

"...to serve present and future generations of Minnesotans...."

## MINNESOTA DEPARTMENT OF NATURAL RESOURCES

Biennial Report 1985-87



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Pursuant to Mn Stat 84.03

(2002년) 1일			
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"...to serve present and future generations of Minnesotans by professionally managing our rich heritage of fish, wildlife, waters, wetlands, forests, prairies, minerals, public lands, and other natural resources in order to preserve and enhance our environment, economy and quality of life."

#### COMMISSIONER'S PREFACE

During the past biennium, the Minnesota Department of Natural Resources completed a project that was much needed and much discussed--a long-range strategic plan that for the next several years will guide the management of Minnesota's resources and provide a gauge by which to measure the DNR's success.

The plan sets down on paper the intentions the DNR has had for many years: protection of our waters, multiple-use of our forests, stewardship of our fish and wildlife, a balanced approach to using and preserving our natural resources. This strategic plan turns these good intentions into realistic goals by setting priorities for activities and spending.

The essentials of this strategic plan were presented publicly in a report called *Directions for Natural Resources: A Look at Problems and Opportunities Facing Minnesota's Resources into the 1990s*. I think *Directions* does an excellent job of identifying the goals and major issues that confront the public and the DNR in the years to come.

Directions is only a beginning. The DNR's strategic plan will be revised and improved. Public involvement in planning will be increased. Eventually the plan will set specific goals and objectives in the field and guide the department's budgeting process.

Please review this biennial report with *Directions* in mind. (The goal statement that preceeds my message here and those that precede each major program in this report are taken verbatim from *Directions*.) In particular, I would mention two important matters to which we dedicated ourselves in our planning and our work: (1) responding to and serving the public, and (2) increasing the efficiency of our organization.

Judge our accomplishments by these commitments.

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Respectfully submitted,

Joseph N. Alexander

Commissioner

Minnesota Department of Natural Resources

#### DEPARTMENT OF NATURAL RESOURCES Organization

## Commissioner's Office



Regional Administrators







Assistant
Commissioner
Administration

Assistant Commissioner **Operations** 

Asst. Commissioner Planning and Special Services

Financial Mgmt. Administrator

Minerals Director

Planning Administrator

Lands Administrator

Waters Director Info. and Education Administrator

Field Services Administrator Forestry Director

Youth Programs Director

Licenses Administrator Fish and Wildlife

Minn. Env. Educ.

Mgmt. Info. Systems

Director

Board Exec. Director

Administrator

Parks and Recreation Director

Human Resources Administrator

Engineering

Trails and Waterways

Volunteer Programs

Administrator

Director

Director

Office Services Administrator

Enforcement Director

Senior Librarian

Library

#### DEPARTMENT OF NATURAL RESOURCES General Operations and Management Program Expenditures (Excludes Bond Fund Expenditures)

