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OUTDOOR  
RECREATION

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*Preliminary Plan...1965*

This copy of Minnesota's official outdoor recreation plan is presented for your agency's use in planning. It is a preliminary plan designed to provide the State with guidelines for long-range development and proper utilization of Minnesota's precious natural resources. Minnesota has prepared this plan with the use of State Natural Resource Funds, general revenue funds and the federal Land and Water Conservation Fund.

By no means is this plan final since it has not been possible to explore and evaluate our State's total recreational potential. However, it does provide us with a preliminary accounting of our outdoor assets and identifies and outlines some of the existing problem areas.

By 1968 this plan will again be reviewed and updated based upon the findings of more complete inventory and demand studies. Your agency should view this plan as a reference for use in local immediate and long range plans for future recreational needs.

Additional copies of this plan may be obtained at the Documents Section, 140 Centennial Building, St. Paul, for \$4.50 each. A special issue of the Conservation Volunteer carrying a digest of this plan is also available free of cost. These may be obtained by writing to Minnesota Department of Conservation, Bureau of Planning, 304 Centennial Building, St. Paul, Minnesota 55101.

Minnesota Department of Conservation

7-12-66



EXECUTIVE OFFICE

State of Minnesota  
St. Paul

KARL F. ROLVAAG  
GOVERNOR

To the People of Minnesota:

Minnesota's heritage of natural beauty offers many recreational opportunities to her people and to the thousands who visit the state each year. The management of our recreational land and the development of additional areas has become increasingly important.

The growing population with greater wealth, more leisure time and increased mobility will place heavy demands on the areas and facilities now dedicated to recreation use. To meet such demands, we should utilize the financial resources placed at our disposal.

The state has made significant progress in the natural resource and recreation field, but there is still much to be done. The Land and Water Conservation Fund Act of 1965 is one of several federal programs which will contribute substantially to meeting the state's recreation needs.

This plan is a preliminary study of our recreational assets and the goals for future development. Planning and effective coordination between private and public agencies at all levels of government will help determine our action program.

We dedicate the plan to the purpose of expanding and enhancing Minnesota's outdoor recreation facilities and opportunities in sufficient quantity and quality to meet the needs of this and future generations.

Very truly yours,

Karl F. Rolvaag  
GOVERNOR

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STATE OF MINNESOTA  
DEPARTMENT OF CONSERVATION  
ST. PAUL, MINNESOTA 55101

November 23, 1965

Regional Director  
Bureau of Outdoor Recreation  
Lake Central Region  
3853 Research Park Drive  
Ann Arbor, Michigan 48104

Dear Sir:

It is a pleasure to present Minnesota's official outdoor recreation plan. This preliminary plan is designed to provide the state with guidelines for long-range development and effective utilization of Minnesota's natural resources. In the absence of a comprehensive state planning program, under Section 701 of the Federal Housing Act of 1954, the state has prepared this plan with the use of federal Land and Water Conservation Funds, State Natural Resources Funds, and general revenue funds.

While it has not been possible to explore and evaluate Minnesota's total recreational potential within the confines of this inventory, it does provide us with an accounting of our outdoor assets and identifies and outlines some of the existing problem areas.

The material contained in this report provides us with a preliminary plan that will enable us to probe into new concepts and areas of outdoor recreation. It represents a starting point toward the job of providing Minnesota with its greatest possible outdoor recreation potential.

Very truly yours,

Wayne H. Olson  
Commissioner of Conservation

# acknowledgments

The Minnesota Department of Conservation gratefully acknowledges the assistance of the following agencies in the preparation of this report.

## FEDERAL

Department of Agriculture  
Forest Service  
Soil Conservation Service  
Department of Defense  
Army Corps of Engineers  
Department of the Interior  
Bureau of Indian Affairs  
Bureau of Outdoor Recreation  
Bureau of Sport Fisheries and Wildlife  
Geological Survey  
National Park Service  
Outdoor Recreation Resources Review Commission (O.R.R.R.C.)

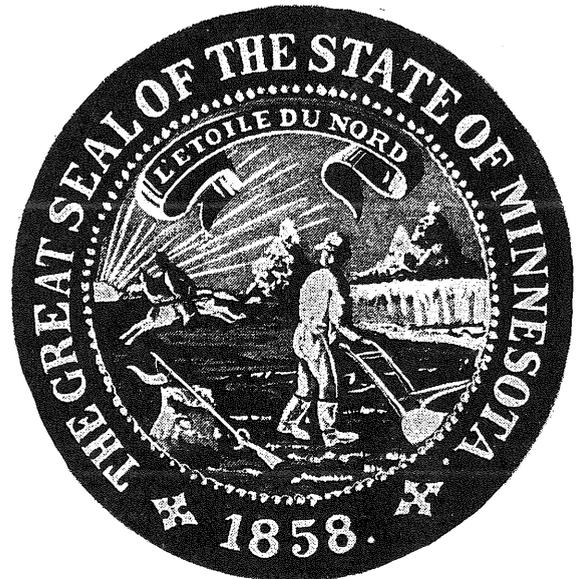
## STATE, REGIONAL AND LOCAL

Cities, Counties and Municipalities  
Metropolitan Planning Commission  
Minnesota Department of Administration  
Minnesota Department of Aeronautics  
Minnesota Department of Business Development  
Minnesota Department of Education  
Minnesota Department of Health  
Minnesota Department of Highways  
Minnesota Outdoor Recreation Resources Commission  
Minnesota State Historical Society  
Quasi Public Agencies of Minnesota  
University of Minnesota  
Various Private Agencies



ITASCA ... The Source of the Mighty Mississippi

# *Minnesota Outdoor Recreation ...*



**PREPARED BY THE**

**MINNESOTA DEPARTMENT OF CONSERVATION  
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**PHOTO CREDITS:  
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CONSERVATION AND THE U.S.  
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## *... Present and Future*

The LOON...  
Our State Bird



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NOTE: All maps and charts in this book have been prepared by the Minnesota Department of Conservation unless otherwise indicated.

# foreword

"Preservation, protection and enhancement of natural beauty"<sup>1</sup> and the fostering of recreation through wise use of our natural resources – this is the foundation for the preparation of this plan. It has been prepared for the people of Minnesota and their visitors and is the first phase of outdoor recreation planning on a state-wide basis. This preliminary or "initial" design will be expanded into a forthcoming, long-range and comprehensive plan.

Although recommendations are presented here, they are done so more to stimulate intelligent discussions and to provide a framework for future work rather than to dictate action. Several considerations suggest the appropriateness of this approach. First, planning is a continuing process where factors are continually changing. It has been the objective to develop this plan in such a way that it can be sustained and improved on a continuing basis as trends change and ideas progress. Second, it has not been possible to explore and evaluate all pertinent areas. Where this has been the case, the omissions have been noted and will be included in more detail in the forthcoming comprehensive plan. Last, and perhaps most important, the role of planning is advisory rather than authoritative, recommendatory rather than executive.

This plan is not aimed at providing ready-made answers to the problems of resource management. Rather, it represents an inventory of some of the basic facts to be used as a basis for exploring future recreation and resource needs. It is designed to provide the state with guidelines for protecting, conserving and developing its natural areas and resources.

A well-defined plan can be of great value to recreation organizations. It can and should be used as a guide for long-range developments for the effective management and utilization of Minnesota's natural resources and recreation areas.

There is no crystal ball into which planners can gaze and determine the future, but they can predict through analyzing past and present trends what will probably be the case in the future. Through proper planning, crucial land and water areas of high value to outdoor recreation can be preserved and developed while they still remain available.

It is up to us to see that Minnesota's great outdoor heritage is guarded and her resources utilized to the best public advantage now and in the future.

<sup>1</sup>President Lyndon B. Johnson, Natural Beauty Message to Congress (1965)

**ROBERT W. MATTSON**

ATTORNEY GENERAL

STATE CAPITOL

ST. PAUL, MINNESOTA 55101

IN REPLY ADDRESS TO

375 CENTENNIAL OFFICE BUILDING

SAINT PAUL, MINNESOTA 55101

June 25, 1965

Mr. Wayne H. Olson  
Commissioner of Conservation  
302 Centennial Building  
Saint Paul 1, Minnesota

Dear Mr. Olson:

This will acknowledge receipt of your letter addressed to Robert W. Mattson, Attorney General, wherein you state the following

FACTS

"The Governor of the State of Minnesota, the Honorable Karl F. Rolvaag, acting pursuant to the authority vested in him by Laws of 1965, Chapter 810, Section 21, did designate on the 25th day of June, 1965, the Department of Conservation of the State of Minnesota, as the state agency to act for him in applying for, receiving and accepting federal funds granted to the State of Minnesota under the provisions of Public Law 88-578, cited as the 'Land and Water Conservation Fund Act of 1965,' the expenditures of any such funds to be governed by the laws of the State except insofar as federal requirements may otherwise provide. The moneys are appropriated by the legislature to enable the state agency to carry out the purposes for which the funds are received and are to be available for expenditure in accordance with the requirements of federal law.

"I have been informed by representatives of the federal government that Public Law 88-578 contains certain requirements which must be vested in the State, a State Agency or agencies, for a state's full participation in the funds of the Act. These requirements are:

1. To prepare and maintain a Comprehensive State Outdoor Recreation Plan;
2. To develop, operate, and maintain outdoor recreation areas and facilities;

3. To acquire land, waters, and interests in land and waters for recreation purposes;
4. To enter into contracts and agreements with the United States and an appropriate agency thereof;
5. To keep financial and other records relative to such contracts and agreements;
6. To furnish appropriate officials of the United States such reports and information as are required for the conduct of the grant program;
7. To coordinate its recreation activities with those of other State agencies and governmental units;
8. To receive Federal moneys;
9. To disburse Federal moneys;
10. To assure the United States that the State has the ability and intention to finance its share of any project proposed;
11. To assure that areas acquired or developed with money granted from the Fund will be operated and maintained for public recreation purposes;
12. To enter into agreements on behalf of political subdivisions and public agencies, and to require from such entities the necessary financial and other assurances."

You ask the following

QUESTION

Does this State and the agency involved (the Department of Conservation) have the necessary legal authority to meet the requirements of Public Law 88-578?

OPINION

The Department of Conservation of the State of Minnesota, is a state agency, M.S. 1961, Sec. 15.01, under the supervision and control of a commissioner of conservation, M.S. 1961, Sec. 84.025, subd. 2, who is the administrative and executive head of the department and subject to the provisions of the section and other applicable laws. He, as such

administrative and executive head, has the power and duties therein prescribed; the enumeration of his specific powers and duties does not limit or exclude other powers or duties (M.S. 1961, Sec. 84.027, subd. 1). The commissioner has charge and control of all public lands, parks, timber, minerals and wild animals, and of the use, sale, leasing or other disposition thereof, (M.S. 1961, Sec. 84.027, subd. 2), and other authority as prescribed by statute. The department may prepare a comprehensive statewide outdoor recreation plan, but must consult with the Minnesota Outdoor Recreation Resources Commission whose opinion is advisory only, on all statewide recreational plans required by the Land and Water Conservation Fund Act (L. 1963, C. 790, Art. II) (L. 1965, C. 810, Sec. 4, subd. 3), and the necessary assistants may be employed and bureaus established. (Op. Atty. Gen. file 983L, dated May 26, 1954). Recreation lands are acquired for or by the Commissioner of Conservation and development of the same is provided for, (L. 1963, C. 790; L. 1965, C. 810; L. 1965, C. 901).

In the 1965 session of the Minnesota Legislature, the legislature enacted the following statute found in Minnesota Laws of 1965, Chapter 810, Section 21, it reads as follows:

"Subdivision 1. The governor is designated as the state agency to apply for, accept, receive and disburse federal funds and private funds which are granted to the state of Minnesota from the Federal Land and Water Fund Act.

"Subd. 2. The governor may designate a state agency or agencies to act for him in applying for, receiving, and accepting federal funds under the provisions of subdivision 1. Such designation of a state department or agency shall be filed in the office of the secretary of state.

"Subd. 3. The governor or any state department or agency designated by him shall comply with any and all requirements

of federal law and any rules and regulations promulgated thereunder to enable the application for, the receipt of, and the acceptance of such federal funds. The expenditure of any such funds received shall be governed by the laws of the state except insofar as federal requirements may otherwise provide. All such moneys received by the governor or any state department or agency designated by him for such purpose shall be deposited in the state treasury and are hereby appropriated annually in order to enable the governor or the state department or agency designated by him for such purpose to carry out the purposes for which the funds are received. None of such federal moneys so deposited in the state treasury shall cancel and they shall be available for expenditure in accordance with the requirements of federal law.

"Subd. 4. Fifty percent of all moneys made available to the state from funds granted under subdivision 1 shall be distributed to local units of government, providing that any amount distributed is a part of a statewide or a county or regional recreational plan prepared within the framework of the comprehensive planning program and compatible with the statewide recreational plan."

We conclude, and it is our opinion, that the State of Minnesota has full power and authority to participate in the "Land Use and Water Conservation Act of 1965," and that it was the clear intention and purpose of the legislature in the enactment of C. 810, and other laws to which reference has been made, that the state shall fully participate in such act. It has clearly designated the Governor as the state agency to apply for, accept, receive and disburse all federal and private funds which are granted to the State from the Act. It further authorizes the Governor to designate a state agency, or agencies, to act for him in applying for, receiving and accepting federal funds under the provisions of subdivision 1 of Chapter 810. All requirements of federal law and any rules and regulations thereunder shall be complied with to enable the application for and the receipt of an acceptance of such federal funds. The expenditure of the funds is to be governed by the state law

Wayne H. Olson

June 25, 1965

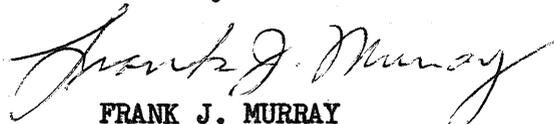
except as federal requirements may otherwise prescribe. All moneys received are to be deposited in the state treasury and are appropriated to carry out the purposes for which the funds are received. Provision for distribution to local units of government has likewise been made in subd. 4 of Chapter 810.

It is, therefore, our opinion that all the requisite authority to meet the requirements of the "Land and Water Conservation Fund Act" as stated by you are vested in the State and the public agency involved including the necessary authority to receive, transfer and expend funds for the purposes intended, accomplish the objectives given in the Act and commit the State to statements made in a proper project proposal.

Your question is answered in the affirmative.

Very truly yours,

ROBERT W. MATTSON  
Attorney General

  
FRANK J. MURRAY  
Deputy Attorney General

FJM:dw



STATE OF MINNESOTA  
EXECUTIVE OFFICE  
ST. PAUL, MINNESOTA 55101

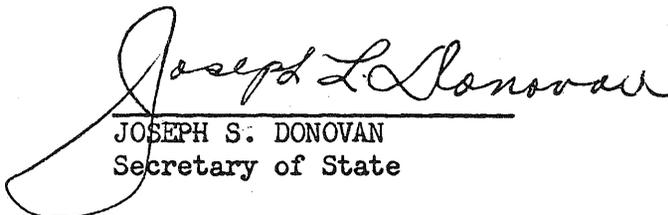
KARL F. ROLVAAG  
GOVERNOR

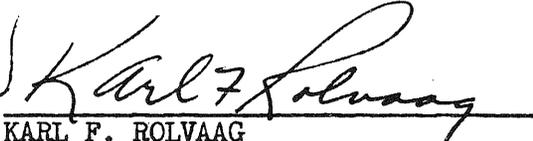
I, Karl F. Rolvaag, Governor of the State of Minnesota, by virtue of the authority vested in me by Laws 1965, Chapter 810, Section 21, do hereby designate the Department of Conservation of the State of Minnesota, to be the state agency to act for me, in applying for, receiving and accepting federal funds granted to the State, of Minnesota from the federal "Land and Water Conservation Fund Act of 1965," Public Law 88-578, and to disburse such funds to carry out the purposes for which the funds are received in accordance with Section 21 of said Chapter 810.

IN TESTIMONY WHEREOF, I have hereunto set my hand and caused the Great Seal of the State of Minnesota to be affixed at the Capitol in the City of Saint Paul, this 25<sup>th</sup> day of June, in the year of our Lord One Thousand Nine Hundred Sixty Five and of the State the One Hundred Eighth.

Attest:

STATE OF MINNESOTA  
Executive Department

  
JOSEPH S. DONOVAN  
Secretary of State

  
KARL F. ROLVAAG  
Governor of said State

STATE OF MINNESOTA  
DEPARTMENT OF STATE  
**FILED**  
JUN 25 1965  
  
Secretary of State

# planning participation

Minnesota's preliminary outdoor recreation plan was organized by regular personnel of the Minnesota Department of Conservation. The work was coordinated by the Bureau of Planning which was added to the Department in 1964 and financed by the state Natural Resource Contingency Fund and the federal Land and Water Conservation Fund. The Contingency Fund was made possible by the enactment of the Omnibus Natural Resources and Recreation Act, Chapter 790, Minnesota Laws 1963, the active catalyst in Minnesota's progress in the resource planning field.

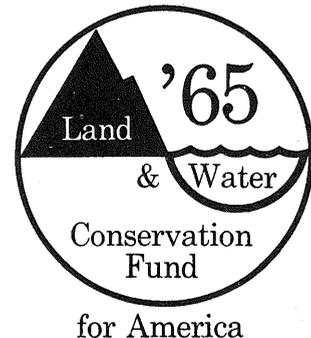
Representatives of Legislative Bodies – The Omnibus Natural Resources and Recreation Act of 1963 created the Minnesota Outdoor Recreation Resources Commission (M.O.R.R.C.), consisting of 14 legislative members; seven from the Senate appointed by the Committee on Committees and seven from the House appointed by the Speaker. An Advisory Council to M.O.R.R.C. consists of 49 members representing 33 federal, state and local agencies and 16 standing committees of the legislature. In addition, there is a 50-member Citizens' Committee of Advisors. Through M.O.R.R.C., its staff, its Advisory Council and its Citizens' Committee of Advisors, legislators worked with planners and administering agencies in the development of long-range resource and recreation plans for Minnesota.

State and Federal Agencies – Many agencies, both state and federal, were contacted in the inventory effort. Valuable advice and council were received during all phases of the organization of this report. All contributed time without compensation. The guidelines and the personal attention, time and effort directed toward this plan by the Bureau of Outdoor Recreation, United States Department of the Interior, is worthy of special mention as is the help given us by the Minnesota Department of Highways, Health and Business Development and other state agencies.

Political Subdivisions, Citizens' Organizations and Other Private Interests – Emphasis has been placed on obtaining the views and opinions of officials in political subdivisions as well as citizens' organizations and other private interests. Meetings were held not only at the capitol, but throughout the state with county boards, school superintendents, agricultural agents, city and municipal officers, watershed district representatives, conservation leaders, chambers of commerce members, sportsmen's clubs, park improvement and booster clubs and individual citizens. The cooperation received has been excellent.

Financial assistance for the preparation of this plan was received from the Land and Water Conservation Fund. The Fund is administered by the Bureau of Outdoor Recreation of the United States Department of the Interior, in accordance with the Land and Water Conservation Fund Act of 1965 (Public Law 578 of the 88th Congress).

Outdoor Recreation



# planning methods

An inventory of our natural resources and the recreational areas and facilities utilizing these resources is a major component of Minnesota's plan. Various governmental agencies and private organizations were contacted to determine the type, size, location, capacity, activities, use – in short the supply of recreation facilities now available to the public. At the same time, an attempt was made to appraise new or potential recreation areas and to obtain some idea of what each might supply in terms of recreation. Bureau of Outdoor Recreation inventory forms were used for both existing and potential developments.

This inventory brings into focus the amount of land and water already available for natural and recreation resource development and brings about a better understanding of land and water use. With such information, policies and projected goals for various types of development can be reviewed. In light of the present and future demands which are now or will be made upon our resources, policies and goals can be modified or adjusted to fit.

Interviews and Questionnaires – The responsibility of providing recreational facilities and services entails the difficult task of determining what the public wants, where they want it and how much should be devoted in time and money for competing recreation activities. In the private sector this is easily answered in that the consumer's preference is expressed by the price he is willing to pay. A facility with no market soon goes bankrupt. Most public facilities have, however, been provided at little or no cost to the immediate consumer. In the absence of dollar figures, decisions have to be made on the basis of legislative direction, user surveys and questionnaires.

In efforts to determine the needs and desires of the recreationist, this plan endeavors to include recommendations formulated as a direct result of the opinion of the consumer. These opinions have been obtained through a diversity of sources, such as, highway interviews of resident and non-resident motorists, direct mail surveys of fishermen, boat owners, etc., and personal interviews and opinion surveys of resort owners, campground owners, campers, park visitors, hunters, fishermen, etc.

In many cases this information is good, but in others it is applicable to only a small segment of the population and not applicable state-wide. Following passage of the Land and Water Conservation Fund Act, summary letters were mailed to all counties, interested agencies and others seeking information regarding the Act. Their cooperation was urged and they were asked to inform us of their planning progress.

