Wildlife Program and other Department personnel.
- . Train volunteers to collect certain information where practical and feasible.

- . Spend up to 30% of the Program's annual budget for research and for information management as described in the next chapter.
- . Initiate socio-economic studies regarding nongame resource as the opportunity arises.
- . Through the small grants program, encourage university personnel to conduct nongame wildlife research projects in Minnesota.

Recommendations to:

U.S. Fish and Wildlife Service - establish a cooperative Fisheries and Wildlife Research Unit in Minnesota.

U.S. Forest Service - Continue and expand research on nongame wildlife habitat requirements and management considerations.

Division of Fish and Wildlife - Initiate socio-economic and user demand and attitude studies.

Section of Fisheries - Cooperatively identify fish species that shall be considered nongame; expand work to assess the abundance, distribution and status of nongame fishes; and participate in funding Project WILD.

INFORMATION MANAGEMENT

Issue: Information management and Nongame Wildlife Program administration require an up-to-date and accessible data system compatible with other natural resource data bases.

Goal: TO ESTABLISH A NONGAME DATA MANAGEMENT SYSTEM THAT IS ACCESSIBLE AND COMPATIBLE WITH OTHER NATURAL RESOURCE INFORMATION SYSTEMS THAT WILL BE USED TO FORMULATE MANAGEMENT ACTIONS TO SUSTAIN POPULATIONS OF NONGAME SPECIES.

Objectives: FY 1986 - 1989

- * To provide and maintain readily accessible, computerized data bases for all state listed wildlife species and for selected species of special interest including colonial waterbirds and loons.
- * To provide monthly updates of information on rare fauna to the Natural Heritage Program to maintain the existing data base on rare and endangered resources.
- * To annually prepare two publications on research findings in professional and/or popular journals, periodicals or special reports.
- * To provide resource information on request and within 30 days for use in the review or preparation of environmental impact documents, proposals for land acquisitions or exchanges, management plans or resource assessments.

Strategy: Past experience has shown that the most effective way to reduce the data backlog, improve accessibility, and design new information management procedures is to assign permanent, full-time personnel with biological and/or computer expertise to the task. This approach will be accomplished in a stepwise manner and has already been initiated. Actions to date include:

- * Conversion of the Natural Heritage Program's secretary/technician to a full time Data Manager position. Secretarial duties have been assumed by the Section of Wildlife's Research Unit personnel. The Nongame Wildlife Program is funding 25% of the Data Manager position to design information management systems, enter nongame resource information into the Heritage data base, and compile nongame resource information in response to requests from others for technical assistance.
- * Conversion of a temporary position within the Nongame Wildlife Program to a permanent part-time (60%) Natural Resources Wildlife Technician to update and maintain existing data bases.
- * Institution of a moratorium on new surveys during the 1985 - 1986 biennium to allow the Nongame Zoologist to focus on assessing new data acquisition needs and designing an eight-year research program (see preceeding chapter on DATA ACQUISITION.)

Additional actions to be accomplished as a part of the Program's strategy during 1986 -1989 include the following:

- * The Nongame Wildlife Program and Natural Heritage Program staff will jointly improve their understanding of the types of nongame resource information needed within the Division and Department of Natural Resources and among other private, state, or federal interests. This will be accomplished through interviews and other techniques.
- * Once priorities for needed new information have been established (see previous chapter) the Nongame Zoologist will seek assistance of the Section of Wildlife's biometrician, computer programmer, programmer/analyst and the Natural Heritage Program's data manager and other Department personnel to design, implement and operate new information management projects to meet field and central office needs.

- * Determine the types of nongame research information needed within the Department and among private, state and federal interests.
- * Assess the need to develop a new comprehensive data management system for use with common species.
- * Contract with outside consultants as necessary to assist in needs assessment, system design, and integration of new systems with other data bases.
- * Compile and make available upon request, information on the status, distribution, abundance, habitat requirements, and management needs of nongame resources.

Management Policy and Operational Guidelines: The Nongame Wildlife

Programs information management efforts will be developed within the following guidelines:

- . Create a centralized data base located in St. Paul but linked by computer terminals to field offices.
- . Design the data systems to meet Nongame Wildlife Program field and central office needs first, yet in a manner consistent with the Department's Management of Information Systems Plan.
- . Interface the data system with existing Department data bases, particularly that of the Natural Heritage Program.
- . Publish findings of research projects within one year of completion.
- . Prepare and distribute summaries of ongoing research each biennium.
- . Restrict access to the data bases as appropriate to protect the sensitive nature of certain data.

Recommendations to:

MN Dept. of Natural Resources - Support the development of a sophisticated and efficient information management system for nongame species that is appropriately integrated with other information management systems throughout the Department.

Div. of Fish and Wildlife - Develop an appropriate computer network to make Natural Heritage/nongame data accessible to regional and area offices; implement cost accounting and comprehensive planning.

Division of Forestry - Cooperatively develop and implement an appropriate strategy for integrating Natural Heritage/nongame data with the Phase II Forest Inventory data base.

Division of Parks - Cooperatively develop and implement a process for integrating Natural Heritage/nongame data into state park management activities and planning.

U.S. Fish and Wildlife Service - Cooperatively develop complete data bases on selected species. In particular, share information between the Endangered Species Information System and the DNR Natural Heritage and Nongame Program data bases.

ENDANGERED AND THREATENED SPECIES

Issue: There is a need to identify and manage Minnesota's native species that have declined in number and distribution and are extirpated, endangered, threatened or of special concern.

Goal: TO MAINTAIN AND ENHANCE VIABLE POPULATIONS OF ENDANGERED, THREATENED, OR SPECIAL CONCERN SPECIES TO PREVENT THEIR EXTINCTION AND MAINTAIN MINNESOTA'S NATURAL DIVERSITY.

Objectives: FY 1986 - 1989

- * To provide a list of endangered, threatened and special concern species and re-evaluate the listing every three years.
- * To increase and/or maintain self-sustaining populations and upgrade the status of eight endangered or threatened species by 1989.

1986 - 1987

Peregrine falcon
Trumpeter swan
Bald eagle
Piping plover

1988 - 1989

Five-lined skink
Wood turtle
Sandhill crane
Common tern

- * To reestablish breeding populations of the trumpeter swan at two locations by 1990.
- * To reestablish a breeding population of the peregrine falcon, an endangered species, by 1990.
- * To prevent the decline of any additional native wildlife species to threatened or endangered status.
- * To expand statutory protection for selected native invertebrates and to broaden protection of the state's native herptofauna.

Strategy: Management, research, and educational projects to restore endangered, threatened or extirpated fauna and to prevent the decline of other nongame resources will continue to be a major Nongame Wildlife Program priority. Within the Section of Wildlife, the Nongame Wildlife Program, Natural Heritage Program and Scientific and Natural Areas Program will continue to work cooperatively to conserve endangered and threatened wild animals and plants as prescribed by Minnesota statute 97.488. The Nongame Supervisor will remain the Division's designated endangered species coordinator. New staff will not be added at this time to address this issue.

The assignment of responsibility among the Divisions' three programs will be as follows:

- 1) Research, monitoring, management, listing and public education for listed animals and other nongame resources - Nongame Wildlife Program.
- 2) Research, monitoring, management, listing and public education for rare plants and plant communities; and operation of rare species data base; public lands inventory and Natural Heritage Registry - Natural Heritage Program.
- 3) Acquisition and/or designation of lands as Scientific and Natural Areas and development of management programs on such lands for the protection of special resources, including threatened and endangered species - Scientific and Natural Areas Program.

The Nongame Wildlife Program's approach during 1986 - 1989 will consist of:

- * Revision of statutes to protect selected native invertebrates and to broaden protection of the state's native heptofauna.
- * Cooperation with the U.S. Fish and Wildlife Service, adjacent states, other governmental agencies and private organizations to finance and implement projects to retain and enhance endangered and threatened resources.
- * Implementation of specific management and research efforts, particularly on Department lands, and in cooperation with other divisions, to improve the status of listed species.