Dollars in Thousands

Fiscal Year 1986

PROGRAM/FUND	GENERAL	MN RES.	WATER REC.	SPEC. REV.	GAME & FISH	FEDERAL	GIFTS	TOTAL	
Mineral Resources Mgmt.	\$3,433.9	\$107.0		\$1,013.2		\$111.7		\$4,665.8	
Water Resources Mgmt.	\$3,844.7	\$984.6	\$68.2	\$61.0		\$94.8		\$5,053.3	
Forest Mgmt. 1	)\$14,588.1	\$307.0		\$5,783.1		\$3,389.4		\$24,067.6	
Parks and Recreation Mgmt.	\$8,172.5	\$56.8	\$718.3	\$4,608.3		\$5.3	\$2.8	\$13,564.0	
Trails and Waterways Mgmt.	\$569.9	\$205.9	\$2,435.3	\$2,751.1			\$2.4	\$5,964.6	
Fish and Wildlife Mgmt.	\$604.0	\$120.2	\$136.8	\$729.9	\$20,952.4	\$430.2	\$20.2	\$22,993.7	
Enforcement	\$1,895.3		\$1,448.9	\$411.6	\$7,292.4			\$11,048.2	
Field Operations Support	\$5,052.0	\$412.2	\$203.9	\$28.5	\$3,212.6			\$8,909.2	
Regional Operations Support	\$2,477.4				\$445.3			\$2,922.7	
Special Services & Programs	\$2,700.7	\$178.9	\$541.8	\$167.5	\$203.8	\$394.9	\$176.2	\$4,363.8	
Administrative Mgmt.	\$3,071.6		\$201.1	\$188.9	\$1,568.6	\$24.0	\$2.0	\$5,056.2	
TOTAL	\$46,410.1	\$2,372.6	\$5,754.3	\$15,743.1	\$33,675.1	\$4,450.3	\$203.6	\$108,609.1	
Fiscal Year 1987									
			Fiscal Year 19	87					
PROGRAM/FUND	GENERAL	MN RES.	Fiscal Year 19 WATER REC.		GAME & FISH	FEDERAL	GIFTS	TOTAL.	
PROGRAM/FUND	GENERAL	MN RES.			GAME & FISH	FEDERAL	GIFTS	TOTAL	
PROGRAM/FUND  Mineral Resources Mgmt.	GENERAL \$3,778.3	MN RES. \$258.5				\$6.8	GIFTS	\$4,962.9	
				SPEC. REV.	·		GIFTS		
Mineral Resources Mgmt. Water Resources Mgmt.	\$3,778.3	\$258.5	WATER REC.	SPEC. REV. \$919.3		\$6.8	GIFTS	\$4,962.9	
Mineral Resources Mgmt. Water Resources Mgmt.	\$3,778.3 \$4,056.3	\$258.5 \$1,214.0	WATER REC.	\$PEC. REV. \$919.3 \$75.7		\$6.8 \$90.1	GIFTS \$6.7	\$4,962.9 \$5,526.0	
Mineral Resources Mgmt. Water Resources Mgmt. Forest Mgmt.	\$3,778.3 \$4,056.3 2)\$19,160.8	\$258.5 \$1,214.0 \$414.6	WATER REC. \$89.9	\$919.3 \$75.7 \$5,707.7		\$6.8 \$90.1		\$4,962.9 \$5,526.0 \$28,882.8	
Mineral Resources Mgmt. Water Resources Mgmt. Forest Mgmt.  Parks and Recreation Mgmt.	\$3,778.3 \$4,056.3 2)\$19,160.8 \$8,783.1	\$258.5 \$1,214.0 \$414.6 \$33.7	\$89.9 \$599.0	\$919.3 \$75.7 \$5,707.7 \$4,456.5		\$6.8 \$90.1 \$3,599.7 \$360.0	\$6.7	\$4,962.9 \$5,526.0 \$28,882.8 \$13,879.0 \$6,529.0 \$23,189.8	
Mineral Resources Mgmt. Water Resources Mgmt. Forest Mgmt. Parks and Recreation Mgmt. Trails and Waterways Mgmt.	\$3,778.3 \$4,056.3 2)\$19,160.8 \$8,783.1 \$612.3	\$258.5 \$1,214.0 \$414.6 \$33.7 \$206.1	\$89.9 \$599.0 \$2,554.1	\$919.3 \$75.7 \$5,707.7 \$4,456.5 \$2,795.8	\$21,030.4	\$6.8 \$90.1 \$3,599.7 \$360.0 \$425.8	\$6.7 \$.7	\$4,962.9 \$5,526.0 \$28,882.8 \$13,879.0 \$6,529.0 \$23,189.8 \$11,306.0	
Mineral Resources Mgmt. Water Resources Mgmt. Forest Mgmt. Parks and Recreation Mgmt. Trails and Waterways Mgmt. Fish and Wildlife Mgmt.	\$3,778.3 \$4,056.3 2)\$19,160.8 \$8,783.1 \$612.3 \$599.6	\$258.5 \$1,214.0 \$414.6 \$33.7 \$206.1	\$89.9 \$599.0 \$2,554.1 \$150.0	\$919.3 \$75.7 \$5,707.7 \$4,456.5 \$2,795.8 \$713.6	\$21,030.4 \$7,707.4	\$6.8 \$90.1 \$3,599.7 \$360.0 \$425.8	\$6.7 \$.7 \$36.6 \$.8	\$4,962.9 \$5,526.0 \$28,882.8 \$13,879.0 \$6,529.0 \$23,189.8 \$11,306.0 \$11,042.9	
Mineral Resources Mgmt. Water Resources Mgmt. Forest Mgmt. Parks and Recreation Mgmt. Trails and Waterways Mgmt. Fish and Wildlife Mgmt. Enforcement	\$3,778.3 \$4,056.3 2)\$19,160.8 \$8,783.1 \$612.3 \$599.6 \$1,611.7 \$5,241.8	\$258.5 \$1,214.0 \$414.6 \$33.7 \$206.1 \$233.8	\$89.9 \$599.0 \$2,554.1 \$150.0 \$1,796.0	\$919.3 \$75.7 \$5,707.7 \$4,456.5 \$2,795.8 \$713.6 \$190.1	\$21,030.4 \$7,707.4	\$6.8 \$90.1 \$3,599.7 \$360.0 \$425.8	\$6.7 \$.7 \$36.6	\$4,962.9 \$5,526.0 \$28,882.8 \$13,879.0 \$6,529.0 \$23,189.8 \$11,306.0 \$11,042.9 \$3,343.3	
Mineral Resources Mgmt. Water Resources Mgmt. Forest Mgmt. Parks and Recreation Mgmt. Trails and Waterways Mgmt. Fish and Wildlife Mgmt. Enforcement Field Operations Support	\$3,778.3 \$4,056.3 2)\$19,160.8 \$8,783.1 \$612.3 \$599.6 \$1,611.7 \$5,241.8 \$2,718.0	\$258.5 \$1,214.0 \$414.6 \$33.7 \$206.1 \$233.8	\$89.9 \$599.0 \$2,554.1 \$150.0 \$1,796.0 \$216.0	\$919.3 \$75.7 \$5,707.7 \$4,456.5 \$2,795.8 \$713.6 \$190.1	\$21,030.4 \$7,707.4 \$3,221.8 \$484.7 \$215.3	\$6.8 \$90.1 \$3,599.7 \$360.0 \$425.8 \$74.2 \$462.9	\$6.7 \$.7 \$36.6 \$.8 \$84.1 \$141.9	\$4,962.9 \$5,526.0 \$28,882.8 \$13,879.0 \$6,529.0 \$23,189.8 \$11,306.0 \$11,042.9 \$3,343.3 \$4,518.8	
Mineral Resources Mgmt. Water Resources Mgmt. Forest Mgmt. Parks and Recreation Mgmt. Trails and Waterways Mgmt. Fish and Wildlife Mgmt. Enforcement Field Operations Support Regional Operations Support	\$3,778.3 \$4,056.3 2)\$19,160.8 \$8,783.1 \$612.3 \$599.6 \$1,611.7 \$5,241.8 \$2,718.0	\$258.5 \$1,214.0 \$414.6 \$33.7 \$206.1 \$233.8 \$259.3	\$89.9 \$599.0 \$2,554.1 \$150.0 \$1,796.0 \$216.0 \$56.5	\$919.3 \$75.7 \$5,707.7 \$4,456.5 \$2,795.8 \$713.6 \$190.1 3)\$2,029.8	\$21,030.4 \$7,707.4 \$3,221.8 \$484.7 \$215.3	\$6.8 \$90.1 \$3,599.7 \$360.0 \$425.8 \$74.2 \$462.9	\$6.7 \$.7 \$36.6 \$.8 \$84.1 \$141.9 \$1.1	\$4,962.9 \$5,526.0 \$28,882.8 \$13,879.0 \$6,529.0 \$23,189.8 \$11,306.0 \$11,042.9 \$3,343.3	