Study of Existing Documents – Extensive use has been made of both published and unpublished material from public and private sources. Reference to existing O.R.R.R.C. and M.O.R.R.C. reports appear regularly throughout this preliminary plan.

Use of Professional Planning Consultants – In the current planning process a number of counties have used the H.H.F.A. 701 Programs in their planning process. Many agencies, counties and private concerns have prepared plans either individually or with the aid of planning consultants. Professional planners are being used throughout the state-wide planning process, and M.O.R.R.C. has relied on a number of professionals in their reports. Although limited funds have restricted the use of this assistance for the initial plan, it is proposed that with the aid of federal money, many phases of the Comprehensive Plan in the months ahead will include the professional planner to a greater degree.

Activity Evaluation – In analyzing each activity, a systematic approach was used. The demands placed on each were studied in relation to the supply of areas providing the activity. From this relationship the need itself was determined for both the area supplying the activities and the individual activity followed by an action program. The same systematic approach of demand, supply, need and action was used for each activity.

Inventory and Supply – For the purpose of inventorying Minnesota's recreation areas and resources and to aid in determining our state need, the classification system established by the Bureau of Outdoor Recreation has been used. (See Supply, page 124, for description of Area Classifications). Unless otherwise stated, the cut-off date for inventory purposes has been June 30, 1964.

Priorities – The following priorities, adapted from the Bureau of Outdoor Recreation, were used in the Action chapter.

Priority A – Includes all projects for which action is needed immediately.

Priority B – Includes those projects on which action must be taken in the near future or an opportunity to preserve a valuable resource will be lost or the needs of a broad segment of the public will not be met.

Priority C – Includes those projects on which action must be taken in the future to meet the needs that exist now.

Priority D – Includes those projects for which, although immediate action is desirable, financing can be deferred for a period. Such projects would generally be designed to meet foreseeable future needs that do not fully exist at the time of submission of a proposal.

# MAJOR FINDINGS and RECOMMENDATIONS

Minnesota has one of the nation's outstanding lake regions. These widely distributed lakes offer a variety of fishing opportunities and are the state's best known recreational resource.

Wildlife is diversified and intensively hunted, especially deer, upland game birds and waterfowl. Forests cover 19 million acres or nearly 37 per cent of Minnesota's land surface. Most of the northern half is forested with remnants remaining in the southeast part of the state and along the major rivers. The landscape in portions of the northeast is scarred from mining operations. In the southern half, urbanization and intensive farming have changed the natural character of the land. The source of the Mississippi River is located in north-central Minnesota at Lake Itasca. In the north, the Boundary Waters Canoe Area, along the international border, comprises the foremost canoeing area in the United States and is one of the few remaining wilderness areas east of the Rocky Mountains. The northern boundary waters were once the route of the French fur traders known as the Voyageurs. There are also several outstanding historic sites in the Minnesota River Valley commemorating the Sioux Uprising in 1862.

Minnesotans and their visitors are outdoor-minded and thus need considerable recreation space. This space is generally available on the 12½ million acres of publicly owned land and on a large portion of privately owned land.

The increase in demand for Minnesota's recreation areas will depend largely on the changes in population – in numbers, characteristics and distribution. It will also depend on the leisure time at each person's disposal; on the ease with which each gets around (mobility); and the money in each person's pocketbook (income).

These four factors are and will continue to be major factors in determining the present and future recreational development goals.

## population

The population of the state increased over 70 percent during the first half of the 20th century. An additional increase of 110 percent is predicted by the year 2000.

### POPULATION TRENDS FOR MINNESOTA

<u>ACTUAL</u>	<u>ESTIMATED</u>
1900 - 1,751,394	1964 - 3,525,000
1950 - 2,982,483	1970 - 3,754,000
1960 - 3,413,864	1975 - 4,054,000
	2000 - 6,293,000

Source: Bureau of Census

Population Distribution – Today there are fewer people living on farms and in some of the rural hamlets than 30 years ago. Benefiting from this migration are the large cities and some of the smaller cities which have had industrial growth or have been able to retain their appeal as trading centers. These changes in the distribution pattern have resulted in localized deficits in recreational opportunities particularly in and around the metropolitan area.

### POPULATION DISTRIBUTION TRENDS

(In per cent of total population)

Year	Entire State		Regional	
	Urban	Rural	Seven-County Twin City Metro. Area	Remaining 80 Counties
1900	34.1	65.9	29.0	71.0
1950	53.9	46.1	39.5	60.5
1960	62.2	37.8	45.0	55.0
1970	70.0	30.0	48.5	51.5
1975	75.0	25.0	51.0	49.0
2000			64.2	35.8

Source: Bureau of Census

Though population growth is most marked in the Twin City metropolitan area, there is a substantial spread of urbanization developing around several second and third class cities in the state, Rochester and Moorhead, for example.

Occupational Status – The change in Minnesota's occupational status is largely motivated by the transition from manual to automated or mechanized systems of production. Fewer farm workers are producing food in excess of need; the surplus workers are moving to the cities. The projections assume that the migration to sources of industrial and commercial employment will continue.

### CHANGE IN OCCUPATIONS – BY GROUPS

(In per cent of total workers)

1940 – 1975

Year	Professional, Technical and Commercial	Farm Managers and Workers	Craftsmen, Operators and Service Labor
1940	33.2	30.0	36.8
1960	41.0	14.1	44.9
1976	49.0	9.8	41.2

Source: Bureau of Census

## leisure time

Another product of mechanization and automation is the increase in leisure time. The present situation and the predicted change for the North Central Region of the United States are as follows:

	<u>1960</u>	<u>1976</u>	<u>2000</u>
Average Work Week	38.7	35.6	30.9
Average Paid Vacation—Weeks	1.8	2.6	3.5
Average Number Holidays	5.7	7.9	9.2
Average Vacation Days Away from Home	6.4	8.0	10.1

Source: O.R.R.R.C. Report 19

## mobility

O.R.R.R.C. predicts that the average 1,290 miles traveled per person for vacations and trips in the North Central Region in 1960 will increase to 1,730 miles in 1976 and 2,280 miles in the year 2000. The completion of the national interstate highway network presumably will increase the flow of east-west and north-south traffic through Minnesota.

### PROJECTIONS OF RECREATIONAL TRAFFIC ACROSS MINNESOTA

(U.S. Origins only, Two-way, Thousands of persons in Minnesota)

	<u>1963</u>	<u>1976</u>	<u>2000</u>
Eastern U. S. to Western Vacation Areas	241	530	960
Central U. S. to Canadian Vacation Areas	153	215	380

Source: M.O.R.R.C. Report No. 4

Seventy-three per cent of Minnesota's visitors come to the state from within a radius of 500 miles; Minnesota will continue to have heavy use from the adjoining states. But, for weekend trips, the choice of site must be situated in closer proximity to the centers of population.

## income

In 1963, total personal income in the United States was \$461,610 million of which 1.8 percent or \$8,132 million was attributable to Minnesota. In Minnesota, the median family income in 1959 was \$5,573, a 75 percent increase over the 1949 figure of \$3,184.

## PERSONAL INCOME, 1940 – 1963, MINNESOTA

	<u>1940</u>	<u>1950</u>	<u>1955</u>	<u>1960</u>	<u>1963</u>
Total Personal Income (in millions of dollars)	1,467	4,184	5,450	7,094	8,152
Total Personal Income (percent of U. S.)	1.87	1.86	1.78	1.78	1.77
Per Capita Personal Income (dollars)	526	1,397	1,710	2,074	2,329

## demand assumptions

Due to lack of complete inventory data and knowledge of demand, it is necessary to use certain assumptions in developing the action program presented in this preliminary plan.

The more significant assumptions used are listed below:

1. Recreational use for such activities as camping, hiking, boating, fishing, hunting, canoeing, water skiing, snow skiing, wildlife observation, outdoor sports and games, driving for pleasure, sightseeing and others will continue to increase due to population growth, leisure time, income and mobility.

2. Development of winter sports facilities will be primarily on private land, or on publicly owned land under lease by private enterprises.

3. The demand for trails for hiking and horseback riding will increase significantly.

4. Wildlife and fish resources are an integral part of the state's recreational responsibility and will have increasing demand from out-of-state recreationists as well as residents.

a. The increase in hunting is and will continue to be contingent on maintaining sufficient habitat to support game populations at a satisfactory level.

b. Waterfowl and upland game bird populations are expected to decrease, if the loss of habitat continues in the southern and western sections of the state.

c. The demand for opportunities to observe, photograph and study varieties of wildlife in natural environment will increase.

5. There will be an increased demand for dispersed, uncrowded, and informal types of recreational use (wilderness type of experience).

6. Water is a prime factor in most outdoor recreation activities. Preservation and improvement of water-based outdoor recreation opportunities will intensify in importance.

7. Demand for accesses, such as boat launchings, wharfs, roads and trails will continue to increase.

a. More access points will have to be provided to public lands and waters as demand increases.

8. Demand will continue to grow and pressure become more intense for summer homes and organized group campsites on publicly-owned land.

9. Increasing demand for use of land for recreational purposes will require additions to key public tracts and the establishment of new areas.

10. Some consolidation of federal, state and county management units by land exchange or transfer will continue to be in the public interest.

11. Competition for land will intensify. Land for public use will be more difficult to locate and acquire.

12. Posting of private land against general public use will continue at an accelerated rate.

# major findings and needs

## INTRODUCTION

The most urgent public recreation needs are: 1. Suitable recreation land in and around large urban areas; 2. Preservation of rapidly disappearing wildlife lands (primarily wetlands); and 3. Development of recreational areas to meet the requirements of an expanding population with more leisure time, more money and greater mobility.

Intensified management of natural resource land to provide greater recreational opportunities is a need on privately owned land and some publicly owned land. In localized areas there is a need for additional land in public ownership to provide sites for specific use functions.

Particular priority and attention should be given, for example, to providing recreation needs in the Twin Cities, Duluth, St. Cloud, Fargo-Moorhead and Rochester vicinities and along Interstate 90 on the southern border. Further study should be given to selecting and developing both state and county recreation areas in these locations.

Drainage of marshes and potholes has been going on at a high rate for the past 25 years. High priority should be given to the preservation of these areas; the loss of this habitat affects the hunter, fisherman, scientist, photographer, ecologist, bird watcher and nature lover as well as the wildlife involved.

Private campgrounds are increasing in number and in quality. The development of recreation homes on privately-owned land continues on subdivided tracts or on single tracts acquired for this purpose. All state-owned and county administered land on lake and river fronts should be withheld from leasing or sale for cabin site or other development purposes until a land use inventory and plan for publicly-owned land under federal, state and local jurisdiction has been completed.

## INFORMATION AND EDUCATION

### MAJOR FINDINGS AND NEEDS

1. Additional information to aid appreciation of our state and an understanding of its features is needed not only for the adult population, but for the youth of Minnesota as well.

Plans and programs calling for the expenditure of public funds for recreation can develop no further than the planning stage without public support. This support can be obtained only through an honest, factual information and education program.

1/A. ACTION: EXPANSION OF AN ACTIVE PUBLIC RELATIONS PROGRAM INCLUDING TOURIST PROMOTION AND CONSERVATION EDUCATION THROUGH WELCOME STATIONS, INFORMATION CENTERS, INFORMATIONAL LITERATURE, NATURAL AND HISTORIC INTERPRETATION, MEETINGS, TALKS, TELEVISION AND RADIO PROGRAMS, NEWSPAPER FEATURE ARTICLES AND NEWS RELEASES.

2. Additional interpretative services are urgently needed in archaeological, historic, natural science and conservation practices to aid understanding and appreciation of such features.

2/A. EXPAND THE SEASONAL PARK NATURALIST PROGRAM TO 12 ADDITIONAL STATE PARKS BY 1970.

2/B. MAKE INTERPRETATIVE CENTERS AND SERVICES AVAILABLE THROUGHOUT THE OUTDOOR RECREATION SYSTEM.

## FISH AND WILDLIFE

3. Preservation of the prairie-wetland environments in southwestern and western Minnesota is essential to waterfowl and associated wildlife production. There are approximately 670,000 acres of key wetlands suitable for waterfowl production not preserved under ownership or lease as of June 30, 1964, by state or federal game agencies.

3/A. PRESERVE AS MANY KEY WETLANDS THROUGH PURCHASE OR LEASE AGREEMENT BY FEDERAL, STATE AND LOCAL GOVERNMENTAL AGENCIES AS POSSIBLE DURING THE FIVE-YEAR PERIOD ENDING JUNE 30, 1970. (WETLAND PURCHASE UNDER THE LAND AND WATER CONSERVATION FUND ACT PROGRAM WILL BE DIRECTED AT ENCOURAGING COUNTY PARTICIPATION.)

- 3/B. SUBMIT TO THE 1967 LEGISLATURE A WETLAND ACQUISITION PLAN WITH BUDGET RECOMMENDATIONS ADEQUATE TO ACCELERATE THE WETLAND ACQUISITION AND DEVELOPMENT PROGRAM.
  - 3/C. COOPERATE WITH THE U. S. DEPARTMENT OF AGRICULTURE IN USING DIVERTED WHEAT FEED GRAIN AND CONSERVATION AREA LAND TO A GREATER DEGREE AS WILDLIFE HABITAT.
  - 3/D. DEVELOP A PROGRAM TO INCREASE THE GAME PRODUCTIVITY ON SUITABLE PUBLICLY-OWNED LAND OUTSIDE WILDLIFE MANAGEMENT AREAS.
4. It is the responsibility of the state and federal wildlife agencies to protect rare and endangered species of wildlife from extinction.
- 4/A. CONTINUE, WITH INCREASED EMPHASIS, A COORDINATED PROGRAM FOR PRESERVATION OF RARE AND ENDANGERED SPECIES.
5. There is an increasing demand for use of wildlife resources in nature study, photography and observation.
- 5/A. DEVELOP WILDLIFE MANAGEMENT AREAS TO PROVIDE ADDITIONAL OPPORTUNITY FOR PERSONS DESIRING TO SEE WILDLIFE.
6. The primary objective of fish management programs is to produce the greatest number of satisfactory fishing hours.
- 6/A. COMPLETE MAPPING, INVENTORY AND PLAN OF SIGNIFICANT FISHING LAKES.
  - 6/B. THE CURRENT APPROPRIATIONS (1966 and 1967) PROVIDE FOR THE ACQUISITION AND DEVELOPMENT OF 2,200 ACRES OF SPAWNING AREAS. IF FEASIBLE, CONTINUE THIS PROGRAM AT THE SAME RATE, 1968, 1969, 1970.
  - 6/C. PROTECT PUBLIC FISHING WATERS AGAINST ARTIFICIAL DRAINAGE, POLLUTION, SILTATION, AND EXCESSIVE WITHDRAWAL OF WATER FOR IRRIGATION THROUGH INTER-AGENCY PLANNING AND COOPERATION TO:
    - A. INSTALL PERMANENT SILLS, WHEREVER POSSIBLE, AT THE OUTLETS OF LAKES TO RETAIN THE PRESENT WATER LEVELS.
    - B. STABILIZE STREAM AND LAKE BANKS.
    - C. REDUCE OR ELIMINATE POLLUTION CAUSING UNFAVORABLE CONDITIONS OR UNWANTED ARTIFICIAL FERTILIZATION.
    - D. PROTECT FISHERIES VALUES IN STREAM STRAIGHTENING PROCEDURES.
  - 6/D. PRESERVE, BY EASEMENT, STRIPS OF LAND ALONG MAJOR RIVERS AND TROUT STREAMS TO PROTECT THE HABITAT AFFECTING FISH AND FISHING.

#### PUBLIC ACCESS

7. There is a need for continuing the evaluation of public lands and waters to determine the type of access for which the area is best suited.

(The counties and municipalities will be encouraged to assume a major role in access development under grants-in-aid programming.)

- 7/A. ACCESS PLANNING AND DEVELOPMENT PRIORITIES:
  - A. LAKES WHERE ACCESS IS NEEDED FOR FISH MANAGEMENT.
  - B. LAKES CLOSE TO THE METROPOLITAN AREA.
  - C. LAKES IN THE CONCENTRATED LAKE REGION.
- 7/B. CONSTRUCT MULTIPURPOSE ROADS ON PUBLIC LANDS WHERE VEHICULAR RECREATION ACCESS IS NEEDED.

## PARKS

8. The Kabetogama Area qualifies for National Park status and will add needed facilities and public recreational opportunities in this region of the nation.

8/A. THE CREATION OF A VOYAGEURS NATIONAL PARK IN THE KABETOGAMA AREA SHOULD BE CONSIDERED AS AN IMPORTANT PART OF THE FUTURE DEVELOPMENT OF RECREATION IN MINNESOTA.

9. The supply of park land needed to meet existing and projected recreational demand, is indicated below:

	<u>Existing</u>	<u>Need</u>	
	<u>6/30/64</u>	<u>1964</u>	<u>1970</u>
Municipal*	22,463	35,250	37,540
County	19,073	52,875	56,310
State	116,991	158,625	168,930

\* Incomplete data

9/A. THE PROPOSED OR APPROVED FIVE-YEAR LAND ACQUISITION PROGRAM WITH FUNDS EXPECTED FROM THE NATURAL RESOURCES ACT AND/OR LAND AND WATER CONSERVATION FUND ACT ARE AS FOLLOWS:

	<u>Estimated Acquisition Goals</u>
Municipal	15,000 Acres
County	37,000 Acres
State	52,000 Acres*

\* OF THIS AMOUNT 5,600 ACRES HAVE BEEN PURCHASED AS OF JUNE 30, 1965, AND AN ADDITIONAL ACREAGE OF 9,388 ACRES AUTHORIZED FOR THE PRESENT BIENNIUM, LEAVING AN ADJUSTED BALANCE OF APPROXIMATELY 37,000 ACRES NEEDED FOR FISCAL YEARS 1968, 1969 and 1970.

10. Development of facilities on new and existing parks throughout the state to supply the indicated demands.

10/A. DEVELOP NEW AND EXISTING PARKS TO INCLUDE ACCESS, WATER SUPPLY, SANITARY FACILITIES, INTERPRETATIVE SOURCES AND SUCH ADDITIONAL FACILITIES AS NEEDED.

## HISTORIC SITES

11. Additional major historic sites qualify for preservation. Present sites need interpretation. An adequate uniform system of site marking is needed.

11/A. DEVELOP A PROGRAM TO ADEQUATELY PRESERVE, MARK AND INTERPRET MAJOR HISTORIC SITES.

11/B. ESTABLISH AND DEVELOP ONE OR MORE OUTSTANDING HISTORIC VILLAGES.

## SCENIC ROADS AND PARKWAYS

12. To meet the increasing demand by those driving for pleasure or sightseeing, programs and projects are needed, 1. to beautify and preserve the scenic roadside values and 2. to develop and maintain a system of scenic roads and parkways. The minimum mileage indicated is 1,722.

12/A. ESTABLISH A STATE-WIDE SYSTEM OF SCENIC ROADS AND PARKWAYS.

12/B. SEED OR PLANT SELECTED SECTIONS OF STATE HIGHWAY ROADSIDES TO NATIVE FLOWERING PLANTS.

12/C. ON SUCH SCENIC ROADS AND PARKWAYS WHERE IT IS NECESSARY TO PRESERVE SCENIC VALUES ADJACENT TO THE RIGHT-OF-WAY, ACQUIRE THE LAND OR CONTROL BY EASEMENT.

## CANOEING AND BOATING ROUTES

13. There is a need to capitalize on Minnesota's potential as a boating state. (Use of rivers as canoe routes is increasingly in demand. There are approximately 2,500 miles of rivers and streams having excellent boating potential.)
- 13/A. RECOMMEND TO THE 1967 LEGISLATURE SUCH ADDITIONAL RIVERS AS ARE DETERMINED SUITABLE AS CANOE ROUTES BY THE AUTHORIZED RIVERS RECREATION USE STUDY. STATUTORY AUTHORITY TO LEASE OR PURCHASE LAND TO PROTECT SCENIC VALUES AND PROVIDE PUBLIC ACCESS SHOULD BE RECOMMENDED WHERE LOCAL GOVERNMENTS ARE UNABLE TO DO SO.
- 13/B. IF THE ST. CROIX RIVER DOES NOT RECEIVE WILD RIVER STATUS BY CONGRESSIONAL ACTION, THE STATE SHOULD TAKE NECESSARY STEPS TO ACCOMPLISH THE PRESERVATION OF THIS RIVER'S SCENIC VALUES.

## HIKING, BICYCLING AND HORSEBACK TRAILS

14. More trails are needed in scenic and natural areas within and adjacent to the Twin Cities and in forest and park areas. A long-distance trail system is also needed.
- 14/A. FEDERAL, STATE AND LOCAL UNITS OF GOVERNMENT SHOULD CONSTRUCT HIKING AND RIDING TRAILS IN SUITABLE AREAS TO MEET THE INCREASING DEMAND.
- 14/B. DEVELOP A LONG-DISTANCE "HEIGHT OF LAND TRAIL" EXTENDING ALONG THE CONTINENTAL DIVIDE IN MINNESOTA. ADDITIONAL LONG-DISTANCE TRAILS SHOULD BE CONSIDERED SUCH AS THE NORTH SHORE AND THE MINNESOTA RIVER VALLEY.