- * Expanded efforts to inform other Departmental personnel and the general public of the importance of endangered and threatened resources and of the efforts needed to protect and enhance these resources.
- * Restoration of breeding populations of the trumpeter swan and peregrine falcon by 1990.

Specific activities to be accomplished by Nongame Wildlife Program personnel include the following:

- Publication of a book on the endangered, threatened, and special concern species of Minnesota in cooperation with the Natural Heritage Program, the University of Minnesota Press and private participants.
- Presentation of two in-house training sessions for Department personnel on endangered resources in 1986 and again in 1988.
- Annual distribution of one public education product specifically on endangered and threatened resources and what the Department and others are doing to benefit these resources.
- Annual implementation, within each DNR region, of at least one research or management project for endangered, threatened or special concern species on DNR lands.
- Preparation of policy, guidelines and procedures regarding management of rare and endangered resources on Department of Natural Resources lands.
- Provide information annually to the public on the Department's endangered species management actions.

Management Policy and Operational Guidelines: The Nongame Wildlife Program supervisor will work with the Department's Office of Planning and representatives of other Programs and Divisions to prepare a formal, Department policy on endangered resources by 1987. In the interim, the Program will continue to operate within the following guidelines:

- . Minnesota Stat. 84.0895 - Protection of Threatened and Endangered Species.
- . Commissioner's Order No. 2204 - Regulations for the issuance of special permits for the taking, possession, importation, transportation, purchase, sale and disposal of endangered or

threatened species of plants and animals.

- . Department of Natural Resources' Guidelines on Wildlife Rehabilitation - Small Mammals and Birds which becomes effective in 1986 and includes discussions on rehabilitation of endangered, threatened and special concern species.
- . The conditions and considerations set forth in existing or future formal cooperative agreements on endangered/threatened species between the Department of Natural Resources and other government agencies or private entities.

Additionally, the Nongame Wildlife Program will be guided in the management and protection of endangered, threatened and rare resources primarily by the recommendations from its research projects and by the advice of the members of the Endangered Species Technical Committee as presented in the 1983 report (Minnesota Department of Natural Resources, 1983). The Program will focus first on those resources most in jeopardy (endangered species, prairie and wetlands communities). It will continue to support and/or coordinate with private initiatives to benefit such resources as the task is larger than one agency can address alone. The Program will also continue to focus on all vertebrate species and selected invertebrate species.

It has been decided that Department activities on behalf of the gray wolf will remain the responsibility of the regular management portion of the Section of Wildlife. However, during the 1985-87 biennium the Nongame Wildlife Program will consider the alternatives for limited cooperative participation on some aspect of gray wolf management.

Reintroduction of extirpated species will not be undertaken by Nongame Wildlife Program personnel unless and until a statewide recovery plan for the species has been prepared and approved and adequate funding is available.

The Nongame Wildlife Program will continue to spend approximately 10% of its annual operational budget, (exclusive of research expenditures) to manage, protect, and conserve endangered and threatened resources.

Recommendations to:

U.S. Fish and Wildlife Service, Forest Service and National Park Service

- maintain and expand existing commitments to endangered/threatened species management on federal lands statewide through cooperative agreements with the Division of Fish and Wildlife and other means; seek expanded appropriations for endangered species management and seek to maintain strong federal endangered species protection mandates.

U.S. Fish and Wildlife Service - Expand cost share funding with the Division by seeking increased appropriations to the federal Endangered Species Act, particularly Section 6; approve and adopt a full authorities cooperative agreement with the state agency; continue nesting bald eagle inventory and aerial survey.

Department of Natural Resources - Develop a policy and guidelines on endangered/threatened species protection and management on Department administered lands.

Division of Fish and Wildlife - Section of Wildlife - Develop and/or implement long range and/or recovery plans and management programs for:

Greater prairie chicken, sandhill crane, caribou, elk, and gray wolf.

Section of Fisheries - Expand work to assess the abundance, distribution and status of all Minnesota fishes, particularly those not taken by anglers.

Natural Heritage Program - Complete a full authorities cooperative agreement between the Division of Fish and Wildlife and the U.S. Fish and Wildlife Service that includes state listed plant species.

PUBLIC AWARENESS AND PUBLIC PARTICIPATION

Issue: Public awareness, understanding and appreciation of wildlife needs and values must be developed in order to enhance public participation and insure future wildlife resources. A well-informed citizenry is the most important advocate for wildlife conservation.

Goal: TO CREATE PUBLIC AWARENESS, UNDERSTANDING AND APPRECIATION OF NONGAME WILDLIFE THEREBY GAINING PUBLIC SUPPORT FOR RESEARCH, MANAGEMENT AND THE MAINTENANCE OF HABITAT FOR THESE VALUABLE NATURAL RESOURCES.

Objectives: FY 1986 - 1989

- * To annually assist in the distribution and implementation of one comprehensive wildlife oriented education program such as Project WILD for use by schools in Minnesota.
- * To annually provide 25,000 citizen volunteer opportunities to participate in resource protection and/or habitat enhancement through projects such as bluebird recovery, loon surveys, Woodworking for Wildlife, and backyard wildlife habitat development.
- * To provide 250,000 additional recreation days of nonconsumptive wildlife use annually through such projects as a wildlife watchers' guide.
- * To provide information and education materials to 100,000 citizens annually on matters of resource protection and management.

Strategy: The Nongame Wildlife Program has chosen to focus its education and information efforts on three broad audiences. The first audience is comprised of the resource professionals within the Department of Natural Resources and other governmental agencies. This approach is compelled by the knowledge that the future availability of wildlife is dependant on the management and regulation of the State's air, water, soils, minerals and timber resources in ways considerate and consistent with the needs of wildlife. The specific aspects of the Program's approach are discussed in the following chapter on COORDINATION.

The other two audiences are the citizens of Minnesota in general and elementary and secondary school children in particular. A large number of Minnesotans are already interested in and concerned about the states wildlife resources. However, many citizens are indifferent to wildlife and its habitat and prejudice and fear of certain species exists.

The conflicts arising from these contrasting points-of-view, as well as the inadequate understanding of wildlife population dynamics and ecology on the part of many citizens, sometimes result in the destruction of wildlife populations or habitats. To address these conflicting attitudes, the Nongame Wildlife Program recognizes the need to:

- 1) raise the general publics' level of appreciation of wildlife species, their habitat requirements, management needs and protection status,
- 2) increase citizen awareness of Minnesota's nongame species and the work of the Nongame Wildlife Program,

- 3) change negative attitudes toward certain species,
- 4) better understand public attitude, the extent of public interest and knowledge of wildlife, the type of wildlife experiences Minnesotan's desire and the areas of misinformation, and
- 5) increase the opportunity for citizen participation in preferred wildlife experiences.

In response to the first two needs, the Nongame Wildlife Program has focused first on school children by providing funding since 1983 to make Project WILD, a supplemental environmental education curriculum, available to all Minnesota schools. As long as the demand from teachers persists, the Nongame Wildlife Program will continue to fund a Minnesota Conservation Corps position to coordinate the Project WILD effort. Additionally, Program personnel will develop special projects such as "Loons to Loan", a natural history poster series, slide/tape programs on nongame topics and the "Blazing Star" newsletter for distribution to schools and other interested citizens through the Minnesota Environmental Education Board (MEEB), DNR Bureau of Information and Education, general mailings and workshops. In response to the third informational need defined above, these projects will focus, not only on endangered and threatened resources, but also on unknown or unappreciated species, and on nuisance wildlife.