\$6,289.1

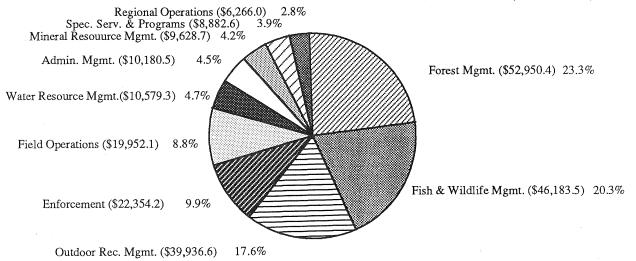
TOTAL

\$52,132.7

\$2,806.8

Summary of Management Program Expenditures Fiscal 1986-87 (Total \$226,913.9)

\$34,511.3 \$5,030.8 \$271.9 \$118,304.8



\$17,262.2

<sup>1)</sup>Includes \$709.7 for Emergency Firefighting.

<sup>2)</sup>Includes \$6,431.1 for Emergency Firefighting.

<sup>3)</sup>Includes \$2,000.0 for Equipment Installment Purchases.

#### DEPARTMENT OF NATURAL RESOURCES Summary of Receipts Fiscal Year 1986-87

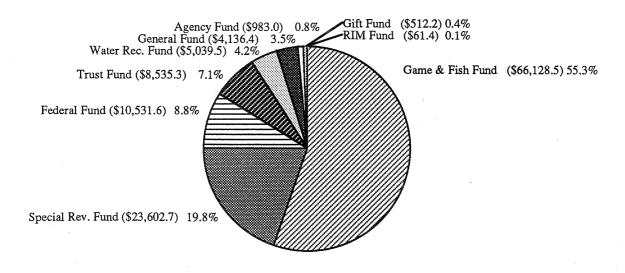
Dollars in Thousands

RECEIPTS BY FUND	FY 1986	FY 1987	TOTAL	% of TOTAL
GENERAL FUND (Land Leases; Service Charges; Resident Rents; Sales Tax; Sale of Equipment; DNR Service Centers; Emergency Fire Fighting Reimbursements).	\$2,495.3	\$1,641.1	\$4,136.4	3.5%
WATER RECREATION FUND (Watercraft Registrations; Fines).	\$2,732.2	\$2,307.3	\$5,039.5	4.2%
SPECIAL REVENUE FUND (Snowmobile Licenses; Park Permits and Merchandise Sales; Timber and Nursery Sales; Iron Ore, Copper/Nickel Royalties; Land Leases and Sales; Cross Country Ski Passes; ATV Registrations).	\$10,908.2	\$12,694.5	\$23,602.7	19.8%
GAME AND FISH FUND (Game & Fish License Sales; Federal Aid Reimbursements; Fines and Forfeits; Interest Income).	\$31,589.1	\$34,539.4	\$66,128.5	55.3%
FEDERAL FUND (BWCA Intensification, LAWCON, Emergency Fire Fighting Reimbursements; Acid Rain; Recreational Boat Safety; Various Smaller Grant Programs).	\$5,547.2	\$4,984.4	\$10,531.6	8.8%
REINVEST IN MINNESOTA FUND (Critical Habitat Cash Match Donations).	\$0.1	\$61.3	\$61.4	0.1%
AGENCY FUND (Iron Ore Royalties; Timber Sales; Land Leases).	\$539.8	\$443.2	\$983.0	0.8%
GIFT FUND ("VOLUNTEER" Magazine Donations; Sentencing to Serve Grant; Misc. Cash Donations).	\$84.4	\$427.8	\$512.2	0.4%
TRUST FUND (Iron Ore, Copper/Nickel Royalties; Timber Sales; Land Leases and Sales; Sand and Gravel Sales).	\$4,221.6	\$4,313.7	\$8,535.3	7.1%
TOTAL	\$58,117.9	\$61,412.7	\$119,530.6	100.0%

SOURCE: Statewide Accounting System (SWA) - Estimated/Actual Receipts Report 9-5-87.