## WAYSIDE REST AREAS

15. Mobility is a factor in increasing highway traffic which intensifies the need for intermediate rest stops along trunk highway routes.

There is a need for standard spacing of overnight camping sites along major recreational highways.

- 15/A. EXPAND THE HIGHWAY WAYSIDE REST AREA PROGRAM.
- 15/B. THE STATE SHOULD PREPARE A COORDINATED PROGRAM FOR DEVELOPMENT OF ROADSIDE OVERNIGHT CAMPING AREAS.

## FORESTS

16. Determine the recreation role which federal, state, county and private forest land should provide.
- 16/A. THE COMPLETION OF LAND USE PLANS ON ALL PUBLIC AND PRIVATELY-OWNED FOREST LAND WILL PROVIDE AN INVENTORY OF EXISTING RECREATIONAL FACILITIES, POTENTIAL DISPersed USE AND DEVELOPMENT SITES.
17. A Minnesota River Valley State Forest is proposed.
- 17/A. COMPLETE A STUDY TO DETERMINE JUSTIFICATION AND EXTENT OF THE PROPOSED MINNESOTA RIVER VALLEY STATE FOREST.

## NATURAL AREAS

18. There is a need to establish and preserve certain areas of natural significance to be maintained in an undeveloped state.
- 18/A. VARIOUS PUBLIC AGENCIES SHOULD BE ALERTED TO THE PRESENCE OF DESIRED NATURAL AREAS AND INCLUDE PROVISIONS FOR THEM IN MANAGEMENT PROGRAMS.
- 18/B. INCLUDE IDENTIFIED NATURAL AREAS IN ACQUISITION PLANS OF STATE AND LOCAL GOVERNMENTAL AGENCIES.

## WATER RESOURCES

19. The state's lakes, rivers and streams are of prime recreational importance.

Localized and state-wide needs are as follows:

- a. Flood plain zoning on certain rivers.
- b. Lake level control.
- c. Navigation channel improvement.
- d. Multiple purpose reservoirs.

19/A. ALL PUBLIC AGENCIES WITH JURISDICTIONAL CONTROL OF LAND ADJACENT TO WATER SHOULD LEND THEIR FULL EFFORTS TOWARD A COORDINATED STUDY OF WATER USE. SUCH BROAD ACTIONS AS LISTED IN THE ACTION PROGRAM SHOULD BE TRANSFORMED INTO SPECIFIC PROJECT PLANS TO MEET THE NEEDS.

## financing

The costs of planning, acquiring land, developing sites and constructing facilities for approved recreational projects may be financed at the state and local levels by grants-in-aid, tax levies, loans, gifts and appropriations or a combination authorized by law.

### MUNICIPALITIES

Municipalities are eligible to receive federal grants-in-aid for planning, land acquisition and development of recreational sites. Three of the main programs are Section 701, Public Housing Act of 1954 (as amended); Title VII of the Housing Act of 1961 (as amended); and the Land and Water Conservation Fund Act of 1965. Under the 701 program, grants are available on a matching basis and provide up to 66-2/3 per cent of the total cost of comprehensive planning (in certain designated areas up to 75 per cent). The Land and Water Conservation Fund Act and Title VII of the Housing Act provide up to 50 per cent of the cost of acquisition and development.

The municipalities are authorized under various state laws and their charters to make tax levies, issue bonds and receive county and state grants to finance the local share of the federal grants-in-aid programs. The state total of municipal funds dedicated for recreational programs is not known, but the authorization is believed adequate to provide such funds as may be necessary to match the federal grants for approved projects.

### COUNTIES

Counties are eligible to receive grants-in-aid under the same federal programs as listed for municipalities.

All counties except Hennepin, Ramsey and St. Louis are authorized under Chapter 512 M.S. of 1961 to levy taxes on taxable property to finance recreational projects. The rate must not exceed ten per cent of the maximum levy authorized for the Road and Bridge Fund of the counties concerned. Under this Act, the 84 counties could levy a maximum of approximately \$2,317,000 annually based on 1964 total taxable property values. However, it is estimated that the total amount levied by the 84 counties will not reach more than \$1,000,000 annually during the next ten years.

Both counties and municipalities are eligible for grants under the Natural Resources Act of 1965 (Chapter 810). During the present Biennium, (1966-1967) \$250,000 was appropriated in the Natural Resource Act for county comprehensive planning. The state contribution not to exceed 50 per cent, with a maximum of \$10,000 per year, of any regional or county comprehensive planning study wherein Housing and Home Finance Housing Act funds are made available, and which includes a recreational plan as a major portion of the study.

One million dollars has been appropriated from the Natural Resources Act during the present biennium to supplement federal funds up to 50 per cent of the local share (with a maximum payment of \$50,000) for any individual county or municipal recreational project which is identified as part of an approved state-wide, county, or regional recreation plan.

### STATE

The state is eligible to receive grants-in-aid under the same federal programs as listed for counties and municipalities.

The Natural Resources Fund as provided in Laws 1963, Chapter 790, (as amended) is derived from a tax on the sale of cigarettes and is a major source of state recreation financing.

## NATURAL RESOURCE FUND

### Deposits

Actual as of June 30, 1965	\$7,499,106
Anticipated – July 1, 1965 to June 30, 1967	\$7,473,200

### Appropriations from Fund

Fiscal years 1964 and 1965	Total – \$7,097,250
Fiscal years 1966 and 1967	\$7,790,199

From the current appropriations, it is estimated that approximately \$2,519,895 is allocated to state agencies for projects which would conceivably qualify for federal Land and Water Conservation funds.

# MINNESOTA'S RESOURCES

"Conservation . . . can be defined as the wise use of our natural environment: it is, in the final analysis, the highest form of national thrift - - the prevention of waste and despoilment while preserving, improving and renewing the quality and usefulness of all our resources."

- - President John F. Kennedy  
Conservation Message to  
Congress (1962)

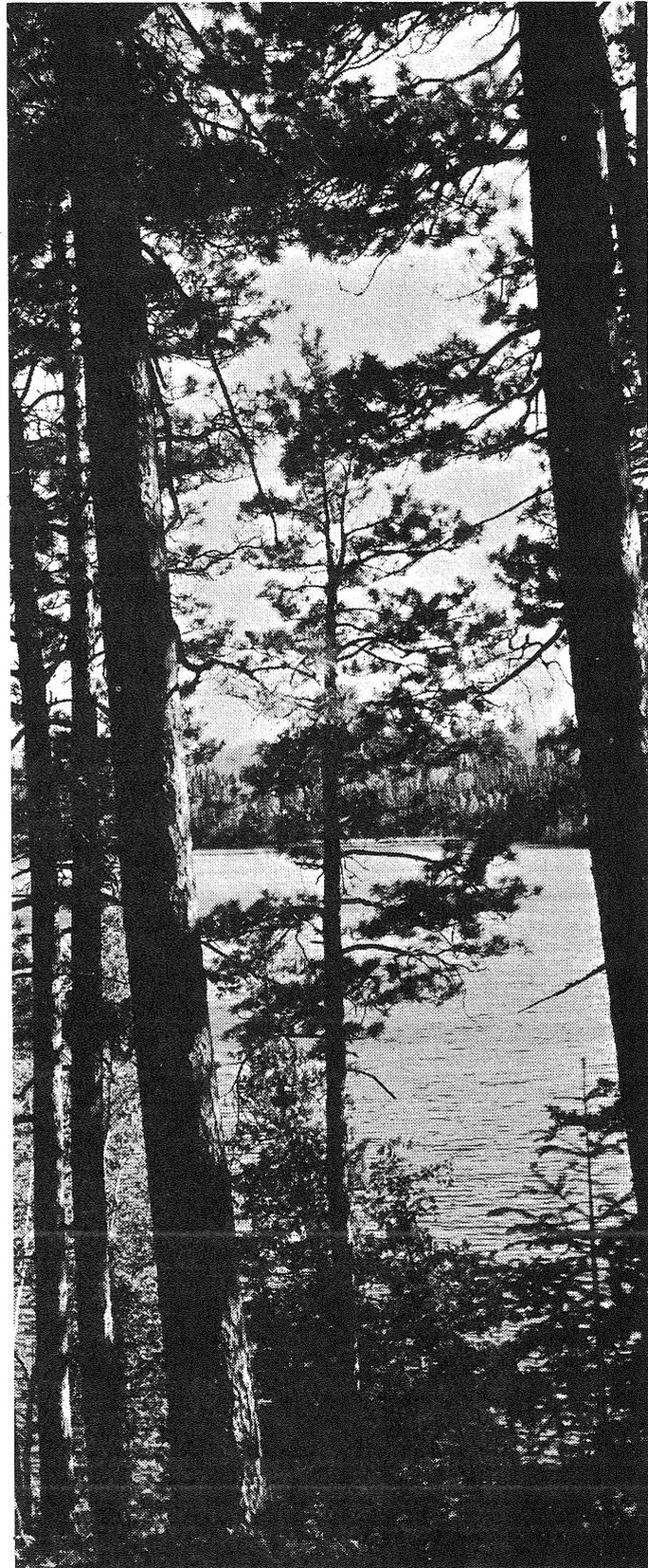
Minnesota has been blessed with a great number of natural resources. Some, such as forests or game and fish, are renewable. Others, such as minerals, are not.

Some resources we have managed well, for they continue to produce the necessities and luxuries of life in quantity and quality. In others, the record is one of greed and plunder for often we have destroyed without regard to the future and the generations to follow.

Great deciduous and evergreen forests have been cut-over, prairies have been plowed into widespread farms, streams have been dammed for power, wildlife has been pushed from its habitat and some species exterminated.

Yet, a portion of Minnesota is virtually unmodified, and remains as it must have been prior to the coming of civilization. In many areas, through wise use, the resources have been maintained and many more almost completely restored.

The development and use should be only such as will not waste and despoil our resources. Preserving our heritage is the great recreational need in Minnesota - - - once gone, it cannot be recovered.





## brief history of minnesota

The history of Minnesota falls into three broad periods: first, there is the period of discovery, exploration and occupation - - the Age of the Fur Trader; second, is that of settlement, the founding of institutions, the exploitation of natural resources - - the Age of the Pioneer; third, is that of change from a youthful to a mature state, from the spirit of exploitation to that of conservation - - the Age of Minnesota's Growing Up.

### THE AGE OF THE FUR TRADER

The climate of Minnesota accounts greatly for the abundance of fur-bearing animals. Because of this, French, English and American fur traders were attracted to the territory at surprisingly early dates. By the three highways of water leading into the heart of Minnesota - - the Red, St. Louis and Mississippi Rivers - - came traders in light birch canoes, lured by treasures of furs and skins which brought fortunes in European and Asiatic markets; explorers to seek the Northwest Passage to the Orient or to set up claims to an inland empire; missionaries to convert the Indians to Christianity; and settlers to build the commonwealth. Lakes and streams not only have influenced the course of Minnesota history, but one of them, the Minnesota (a Sioux name probably meaning "sky-tinted water"), gave the state its name.

French exploration moved close to the Minnesota country in the 1650's with the expeditions of Radisson and Groseilliers. At that time the region was occupied by the Sioux. By the 18th century it was the uneasy battleground of the Sioux and Chippewa. Westward-moving Chippewa advanced into the woodland areas from Lake Superior and eventually pushed the Sioux west and south onto the prairies. Both tribes cooperated with British and American fur traders in collecting furs and pelts, but they established no lasting peace among themselves. A deep-rooted hatred between Sioux and Chippewa persisted and proved to be a major problem of the northwestern frontier.

The fur trade gave the Indian a certain measure of prosperity, but destroyed the old Indian economy. For the Indian, the fur-trade was often the beginning of intemperance, disease, misery and squalor.

The history of Minnesota and the Northwest is marked by the succession of French, British and American political control. The regime of the French, started by Duluth, the first white man officially on record to enter the Minnesota region, was long and colorful. This explorer-statesman made his way to Mille Lacs as early as 1679. The French regime was marked by the coming of Father Louis Hennepin who, in 1680, discovered the Falls of St. Anthony in what is now Minneapolis.

As the French moved into the region, forts were built on Prairie Island in 1695, and Fort L'Huillier on the Blue Earth River five years later. Fort St. Charles was established in 1732 in the northern Lake of the Woods Country. From this point, many exploring trips into Canada and the United States were conducted.

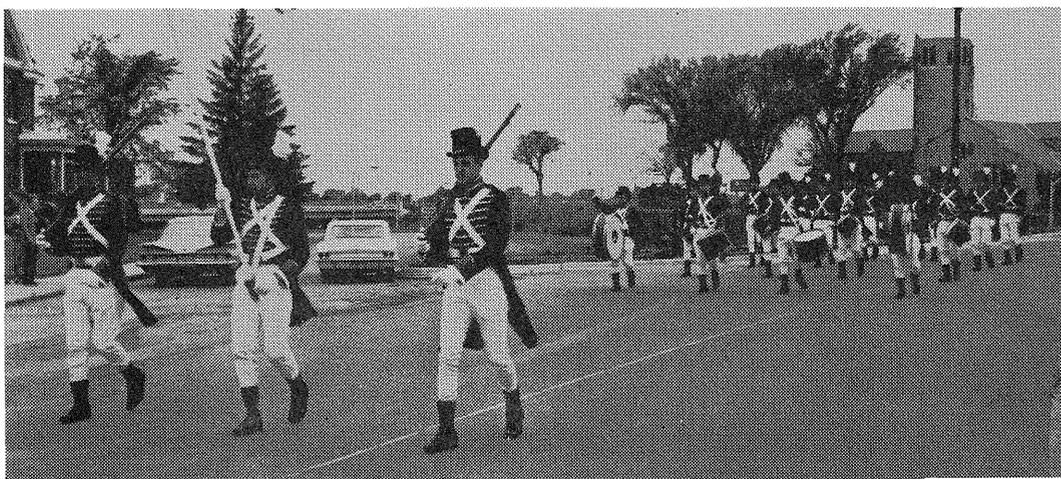
In 1763, western Minnesota was included in the vast area secretly ceded by France to Spain a year earlier. Yet in the northwest woods the French influence lingered for they had brought their language and customs.

Next came the British. Although they were slow to exploit the Northwest after 1763, once they were firmly upon the region, the area remained British for a generation after the close of the American Revolution. British governmental policy reserved the new Northwest for the fur trader. In 1768, the site of Grand Portage was cleared for construction of a fur post, which for the next fifty years, was the great inland center of the North West Company fur trade. The powerful North West Company dotted Minnesota with fur-trading posts, most important of which were on Lake Superior and the Pigeon River, at both ends of the Grand Portage.

Neither the peace of 1783 nor the Louisiana Purchase shook the British grip upon the Trade. It wasn't until after the War of 1812 that the fur magnates of Montreal yielded the empire of beaver and muskrat south of the international boundary to American businessmen. The American period was now at hand. After 1816, the North West Company passed from the Minnesota scene and the American Fur Company, which had been incorporated by John Jacob Astor in 1808, took up business of exploiting Minnesota's fur resources.

## THE AGE OF THE PIONEER

The nucleus of American civilization in the Minnesota country was Fort Snelling. This pioneer site was chosen in 1805 by the American explorer, Zebulon Pike. When established in 1819, Fort Snelling was the U.S. Army's northernmost outpost. The fort gave settlers, a needed source of protection in the Indian country and soon the area was a small farming community. At Mendota near the fort, Henry Hastings Sibley, the agent of the American Fur Company, established his headquarters which still stands. Fort Snelling was the objective of caravans of ox-carts that followed the Red River trails. One of these, the Pembina trail is probably the best known. At Fort Snelling trade relations were maintained between the British settlements on the Red River and the Americans. For the early missionaries the fort was a natural center.



Dedication of Fort Snelling State Park

The pioneer settlements of Minnesota were near the walls of Fort Snelling. The organization of the Territory of Minnesota in 1849, and the land cession treaties of Traverse des Sioux and Mendota in 1851, were the signals for a boom that was to bring Minnesota into the Union as a state. The rapid settlement which followed lessened the need for Fort Snelling, but necessitated the building of Fort Ripley on the Mississippi near the Crow Wing River in 1848. Fort Ridgely, now a state memorial park, was established on the north bank of the Minnesota in 1853.

The extension of civilization meant the breaking of the soil for farm lands, the founding of towns and cities, and gradual inhabiting of the region. The native American settlers who came by the thousands from New York, New England and the Old Northwest were supplemented by other thousands who hailed from the Scandinavian countries, Germany, the British Isles and other parts of Europe. Farms, lumber camps, mills, mines and factories drew increasing numbers of Finns, Poles, Czech, Slovaks, and other nationalities, while the amount of immigration from Norway, Sweden, Denmark, Germany and the British Isles increased. Minnesota became a state in which two-thirds of the population was of European blood.

The Age of the Pioneer was one of institutional beginnings. Government was solidly established; political parties appeared on the scene; churches, representing religious influences of the Old and New World, were organized; and educational systems began although the University of Minnesota established on paper as early as 1851, did not become a reality until eighteen years later; a frontier press sprang up; social life took form; cultural activities multiplied; the territory ran its nine-year course and the state was formed in 1858, after having been a territory from 1849 to 1858.

The rapid expansion of settlers received a serious setback in 1862. Sioux Indians, disgruntled by the lack of food and the tardiness of their annual payments, rose against the whites and massacred helpless settlers in the Minnesota Valley. Fort Ridgely and New Ulm were besieged and many cabins and settlements attacked. Most of the Indians involved were captured and sent to reservations beyond the state boundaries. Many of the newer settlements were almost depopulated as a result of the uprising and it was many years before the hatred of the Indians was forgotten.

Significant parts of the pioneer era lie in the story of the lumber industry. The first commercial sawmill was at Marine on the St. Croix and the industry proceeded with great haste to exploit the timber resources of Minnesota, rapidly sweeping away the white pine forests and at the same time clearing the land for the settlers. The story of pioneer farming was one of intensive wheat cultivation without regard to the conservation of soil. The story of town planning and building was one of speculation, inflation and booming followed often by periods of depression. The frontiersman was schooled by a succession of ordeals—hardship, panic, disappointment, Civil War and the Indian Outbreak of 1862.

#### THE AGE OF MINNESOTA GROWING UP

The generation after the Civil War witnessed the passing of the frontier. This important shift in Minnesota life and conditions was brought about by several factors. Among these was the building of a state-wide network of railways. Another was a continuing increase of population, which advanced from some 250,000 in 1865 to more than 1,300,000 in 1890. The increase in population was, in turn, closely related to the settlement of the western borders of the state and beyond. Meanwhile, the spirit of pioneer exploitation of natural resources continued. Wheat became king and its reign lasted through the sixties and seventies. Thereafter, farming methods changed, new problems arose, and the wheat empire began to decline.

A second large factor was the rise of modern industry. From the modest beginnings of the Pioneer Age, there came a vast business expansion. A mighty flour industry was built. Lumbering came into its golden age, rising to astounding peaks of production and slashing down the majestic virgin white and red pine of this north country to satisfy the demand for more and more lumber. Manufacturing interests were widened. The iron deposits of the Northeast were exploited. Labor was organized. The Twin Cities became a nerve center for a wide-stretching area. Education passed through a process of transition in response to the demands of a new day. Notable changes took place in the culture of the state, in music, art and literature. There arose a new sense of civic social responsibility. The woman's movement made successive advances. One began to hear about conservation, the cooperative movement, public health, organized sports. There was a marked expansion of the scope of state government.

Interesting developments on the political side are characterized by old-party control challenged by agrarian, third-party movements aimed at restoring the economic democracy of the early frontier and marking the path of liberal reform. This is the background of Ignatius Donnelly and Charles Lindbergh, father of the famous flyer. Such agrarian movements, leagues and parties played an interesting and significant role in Minnesota's political life.

Scattered over the face of the state are many interesting and important legacies from the early French and British penetration of the heart of North America and the American Westward Movement.

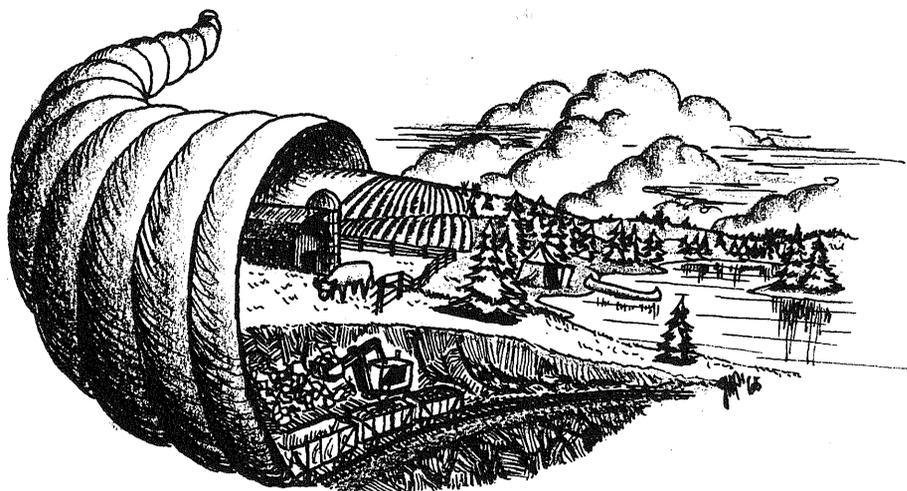
In outlook, Minnesotans were part of the modern world, even in pioneer days. One becomes increasingly aware of this as he follows the story of Minnesota through the first half of the twentieth Century with its complexities, inventions, world wars, depressions and continued economic, social and political changes.