During fiscal year 1987, the Nongame Wildlife Program, the Section of Wildlife's Population and Research Unit and University of Minnesota wildlife researchers will jointly initiate studies to define user demand and the socio-economic implications of nongame wildlife resource

management in Minnesota. Such studies would be designed to improve the agency's understanding of its clientele's interests or needs and the benefits derived from its management actions.

Program personnel want to inform citizens of opportunities for positive interactions with wildlife around their homes and throughout Minnesota. Consequently, the Program will continue to provide extension services, the winter series of wildlife workshops, and each biennium will produce a booklet describing activities citizens can undertake. The first booklet, "Woodworking for Wildlife" was produced in 1985. "Landscaping for Wildlife" will be released in 1987, to be followed in the third biennium by a booklet on wildlife watching.

Whenever possible, existing educational materials will be acquired and adapted to Minnesota for distribution through the existing network of MEEB volunteers, the Minnesota's Naturalists Association, park interpretive programs, and local conservation groups. Programs that stress the habitat needs of wildlife and illustrate basic ecological principles in resource management will receive priority consideration. Volunteers from Hennepin County vocational school's audio visual department have developed a number of these programs and this successful approach will be continued.

All of these activities recognize the provision of public education and public participation opportunities as a primary obligation of the Nongame Wildlife Program. The Program will continue to design its efforts to be complementary to the Department's commitment and capabilities in the area of public information and environmental education. As joint projects are undertaken with the Bureau of

Information and Education and the Minnesota Environmental Education Board, cooperative working relationships are evolving.

The Nongame Wildlife Program can best serve to provide the scientific expertise and funding for cooperative projects, while the Bureau of I and E can provide the audio-visual technical expertise. The Nongame Wildlife Program will, therefore, make \$4,000.00 available each biennium toward the purchase and replacement of materials in the Bureau's film and slide libraries and for printed materials on nongame topics. It will also continue to finance the development and production of its own new education units and to provide copies of its new slide/tape programs to the naturalists with the Division of Parks.

The Program will also continue to promote the availability of such material among its various clientele. In return, the Program looks to the Bureau to serve as a Departmental clearinghouse to coordinate and direct the educational efforts among the various Divisions, expand its information coverage of Nongame Wildlife Program activities through new's releases and feature stories, and provide technical personnel for the production (layout, typeset, slide duplication) of new materials.

Coordination with the Minnesota Environmental Education Board will be undertaken at the regional level. The regional nongame specialists will continue to volunteer as members of MEEB's regional environmental councils, as workshop instructors and/or to contribute funding to selected educational projects at the local and regional level. The primary cooperative initiative at the state level will be the joint sponsorship of Project WILD. This approach maintains the focus on school children as a primary audience.

Management Policy and Operational Guidelines: The Nongame Wildlife Program recognizes the desire of some citizens to participate directly in resource conservation. Therefore, the Program will continue to support the Section of Wildlife's policy of allowing qualified private individuals to conduct wildlife rehabilitation activities at their own expense and with appropriate state and federal permits. The program will not subsidize such rehabilitation efforts, except for select instances involving endangered or threatened species.

Instead, the Program will focus on providing opportunities for Minnesotans to contribute through activities related to habitat conservation, particularly within their own communities, or through volunteer assistance with census, education or promotion activities. Additionally, before it initiates any new participation projects, the Program will identify the types of wildlife experiences preferred by the public and assess the need for increased opportunities.

The Nongame Wildlife Program staff will expend up to 25% of their time to provide extension services and educational programs to the general public. Rather than developing and presenting all programs personally, however, Program staff will seek every opportunity to adopt existing material or seek volunteers to prepare the programs. Staff would focus instead in identifying needed materials, developing the Program's I & E plan and disseminating the information or programs to groups and agencies through the state's existing education, conservation and community services networks and electronic news media.

Recommendations to:

Department of Natural Resources: Restore funding and fill any vacant positions within the Bureau of Information and Education and the

Minnesota Environmental Educational Board; designate a working group of agency personnel to develop a comprehensive natural resource information and education program and plan for the Department; provide the Volunteer magazine to all interested Minnesotans.

COORDINATION TO ENHANCE NONGAME RESOURCE CONSERVATION

Issue: Many organizations and individuals regulate, influence, and undertake activities that affect the nongame resource. Improved communication and cooperation among public agencies, private organizations and individuals is needed to maximize nongame resource conservation efforts.

Goal: TO ESTABLISH AN INTEGRATED AND COORDINATED APPROACH TO THE MANAGEMENT AND CONSERVATION OF MINNESOTA'S WILDLIFE RESOURCES

Objectives: FY 1986 - 1989

- * To establish a Department policy and priority for management of endangered resources on all DNR administered lands by 1987.
- * To incorporate nongame resource management considerations into land use planning for all DNR administered land by 1990.
- * To implement cooperative nongame resource management projects on 25 Scientific and Natural Areas and 15 additional DNR management units (parks, forests, trails and/or wildlife management areas) biennially.
- * To provide technical assistance and information in response to 200 requests annually from other Department personnel, other agencies, or private organizations on matters of nongame resource conservation in Minnesota.
- * To establish cooperative agreements with the U.S. Fish and Wildlife Service and agencies of adjacent states for the protection and management of regionally significant nongame resources including endangered species.

- * To prepare and maintain a directory of agencies or organizations involved in nongame resource management in Minnesota.

Strategy: In Minnesota, more than 30 government agencies, numerous private organizations and countless citizens conduct activities that impact the nongame resource. The Nongame Wildlife Program cannot reasonably be expected to coordinate with or even remain informed on the activities of all these groups. Consequently, the Nongame Wildlife Program has decided to approach this matter in steps and concentrate first on improving intra-agency coordination within the Department of Natural Resources. Within the Division of Fish and Wildlife, the Nongame Wildlife Program already interacts significantly with the Scientific and Natural Areas Program and the Natural Heritage Program. The joint activities of these three Programs will be continued and opportunities pursued to expand these cooperative efforts to include other Division programs. In particular, the Nongame Wildlife Program will seek cost share funding for an aquatics component to Project WILD and cooperation on development of an expanded management program for nongame fishes with the Section of Fisheries. Additionally, a member of the Program's staff will participate on the Division Planning Task Force to insure that nongame resource issues are integrated into the comprehensive plans of the Division of Fish and Wildlife.

During the next two biennia, Program staff will also focus on providing technical assistance to other Department professionals to help them make informed decisions and incorporate nongame resource considerations into their planning, management and regulatory

activities. Specifically, program personnel may be involved in any or all of the following activities on a statewide basis:

- * Prepare and present at least two technical programs on nongame resource matters to DNR field and administrative staff annually.
- * Collaborate with the Section of Ecological Services and the Office of Planning in the evaluation of proposed development projects and make recommendations to alleviate adverse consequences to nongame resources.
- * Advise the Scientific and Natural Areas Program on the selection of natural areas and the development of management plans to enhance nongame resources on these lands.
- * Advise the Section of Wildlife on the selections of Wildlife Management Areas for acquisition and the development of management plans to enhance nongame resources on these lands.
- * Represent the Division on nongame resource matters in the development of legislation and Department manuals, guidelines, plans, policies and/or regulations.
- * Incorporate nongame resource management considerations in the Division of Forestry's Forest Unit Planning process and Private Forest Management Guidelines; and in the Division of Fish and Wildlife's comprehensive planning effort.
- * Participate in at least one regional and/or national professional meeting annually to exchange information on management needs and techniques.
- * Serve as the Division's representative for nongame matters on intra-agency task forces and committees.
- * Seek opportunities to jointly conduct research and/or management projects with other Divisions on topics of mutual interest.

Within their respective regions, the Regional Nongame Specialists will continue to serve as the field representatives for the Scientific and Natural Areas Program and to coordinate intra-agency endangered species management projects. They will be expected to prepare the nongame portion of any Forest Unit Plans in their region and will continue to provide technical assistance up to 15% of their time on

additional cooperative projects such as prairie burns, environmental reviews and regional environmental education efforts. The specialists will also continue to establish their individual networks of cooperators and volunteers.