These receipts are generated by the programs and activities of the Department and are deposited to the respective funds pursuant to Minnesota Statutes. The Department cannot expend these receipts without Legislative approval. The Legislative appropriation of these receipts along with an appropriation from the General Fund provides the funding for program operations and management.

## Summary of Receipts by Fund Fiscal Year 1986-87 (Total \$119,530.6)



"Increase and diversify the sources of revenue and employment from state-administered mineral rights while maintaining environmental quality. Preserve the iron ore/taconite industry, and expand exploration and development of nonferrous metallic minerals, industrial minerals and peat."

### MINERALS RESOURCES MANAGEMENT

The Division of Minerals administers about 12 million acres of state-owned mineral rights and 3 million acres of state-owned peatlands. As a mineral-rights owner, the state, through the division, plays a key role in encouraging the exploration and development of the state's mineral resources. The division, through the administration of the state's reclamation regulations, also plays a central role in the permitting required for a mining operation on land of any ownership.

During the last eight years, as the state's taconite industry declined and then stabilized, the DNR has tried to diversify Minnesota's mineral industry by the following means: encouraging mineral exploration by providing information and leasing land; marketing the state's nonferrous metallic and industrial minerals, including peat; and assisting the state's ironore industry. (The state's taconite industry is hardly moribund. Last year, Minnesota produced more than 30 million tons of pellets and employed 5,000 miners.)

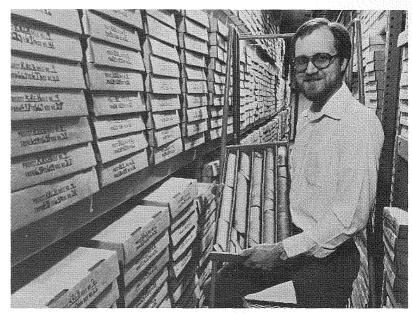
Accomplishments: During the past biennium, the Division of Minerals has taken the following steps:

- A joint effort with the Minnesota Geological Survey to encourage exploration by compiling information about Minnesota geology and minerals and providing relevant survey information to exploration companies. Among these projects is a geochemical survey of glacial till that revealed visible gold flecks at several locations in northern Minnesota.
- Information provided to exploration companies through the drill-core library in Hibbing. Reexamination of these drill cores has led to significant findings, including the discovery of a significant platinum resource.

- Increased promotion of Minnesota mineral exploration through publications, publicity, and attendance at conventions.
- Continued leasing of state mineral lands for exploration. More than 230,000 acres of state mineral rights are now under lease by more than two dozen companies that are searching for gold and other valuable nonferrous metals.
- Cooperative research with industry to improve taconite processing and to develop new technologies that may make economical use of Minnesota mineral resources. Among these are combustion tests that demonstrated the feasibility of using Minnesota peat in commercial furnaces. Many of these projects have been undertaken in accorparation with the

undertaken in cooperation with the Natural Resources Research Institute and Mineral Resources Research Center.

• Development of new reclamation regulations for nonferrous-metal mining. As part of this, the Division of Minerals is conducting and cooperating in research into the environmental impacts of nonferrous-metal mining and ways to mitigate its effects. By tackling these environmental questions now, the division smooths the way for mineral development later.



Assistant Director of Minerals Marty Vadis displays drill core, which the division catalogs and makes available to companies for mineral exploration and to universities for research.

"Maintain surface water and groundwater supplies that meet long-term requirements for basic necessity, environmental protection, and economic production, by improving state and local coordination in addressing water- and related land-resource problems."

#### WATER RESOURCES MANAGEMENT

In a land of 10,000 lakes (actually, far more than that) the job of managing public waters is immense. Minnesota has more than 21,800 protected lakes and wetlands, 6,564 streams and extensive underground water supplies.

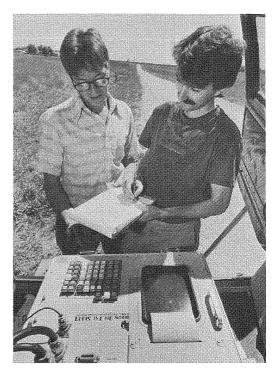
The Division of Waters is the primary water-management agency of the state. Among its chief concerns are the drainage of wetlands; the appropriation of surface and underground water; shoreline development; flooding of existing development; and new development in the floodplain. Of particular concern in the years ahead are the demand for water from high-quality aquifers, such as the Mt. Simon-Hinckley aquifer beneath the Twin Cities, and the contamination of these same sources of groundwater. The state (including the DNR) must also develop more effective ways of resolving water disputes, such as controversies over lake levels. Finally, state agencies must more efficiently apply existing programs to the business of watershed management to reduce eutrophication and sedimentation of lakes and rivers.

Accomplishments: The following are among the accomplishments of the Division of Waters during the last biennium:

- Completion of the Public Waters Inventory. Begun in 1979, the inventory is a milestone in the management of surface waters. For the first time, the state has a complete listing of "protected" and "unprotected" waters under its jurisdiction. This categorization will make permitting and enforcement simpler, clearer and more authoritative.
- Revision of the Shoreland Management Regulations, which were first promulgated in 1969 to prevent shoreline crowding and water pollution. The revisions should better protect surface water and groundwater from human and animal waste, reduce siltation of streams, provide better

design standards for nontraditional developments, and better protect the economic value of shoreline property.