## characteristics of minnesota



## LAND – GEOGRAPHICAL DIVISIONS



Soil, topography, drainage, climate and natural vegetation all form the character of the land itself. Most of the state is gently rolling. But in some areas, especially in the northeast and southeast corners, plains are interrupted by groups of hills and isolated knobs. Throughout, there are belts of glacial moraines where most of the lakes lie. In most of these areas, recreation plays an important part.

Minnesota covers 84,068 square miles. Of this total, 4,059 square miles are covered by water; one-fifth of the remaining land is swamp or muskeg. Drainage of many of these marshes has opened some additional areas for agriculture, but the early dream that all swamps of the state are good for agriculture was abandoned long ago. There are 10 or 12 million acres of swampy, steep and rocky soils, and millions of acres of level ground covered by light, sandy soil which have a short growing season and high cost of improvement. These areas are unsuited for agriculture and, in part, are best suited for forestry and recreational purposes. Much of this land has now reverted to public ownership through forfeiture due to delinquent taxes.

To study Minnesota's land use, the state is divided into the following geographical divisions:

The Border Lakes Region – This superb forest and lake region was heavily cut and burned in the early days. Now, much of the land is once again reforested through natural means and by planting. This is the country of the Bois Fort - - that is "thick woods" (Chippewa). Much of it is in state and national forests and plays an important part in the recreational picture of Minnesota.

The Arrowhead Country – This famous country in Northeastern Minnesota also plays a big part in the state's recreational picture. Because of its extreme rocky nature and light soil, agriculture plays a small role in this region. Here in the Arrowhead Country are many of the State's forest regions. Outstanding areas for sport and travel are found along the famed North Shore of Lake Superior.

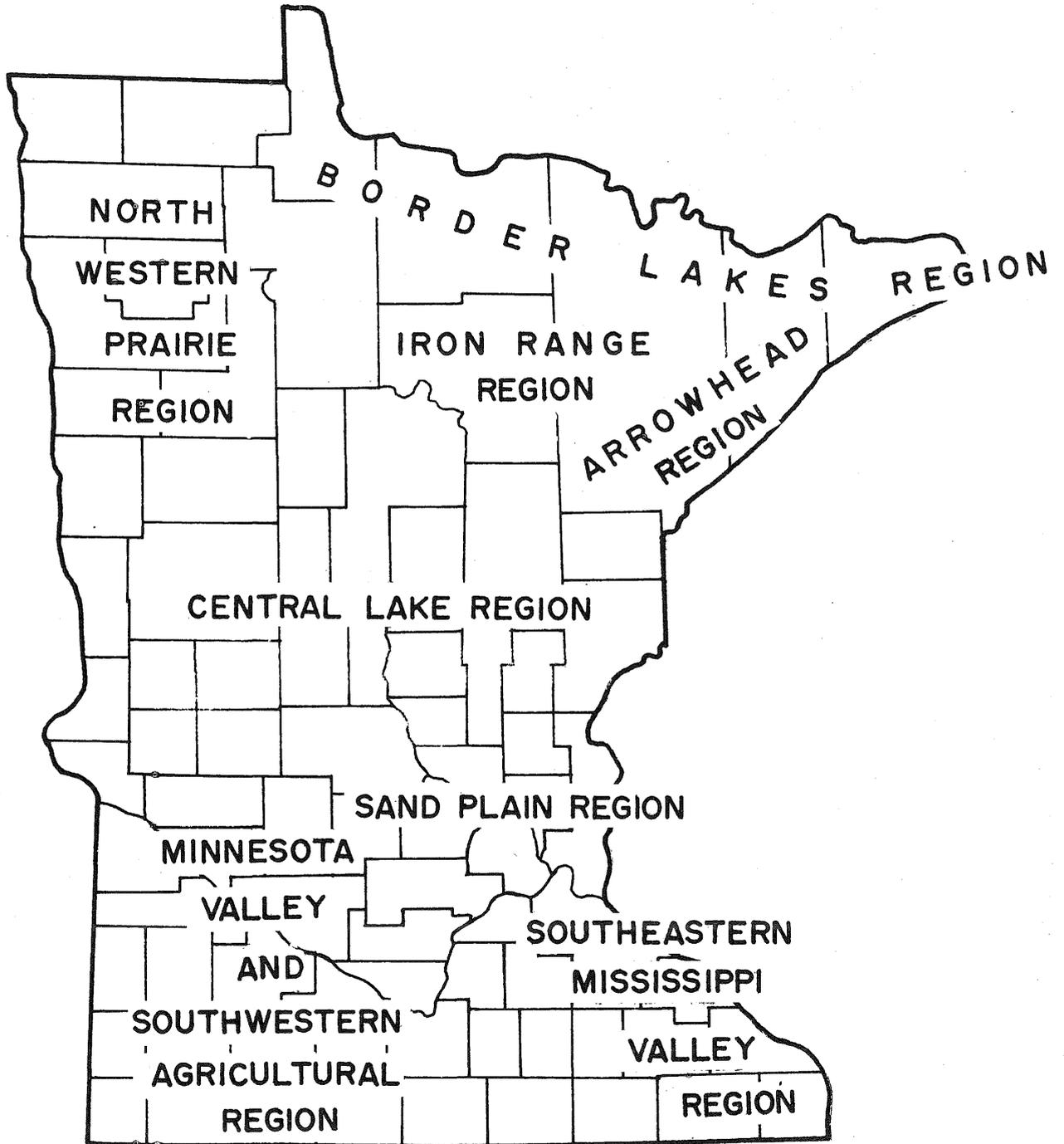
The Iron Range – This region is one of Minnesota's major sources of wealth, and geologic and historic interest. Therefore, it is high in recreational value. Due to its soil and topography, the region is largely unsuited to farming and possesses numerous cut-over and swamp lands.

The Northwest Prairie Region – This grain and potato country of Minnesota includes the well-known Red River of the North. It is supplemented by dairying. The valley of the Red River has little forest land or swamp land and few lakes. The tributaries, however, drain the great muskeg wilderness of the Red Lakes - - the "Big Bog," a marsh area larger than the Florida Everglades.

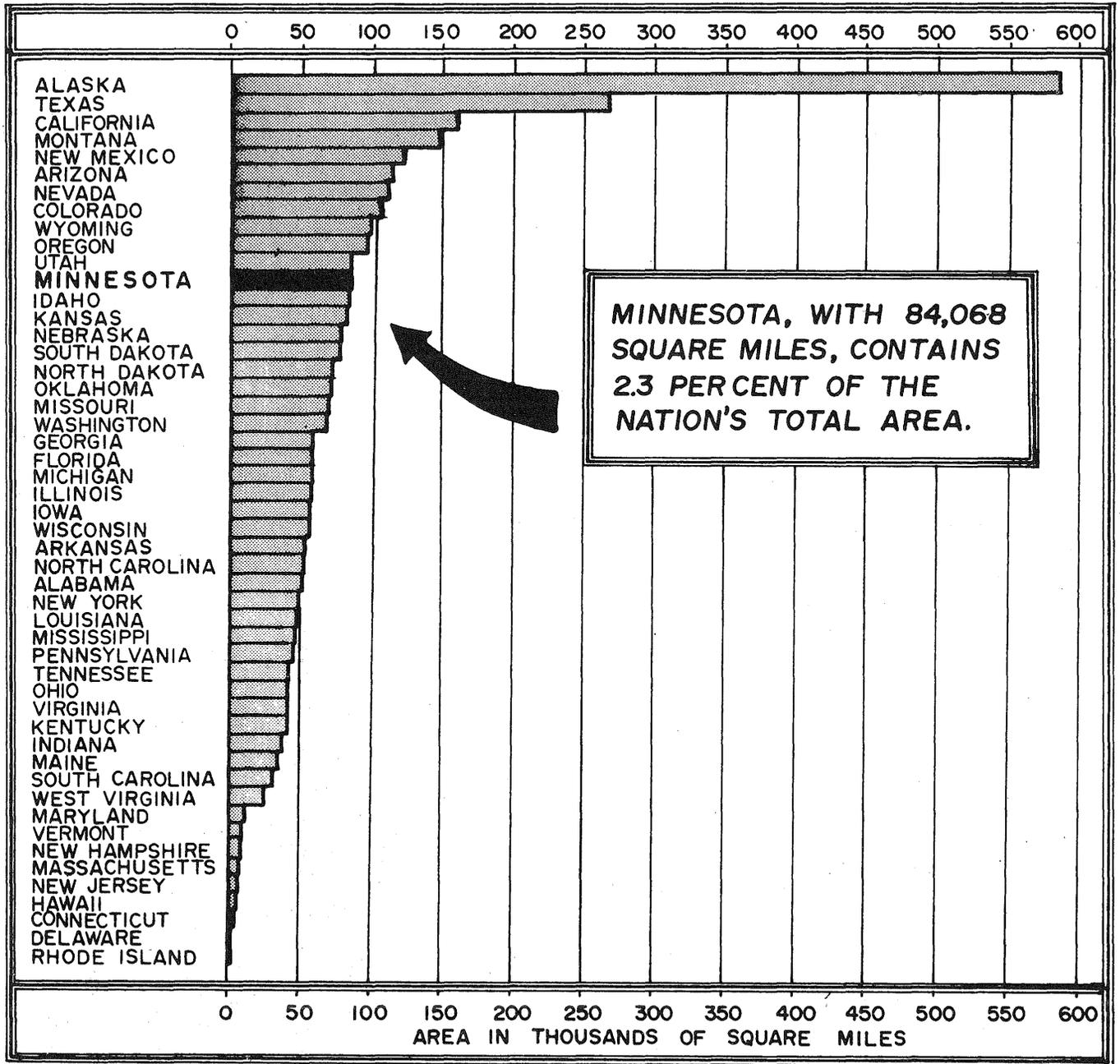
The Central Lake Region – This region includes an area from St. Louis to Wilkin counties—Itasca to Pope and Stearns counties. Here the land is dotted with thousands of lakes for which Minnesota is famous. This area, drained by the Mississippi River, also includes many scenic forests. The topography is ideal for recreation.

Arable land and rural population increase as one moves into the southern tier of counties. Lakes here are often bordered by agricultural land.

# GEOGRAPHIC DIVISIONS OF MINNESOTA



# TOTAL AREAS OF THE STATES



The Sand Plain Region – The region extends from Minneapolis north along the Mississippi River to St. Cloud and eastward from the river, covering most of Anoka, Sherburne and Isanti, Ramsey, Hennepin and Chisago counties. It is a vast farming area covered with sandy soil that is not well suited to extensive agriculture. This area requires careful, intensive cultivation and favorable weather to produce results.

In this region are many of the state's lakes so important to Minnesota's recreational economy. Being of easy access to the Twin Cities, shores of these lakes have become dotted with resorts and seasonal homes. However, the high price of land near the metropolitan areas makes it difficult to acquire large areas for recreational purposes.

The Minnesota Valley and Southwest Agricultural Regions – Most land in this prairie region is admirably suited for agriculture and subject to intensive cultivation. Nearly 85 percent of the land in the central and southern counties is in farms. A large amount of the national corn crop and small grain supply is raised here. The area is drained by the Minnesota River system and is dotted with numerous lakes.

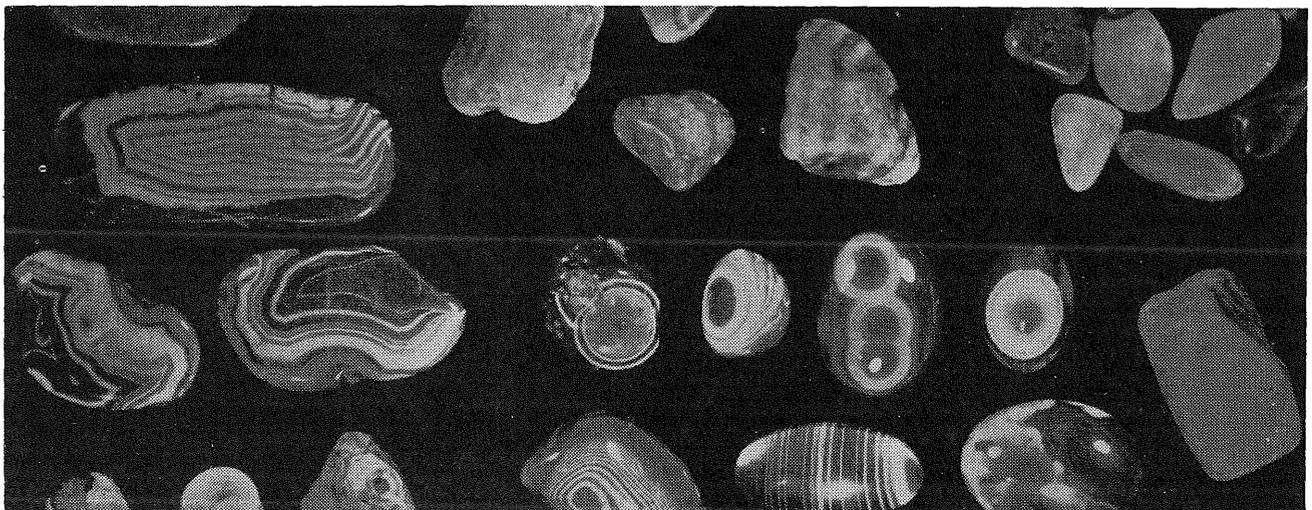
The Southeast Mississippi Valley Region – Here there is also good agricultural land both on the uplands and in wide valleys. Originally, it was part of the hardwood forest. Being within the Mississippi River Valley, in the early days the land along the river was the only avenue of travel and its forests were the first to go when the territories opened. The soil was so well suited to raising crops that cut-over areas were quickly cleared for agriculture. However, at present the heavily wooded bluffs along the Mississippi and its tributaries constitute one of the region's most valuable resources. There are many sites of historic and geologic importance scattered along the Mississippi Valley giving the region high recreational value. Many of the tributaries flow through deeply eroded and scenic valleys that have considerable recreational potential.

## GEOLOGY

Much of Minnesota's surface consists of features molded by the Pleistocene ice sheets that advanced then retreated from the state. As the ice sheets moved across the land they picked up and carried everything from huge boulders to fine dust.

In the exposed rocky regions of the northeast, the glaciers scoured and striated the rocks and in some areas, gouged large grooves in the rocks. Many of the lake basins near the Canadian border were formed in this manner. In other areas, the glaciers imported rock and soil debris of all sizes and shapes. As the glaciers melted, this debris or "drift" was deposited in various forms such as those found on the plains that dominate much of southern Minnesota, the hilly or morainic belts where many of the lakes are situated, and in the form of outwash deposits. (See map, page 3)

At times, the front margins of the glaciers remained stationary and melt water flowing from them deposited sand and gravel in smooth outwash plains. In many areas blocks of ice were deposited on these outwash plains. As the ice melted, it left ice block basins or pits which filled with water and became lakes. Areas of outwash containing many ice block basins are called pitted outwash plains.



The outwash deposits of sand and gravel were often covered with glacial deposits from later ice sheets or from deposits which accumulated during periods between glacial advances. These buried outwash sands and gravels are often a principal source of water.

Throughout the Ice Age a wide variety of surface depressions were created. Many of these depressions now constitute Minnesota's thousands of lakes having all variations in area, depth and shape. The melting glaciers released large quantities of water which filled low basins forming temporary glacial lakes. Lake Agassiz which once covered the entire northwestern portion of Minnesota was formed as the glacier retreated northward from a divide which passes between Lake Traverse and Big Stone Lake, on the boundary between South Dakota and Minnesota. As the glacier receded, glacial Lake Agassiz was formed by its melt water. It expanded until it filled large areas in the Dakotas, northwestern Minnesota and Canada. The water flowing from Lake Agassiz flowed southeastward eroding the wide, deep valley of glacial River Warren which is today the valley of the Minnesota River. This great glacial lake bed had an area greater than the present Great Lakes combined. When the glacier had receded further, a new outlet was found northward along the present course of the Red River of the North. When the lake was drained, it left the present flat surface of northwestern Minnesota in which there are such residual bodies of water as the Red Lakes and Lake of the Woods. Today lake clays, silts, beach ridges and peaty muskegs in the poorly drained areas are dominant features of this region.

Although the retreat of the last glacier from Minnesota some 8,000 years ago was the last major geological event, some of the present surface features have since been formed by wind action and running water. Among these are the extensive sand plains located north of the Twin Cities which were formed as wind and water reworked glacial sand and gravel deposits. The glaciers missed the southeastern corner of Minnesota, the state's only unglaciated area. Here winds deposited fine silt deposits, or loess, forming a thin veneer on the surface. Deep, stream-carved valleys and high, narrow intervening ridges characterize the pre-glacial topography of the southeast. Often spring-fed streams flow through these wooded valleys.

All of the state is underlain by a series of Precambrian igneous and metamorphic rocks formed several billion years ago. The igneous rocks, such as granite and gabbro, were formed as molten rock solidified. These rocks outcrop over much of northeastern Minnesota and are scattered at the surface elsewhere at St. Cloud and in the upper Mississippi River valley. The metamorphic rocks which are now compact and crystalline were formed from pre-existing rocks by the action of pressure, heat and water. In the eastern and southeastern parts of Minnesota a huge trough in the old Precambrian rocks is filled with several thousand feet of Precambrian conglomerates, sandstone and shales and a thick series of younger limestones, shales and dolomites of Paleozoic Age. These rocks, called sedimentary rocks, were formed by the accumulation of rock debris which was eroded from the land and deposited in seas which repeatedly submerged parts of the state and then retreated.

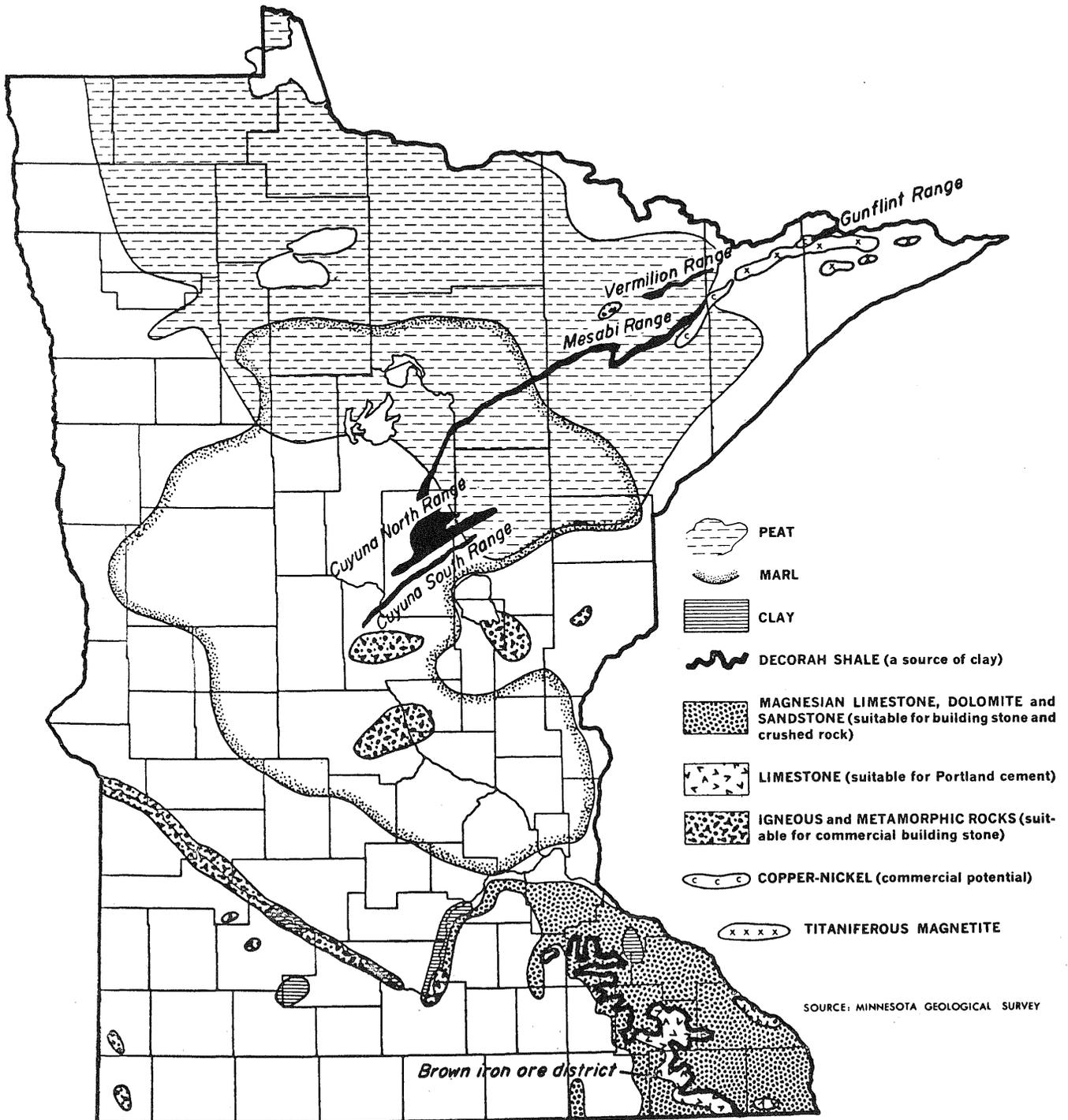
In the southwestern and western parts of the state as much as 500 feet of Cretaceous shales and sandstones cover the eroded surface of the Paleozoic rocks and the base Precambrian rocks. In parts of southern and southeastern Minnesota remnants of Cretaceous strata overlie the Paleozoic rocks.