Management Policy and Operational Guidelines - In response, to the mandate of Department of Natural Resources to conserve all wildlife, the Division of Fish and Wildlife will continue to broaden its management role to encompass nongame species of fish, birds, mammals, amphibians and reptiles as well as native plants and selected invertebrates. The Division shall assume the leadership role in statewide nongame management and will have primary responsibility for coordination of fish and wildlife conservation programs with private organizations and agencies outside the Department of Natural Resources. The Resource Manager within the Section of Wildlife will be the Division's inter-agency liaison on nongame matters, except that the Nongame Program Supervisor will continue as the Division's designated endangered species coordinator for cooperative programs with the U.S. Fish and Wildlife Service, U.S. Forest Service, National Park Service and other states.

Nongame Wildlife Program personnel will concentrate primarily on intra-agency coordination. Within the Division, emphasis during the two biennia will be on: 1) continued cooperation with the Scientific and Natural Areas and the Natural Heritage Program, and wildlife managers, 2) cooperative education and resource management programs with the Section of Fisheries, 3) substantial participation in the Division's comprehensive planning effort, and 4) strengthened participation with Ecological Services Section in environmental review (see DATA ACQUISITION and HABITAT chapters). Staff people will also expand their

efforts to provide technical assistance to others within the Department of Natural Resources through joint planning sessions, workshops or training programs, cooperative research and management programs, or cost sharing for equipment or personnel. The objective is to incorporate nongame considerations and management projects into the annual work plans for parks, wildlife management areas, forests, trails and other DNR lands.

The Program's intention for cooperative initiatives in public education with the DNR's Bureau of Information and Education were discussed in the previous chapter.

Recommendations to:

Division of Fish and Wildlife - hire the Resource Manager and create the position(s) for Forestry/Wildlife Coordinator(s).

DNR - Office of Planning - develop a Department policy and/or guidelines for management of endangered resources on DNR lands.

WILDLIFE HABITAT

Issue: High quality habitat is the key to wildlife survival.

Goal: TO PROTECT, MAINTAIN AND ENHANCE WILDLIFE HABITAT THROUGH AN ECOSYSTEM MANAGEMENT APPROACH THAT ASSURES THE PERPETUATION OF ALL MINNESOTA'S WILDLIFE SPECIES.

Objectives: FY 1986 - 1989

- * To implement 15 habitat enhancement projects for nongame resources on DNR administered lands biannually.
- * To incorporate nongame resource considerations into the management planning for 500,000 acres of state owned lands annually.
- * To develop four backyard wildlife habitat demonstration areas on public land.
- * To participate in the development of a wildlife habitat and population management demonstration area and interpretive facility at the Carlos Avery Wildlife Management Area.
- * To identify and protect two significant habitat units for nongame resources each year including participation in establishment of one large prairie reserve by 1989.
- * To implement a "Landscaping for Wildlife" public education and promotion program in fiscal year 1987 in order to enhance 20,000 acres of private lands for wildlife by 1989.
- * To protect, enhance and restore habitat or mitigate for resource loss on 5,000 acres of private lands annually through the environmental review process.

- * To develop an urban wildlife component within the Nongame Wildlife Program that addresses the unique opportunities that exist for improvement of urban wildlife habitats.

Strategy: Traditionally, habitat protection for wildlife consisted primarily of private or government acquisition or lease of significant habitats and management specifically to enhance wildlife populations. Staff and interested citizens alike recognize that the Program's funding is not sufficient to finance large scale acquisition. The Program, therefore, will not undertake any independent land acquisition projects during this planning cycle unless substantial new funding becomes available. Acquisitions would then be considered only when acquisition costs could be matched from other sources for habitat of high value to nongame wildlife.

The program will continue to identify important nongame habitats through its research and inventory programs and to recommend such areas for acquisition as wildlife management areas, scientific and natural areas or as private conservation tracts. The program will intensify efforts to facilitate such acquisitions. In particular, during 1987-1988 fiscal year, \$16,000 in operational costs have been earmarked for acquisition to match general fund monies through the "Reinvest in Minnesota Resources Act of 1986".

Habitat emphasis for the Program will focus on the following activities:

- * Cooperative projects of active management on public lands, particularly on DNR lands for endangered, threatened, and rare plant and animal resources.
- * Habitat enhancement on private lands through the provision of technical assistance for citizen initiated projects,

- * Education programs to promote private lands enhancement and resource stewardship,
- * Support legislation including habitat tax credits and regulations on toxic substance discharge, land use and environmental review,
- * Intra-agency advocacy for a comprehensive land management program of macro-reserves and a philosophy of ecosystem resource management,
- * Encourage the Division of Fish and Wildlife to initiate studies of the socio-economic aspects of wildlife management,
- * Fund applied research projects to assess the effects of toxic substances, land use activities and/or management activities on nongame resources in order to improve or design new management alternatives,
- * If funding for the Program increases significantly, consider limited acquisition of lands of high significance to nongame wildlife.

Land use planning and management practices on the approximately 12 million acres of public land in Minnesota can have tremendous consequences for nongame resources. Recent state and federal legislation directs that public forest lands are to be managed for compatible, multiple use benefits unless otherwise dedicated by law. The Nongame Wildlife Program will continue to seek opportunities to benefit nongame resources through integrated forest and wildlife management programs required by state policy adopted in response to those mandates.

In this regard, Program actions to date include incorporation of guidelines on forest habitat management for reptiles and amphibians as well as for endangered, threatened and special concern species into the Department's manual "Forest-Wildlife Guidelines to Habitat Management". These guidelines will broaden the scope of the Department's land

management for wildlife and the following additional actions will further encourage this effort:

- * Incorporate habitat management guidelines for nongame resources into the Division of Forestry's guidelines for forest management on private lands.
- * Prepare the nongame resources portion of the Department's Forest Unit Plans and assure that necessary resource management actions are included in final plans.
- * Provide training to DNR field personnel on the status, distribution and habitat needs of nongame resources and on the Natural Heritage Program's land registry program.
- * Participate in all phases of the Division of Fish and Wildlife's comprehensive planning process to encourage consideration of nongame resource needs in all Division programs.
- * Implement at least two habitat enhancement projects for nongame resources on DNR lands in each region each biennium.

The Nongame Wildlife Program will also continue to respond to citizen requests for advice on habitat enhancement on private lands. Further, the Program will promote citizen involvement through winter workshops, demonstration areas, posters and other printed materials including a "Landscaping for Wildlife" book that will be the focal point for the 1987 and 1988 citizen awareness and participation program. Whenever possible, the Program will integrate its activities with the Section's Private Lands Wildlife Habitat Improvement Program, particularly the Roadsides for Wildlife Project. It will also cooperate with the Agriculture Extension Service, Soil and Water Conservation Districts and Soil Conservation Service in programs to promote habitat enhancement on private lands particularly in the agricultural areas.

Under the Reinvest in Minnesota Resources Act of 1986, the Nongame Wildlife Program is eligible for up to \$200,000.00 from the Minnesota Critical Habitats Matching Sector Fund for habitat enhancement during 1987 and 1988. The Program is preparing a list of suitable projects.

Management Policy and Operational Guidelines: Conservation of habitat adequate in both quantity and quality is essential to sustain Minnesota's wildlife resources. The Commissioner of Natural Resources is authorized to acquire lands and reserve public waters and manage the same for the propagation of wild animals and aquatic plants including endangered, threatened and special concern species. The Commissioner is also authorized to enter into agreements and assist private landowners to improve or develop wildlife habitat on private lands. The Nongame Wildlife Program's role in the Department's efforts to conserve habitat is to: 1) define the habitat needs of priority nongame species, 2) identify tracts of land essential to sustain important nongame populations, 3) facilitate the protection of those sites for the continued use of wildlife resources and in the public interest and 4) implement management to enhance nongame resources on public or private land.