- Start of the Flood Damage Reduction program, which provides grants to communities to use in planning and carrying out flood-prevention and flood-mitigation projects. These projects may be structures such as dikes or nonstructural methods such as zoning or relocation of high-risk structures. The Flood Damage Reduction program allows the state and communities to continue to take advantage of newly increased federal matching funds as well as address problems that have not received federal priority.
- Major revisions to the state Drainage Code, for which the DNR has some permitting responsibility. Negotiations among the DNR, environmental groups and local ditching authorities led to these changes, which clarify the circumstances under which drainage is allowed. They also clarify and strengthen the rules governing the work.
- Continuing work on the state groundwater inventory to determine the quantity, natural quality, and location of groundwater resources and characterize their capabilities. This information is particularly important to have as groundwater is put to greater use for economic development, irrigation and drinking water, and as aquifers show increasing degrees of depletion and pollution. Development requires water and must be guided to areas where groundwater is sufficient. Geophysics applications and water investigations have been developed from oil-field technology. These methods have been used not only for the inventory, but also by the Minerals Division for nonferrous-mineral exploration and by the Pollution Control Agency to find underground tanks.



Joe Julik (left) and Andrew Streitz record data as part of a Division of Waters geophysics survey. This new technology uses sound waves produced by small charges and portable pile drivers to probe underground. These tests help determine the quality, quantity and location of aquifers.

"Work with public and private organizations to promote the conservation, protection, and enjoyment of Minnesota's forest resources through multiple-use management, wildfire control and forest protection, and technical forestry assistance."

#### FOREST MANAGEMENT

Foresters must anticipate demand for a commodity that requires 40 years or more from planting to harvest. The division prepares for this uncertain future by maintaining healthy stands of timber in a diversity of ages and species.

Multiple-use management of forests has long been a goal of the state. At times, the symbiosis is easy and natural--the creation of forest roads to serve both loggers and hunters, for example. At other times, differences are more difficult to reconcile. As an example, forestry and wildlife aims sometimes differ but must be incorporated into any management plan.

Chronic issues include control of fire, disease and insect pests. Fire causes obvious damage. Gypsy moth infestations, spruce budworm, white-pine blister rust and jack pine budworm are less obvious, but all decrease the value and productivity of Minnesota's forest resource.

Accomplishments: Among the Division of Forestry's accomplishments during the past biennium were the following:

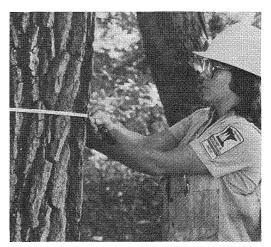
- Wildfire protection on 22.8 million acres. The spring of 1987 was the worst fire season in 10 years. During the biennium, the division fought about 4,000 fires on about 150,000 acres in Minnesota at a cost of \$8.5 million. In addition, the department sent about 300 full-time employees to fight fires in western states.
- Completion of the statewide Cooperative Stand Assessment, a complete inventory of state-managed forest resources. As well, the division is beginning to update its Forest Inventory Assessment, an inventory of all forestlands regardless of ownership. Thorough, up-to-date inventories such as these allow for better forest management. They also attract industry to Minnesota's forests. For example, Blandin and Potlatch are expanding their paper operations, and Lake Superior Paper

has built a plant in Duluth. During the last decade, the forest-products industry has invested more than \$1 billion in Minnesota, creating more than 1,000 jobs.

- Assistance through the division's Private Forest Management program to nearly 35,000 landowners during the biennium. Much of this work applied to acreage enrolled in the federal Conservation Reserve Program: the Division of Forestry planted trees, wrote management plans, gave advice and in other ways lent technical assistance.
- Regeneration of more than 5,000 acres of overmature aspen through the aspen-recycling portion of the Reinvest in Minnesota program.

Administration of state timber sales totaling more than 920,000 cords and issuance of 6,400 fuel-wood permits.

- Rehabilitation, expansion and construction of state-forest recreation facilities. The Division of Forestry oversees 46 state-forest campgrounds, 44 day-use areas, 1,200 miles of recreational trails, 142 water-access sites and 17 canoe and boating campsites.
- Construction and maintenance on more than 2,000 miles of roads on lands administered by the Division of Forestry.
- Shipment of 40 million conifers, 3 million hardwoods and more than 6 million containerized seedlings from state-forest tree nurseries.
- Update of the Minnesota Forest Resources Plan for 1987-91 and completion of management plans for the Orr and Park Rapids forestry areas. Long-range planning not only allows for better multiple-use management of forest resources; it also involves the public in decisions affecting Minnesota's forestlands.



Taping the girth of a cottonwood, Faribault Field Station Forester Lillian Baker cruises timber for a sale. Forest inventory and timber cruising are important aspects of managing the state's forests and planning for the future.

"Maintain appropriate fish, wildlife and native plant populations and the viability of the communities, and provide quality opportunities for public use and appreciation of these resources."

## FISH AND WILDLIFE MANAGEMENT

Our fish and wildlife are in greater demand than ever before. More people spend more time fishing, hunting and trapping. More people are spending more time in the outdoors in anticipation of seeing wildlife and appreciating wild things. Yet the quality of habitat has declined. Since the 1950s, 5 million acres of natural land have been converted to cropland or commercial land. Wildlife food and cover have been lost. Sedimentation and pollution have destroyed fish habitat.