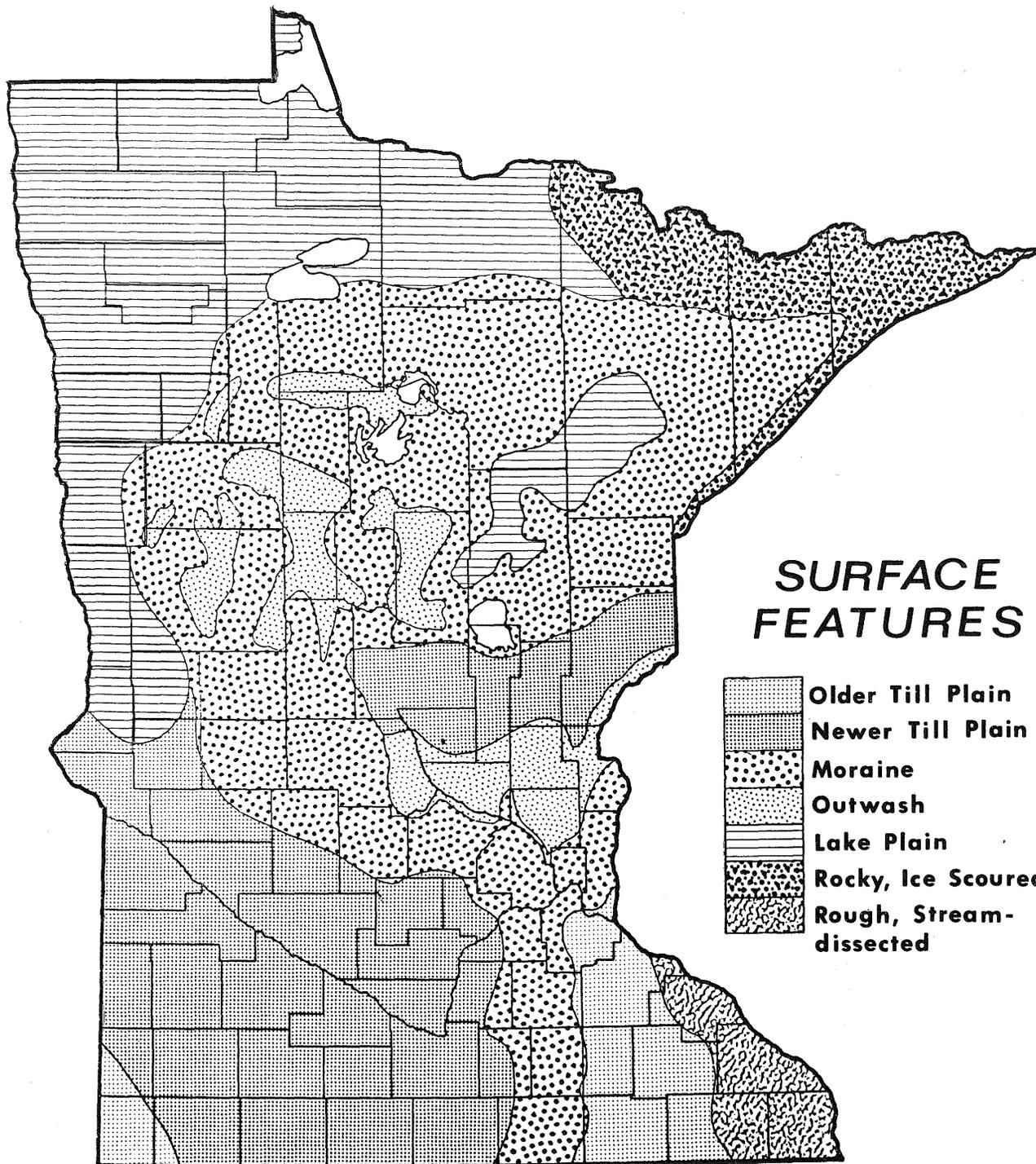


A study in geology - Minnesota's magnificent North Shore.

STATE OF MINNESOTA  
LIBRARY

# MAJOR MINERAL AREAS





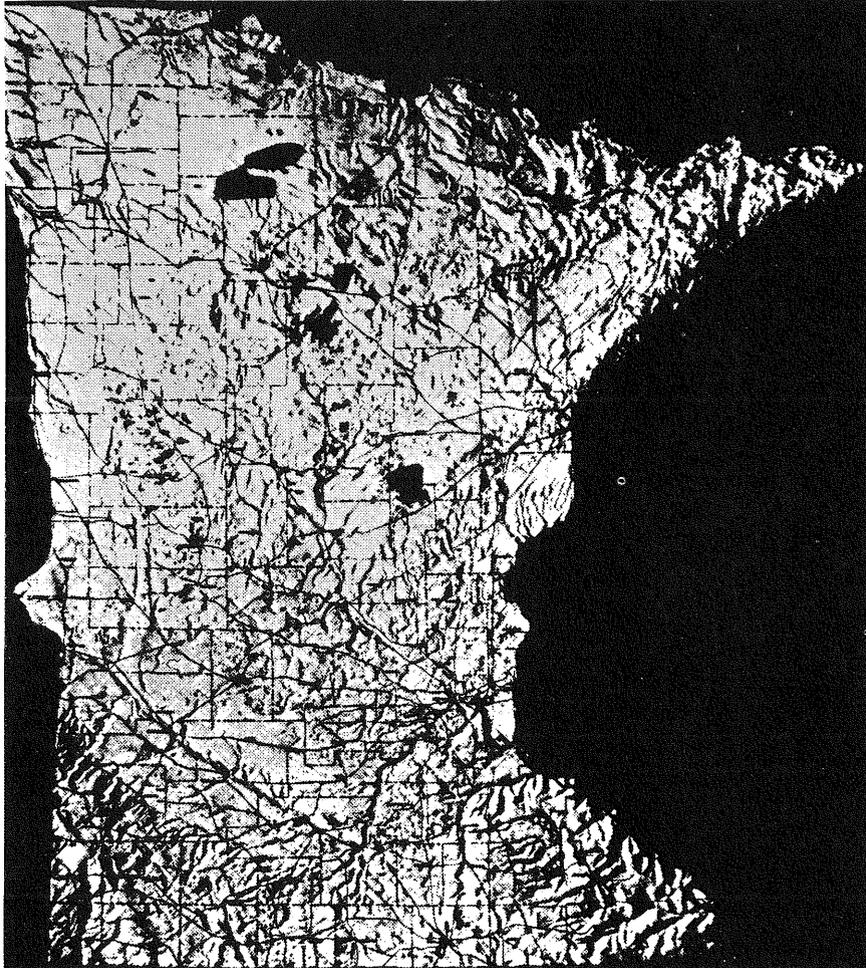
**SOURCE: "A Reconnaissance Atlas of Minnesota," Dr. John Borchert, University of Minnesota, 1958.**

## TOPOGRAPHY

Most of Minnesota varies from level to rolling prairie and forest land, interspersed with irregular, glacial moraines with hills rising 50 to 300 feet.

The Continental Divide which separates the Hudson Bay from the Mississippi watershed passes between Big Stone Lake and Lake Traverse on Minnesota's western boundary at an elevation of 1,000 feet. Then it continues north-eastward to an area near Hibbing where the water flows into one of three major drainage basins: the Hudson Bay, the Mississippi and the St. Lawrence. Little water enters Minnesota from streams originating in other states, but considerable areas of North Dakota, Wisconsin and Canada are tributary to the boundary waters on the western, northern and eastern borders of the state.

Minnesota is considered a low plateau at the head of the Mississippi River Valley, with an elevation of about 1,200 feet above sea level. The roughest topography is in the northeast which hosts the highest point in the state, Eagle Mountain, rising 2,230 feet. The lowest point, 602 feet, is not far away at the surface of Lake Superior. The Sawtooth Range and other high rock ridges rise abruptly from the shores of Lake Superior to heights of 600 to 900 feet above the lake. Other high areas are near the headwaters of the Mississippi River, where high morainic hills are a part of the rugged topography. In the southwestern corner of Minnesota, elevations approach 2,000 feet. The Red River of the North crosses the Canadian border at 750 feet. An area extending from the vicinity of Mankato northeastward through the Twin Cities to southern Pine County is mostly below 1,000 feet.



Source: "Minnesota Rocks and Minerals", Schwartz and Thiel, 1954, University of Minn.

## SOIL

One of Minnesota's most important natural resources is its fertile soil. Just as the glaciers formed much of the geologic pattern, lakes and streams, they were also responsible for the deposition of the several layers of parent material of Minnesota's soil.



Pictured here is a familiar scenic pattern in Minnesota. Farmland, water and forest--this combination of resources presents maximum opportunities for coordinated multiple-use.

In all sections, except the Driftless Area of southeastern Minnesota, the first two glaciers to enter Minnesota left a covering of fertile, grey soil. With the retreat of the third glacier, less fertile, bright red soil was deposited on top of the grey in eastern Minnesota. Then a fourth glacier entered in three separate sections. One spread south from Lake Superior and left layers of grey soil mixed with iron rust. Another section left grey soil along the Red River of the North and the Minnesota River. The third section spread a layer of this soil westward from Lake Superior.

The state has been divided into 15 soil groups, further subdivided into 57 soil associations by the Soil Conservation Service, Department of Agriculture, in cooperation with the University of Minnesota.

Soils in south-central Minnesota, extending north to Douglas and Otter Tail counties are highly productive with medium to fine texture and are well supplied with lime. The low areas are often impaired for agriculture by inadequate drainage in periods of excessive moisture.

Along the South Dakota boundary and extending northward, east of the Red River to Polk County, the dark, medium to fine textured, high lime soils support cash grain crops and livestock. In the southeast, loams of Mower and Dodge counties range from very black to brown in color. Much of the region is underlain by limestone beds.

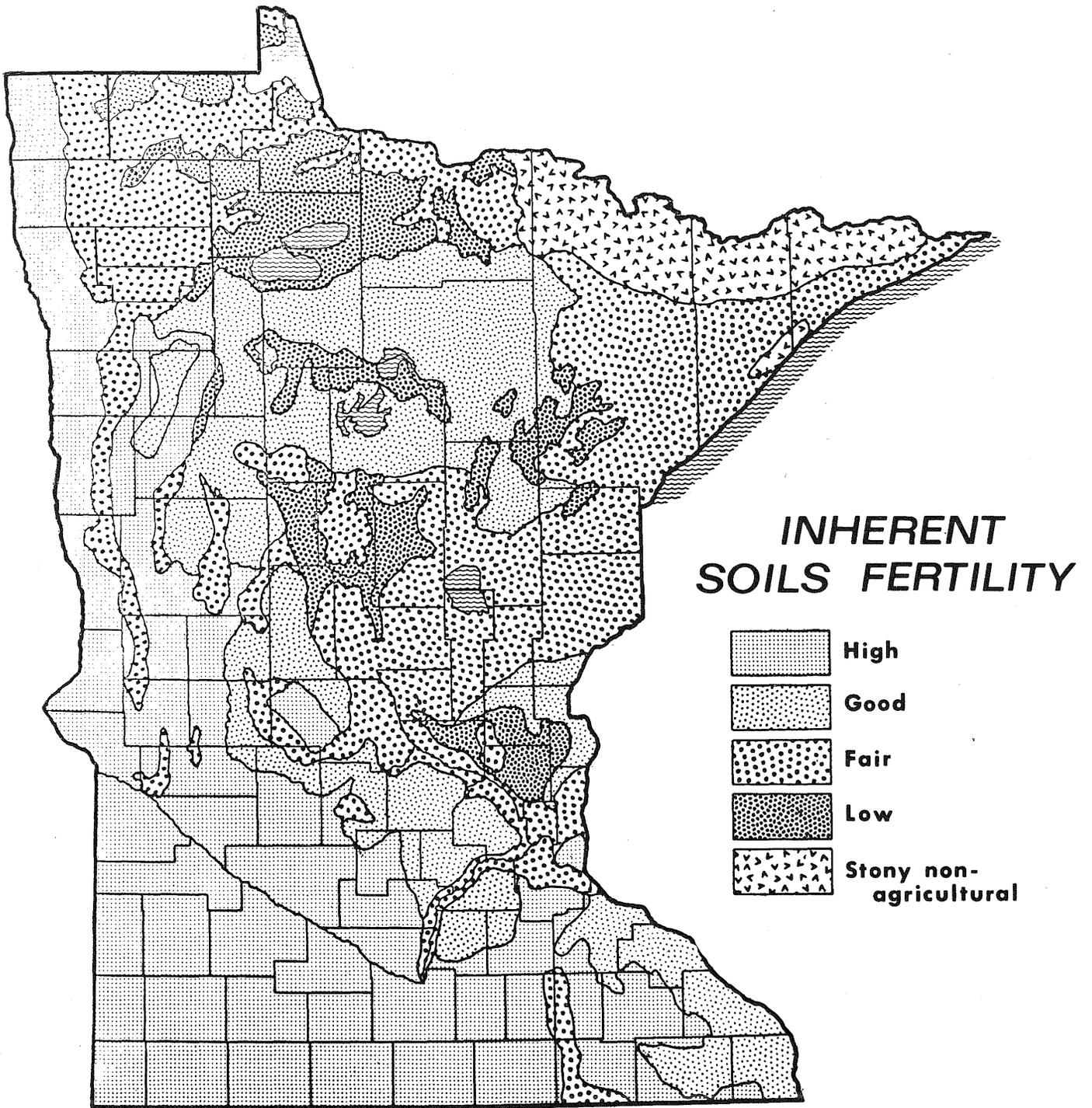
In the extreme southeast, the undulating to hilly areas, covered by silty loam soils create a serious erosion problem. Soils in the Red River Valley are black, heavily silted with clays laid down in the glacial lake bed. Due to the level surface, proper drainage is difficult. East of the Red River Valley and north of Polk County, black, sandy loams are underlain by sand or gravel subsoils. These soils are subject to wind erosion and tend to be dry in some areas.

Soils of Kittson, Roseau, Pennington, Mahanomen, Becker and Otter Tail Counties are limy and dark. In northern Minnesota, there are large areas of peat soil and many scattered peat bogs.

The dark surface soils are colored by organic matter supplied by shallow rooted plants with extensive root systems. In prairie areas where many fibrous roots decay each year, the surface is well supplied with such organic matter and the soils are black and deep.

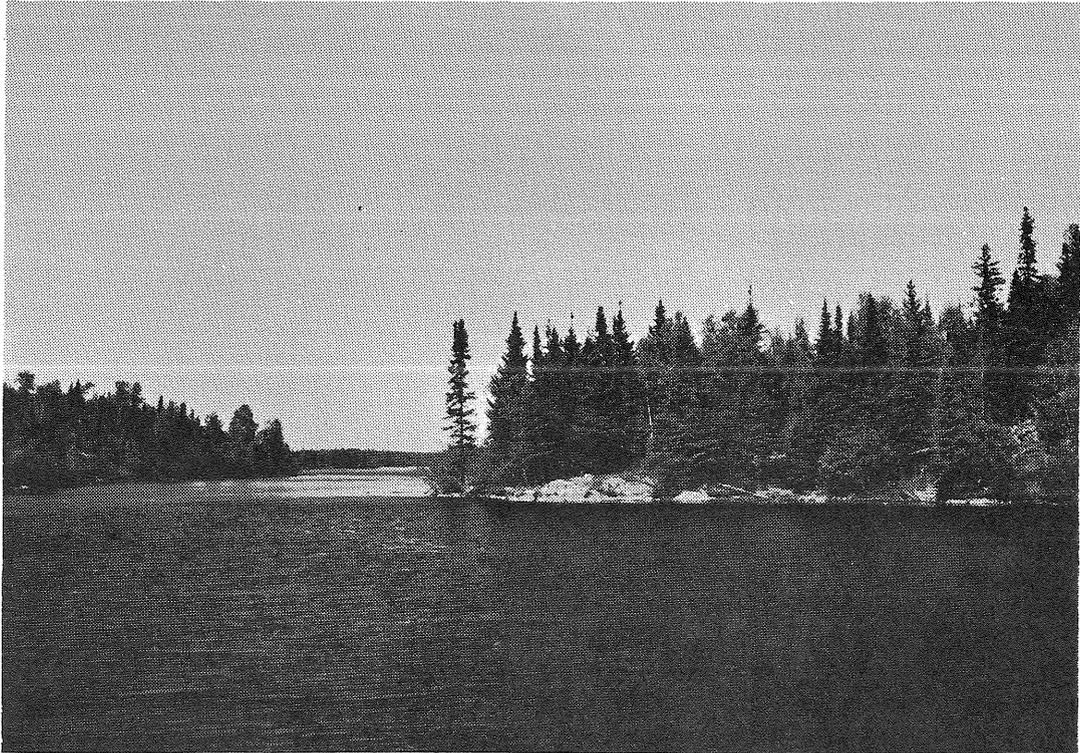
In the so-called "Big Woods" area of south-central Minnesota, the soils are dark resembling prairie soil. In this area trees once invaded the prairie, growing in the area long enough to allow the organic matter to be leached out of the surface soil by percolating water. In the northeast coniferous forest region, soils are acid.

Inherent soil fertility is perhaps five or six times higher in the southwestern prairie till plains than in the northeastern pine-covered moraines. (See map, page 35) These differences are reflected in rural land values today.



**SOURCE: "Minnesota Lands," American Forestry Association, Dana, Allison and Cunningham**

## WATER



A heritage of sky-tinted waters.

Minnesota, the "Land of the Sky Blue Waters", is rightfully proud of its many lakes and streams. The lakes which dot the landscape are of many kinds, shapes and sizes. We say there are 10,000 of them, but exactly how many there are depends upon the size at which counting begins. There are 15,291 lake basins larger than ten acres. But if we include all the smaller waters, ponds and wetlands, perhaps 100,000 would be too small a number.

How much water is this? No one knows exactly because many of these waters are not mapped, but the total is estimated at about 2.6 million acres or about five percent of the state's area. To this we could add the 1.4 million acres which is Minnesota's portion of Lake Superior. Our inland waters cover an area equal to that of the combined area of the states of Rhode Island and Connecticut.

The lakes range in size from the great rolling expanses of Lower Red Lake near Bemidji, which is 25 miles across, to lakes of only a few acres in the pine forests along the North Shore of Lake Superior. In descending order of size, the ten largest Minnesota lakes are: Upper and Lower Red (450 square miles), Mille Lacs (207), Leech (171), Winnibigoshish (118), Vermilion (76), Cass (46), Kabetogama (40), Mudd (37), Pokegama (24) and Minnetonka (22). In addition, four large basins on the Minn.-Ontario Border constitute considerable area; Lake of the Woods, (636 square miles-Minn. area), Rainy (86), Lac La Croix (31), and Basswood (23). All of these large lakes have played an important part in the history of Minnesota. On their shores stood Indian villages and across them canoed French fur traders and trappers and the early explorers. Much of the land around Red Lake is still reserved for the Chippewa Indians.

How deep are Minnesota lakes? Many are deep, but often not as deep as is usually thought. There are now more than 2,400 detailed maps of Minnesota lakes showing depths. Maps were made in the C.C.C. days by laborious hand sounding through the ice, and in recent years by use of sonar or "echo-sounding" equipment. These maps show that lakes deeper than 100 feet are exceptional in Minnesota. Many of the larger lakes are quite shallow. Lower Red and Mille Lacs Lakes, for example, have maximum depths of about 35 feet. The deepest lakes known in Minnesota are Saganaga on the Canadian border (240 feet), Gabimichigami in Lake and Cook counties (226 feet), Mountain Lake in Cook County (210 feet), Lower LaSalle in Hubbard County (204 feet), and Loon Lake in Cook County (202 feet). In the vicinity of the Twin Cities, Lake Elmo is the deepest (140 feet).