The Nongame Wildlife Program has direct management authority over a very limited land base. Thus, in order to attain its habitat protection goals, it will be necessary for Program personnel to work cooperatively with those groups and individuals having authority or ownership of the land. During 1986-1989, the Program's priority will be to develop cooperative habitat programs on DNR lands and to promote citizen initiated enhancement projects on private lands. Regional specialists

will spend 15-20% of their time on such habitat management and assistance activities. Additionally, the Nongame Wildlife Program's research unit will expand its participation with other regulatory agencies in environmental review and will continue applied research to assess the effects of habitat alteration or degradation on priority species.

Recommendations to:

Minnesota Department of Natural Resources - accelerate the designation of Natural Heritage Program registry sites on DNR administered lands; promote the application of Forestry/Wildlife Guidelines to Habitat Management on all agency lands; develop an agency policy on endangered and threatened resources; continue to support the prairie and wetland tax credit programs and the "Reinvest in Minnesota" initiative.

Minnesota Division of Fish and Wildlife - appoint a Resource Manager and Forest-Wildlife Coordinator with expertise and experience in management of nontraditional resources; restore and expand the staff of the Scientific and Natural Areas Program including conversion of the planner position to the general fund and appointment of a Management Coordinator, a Preserve Design/Protection Specialist and a Prairie Management Specialist; establish two large prairie reserves by 1989.

U.S Fish and Wildlife Service - implement a nationwide nontoxic steel shot program; obtain appropriations for the Fish and Wildlife Conservation Act of 1980; and obtain sufficient funding to retain and expand allocations to states under Section 6 of the federal Endangered Species Act.

COMPREHENSIVE PLANNING

Issue: Long range comprehensive planning is necessary for operation of the Nongame Wildlife Program in a manner consistent with resource needs and citizen interests.

GOAL: TO DEVELOP, IMPLEMENT AND MAINTAIN AN INTEGRATED SYSTEM OF NONGAME WILDLIFE PROGRAM OPERATION THAT WILL GUIDE AND MONITOR THE PROGRAM'S PROGRESS IN THE ATTAINMENT OF QUANTIFIED OBJECTIVES FOR THE CONSERVATION OF MINNESOTA'S WILDLIFE RESOURCES.

Objectives: 1986-1989

- * To complete the "Plan for the Management of Nongame Wildlife in Minnesota" and implement the prescribed management actions during the 1985-1987 and 1987-1989 biennia.
- * To integrate the Nongame Wildlife Program's strategic and operational planning with the Division of Fish and Wildlife's comprehensive planning process by 1987.
- * To prepare and distribute a report on Nongame Wildlife Program activities each biennium.
- * To assign a regional nongame specialist to the southeast region in 1988.
- * To prepare an information and education plan for the Nongame Wildlife Program.

Strategy: In 1982, Nongame Wildlife Program personnel, Department administrators and interested citizens agreed that development of a comprehensive plan was the most realistic way to address all resource

concerns and administrative constraints affecting the Nongame Wildlife Program's operation. A six part process for plan development was defined and has been previously described in Volume 1 of "The Plan for the Management of Nongame Wildlife in Minnesota." To date, all of the six steps have been accomplished by the Program staff, with the assistance of Department's Office of Planning and input from interested citizens. It remains for staff to document the process by completing the current strategic plan document and formalizing a written four year operation plan to be presented as Volume 5 (attached).

A budget and cost accounting process has been in operation since 1985 and will continue until the Division's cost accounting procedures are implemented. The Program's operational plan has also been in place since July 1, 1985.

When Volume 4 and 5 are completed, the Program will restructure its staff by a reassignment of duties and responsibilities to better balance field and administrative activities. The planner's position will be revised and 60 to 80% of the work time apportioned to resource management responsibilities through 1987 in a combined metropolitan/southeast regional work area. The existing complement position would remain in St. Paul to maintain the Program's planning initiative (20 - 40% of time) and serve as the Metro Region nongame specialist.

Concurrently, authorization will be sought to add a complement position for a separate specialist in the southeast region beginning in fiscal year 1988. While Program income is adequate to finance an additional regional specialist, the appropriation for the current biennium (July 1985 - June 1987) does not provide for such an

expenditure. Consequently, an expanded appropriation has been requested to fund a new specialist beginning in July 1987. The Program would have six regional specialists by 1988.

Responsibility for maintaining the Program's planning initiative would then be divided between the Program's administrative unit and the Division of Fish and Wildlife planning team. The current schedule anticipates a major review and update of the Program's plan beginning in January 1988 and every four years thereafter. Updates or revision of the strategic plan (vol. 4) and evaluation of the Program's provision of public services and resource management (including any cost/benefit assessments) within the scope of Division wide efforts would become a planning team responsibility. The Program's administrative unit would be responsible for:

- * Development of Program policy and management philosophy within the scope of the Division's legal mandates and consistent with resource needs identified by research and planning.
- * Liaison with the Division planning team.
- * Development and implementation of annual operational plans consistent with strategic plan objectives.
- * Identification and coordination of interagency agreements for endangered species management or other actions such as legislative initiatives necessary to implement Nongame Wildlife Program objectives.
- * Promotion of the Nongame Wildlife Management Account, monitor checkoff performance, and implementation of additional revenue alternatives (see FUNDING chapter).
- * Production of annual performance reports, budgets and other general administrative duties.
- * Formulation of a public education and participation plan for the Program based on the findings of user demand and citizen attitude assessment.

The administrative personnel would also direct the Program's educational efforts and assure that nongame planning and Program operations comply with state and federal guidelines.

Management Policy and Operational Guidelines: Three considerations will continue to guide Program's comprehensive planning activities. First, it's recognizes that a planned program, once implemented, requires ongoing input in order to be successful. Therefore, responsibility for monitoring, evaluating, revising and updating Program activities and plans to insure their continued applicability, cost effectiveness, and relevance to resource needs and public desires has been specifically assigned.

Second, the periodic nature of planning activities will not necessitate a full-time planner once the first cycle of planning is complete and provided the Division planning team continues its efforts. However, the Program must maintain flexibility in its current organization so that staff time and effort can be focused on planning when needed.

Third, planning for the Nongame Wildlife Program's operations can best be accomplished within a framework of agency planning for all of Minnesota's natural resources. Consequently, Program personnel will continue their involvement in all aspects of the Division's comprehensive planning and with selected Department planning efforts (See chapter on COORDINATION).

The Program policy will continue to minimize administrative costs by limiting staff. Instead, it will focus on upgrading existing positions, contracting research projects and using volunteer assistance

or the Minnesota Conservation Corps where practical and as needed to accomplish resource management and protection.

Recommendations to:

Division of Fish and Wildlife - secure authorization for an additional complement position for a regional nongame specialist; hire Resource Manager for Section of Wildlife; continue comprehensive planning.

LITERATURE CITED

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PLAN FOR THE MANAGEMENT OF NONGAME
WILDLIFE IN MINNESOTA

Volume 5 - Operational Plan

Date: November 1, 1986

Minnesota Department of Natural Resources
Division of Fish and Wildlife
Nongame Wildlife Program
St. Paul, Minnesota

NONGAME WILDLIFE PROGRAM

OPERATIONAL PLAN

FISCAL YEARS 1986-1989

This section represents a proposed operational schedule for fiscal years 1986 through 1989 (July 1, 1985 through June 30, 1989). The specific actions to be undertaken by Nongame Wildlife Program personnel in response to each resource management issue are itemized. Priorities for accomplishment of the actions within each issue are also indicated. As in the Strategic Plan, the order in which the issues are presented represents the priority among issues. Clearly, continued action to raise funds through the tax checkoff and other initiatives is the first priority essential for the successful accomplishment of all other Program actions.