Among specific challenges to management is a federal agricultural set-aside program that is not cost effective and is in some cases detrimental to establishing good wildlife habitat. Another objective of the DNR is to secure long-term funding for the popular Reinvest in Minnesota program.

Accomplishments: Among the accomplishments of the Division of Fish and Wildlife during the past biennium were the following:

- Completion of Fish and Wildlife's first comprehensive strategic and long-range management plans. The planning process provided information to the public about department actions and natural-resources issues, and involved the public in department decision-making.
- Two full years of rebuilding habitat through RIM, which consists of four major programs:
  - 1. Under the Critical Habitat Matching Program, RIM money has matched private donations to improve fish and wildlife habitat. Through the end of the biennium, citizens donated more than \$170,000 and 3,200 acres valued at more than \$1 million.

- 2. Through the Aspen Recycling provision, the DNR cuts old aspen to improve wildlife habitat and better manage stands for commercial cutting (see Forest Management).
- 3. Through the Fish and Wildlife Conservation provisions of RIM, the DNR has carried out more than 20 fisheries projects and two dozen wildlife projects during the biennium, including trout stream improvement; installation of aeration systems to prevent winterkill; construction of fishing piers and rough-fish barriers; purchase of land and easements to develop wildlife management areas for public use; development of wildlife habitat in other areas; and addition of several scientific and natural areas.
- 4. Through the Conservation Reserve portion of RIM, the state has secured easements on more than 20,000 acres of marginal farmland to improve water quality and wildlife habitat. (This last aspect of RIM is administered by the state Department of Agriculture.)
- Help in developing the criteria the Department of Agriculture uses to select lands for the federal Conservation Reserve Program. Because of good selection criteria and an early start, Minnesota has one of the most successful programs in the nation with 1.5 million acres in the reserve.
- Promotion that led to record donations of \$834,213 to the "Chickadee Checkoff" in 1987. The Nongame Wildlife Program has funded efforts to reestablish peregrine falcons, trumpeter swans and other threatened or endangered species.
- Continued success in increasing the state's white-tailed deer population. Improved management has led to a record harvest of 146,203 deer in 1985 and 137,973 in 1986. As recently as 1971 deer numbers were so low the season was closed.



Larry Gates and Steve Hirsch of the Division of Fisheries electrofish a trout stream in southeastern Minnesota. These surveys are used to estimate the number and size of fish in a stream and are vital to the success of fish management.

- Fish management intensification. The fishing license surcharge has funded the buy-out of commercial fishermen on Lake of the Woods; additional habitat work, especially on trout streams; and construction (still underway) on a Grand Marais hatchery.
- Extension of trout and salmon stamp funds to Lake Superior. Because of an aggressive program of lake-trout stocking and lamprey control by Minnesota and other Great Lakes states, the lake trout shows strong signs of recovery in Lake Superior. Stocking of chinook salmon has led to several successful salmon-fishing seasons on Lake Superior and in tributary streams. Work continued to successfully establish the Atlantic salmon. Steelhead stocking continued. Trout stamp funds were used to buy an off-shore boat for Lake Superior assessment.
- Cooperation with the University of Minnesota in research concerning lake-trout genetics and Lake of the Woods fish populations.
- The addition of several lakes and stretches of five trout streams and one warm-water stream to the experimental waters classification. Special regulations on these bodies of water are designed to improve sport fishing. One of the most notable successes has been the increase in the size of northern pike and walleyes in Mille Lacs Lake.

"To enhance the satisfaction of existing and new recreational users while preserving the state recreational resources and environmental quality."

### OUTDOOR RECREATION MANAGEMENT

The Division of Parks and Recreation and the Trails and Waterways Unit manage many of Minnesota's outdoor recreation areas, including 64 state parks; 1,200 public water accesses; nearly 13,000 miles of trails for hikers, skiers, snow-mobilers and others; and 19 canoe and boating route rivers. State parks protect special natural or cultural resources as varied as the rugged gorge of the St. Louis River and the prairie of Blue Mounds State Park. In many instances, state recreational facilities are the focal points of area tourism.

Among the greatest problems the DNR faces in managing outdoor recreation is the sheer demand for parks, trails, rivers, and access to lakes. Areas once sufficient are now overwhelmed by public use.

In state parks, resource management and maintenance of facilities have lagged. In Itasca State Park, for example, extensive pine regeneration is needed if the impressive forest for which the park is known is to survive as it has for centuries. The Division of Parks and Recreation will give greater attention to managing and interpreting the resource in addition to providing recreation and facilities.

A particular problem with trail use concerns the little revenue received from the state ski pass. Because of recent poor skiing conditions, few passes were sold. The pass system has been improved and greater effort is being made to market the program, though nothing can compensate for lack of snow.

Accomplishments: The Division of Parks and Recreation includes the following among its accomplishments during the last biennium:

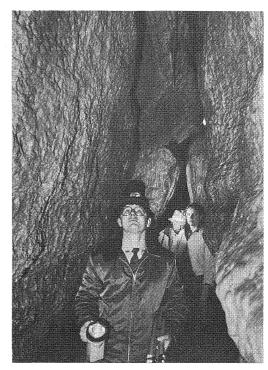
• Gaining legislative authorization to add Mystery Cave, a geologic treasure and tourist attraction, to Forestville State Park.