In southern Minnesota most lakes are shallower than 25 feet and many have filled in considerably during the past 75 years with silt eroded from adjacent farm lands. Such shallow lakes are highly productive of fish, but they can store only a small amount of oxygen in their waters under the ice. In those shallower than 20 feet, if there is snow on the ice,

the stored oxygen may be used up before spring and the lakes "freeze out" or "winterkill". The fish die of suffocation. A lack of fish, however, does not mean a lake has no value. These shallow lakes, like their deeper companions, provide many indirect benefits that often go unrecognized. Some assist in retarding runoff, thereby preventing flooding. Others, through seepage, may act to replenish ground water. Some serve as stock watering basins.. Many are fish spawning areas and nearly all are of some value to wildlife, especially waterfowl.

The Mississippi, Minnesota, St. Croix, Red and St. Louis rivers, together with hundreds of tributary systems, make up more than 15,000 miles of flowing water. Like the lakes, the streams differ greatly. There are the rock-bottomed, rapid streams along the forested North Shore with their beautiful waterfalls; there are sluggish streams winding through prairie farmland; and many gradations between. In the northwestern part of the state many streams have their origin in the "Big Bog" which lies in the basin of the immense, extinct lake of glacial time—Lake Agassiz. The Big Bog, in this ancient lake basin is a muskeg wilderness of tamarack, black spruce, low shrubs and springy sphagnum moss. Much of it is inhabited by moose. Streams originating in this boggy wilderness feed the Red River and by it their waters eventually reach Hudson Bay.

Near the Twin Cities, the Minnesota, St. Croix and Mississippi Rivers join to mark the beginning of the Mississippi as a large river. Below this junction are seven dams stretching between Minnesota and Wisconsin. The pools formed by these dams impound about 119,000 acres of water including Lakes St. Croix and Pepin and numerous back-water lakes.

These lakes and streams beautify the landscape, provide us opportunity for fishing, boating, swimming and hunting and are the main attraction for summer vacationists.

#### COMPARISON OF SURFACE WATER AREA BY STATES IN THE NORTH CENTRAL UNITED STATES -

	1960 Population in Thousands	Total area <sup>1</sup> in square miles	Water area in square miles	Water as a % of total area	Water acres per capita
United States	179,323	3,615,211	66,237	1.8	0.236
North Central U. S.	51,619	765,530	11,045	1.4	0.137
Ohio	9,706	41,222	250	0.6	0.016
Indiana	4,662	36,291	106	0.3	0.015
Illinois	10,081	56,400	470	0.8	0.030
Michigan	7,823	58,216	1,197	2.1	0.098
Wisconsin	3,952	56,154	1,449	2.6	0.235
MINNESOTA	3,414	84,068	4,059	4.8	0.760
Iowa	2,758	56,290	258	0.5	0.060
Missouri	4,320	69,686	548	0.8	0.081
North Dakota	632	70,665	1,208	1.7	1.223
South Dakota	681	77,047	669	0.9	0.629
Nebraska	1,411	77,227	615	0.8	0.279
Kansas	2,197	82,264	216	0.3	0.062

1. Permanent inland water surface, such as lakes, reservoirs, and ponds having 40 acres or more of area; streams, sloughs, estuaries, and canals one-eighth of a statute mile or more in width; deeply indented embayments and sounds, and other coastal waters behind or sheltered by headlands or islands separated by less than 1 nautical mile of water; and islands having less than 40 acres of area. Does not include water surface of the oceans, bays, the Gulf of Mexico, the Great Lakes, Long Island Sound, Puget Sound, and the Straits of Georgia and Juan De Fuca, lying within the jurisdiction of the United States but not defined as inland water.

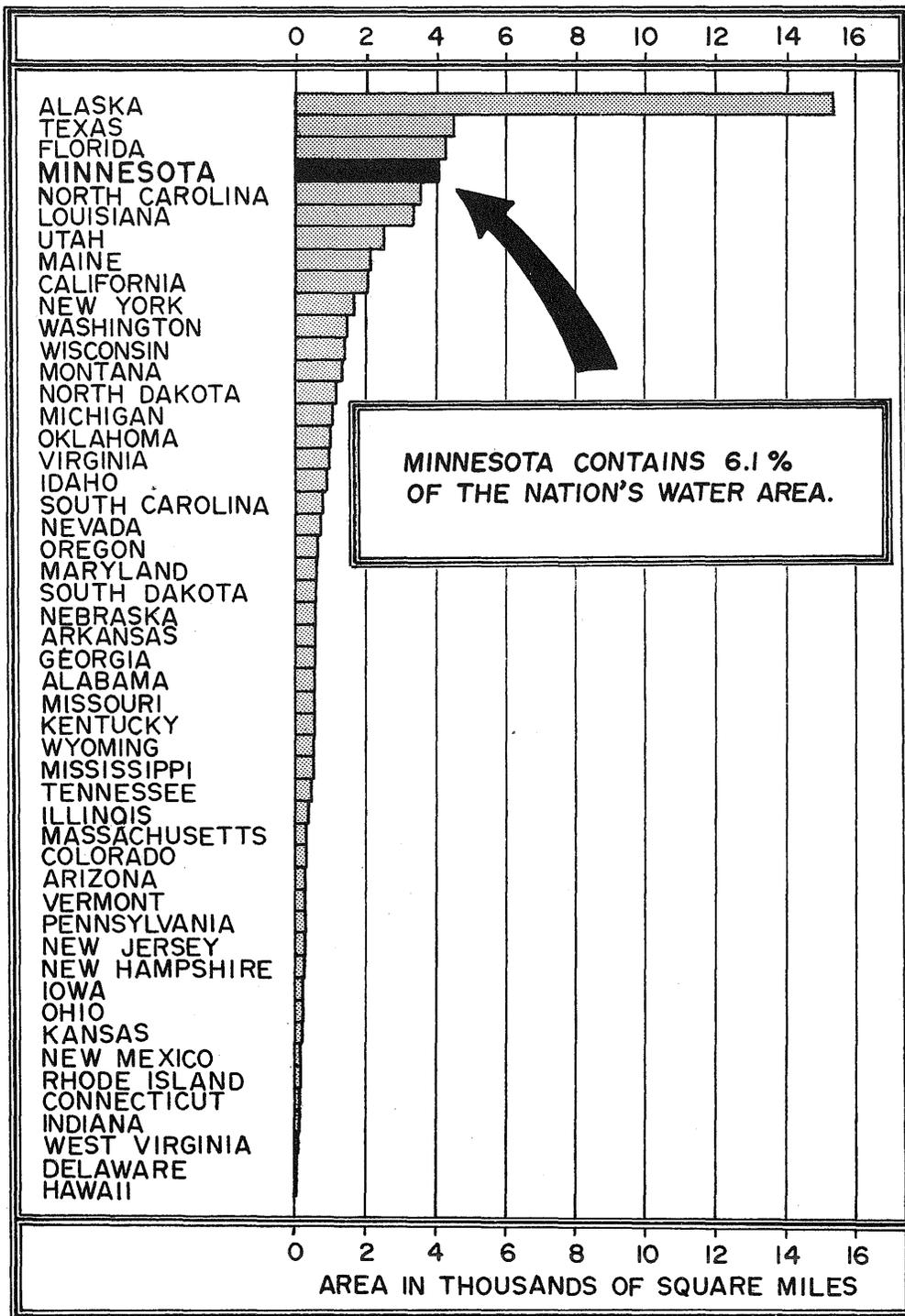
Source: U.S. Bureau of Census, Statistical Abstract of the United States, 1963.



**MINNESOTA'S  
LAKES AND STREAMS**

JUNE 30, 1964

# WATER AREAS OF THE STATES

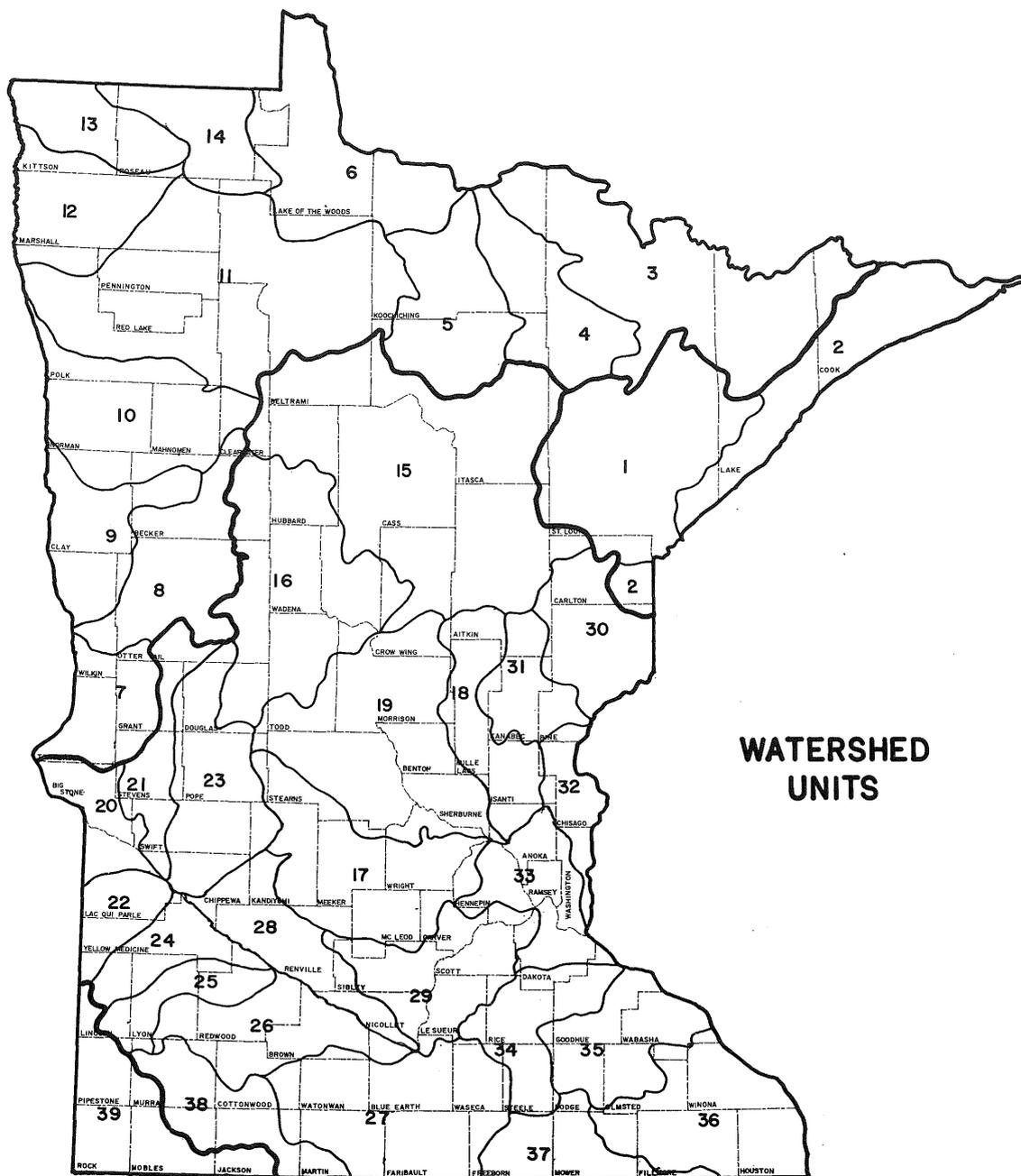


**NOTE:**  
 DOES NOT INCLUDE TEMPORARY WATER AREAS SUCH AS MARSH LAND, SWAMPS, RIVER FLOOD PLAINS; STREAMS, SLOUGHS, ESTUARIES, AND CANALS LESS THAN 1/8th OF A STATUTE MILE IN WIDTH; AND LAKES, RESERVOIRS AND PONDS OF LESS THAN FORTY ACRES.

Watersheds – Watersheds are nature's own way of dividing one drainage area from another – they recognize no man-made divisions.

Minnesota is the roof of mid-America and from it water flows in three directions; eastward to the Gulf of the St. Lawrence, southward to the Gulf of Mexico and northward to Hudson Bay and the Arctic Ocean.

The state has been divided into 39 major watersheds, each contributing to the water supply of a certain river or lake.. Here, the terrain naturally channels tributary flows and surface runoff to a single major stream above a certain point. Watersheds may be large or small. The average size of the 39 units is 2,150 square miles. The largest is 7,068 square miles; the smallest is 668 square miles.



**WATERSHED  
UNITS**



Minnesota's outdoor activities – as varied as the climate itself.

Minnesota's geographical location gives it what is termed a "continental climate," one characterized by extremes of temperature and less moisture than is usually found nearer the oceans.

The coldest month is January, the hottest, July. The average annual temperature is  $42^{\circ}$  F, but the range is from  $-30^{\circ}$  F and lower to  $90^{\circ}$  F above, and higher. The greatest extremes occur in the northwest. The growing season is longest in the southeast, nearly five months, and shortest in the north and northwest, about three months. (See map, page 43).

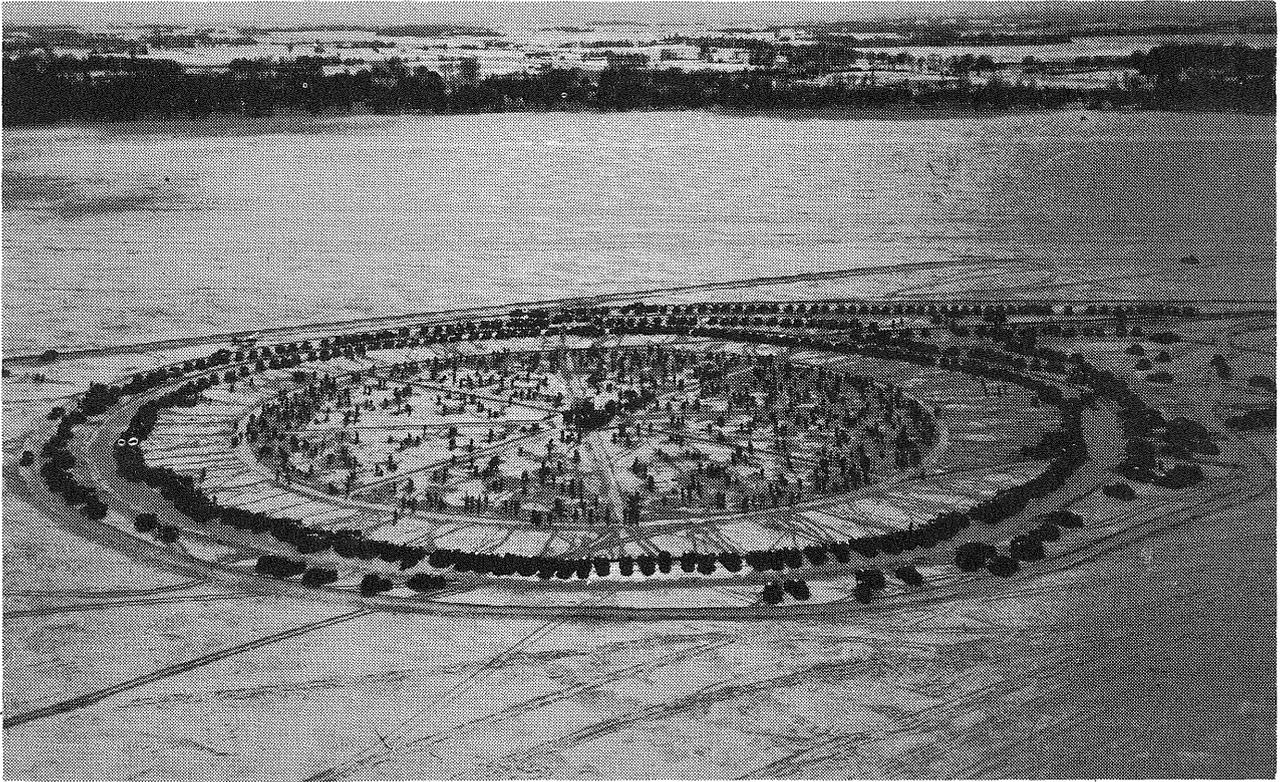
Temperature extremes are evidenced in Hallock, in the extreme northwestern part of the state, where the average January temperature is  $8^{\circ}$  F, and the average July temperature is  $67^{\circ}$  F, with extremes of  $-51^{\circ}$  F and  $109^{\circ}$  F. At Caledonia, in the extreme southeastern part of the state, the average January temperature is  $15^{\circ}$  F and the average July temperature is  $71^{\circ}$  F with extremes of  $-35^{\circ}$  F and  $104^{\circ}$  F. The tempering effect of Lake Superior is noticeable in the records for Grand Marais, along the Superior shoreline in northeastern Minnesota, where average temperatures are  $14^{\circ}$  F for January and  $59^{\circ}$  F for July, with extremes of  $-34^{\circ}$  F and  $100^{\circ}$  F.

The wide variation in climate is partly responsible for the marked range in vegetative cover, other influencing factors being soil and drainage. In Minnesota, the precipitation varies from an average of 18 inches at Warren in the northwest, to 34 inches at Caledonia in the southeast. Minnesota has a considerable seasonal variation in precipitation.

Minnesota may be considered a transitional state as it lies partly within the more humid, temperate part of the nation known as the East Central Section and partly within the drier, West Central Section characterized by extremes of temperature. It lies in the path of most of the great cyclonic storms which cross the country from west to east. The southeastern part derives the greatest benefit from the moisture-laden, warm winds from the Gulf regions, whereas the northwestern areas receive the greater brunt of wide, seasonal temperature variations. The passage of alternating low and high pressure areas account for the sudden changes in weather characterizing the climate of the entire state.

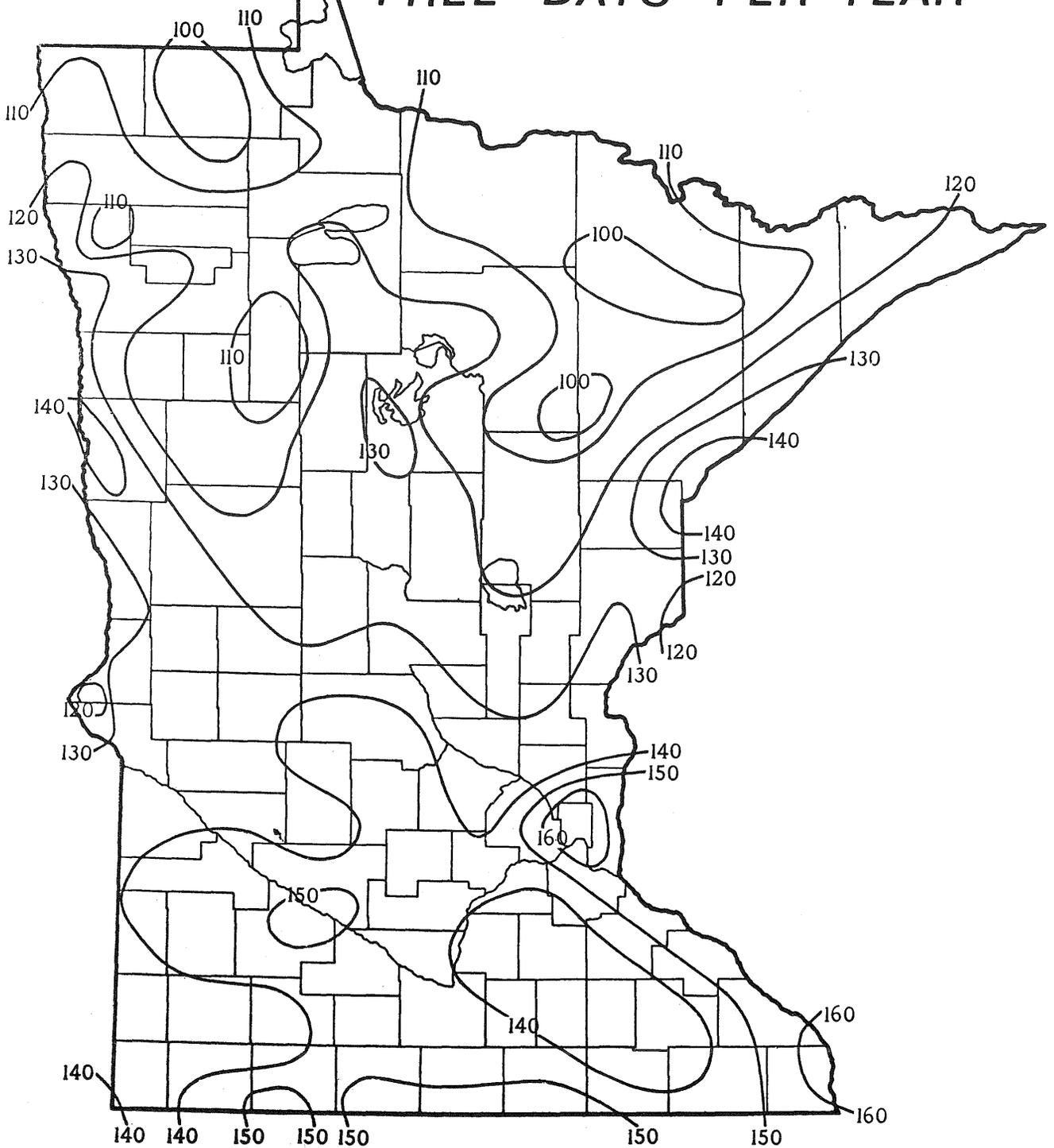
The greatest precipitation falls from April to September. The southwestern part of Minnesota has the smallest number of rainy days, the northeastern the greatest. Snow fall is lightest in the southwest and heaviest on the Iron Range. The dry and invigorating cold of a Minnesota winter makes the state an excellent winter playground. Annual snowfall varies from 18 inches in the southwest and west to about 70 inches in the northeast. A maximum fall of 107 inches has been reported in Cook County, where accumulations of three to five feet at the end of winter are not uncommon.