The costs of actions planned to address each issue are presented in two parts. Basic costs include staff salaries and benefits, routine travel costs, nonspecific expenditures for supplies and equipment and regular operating costs such as utilities, rent, postage, equipment repair, and unemployment compensation. Action specific costs are those costs over and above basic expenditures. They include contracts, special material and equipment not on hand, printing costs, aircraft rental, and other items that may be required for the specific actions listed. TOTAL annual costs are the sum of the basic plus action specific costs anticipated to address each resource issue.

The schedule assumes that funding will continue to increase and that expenditures due to Program expansion will reach \$1.1 million in fiscal year 1989. Obviously, fund availability and unforeseen

circumstances may cause changes in the schedule. Actual costs may also differ from estimates shown. Consequently, the Program's operational plan will be updated annually and a biennial report of accomplishments and actual expenditures will continue to be prepared.

Abbreviations (where not self-explanatory)

MN Herp Society - Minnesota Herpetological Society

Nat. Hert. - Natural Heritage Program

NG ADM - Nongame Wildlife Program administrative personnel

NG RES - Nongame Wildlife Program research personnel

Reg. Specs., Reg 2 Sp or Reg 2 Spec. - Regional Nongame Wildlife
Specialists

SNA - Scientific and Natural Areas Program

TNC - Minnesota chapter of The Nature Conservancy

Issue: Funding (Promotion)

Fiscal Year

1. Basic costs

Salaries
Utilities
Travel

2. Action specific costs: (see details below)

(1 & 2) TOTAL annual costs:

85	86	87	88	89	Notes
	12,110	14,255	14,025	19,770	
	1,650	2,050	2,050	2,050	
	200	400	700	700	
	16,880	27,300	20,850	15,750	
\$36,482	30,840	44,005	37,625	38,270	

Priority	Specific Actions	Responsibility		Project Years (fiscal)	Estimated Cost Above Base				Notes
		lead	cooperators		86	87	88	89	
I.	BROADEN AND MAINTAIN FUNDING								
1a	Administer annual checkoff promotion campaign	NG ADM	NG Regional Specialists	ongoing	13,180	23,300	16,050	15,750	
1b	Coordinate and cooperate with Dept. of Revenue on the operation of the Nongame Wildlife Management Account.	NG ADM		ongoing		basic costs only			
2a	Seek expanded cost sharing funds from federal, state or private sources for projects of mutual interest and administer existing federal aid grants.	NG ADM	Division of F&W NG staff	ongoing		basic costs only			
2b	Seek additional funds through appropriations or other revenue sources (RIM etc.)	NG ADM	Division of F&W	ongoing		basic costs only			
3a	Assessment of citizen motivation for participation in tax checkoff program and expectations regarding Program activities.	NG ADM	Contractor	1987-1988		5,000	4,800		
3b	Monitor the funding strategies of other states for ideas to expand funding base.	NG ADM		ongoing		basic costs only			

Fiscal Year

1. Basic costs

Salaries
MCC position
Utilities
Supplies & equipment & repair
Travel

2. Action specific costs: (see details below)

85	86	87	88	89	Notes
	100,790	98,808	151,041	164,616	
	5,330	5,250	5,750	4,000	
	11,100	2,050	3,800	2,700	
	12,000	9,864	12,228	14,056	
	118,800	157,160	108,075	129,175	
(1 & 2) TOTAL annual costs:					
\$187,242	248,070	278,632	2,800,894	314,547	

Priority	Specific Actions	Responsibility		Project Years (fiscal)	Estimated Cost Above Base				Notes
		lead	cooperators		86	87	88	89	
II & III	OBTAIN DATA NECESSARY FOR RESOURCE CONSERVATION								
1a	Administer, coordinate, or implement existing in-house census and survey projects - colonial waterbirds, osprey, loons, eagles, green card reports (purchase services) a) nongame fish survey	NG RES	NG staff & volunteers	Ongoing	11,950	3,150	4,525	4,125	
		Ecol Serv.	NG RES.	1984-1988	10,400	2,500	2,500		
1b	Evaluate & design new in-house survey, monitoring or research projects to determine species status and/or distribution. a) redesigned loon survey b) statewide atlas project	NG RES	NG staff	Ongoing		basic costs only			
		NG RES	NG Reg. Specs.	1985-1987		500			
		Nat Hert.	NG Res & staff	1988-1989			175,000	175,000	LCMR & TNC funds
2a	Initiation of new contracts outside small grants program.	NG RES	Contractors	Ongoing	15,000		30,000	30,000	
2b	Administration of small grants program a) existing obligations b) shovelnose sturgeon distribution c) 3 special concern birds-habitat needs d) bat hibernacula assessment e) rock vole population structure	NG RES	NG staff & Contractors		32,000		20,000	30,000	1988-89 projects undetermined
			Contractors	1986 (includes x's)			5,000		
			Div. of Minerals	1986	x				
			Contractors	1986	7,500				
			Contractors	1986-1987	x	2,668			
			Science Museum	1984-1987	x	3,900			

Issue: Data Acquisition & Information Mgmt. cont.

Priority	Specific Actions	Responsibility		Project Years (fiscal)	Estimated Cost Above Base				Notes
		lead	cooperator		86	87	88	89	
	f) pleistocene snail inventory		Contractor	1986	x				
	g) Forster's tern - reproductive success		Contractor	1986-1987	x	570			
	h) Loggerhead shrike - population assessment		Contractor	1987		4,250			
	i) Five-lined skink		MN Herp. Society	1986-1987	x	500			
	j) Woodland raptors		Contractor	1986-1987	15,000	15,200			
	k) contingency - unanticipated contract agencies or expansion		various	Ongoing	3,000	500	20,000	30,000	
	l) Cooperative projects		TNC	Ongoing	6,000		7,500	7,500	
	m) Wood turtle/Blandings turtle		Contractor	1984-1989	7,500	3,000	7,500	7,500	
	n) Nongame fish - distribution		Contractor	1986-1987	x	3,592			
	o) Crayfish distribution		Contractor	1986-1987	x	1,060			
	p) Snowy owl behavior		Contractor	1987	x	120			
	q) Butterfly data base		Contractor	1987		2,000			
	r) chestnut-collared longspur	NG RES	NG Reg. 1	1987		1,200			
1c	Compilation of data and update species status assessments	NG RES	Nat. Herf.	Ongoing	2,650	2,700	4,550	5,050	
	a) Bald eagle data base	NG RES		Ongoing		4,000			
1d	Publication of technical and/or general reports of research fundings.	NG RES	Staff and contractors	Ongoing	2,300	550	3,000	4,500	
2b	Attendance of Zoologist at professional meetings.	Zoologist		Ongoing		basic costs only			
3a	Field reseach project - Zoologist	Zoologist		Ongoing	500	500	500	500	
1e	Provide botanical expertize - (cost share)								
	a) NHP - Botanist salary & operation expenses.	Nat. Hert.	NG RES	Ongoing	(35,080	39,100	42,125	43,880)	included in basic costs
	b) development of a habitat data base for floristic data - contract project	Nat Hert.	Contractor		2,500	3,500	8,000	10,000	
3b	Assessment of socio-economic benefits of wildlife resources	NG ADM	Contractor	1987-1988		See item 3 under Funding			
1a	Maintain computerized data base & provide information on request to other agencies or individuals.	Nat. Hert.	NG RES	Ongoing		basic costs including salary for MCC position, Technician, and 25% of Data manager position			

Issue: Endangered & Threatened species
(special concern)

Fiscal Year

1. Basic costs

Salaries
MCC position
Rent, utilities, communication
Supplies & equipment
Travel

2. Action specific costs: (see details below)

(1 & 2) TOTAL annual costs:

					85	86	87	88	89	Notes
						14,354	13,926 3,500	18,601	20,575	
						150 850 48,900	1,250 750 76,679	1,650 71,450	1,400 51,050	
					\$31,541	64,254	92,641	91,701	73,025	

Priority	Specific Actions	Responsibility		Project Years (fiscal)	Estimated Cost Above Base				Notes
		lead	cooperators		86	87	88	89	
IV	ENHANCE POPULATIONS								
1a	Increase populations in order to upgrade status of endangered, threatened or special concern species (purchase service)	NG ADM	Nat. Hert. SNA	ongoing			500		
	a) Peregrine falcon - see recovery plan	NG ADM	Sec. Wild. various	1982-90	15,000	15,000	15,000	15,000	
	b) Trumpeter swan - see recovery plan	NG ADM	contracts	ongoing	24,600	41,804	36,450	16,550	
	c) Bald eagle - recovery plan in prep.	NG RES	Regions	ongoing		basic costs only			
	d) Piping plover - pop. monitoring	NG RES	NG Reg. specs.	ongoing	12,500	13,795	15,000	15,000	
	e) Five-lined skink - census & hab. mgnt.	NG RES	NG Reg. specs.	1986-1987					e through h - costs included under Data Acquisition
	f) Wood turtle - census & hab. protection	NG RES	MN Herp. Soc. contractor	1985-86					
	g) Sandhill crane-pop. assess, mgn't recomm.	NG RES	contractor	1986		completed			
	h) Common tern - habitat protection, see plover	NG RES	contractor	ongoing					
	i) Burrowing owl - exp. reintroduction	Reg/RES	contractor	ongoing					
		Reg. IV	R.R.R.P.	1985-?	basic costs only				
1b	Review & update state endangered species list.	NG RES	Nat. Hert.	1987		basic costs only			
1c	Preparation of Departmental policy on endangered or threatened resources.	NG staff	Off. Plan	1987		basic costs only			
						See Coordination			
2a	Basic and/or applied research on other selected, listed species (Prof services).	NG RES	contractors	various	4,000		4,000	4,000	
	a) Chestnut collared longspur - census								

Issue: Endangered & Threatened species cont.
(special concern)

Priority	Specific Actions	Responsibility		Project Years (fiscal)	Estimated Cost Above Base				Notes
		lead	cooperators		86	87	88	89	
	b) Shovelnose sturgeon - distribution c) 3 special concern birds -habitat needs d) Bat hibernacula assessment e) Rock vole - pop. structure f) Pleistocene snail inventory g) Forster's tern - reproductive success h) Loggerhead shrike - pop. assessment i) Listed reptiles & amphibians - distribution and abundance								a through i costs included under Data Acquisition
2b	Serve as Division's designated Endangered species Coordinator & liaison - attend regional coordinator's meetings.	NG ADM	USFWS other states	ongoing					basic costs only
2c	Participation on national Piping Plover recovery term	USFWS	Zoologist	1986					basic costs only
	Relocation of elk in N.W. Minnesota	Sec. Wild.		1986	(20,000 - direct appropriations to Sec. of Wildl. - not included NWP 1986 operating budget)				
3a	Conduct/coordinate regional rehabilitation, management and monitoring activities for endangered & threatened resources	Reg. Sp.	NG RES NG ADM	ongoing					basic costs only see Coordination issue
3b	Develop Felton Prairie preserve design for listed grassland vertebrates & butterflies.	NG RES	Nat. Herit. Reg. 1 Spec.	86-87					basic costs only
3c	Preparation of general educational materials on states endangered & rare resources.	NG staff	volunteers	ongoing					
	a) book on MN endangered species	NG RES	Nat. Herit.	86-87	5,300	2,130			plus private funds
	b) posters, brochures, other written material	NG staff	Nat. Herit.	ongoing	6,000	500	500		
	c) audiovisual aids	NG staff	volunteers	ongoing					costs under Public Awareness
3d	Conduct two in-house training sessions on endangered resources.	NG staff		Alt. yrs.					basic costs only

Issue: Public Awareness

1. Basic costs

Salaries
Rent utilities communication
Travel
I & E specialists (cost share with I & E Bureau)

2. Action specific costs: (see details below)

Fiscal Year

	85	86	87	88	89	Notes
		36,534	44,463	42,200	45,942	
		Itemized as extension services below				
		1,725	1,948	3,421	3,476	
				5,000	5,000	
		41,860	40,550	12,140	66,750	
(1 & 2) TOTAL annual costs:	\$102,974	80,119	86,961	122,761	121,168	

Priority	Specific Actions	Responsibility		Project Years (fiscal)	Estimated Cost Above Base				Notes
		lead	cooperators		86	87	88	89	
V	CREATE PUBLIC AWARENESS								
1a	Provide extension services - assistance to the general public on nongame resource protection or management	NG staff	Sec. Wild.	ongoing	3,550	2,350	5,600	5,600	
1b	Coordinate & administer Project WILD	NG AND	MEEB	1985-1989	10,000	10,000	10,000.	10,000	MCC position
	a) 1 full-time MCC worker & support services		NG Reg. Sp.						
	b) establish aquatics component to Project WILD.	Sec. Fish	NG staff	1987 ongoing		10,000*	10,000*	10,000*	*Sec. Fish funds
2a	Develop and produce written materials:								
	a) Natural History poster series	Reg. Specs.	NG staff	1985-1987	3,100	3,500	3,500	3,500	
	b) Blazing Star newsletter	NG RES	NG staff	annual	4,100		2,600	2,600	
	c) Woodworking for Wildlife book	NG ADM	NG staff	1985-1986	11,000	1,300	7,000	6,000	
	d) Landscaping for Wildlife book	NG ADM	NG staff	1986-1987	basic	16,200	11,000	6,000	
	e) Wildlife watching information	NG ADM	NG staff	1988-1989			7,000	12,000	
	f) reprinting costs	NG ADM		annual	3,500		3,500	5,000	
2b	Purchase, prepare, produce and distribute audio-visual education units				400	600	2,200		
	a) I & E film & slide library purchases	NG ADM	Bureau I & E	1986 ongoing	2,000	2,000	2,000	2,000	
	b) MN Zoo or other cooperative projects	NG ADM	various	ongoing	2,000	1,000	2,000	2,000	
	c) Maintain regional film libraries	NG ADM	NG Reg. Specs	ongoing	850		2,590	1,000	
	d) Slide/tape programs	Reg Spec.	Various	ongoing		2,500	1,050	2,800	
	e) I & E grants	NG ADM	Various	1988-1989			6,000	6,000	

Issue: Public Awareness cont.

Priority	Specific Actions	Responsibility		Project Years (fiscal)	Estitimated Cost Above Base				Notes
		lead	cooperator		86	87	88	89	
2c	Provide opportunity for citizen volunteers to participation in resource management and habitat enhancement - region workshops	NG staff	Volunteers	ongoing	1,160	600	1,500	2,650	
3a	General public appearences, media presentations & school programs	NG staff		ongoing		See travel above			
3b	Future planning for I & E programs a) citizen's attitudes and needs survey	NG ADM	contractors	1988		See item 3 of Funding			
4a	Provide taxidermy work for educational materials.	NG ADM		ongoing	200	500	500	500	
4b	Produce 3 educational TV PSA's	NG ADM	I & E Bureau	1988-1989			2,100	2,100	
4c	Nature show sponsorship	NG ADM		1988-1989			2,000	2,000	

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1. Basic costs:

2. Action specific costs: (see details below)

(1 & 2) TOTAL annual costs:

85	86	87	88	89	Notes
	47,259 7,823 3,250 4,115	59,537 4,500 3,516 2,800	53,972 10,150 4,232 5,850	55,895 10,200 4,264 5,250	
\$41,058	59,197	66,837	74,204	75,609	
Project Years (fiscal)	Estimated Cost Above Base				
	86	87	88	89	NOTES
1987		basic costs only			
ongoing		basic - see ES issue			
ongoing		basic costs only			
ongoing		basic costs only			
1986 ongoing		basic costs only			
ongoing		basic costs only			

Issues: Coordination cont.