- The opening of Tettegouche State Park and completion of the visitor center, the major interpretive facility on the North Shore. The center and entrance road were joint projects of the DNR and the Minnesota Department of Transportation.
- Expansion of a state park marketing program. Better promotion and publicity have raised attendance.
- Organization of several special events that tie state parks more closely to local communities. Among these are the Fort Ridgely Festival and smaller celebrations at Helmer Myre, Forestville and Blue Mounds state parks.

Accomplishments: The Trails and Waterways Unit counts the following among its accomplishments:

- Completion of the Taconite State Trail from Grand Rapids to Ely.
- Major construction on the following corridor trails: Hinckley Fire State Trail, Root River State Trail, Douglas State Trail, Heartland State Trail and the Shakopee-Chaska section of the Minnesota Valley State Trail.
- Construction of more than 50 accesses on public waters, including accesses on Lake Minnetonka, Christmas Lake, and Lake Superior at Two Harbors.
- Installation of more than 30 fishing piers at many Minnesota lakes in cooperation with the Section of Fisheries. These facilities have proven popular with youngsters, the elderly, the handicapped and other anglers who don't have boats or access to more remote waters.
- Administration of grants to local units of government to build or maintain nearly 9,000 miles of grant-in-aid snow-mobile trails and more than 800 miles of grant-in-aid ski trails. In addition, the DNR undertook maintenance on more than 3,000 miles of park, forest and other state-owned trails.

- Construction of more than 10 canoe and boating route sites and maintenance of sites on more than 2,800 miles of the state's 19 canoe and boating route rivers.
- Beginning of a new river cleanup program, which uses volunteers, Minnesota Conservation Corps workers and Sentencing-to-Service labor.
- Establishment of the Trail Explorers Club to promote trail opportunities for bicycling, hiking, cross-country skiing and snowmobiling.
- Initiation of a statewide interpretive program for state trail users.



Forestville State Park Manager Mark White leads a tour of Mystery Cave, a recent and unique addition to the state outdoor recreation system.

"To provide training-based solutions to the DNR's enforcement needs, including being more responsive and accountable to the public, and maintaining conservation officer skill levels in the face of an increasingly complex workload."

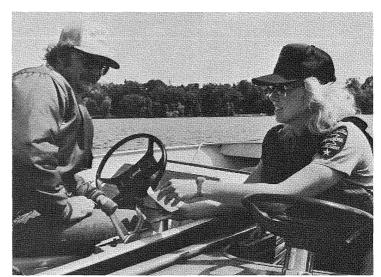
#### **ENFORCEMENT**

Since the relatively simple days of the "game warden," the duty of the conservation officer has grown to include mediation of water-use disputes, investigation of arson and trespassing on state land, patrolling of state campgrounds, and investigation of animal nuisance complaints--in addition to the traditional job of arresting fish- and game-law violators. Conservation officers also instruct youth in safety programs for firearms, snowmobiles and all-terrain vehicles.

Accomplishments: The accomplishments of the division during the last biennium include the following:

- Improvements in training. Annual training, previously carried on in the regions, was consolidated at Fort Ripley. The result is greater uniformity in training and better use of funds. In the end, enforcement should benefit.
- Stepped-up enforcement in high-use areas, where officers' time is used to greatest effect. One additional officer was assigned to Mille Lacs; another to the Metro Region. Two positions were added to the special investigations unit.
- Continuing success of the Turn in Poachers program. TIP accounted for more than 2,200 calls that led to more than 700 arrests. More than \$49,000 in privately raised award money was paid out during the biennium.
- Completion of the Mesabi Fur investigation. This twoyear cooperative undercover operation with Wisconsin, Michigan and the U.S. Fish and Wildlife Service resulted in 103 convictions in Minnesota courts on a variety of charges of illegally selling wild game and fish.

- During the biennium about 35,000 youth were trained in firearms safety, 5,200 in snow-mobile safety and 1,300 in all-terrain vehicle operation.
- Enforcement of state natural-resources laws, which resulted in more than 10,000 arrests in 1985, more than 9,000 in 1986, and about 9,500 in 1987.
- Commemoration of 1987 as the 100th anniversary of natural-resources law enforcement in Minnesota. The Division of Enforcement hosted the June meeting in Duluth of the Association of Midwest Fish and Game Law Enforcement Officers.
- Computerization of Division of Enforcement records, which will aid investigations and other enforcement.



Conservation Officer Cathy Brehm checks the fishing license of an angler on Lake Sarah in Hennepin County.

"By more effective management of leases, sales, exchanges, acquisitions, and other real estate activities, the DNR plans to enhance state revenues and better serve the public interest.... Improve the Department through...better equipment maintenance and replacement."

#### FIELD OPERATIONS SUPPORT

Field Operations Support provides professional and technical services to the department through the Bureau of Engineering, Bureau of Land and the Bureau of Field Services (which provides services for department equipment and facilities).