The summer coolness of the lake regions and the Lake Superior shore, the warmth of the rest of Minnesota and the wide range of recreational attractions are partially responsible for the decision by vast numbers to choose Minnesota as their vacation-land.



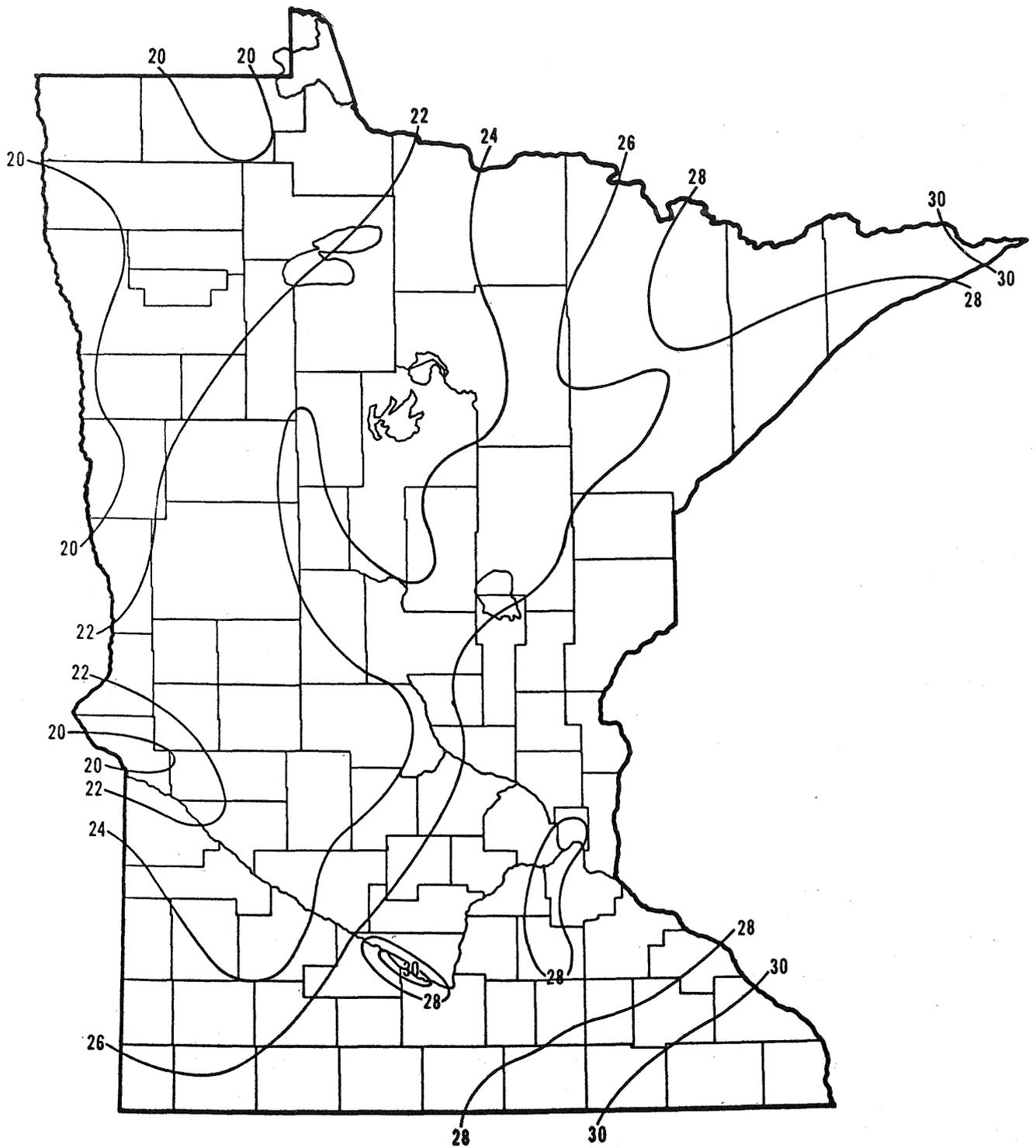
A study in symmetry – ice fishing contest at White Bear Lake.

# AVERAGE NUMBER FROST FREE DAYS PER YEAR



SOURCE: U. S. Weather Bureau

# AVERAGE ANNUAL PRECIPITATION (in inches)



SOURCE: "A Reconnaissance Atlas of Minnesota,"  
Dr. John Borchert, University of Minnesota, 1958.

## FOREST AND VEGETATION



Among Minnesota's greatest attractions are the magnificent forests of conifer and hardwood, with many varieties of ferns, mosses and flowering plants. Shaded uplands, bare rock ledges, marshes and the drier prairies all provide ideal habitat for a wide variety of plant life. Wildflowers abound and many kinds of native orchids, including the showy lady's slipper – the State Flower – can be found in the northern forests and muskegs. In the north, bare rock ledges and sand dunes near Lake of the Woods produce unusual plants not found in other regions of the state.

When Minnesota was first settled, 31.5 million acres of the state was covered by timber. Today, 1965, the remaining forest totals 19 million acres and at present, from the standpoint of acreage, the amount of forest land is remaining stable.

Roughly 20 million acres of the state was covered by virgin prairie with its characteristic vegetation. For the most part, the prairie vegetation has been replaced by cultivated crops. Perhaps ten million acres of land in the hardwood forest area is now either cropped or grazed. According to the Agriculture Experiment Station of the University of Minnesota, about 60 percent (30 million acres) of the state is being farmed.

According to Rosendahl and Butters in the "Trees and Shrubs of Minnesota" the state may be divided into three great regions, the evergreen forest, the deciduous forest, and the prairies, each with its characteristic plants.

The Evergreen Forest – The evergreen forest of the northeast, extends into Pine County, southwest into Morrison and Todd counties and west into Roseau County. Although the original stands of white and red (Norway) pine that once characterized northern Minnesota have, for the most part, been logged, the region is now wooded with scattered old growth and second growth. In many instances, the second growth has now outgrown the original stands. White,

red and jack pine are common. Tamarack, black spruce and northern white cedar characterize the bogs and muskegs. There are "islands" or "pockets" of hardwoods near lakes of considerable elevation. Aspen and birch are found on burnt or cut-over areas.

The Deciduous Forest – Much of the hardwood or deciduous forest of central Minnesota, originally covered by hard maples, basswood, elm, red, white and burr oak, is now farmland. The deciduous forest forms a continuous band of trees from the northwest to the southeastern corners of Minnesota. The number of tree varieties decreases from the southeast to the northeast. In the southeast, black oak, shagbark hickory, black walnut and river birch are mixed with common northern species. Here, the mature forest is composed of such species as maple and basswood.

At one time, great tracts of deciduous forest, known to early settlers as the "Big Woods," extended from 100 miles long and 40 miles wide from St. Cloud to Faribault. Although much reduced to make room for agriculture, remnants of hardwood forest such as can be seen in the Mille Lacs and Minnetonka area still contain examples of the original species. Northwest of the Big Woods are also hardwood types. But approaching the prairie region to the west, the growth becomes less vigorous and the forest more of burr oak.

The Prairie Region – The deep, fertile sod of the south and the southwest prairies was broken early in the development of Minnesota and is now host to some of the best corn producing land on the continent. This bottom-land region of larger rivers such as the Mississippi, St. Croix and the Minnesota is represented by special characteristics; the area is subject to considerable flooding and unstable conditions. The chief tree varieties on low-lying flood plains are willows and cottonwoods. On slightly higher land are tree species such as the elm, soft maple, hackberry, green ash and box elder.

Flowers in this area include spiderwort, aster and goldenrod, daisies and other typical prairie flowers. Dune areas away from the typical prairies, such as the sand plain north of the Twin Cities, also have prairie plants as well as the sandbar and long-leaved reed grass which tend to hold the sand from blowing. There are also stands of pin oak.

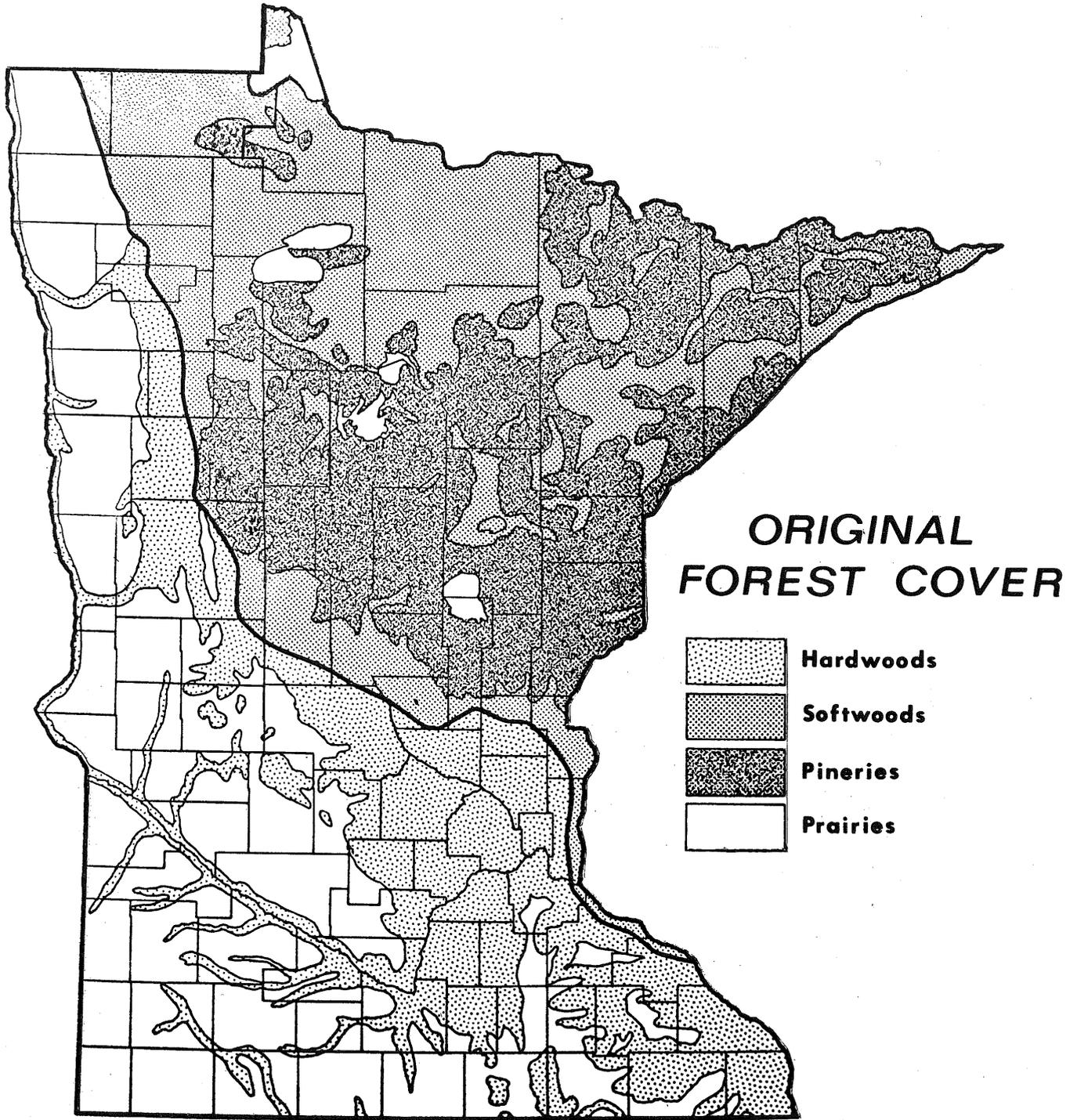
With the exception of the Minnesota River Valley and eastern lakeshores protected from prairie fires, vegetation of western and southwestern Minnesota was originally characterized by a lack of trees and shrubs, and a dominance of prairie grasses and herbs such as sunflowers and goldenrods, box elders, cottonwood, and a few shrubs along the streams and other moist areas. Big and little blue stem, tall panic, needle and bunch grasses were the important grasses. It was a tall grass prairie where grasses grew head high.

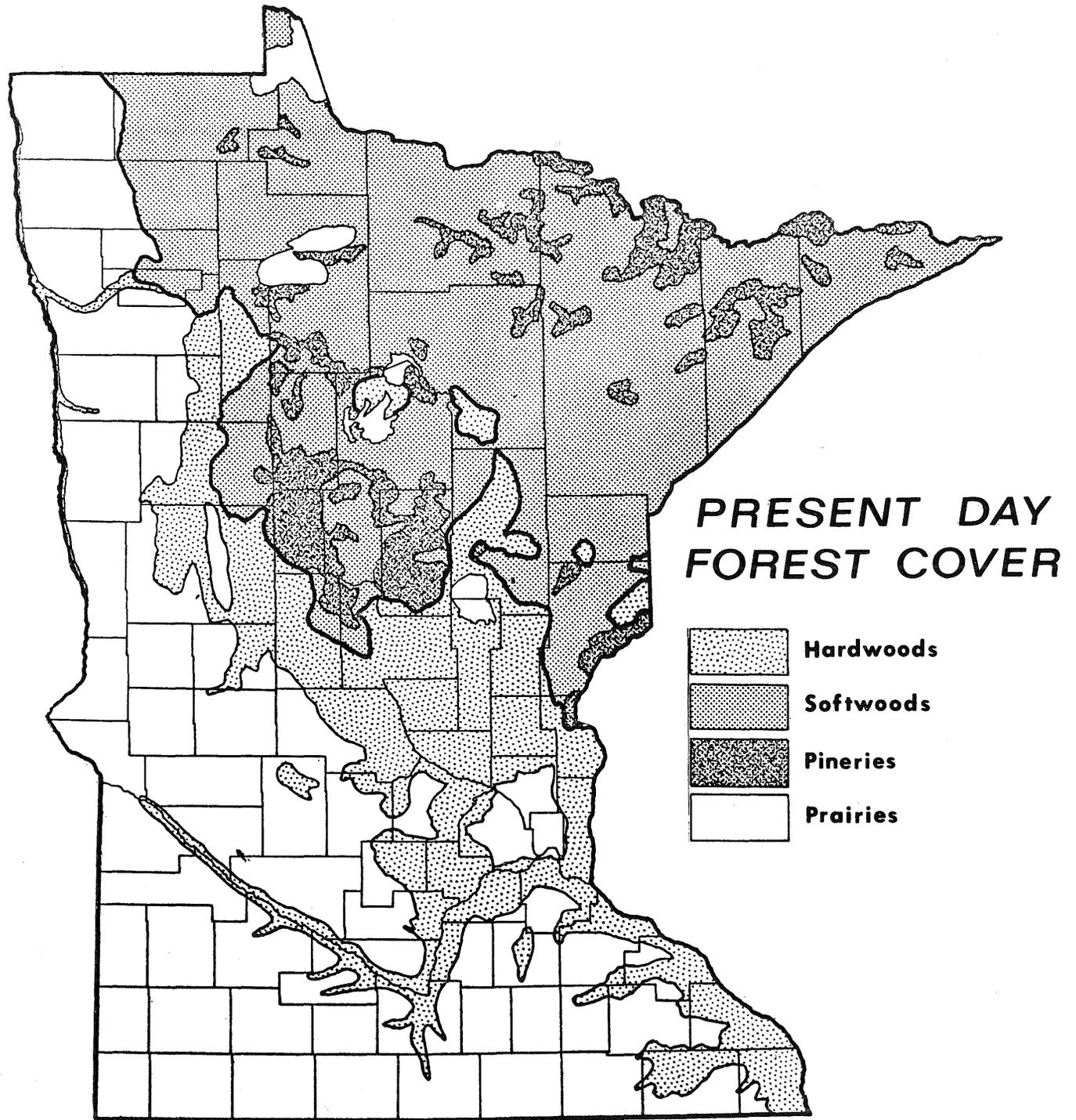


Showy Pink and White Lady's Slipper --  
Minnesota's State Flower.

Norway Pine --  
Minnesota's State Tree









It is more than 200 years since the first white man saw the wilderness that has become Minnesota. Each vegetational zone, had its own kind of wildlife. Caribou and moose were found in the coniferous forest of the north and northeast; deer inhabited the hardwood forest of southeastern and central Minnesota; bison, elk and antelope grazed on the tall-grass prairies of the south, the southwest, and in the Red River Valley. Black bear and cougars ranged throughout. With these big game animals were associated many kinds of smaller mammals and upland birds. Waterfowl, it is reported, rose from the prairie lakes with a noise like thunder and passenger pigeons weighted down the branches of oak trees.

Of native mammals originally present, all still occur in the state except grizzly bear, caribou, antelope and bison. Several native mammals once exterminated, or nearly so, may again be found in Minnesota. They include the elk (descended from a herd imported from Wyoming); the fisher (which has again become fairly common in the northeast); the cougar (which has been seen several times in recent years), and the beaver, which is now abundant after having been nearly gone from the state at the turn of the century. The Canada lynx usually is quite rare and only a few pine marten have been reported in recent years.

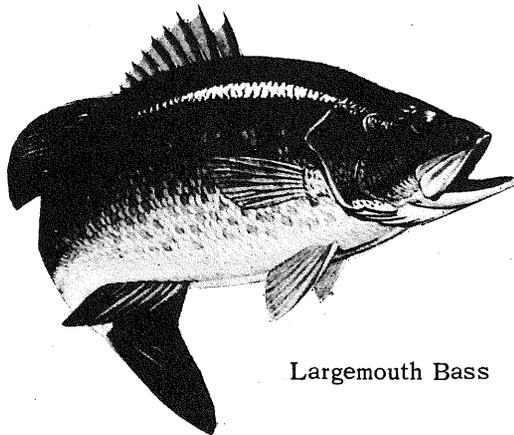
There is no way of knowing how much game there was in Minnesota when the white man arrived. Some early explorers found game in abundance; others reported it to be scarce. Nor is there any exact count of the Indians who lived on game and other wild products supplemented by harvests from rudimentary agriculture. It seems likely, however, that the total number of Indians in Minnesota at the coming of the white man did not exceed 20 thousand and that the amount of game they could have taken by primitive hunting was considerably less than that taken by our present-day army of sportsmen. Not only is game more heavily hunted today, but there is probably more game to hunt. It is well known that mature and unbroken forests are unproductive of game. Our present game is most abundant along the edges or boundaries between vegetative types. Farming, forest cutting, and fires that followed lumbering created such edges.

Disturbance of the landscape by man has favored some game animals, such as the deer, pheasant, and ruffed grouse. But it has eliminated or nearly eliminated animals like the bison, caribou and elk which preferred extensive stretches of similar vegetation. For awhile development of grain farming interspersed with prairie grassland greatly favored the prairie chicken, but this bird has now disappeared from much of the state because of the development of intensive agriculture. Intensive and diversified agriculture has favored the introduced ringneck pheasant, and this fine bird has supplied much of our upland game bird hunting during the past 25 years. Waterfowl populations declined from primitive abundance on our prairie lakes and potholes to a very low level in the drought of the 1930's. After a comeback in the 40's and 50's ducks are now, in 1965, again at a low level. Breeding of waterfowl in the state has been seriously damaged by drainage of wetlands, especially prairie potholes to provide more land for farm crops. More than 50,000 such small water areas have already been lost, and drainage is continuing.

Changes in past land use pattern in Minnesota have had both favorable and unfavorable effects on game animals. Preservation of the values associated with wildlife will depend largely upon coordinated efforts, both public and private, to support scientific game management. These efforts must provide a place for wildlife in land use plans and fit habitat management into patterns of multiple-use where agricultural, forestry and recreational values are all considered.