Priority	Specific Actions	Responsibility		Project Years	Estimated Cost Above Base				Notes
		lead	cooperative		86	87	88	89	
3a	Prepare and present two programs on non-game resource management to DNR personnel annually.	NG staff		ongoing		basic costs only			
3b	Attend professional meetings, quarterly staff meetings & annual wildlife school or formal classes to receive or provide professional training and exchange information on resource management.	NG staff		ongoing	4,115	2,800	5,850	5,250	
3c	In cooperation with Sec. of Fisheries: a) establish aquatic component to Project WILD and	NG ADM	Sec. Fish	1987 ongoing		10,000*	10,000*	10,000*	Fisheries funds - See Public Awareness
2b	b) develop an expanded nongame fish management program.	NG RES	Sec. Fish.	1988 ongoing		undetermined			
4a	Administer regional falconry licensing	Reg. 2,1	Law Enforce	ongoing		basic costs only			
4b	Prepare and maintain a directory of agencies and organizations involved in nongame resource management in Minnesota.	NG ADM	various	1987		basic costs only			

Fiscal Year

1. Basic costs

Salaries
MCC positions
Rent, utilities, communication
Travel
Supplies, equipment and repair

2. Action specific costs: (see details below)

(1 & 2) TOTAL annual costs: (doesn't include RIM)

85	86	87	88	89	Notes
	\$37,216	13,659	45,919	49,551	
	10,500	7,000			
	100	200			
	1,900	2,064	4,278	3,306	
	300	1,100	1,000	1,000	
	10,600	2,313	10,894	10,592	
\$127,693	71,216	26,336	62,091	64,449	

Priority	Specific Actions	Responsibility		Project Years (fiscal)	Estimated Cost Above Base				Notes
		lead	cooperator		86	87	88	89	
VII	HABITAT PROTECTION AND ENHANCEMENT								
1a	Develop &/or implement habitat protection or enhancement projects on DNR lands;				1,500	1,832	3,950	3,450	
	a) peregrine eyries management (5)	Reg. 5,	Forest Parks	1986-1987			basic costs only		
	b) bald eagle nest site plans (7-8)	Reg. Specs.	various	1986-1988			basic costs only		
	c) Henslows sparrow habitat enhancement	Reg. 5 Sp.	Parks	1987			basic costs only		
	d) Piping plover habitat enhancement	Reg. 1 Sp.	Parks	1986	1,500				
	e) Lamprey Pass WMA plan	Reg. 3 Sp.	Sec Wild.	1986-1987	basic costs only				
	f) Lamprey Pass WMA demonstration area	Reg. 3 Sp.	Sec Wild.	1987		(10,000*)			*RIM funds
	g) Carlos Avery & Swan Lake plan assist	Sec. Wild	NG Staff	1986-1988	basic costs only				
	h) Waterbird nest site enhancement-Duluth	Reg. 2 Sp.	Various	1986 ongoing	600	(25,000*)	basic costs		*RIM funds
	i) Prairie burns on WMAs, SNAs	Sec. Wild.	NG staff/SNA	Ongoing	550	(30,000*)	(30,000*)		*RIM funds
	j) Five-lined skink site enhancement	Reg. Sp.4,5	Various	1985 ongoing			basic costs only		
	k) Cannon River canoe route & Turtle Flats SNA projects	Reg. 5 Sp.	SNA/Trails	1986-1988			basic costs only		
	l) Natural Heritage public lands Registry Program	Nat. Hert.	NG staff	1987 ongoing			basic costs only		
	m) Kabekona WMA heronry	Reg. 1 Sp.	Sec. Wild.	1985			completed		
	n) Bat roost boxes	Reg. 1 Sp.	Sec. Wild.	1985			completed		
	o) Assess burrowing owl habitat	Reg. 4 Sp.	Sec. Wild.	1986-1987			basic costs only		
	p) "Roadsides for Wildlife" cost share	Reg. 4 Sp.	Sec. Wild.	1986 ongoing	2,500	487	3,944	4,142	
	q) Bluebird nest box trails	NG staff	Parks	1986-1987			basic costs only		
	r) Kestral nest box program	Reg. 4 Sp.	DOT	1986			basic costs only		
	s) Wood turtle habitat	Reg. 2 Sp.	Forestry	1987			basic costs only		
	t) Public access posting	NG staff	Trails	1985-1987			basic costs only		

Issue: Habitat cont.

Priority	Specific Actions	Responsibility		Project Years	Estimated Cost Above Base				Notes
		lead	cooperative		86	87	88	89	
1b	Prepare habitat management guidelines & recommendations for: a) Div. of Forestry's Private Forest Management Manual b) DNR's manual - "Forest-Wildlife Guidelines to Habitat Management"	Forestry	NG staff	1984-1987	basic costs only				
		Sec. Wild./ Forestry	NG staff	1984-1986	Completed				
2a	Identification and protection of significant habitats for nongame resources.	SNA/NG staff	Sec. Wild.	ongoing	basic costs only				See Coord.
3a	Implement "Landscape for Wildlife" public awareness & participation program a) Interstate highway rest stop demonstration area b) Mn Arboretum demo area c) Brainerd Arboretum demo area	NG Staff	DOT	1987-1988	3,950	25,000*	3,000 25,000*	3,000	*RIM FUNDS
				1987		10,000*			"
				1988			5,000*		"
3b	Boy River Orchid Bog management	SNA	Reg. 2 Sp.	1988			24,000*		"
3c	Flowing Prairie WMA acquisition	Sec. Wild.	Reg. 1 Sp.	1988			16,000*		"

1. Basic costs

Salaries
Unemployment compensation
Rent, utilities, communication, freight, repair
Travel
Supplies & Equipment

2. Action specific costs: (see details below)

85	86	87	88	89	Notes
	78,148	69,265	83,112	97,284	
	6,658	5,600	5,000	10,000	
	16,100	31,390	25,000	26,632	
	1,325	1,808	1,991	2,057	
	14,850	16,970	16,400	25,650	
	29,950	17,700	50,950	58,450	
(1 & 2) TOTAL annual costs:	\$98,885	147,031	147,653	182,653	220,073

Priority	Specific Actions	Responsibility		Project Years (fiscal)	Estimated Cost Above Base				NOTES
		lead	cooperative		86	87	88	89	
VIII	MAINTAIN INTEGRATED OPERATION								
Ia	Prepare and/or update Program's comprehensive plan. a) printing and distribution	NG ADM	NG Staff	ongoing		basic costs only			
		"	"	"	5,000	1,150		1,650	
Ib	General administrative duties including cost accounting, budget and operational planning, performance review, fees and memberships	NG staff	Wild Adm.	ongoing	1,950	1,550	3,300	1,800	
2c	Prepare biennial activity reports a) printing and distribution	NG ADM	NG staff	1986, 1988	basic 1,600		basic 1,650		
2b	Develop four year public education plan for MWP including public opinion survey	NG ADM	Contractor	1986-1988	12,000	See Public Awareness			
2c	Participate in Division's comprehensive planning effort.	Division	NG staff	1986 ongoing		See Coordination			
3	Serve as regional representatives' for Division on DNR's affirmative action committee.	Comm. office	Reg. 1,3 spec.	ongoing		basic costs only			
1c	Hire nongame specialist in Region V.	NG ADM		1988 ongoing			40,000	50,000	
	Administrative costs	NG ADM		1986 ongoing	9,400	15,000	15,000	15,000	
	Computerize field offices	NG ADM		1986 - 1989	3,000		6,000	5,000	