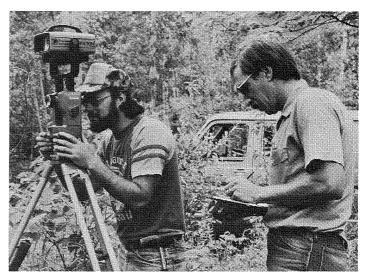
Accomplishments: Major accomplishments during the past biennium included the following:

- Planning of improvements to fleet management to increase efficiency and pay for the regular replacement of vehicles. Vehicles no longer are assigned permanently to management units, but instead are rented. Rental costs pay for maintenance and replacement. (The new system began operation July 1, 1987.)
- Transfer of contracting authority to the DNR from the Department of Administration and delegation of this authority to the field. Many contracts now can be handled entirely in the field. The new process is faster and cheaper than the old method. The DNR also arranged with Administration to allow for expanded local purchasing authority so purchases up to \$1,500 can be made entirely within the field for greater efficiency.
- Computerization of Field Services and Lands records, which will increase the efficiency of the bureaus.
- Payment of more than \$12.3 million to counties as payments in lieu of taxes, revenue sharing, and real-estate taxes and assessments.
- Acquisition of more than 19,000 acres through 330 transactions, and the execution of 37 land exchanges.
- Administration of more than 3,000 leases, 700 cooperative farming agreements, 2,900 utility-crossing licenses and nearly 600 easements.

- Generation of more than \$3.3 million through real-estate management activities.
- Completion of the Lakeshore Lease Disposal Report. The Legislature mandated the sale of state-leased lakeshore property. Actual sale has been enjoined in court.
- Completion of several special projects, including the LCMR land exchange study, the streamlined leasing pilot study, the land acquisition procedures study, and the White Earth Indian Reservation land transfer.
- Design and construction by the Bureau of Engineering of 300 projects with a value of about \$12 million. Among the major ones were a regional shop facility at New Ulm, the Tettegouche State Park visitor center (see also

Outdoor Recreation Management), the Agate Bay access on Lake Superior (a cooperative project with several private groups), the portion of the Minnesota-Wisconsin Boundary Trail between Carlton and West Duluth, and the repair of the Lake Bronson State Park dam.

• Completion of 200 land management, development and acquisition surveys by the Bureau of Engineering.



Engineering Aide Doug Schaffer (left) and Survey Crew Supervisor John Burkhardt survey land for a DNR project.

#### REGIONAL OPERATIONS SUPPORT

Regional Operations, with headquarters in six locations throughout the state, is the cornerstone of department field operations. Regional administrators are the commissioner's representatives in the regions. They are in charge of interdisciplinary coordination of field activities.

Accomplishments: Major developments in regional operations during the past biennium include the following:

- Greater involvement in department management by regional administrators. The lines of authority from the regional administrators to the commissioner's office have been streamlined. These changes and the addition of an assistant commissioner for operations have led to a great improvement in communications between the central office and the regions.
- Start of a new fleet-management and accounting system that is carried out in the regions (see also Field Operations Support).
- Start of the Mississippi River project, a new kind of decentralized interdisciplinary management program. Federal grants for managing the navigable portion of the Mississippi led the Legislative Commission on Minnesota Resources to authorize \$300,000 and four positions in a river-management program that involves two regions and is headed by the Region V administrator.

"To be a state agency recognized for its service to the public. To achieve a broad public understanding of, and participation in, natural resource management programs....Improve the Department through...improved human resource management... and the reduction of workers' compensation costs."

#### SPECIAL SERVICES AND PROGRAMS

Special Services and Programs comprises the Bureau of Information and Education, Office of Planning, Bureau of Human Resources (personnel), Youth Programs (Minnesota Conservation Corps), Volunteer Services, Minnesota Environmental Education Board, and DNR Library.

Accomplishments: Special Services can cite the following accomplishments during the past biennium:

- Filling five regional information-officer positions at offices in Bemidji, Brainerd, New Ulm, Grand Rapids and St. Paul. These people will provide information, explain accomplishments and define issues on a regional level.
- Completion of a long-range strategic plan for the DNR that is summarized in *Directions for Natural Resources: A Look at Problems and Opportunities Facing Minnesota's Resources into the 1990s*.
- Enlargement of the DNR Information Center, which has allowed the public immediate, one-stop access to information.
- Expansion of the Minnesota Conservation Corps, which provides work experience for persons aged 18 to 26, and the summer youth program for adolescents aged 15 to 18.
  - Training for midlevel staff to improve supervisory skills.
- Completion of the Career Paths Study, through which the DNR will try to further employees' career plans and better meet immediate on-the-job needs, such as day care.
- Completion of 499 education programs reaching 160,000 people, sponsored by the Minnesota Environmental Education Board and regional councils. MEEB also trained about 2,000 teachers and others in the Project WILD curriculum.
- Organization of hundreds of volunteers, who donated 42,000 hours to activities ranging from beaver-dam control to photography.

"Improve the Department through increased use of long-range planning, computer use...and organization efficiency."

# ADMINISTRATIVE MANAGEMENT

Administrative Management comprises the Commissioner's Office, Financial Management, Bureau of Licenses, Internal Audit, Information and Data Systems, and Office Services.

Accomplishments: The following are among the accomplishments of the Administrative Management program during the past biennium:

- Additional efforts by the commissioner's office to meet with employees to identify issues and eliminate impediments to effective work. These efforts include "focus groups" among employees and "program reviews" in the regions.
- Appointment of an assistant commissioner for operations to increase efficiency and responsiveness of the commissioner's office in dealing with the regions.
- Improvements in accounting to reduce the number of recommendations by the legislative auditor.
- Continuing progress in the installation of a departmentwide computer system.
- Greater computerization and automation in licensing to save time and reduce costs.



Minnesota Department of Natural Resources 500 Lafayette Road St. Paul, MN 55155-4040