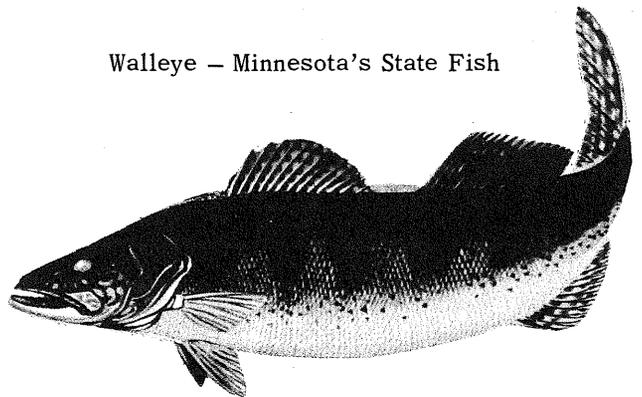


## FISH



Largemouth Bass

Walleye – Minnesota's State Fish



As well as being abundantly blessed with lakes and streams, Minnesota has a wide variety of fish to inhabit this fluid environment. Rippling streams, sylvan pools, deep lakes and roaring scenic North Shore streams host trout; bass and panfish thrive in the shallows of most Minnesota lakes; muskellunge cruise some northern lakes, and in the northeast, lake trout inhabit the deep, cold lakes.

For years the walleye was generally known as Minnesota's state fish. The 1965 legislature made this status official and the walleye became "King of Minnesota Fishes." The principal natural range of this "Number One" piscatorian is the northern half of Minnesota. The best walleye lakes are rolling expanses larger than 1,000 acres, but it is also found in larger rivers. A close cousin of the walleye, the sauger is common in some lakes and large rivers, and is also taken by anglers. In some lakes another relative of the walleye, the perch, also provides sport fishing. Young perch are a necessity in the diet of the walleye.

Two of the state's most famous fighting sport fish are the northern pike and muskellunge or "muskie." Because of their predatory habits and the large territory they require, muskies are not plentiful in any water. Northerns are common in most Minnesota fishing lakes and are quite tolerant of low oxygen levels. During the winter months they can survive in shallow lakes of southern Minnesota as well as the deeper northern lakes. Drainage of sloughs adjacent to lakes and the filling in of shallow-water spawning areas has had a detrimental effect on northerns especially in southern Minnesota. A mutant of the northern, the "silver pike," is taken occasionally.

In terms of the annual numbers of fish caught, panfish are first in the angler's catch and second only to northern pike in total weight of fish caught. The panfish in Minnesota are represented by black and white crappie, rock bass and several kinds of sunfish. Bluegills and pumpkinseeds, the best known sunfishes, are common in weedy, shallow areas of lakes throughout the state.

Anyone who has fished through the ice in this state has most likely caught the crappie. In all except the deep, cold northeastern lakes, crappies comprise a good portion of the fish population. Crappies are taken from shallow, fertile lakes and are especially abundant in the prairie lakes. Rock bass are abundant in cold, clear water of northern lakes associated with walleyes.

Smallmouth bass thrive in cooler streams and lakes of Minnesota occurring abundantly in portions of the St. Croix and Upper Mississippi rivers. Smallmouth have been introduced to some of the lakes along the Minnesota-Ontario border. Largemouth bass provide much fishing in warmer, weedy lakes throughout the state.

Most Minnesotans are lake fishermen, but fish are found in most streams as well; trout in the smaller cold water streams; and other game fish such as the smallmouth bass and northern pike in the warmer and larger rivers. Most warm water streams are lightly fished in Minnesota even though they contain many fish for anglers to catch.

In Minnesota, the catfishes are represented by three species of bullheads, the yellow, black and brown, and three species of catfish, the channel, shovelhead or mud catfish and the rare, blue catfish. Both the channel and blue catfishes are found in the Mississippi River drainage system below St. Cloud. Mud cats are found in the lower Mississippi, St. Croix and Minnesota rivers. Channel catfish are also in the St. Louis drainage system. Although the waters in the southern Minnesota lakes region offer diversified angling for panfish, pike, bass and walleyes, many anglers come to the area for bullhead fishing. Besides being caught by anglers, bullheads are also removed as rough fish from some Minnesota lakes and sold for human food or to stock fishing ponds in southern states.

In the cool streams there are three kinds of trout, the brook, rainbow, and brown. Brook trout are native to eastern Minnesota thriving best at temperatures below 65 degrees. Rainbow and brown have been introduced and were first planted in Minnesota streams during the 1870's. Most of Minnesota's trout streams are in the wooded valleys of the southeast and along the North Shore of Lake Superior, but there are also trout streams in other areas, such as the Kabekona and Straight Rivers near Park Rapids.

Many lakes in northeastern Minnesota contain native lake trout, the giant of the trout family which sometimes weighs more than 50 pounds. Lake Superior and the cold, deep lakes of the rocky Boundary Waters Canoe Area are especially noted for lake trout. Grayling, an introduced species, is also found in this habitat, but only in isolated stocked lakes. Associated with lake trout are its relatives, the tullibee, lake herring and whitefish.

An unwelcome arrival in Lake Superior, the parasitic sea lamprey, which came originally from the Atlantic Ocean has made its way westward through the Great Lakes destroying lake trout. It first appeared in Lake Superior in 1953. Successful efforts have been made by the Great Lakes Fishery Commission through the cooperation of the U.S. Fish and Wildlife Service and the Canadian Wildlife Service to control this parasite.

Recently, two species of fish have invaded Lake Superior from eastern waters. The smelt, native to the Atlantic Coast, first appeared near Duluth in 1946. As soon as the ice retreats, myriads of these silvery fish spawn all along the North Shore. As they move into the tributaries, hundreds of fishermen of all ages wade into the icy waters to net smelt. The alewife, another fish of the Atlantic Coast, has recently arrived in Lake Superior. It is of no sportfishing value.

Some of the first inhabitants of Minnesota were Lake Superior commercial fishermen. There are still commercial fisheries along the North Shore and on some of the lakes adjacent to the Canadian border and on Red Lake where the Chippewa Indians operate a commercial fishery.

Rare or Endangered Species in Minnesota – As in most states, there are several forms of wildlife and fish that are either extinct, threatened with extinction or considered so by those concerned with conservation. Many believe that our treatment of rare or endangered species is a good indication of how we are treating our environment and a measure of our attitude toward ourselves and toward the kind of world in which we want to live.

The state has certain legal commitments toward preserving all forms of wildlife . . . "all living creatures, not human, wild by nature, endowed with sensation and power of voluntary motion 'including quadrupeds, birds, fish, amphibians, reptiles, crustaceans and mollusks, lies insofar as they are capable of ownership' . . . in the state in its sovereign capacity for the benefit of all its people, and no person shall acquire any property therein, or destroy the same, except as authorized . . . "

There are no generally accepted definitions of "rare" or "endangered" that are applicable to all forms of fish and wildlife. Both connote need for protection and to many this means no harvest by man. The Committee on Rare and Endangered Species, Bureau of Sport Fisheries and Wildlife, U. S. Department of the Interior, has adopted the following definitions as a basis for judging which vertebrates should be included on the nation-wide list.

**Endangered:** A species or subspecies whose ability to survive is seriously threatened.. Small numbers, loss of or changes in habitat, over-exploitation, predation, competition, disease or other factors could cause it to become extinct.

**Rare:** A species or subspecies, although not presently threatened with extinction, is few in numbers throughout its range, and may be endangered if environmental conditions become more adverse. The range may be restricted or widespread.

The nation-wide list compiled by the Committee is based on the status of numbers and habitat as of January, 1965. Of those listed, the following species occur or have occurred in Minnesota:

Mammals	Birds	Fish
Timber wolf	Northern prairie chicken	Lake sturgeon
Fisher	Trumpeter swan (now extinct)	Blackfin cisco
Marten	Peregrine falcon (duck hawk)	
Canada lynx	American osprey	
Woodland caribou (now extinct)	Ferruginous roughleg hawk	
	Bald eagle	
	Eastern bluebird	
	Greater sandhill crane	

The Department of Conservation, Division of Game and Fish, in June, 1965, prepared a list of rare or extinct waterfowl in Minnesota. This list is as follows:

Fulvous whistling or tree duck	Trumpeter swan	Atlantic brant
Ross's goose	European widgeon	Cinnamon teal
Common eider	King eider	Common scoter
Surf scoter	Harlequin duck	Barrow's goldeneye

One very bright aspect is the enactment of the Land and Water Conservation Fund Act. One of the provisions of the Act authorizes expenditure of some of this fund to acquire lands and waters for species of fish and wildlife threatened with extinction.. The Bureau of Sport Fisheries and Wildlife is developing a long-range program of habitat acquisition for these species which may be preserved by this approach.

Research to obtain the missing vital information at the earliest time possible is imperative.. To attack this problem, the Bureau is planning a long-range research program specifically aimed at the needs of the rare or endangered.

# RECREATIONAL RESPONSIBILITY

What is the recreational responsibility of various agencies in Minnesota? It is not a matter of a few persons and a few agencies taking part—all Minnesotans are involved.

The federal and state governments, counties, municipalities, other public agencies and the private sector can and do play an important part in Minnesota's recreational program.

## private role

Private enterprise supplies recreation areas and facilities to the public at an acceptable quality and price.

Private operations furnish a wide variety of opportunities such as golf and country clubs near cities and villages, lakeshore cabins, resorts and camping areas, boat launching sites, ski areas, vacation farms, riding stables, hunting preserves and many others. Not only does private enterprise play an important role in state-wide recreation, but also takes pressure from state and local governmental agencies. Investment by commercial interests in the recreation field are part of the state's over-all economic development.

Some organizing of the vacation-resort-recreation industry has been done by regional and local associations and individual state trade associations. Examples include the state hotel, motel and restaurant associations. These local and regional associations have two primary purposes; one, to attract visitors by and through coordinated promotional efforts and information centers and second, to give organizational coordination and strength to programs that benefit the resort industry.

## quasi public role

Quasi public groups such as church organizations, youth organizations, businessmen's clubs, etc., make it possible for many Minnesota children to have outings at low cost. The large number of organized camps throughout the state attest to this fact. With the growing population, the needs of our youth will require continual activity by quasi public agencies.

## municipal role

Municipalities including cities, villages, townships and school districts, are primarily responsible for the establishment, development, programming and supervision of public recreation areas and facilities to meet the needs of



local residents for frequent short-term, extensive use. These agencies provide park and play facilities at the neighborhood and community levels. Schools usually provide facilities adjoining a school or within walking distance of homes (generally within one-fourth to a half mile.) Access is usually by city street. Municipal areas serve neighborhoods and communities within a half mile to two miles distance; ten acres per 1,000 persons.

They are usually not intended to meet the demands of tourists in quest of camping, fishing, etc. Municipal areas are usually located within or adjacent to a community and provide recreation activities primarily for the local population. They are relatively small areas which are highly developed and equipped.. Some are under the direction or with the assistance of qualified recreational advisors.

## county role

The primary role of the county is to provide larger areas than the municipalities with facilities to meet the recreational needs of families and groups on an inter-community basis. The county provides a recreation facility designed for use by the citizens of the county in which the park is located.

Counties provide areas for extensive day-use. Access is usually by means of a nearby highway, major county or secondary road; ten miles of service distance of the park is designed to accommodate large numbers of people.. The operating agency is usually the county park board. County areas usually provide for 20 users per acre. The minimum size should be about 100 acres.

County recreation areas include canoe routes, parks, wildlife areas, waysides, historic sites, public access and related outdoor recreation areas. Counties can operate many of Minnesota's smaller recreation areas more efficiently than can state government operating on a state-wide basis.. A County Park Board by its very nature is more responsive to the people of its area; it is close to the pulse of the people served and can provide the development of an area according to local wishes.

The counties can fill a void between the state park system operating on a state-wide level and municipal parks serving the citizens of the town or city. County Boards have proceeded on local recreational developments not possible for the state, and there is a great need for further expansion in this area. There are thousands of small areas of scenic beauty and interest which recreation seekers should have the opportunity to enjoy. Now, with the passage of the County Park Law, passed in 1961, counties are seen as an answer to providing more outdoor opportunities.

## state role

The role of the state is to provide large-scale recreation areas of state-wide interest or importance for its citizens. These include extensive scenic parks, large recreational preserves, historic sites, forests, wildlife management areas, wayside rests, public access and other areas for recreational purposes as well as for the conservation of various natural resources and management of wildlife. The range of facilities and uses attract people from wide distances.

The location depends on the resources. Access is usually over major highways with 20 miles or more of service distance.. Facilities include picnic areas, camping, bathing beaches, fishing areas, boat ramps and many others.

The state supplies the type of facilities other agencies may not be able to furnish. This does not mean the state's function is merely to "supplement" the facilities other agencies are not able to provide. It is the state's function to preserve and make available its fine scenic, historic and scientific areas for public enjoyment. It is also the function of the state to supply extensive recreational opportunities for holidays, vacations and weekends within reach of all its citizens. The state coordinates and assists its political subdivisions (municipalities, counties and metropolitan regions) in developing appropriate recreation facilities.

The state aids counties, municipalities, and quasi public and private groups in preparing long-range, broad programs of state-wide recreation areas, facilities and policies. It is the function of the state to define and coordinate the activities of all groups to the fullest extent without assuming the responsibilities of its subdivisions. Consultation and advice should be available so that in the end, Minnesota's greatest recreational assets—its land, forests, streams, lakes—will be devoted to the best possible use so their values increase, rather than diminish.

# federal role

The federal government identifies and preserves areas of national interest and appeal. The federal government conserves and protects areas of outstanding scenic, scientific and historic importance – areas of superlative natural beauty and those that interpret natural phenomena of the American Continent and the story of man's career in America.

The federal government also provides recreational leadership and assistance to states, local governments and private enterprise through technical assistance, loans, and grants-in-aid. (For information regarding programs providing technical assistance, loans and grants-in-aid, see "Federal Assistance in Outdoor Recreation" available from the Bureau of Outdoor Recreation, Ann Arbor, Michigan).

# DEMAND

## SECTION

# FACTORS AFFECTING RECREATION DEMAND

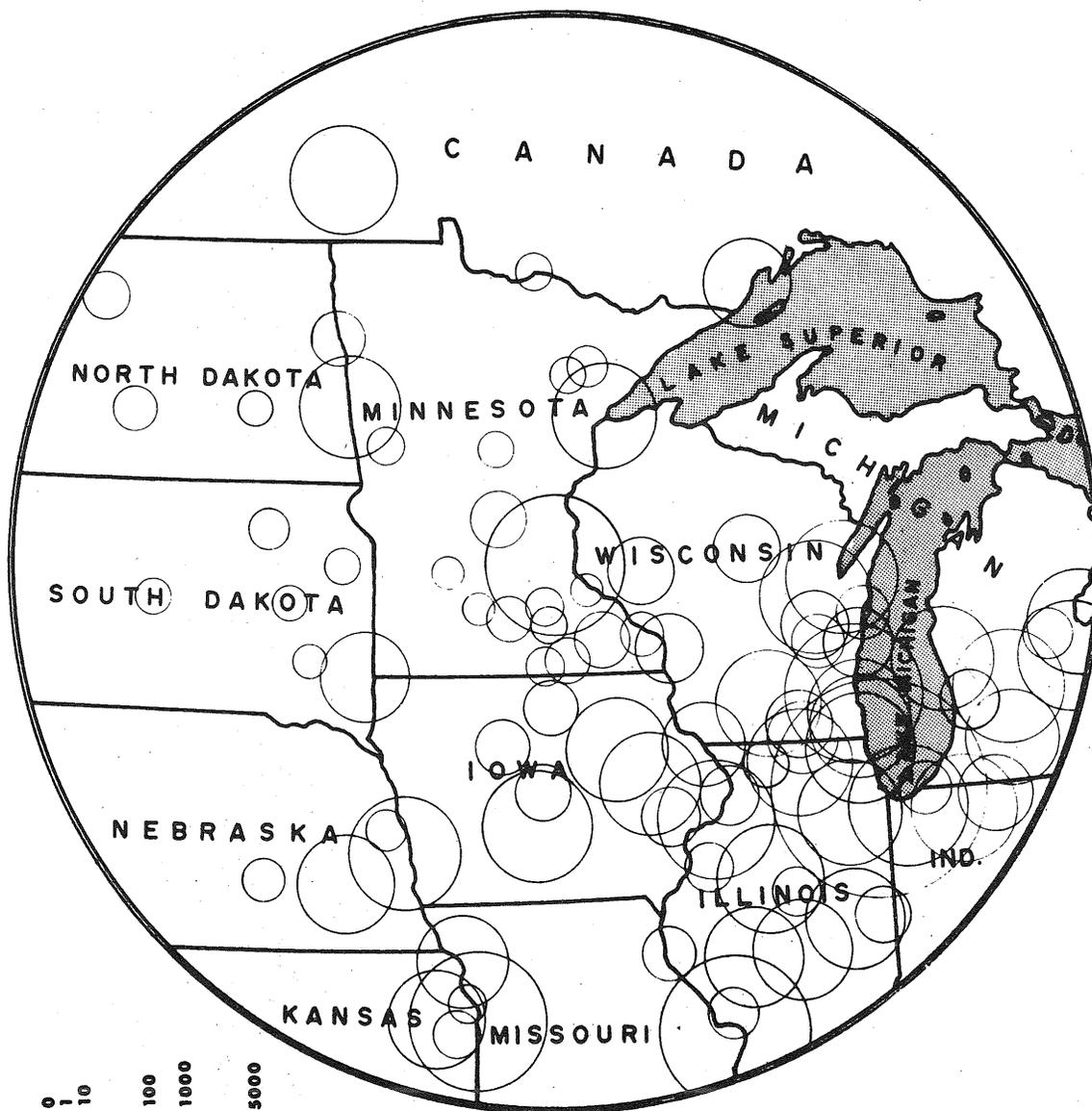
The demand for recreational opportunities in Minnesota today and in the future will depend on the number of residents and visitors, the time at their disposal, how and where they spend their money, and how easily accessible recreational areas are to them. Recreational opportunity must be provided for both residents and nonresidents as individuals, families and groups differing in age, sex, cultural and educational background, capabilities and income. These factors affect where they go and what they enjoy in Minnesota, whether their interests lie in fishing, nature study, golf, hiking, skiing or other phases of outdoor recreation.

No matter what the background, outdoor recreation in Minnesota is needed by people who live here and by those who visit our state on pleasure trips. The needs of visitors are seasonal while the residents require year-around outdoor recreation.



# POPULATION CONCENTRATIONS IN MINNESOTA AND ADJACENT REGIONS

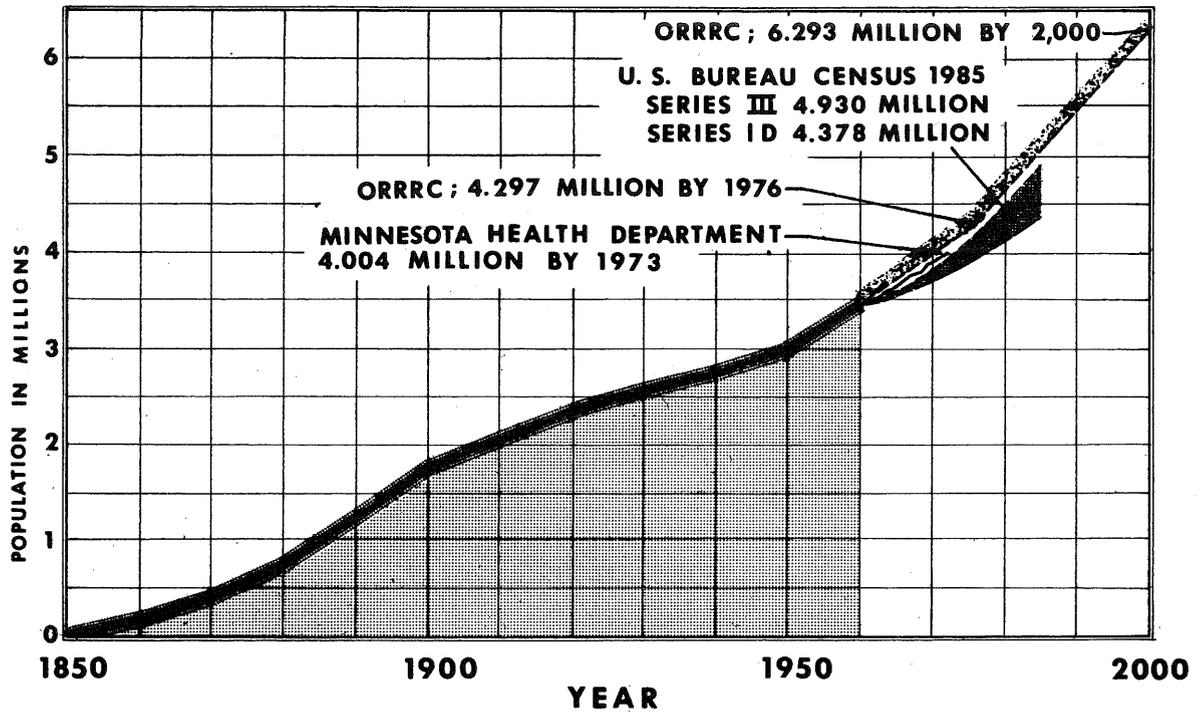
geographic distribution and comparative size of urban places with a population of 10,000 or larger



**DIAMETER SCALE**  
(POPULATION IN THOUSANDS)

# MINNESOTA

## population growth and projections of future population size



# population

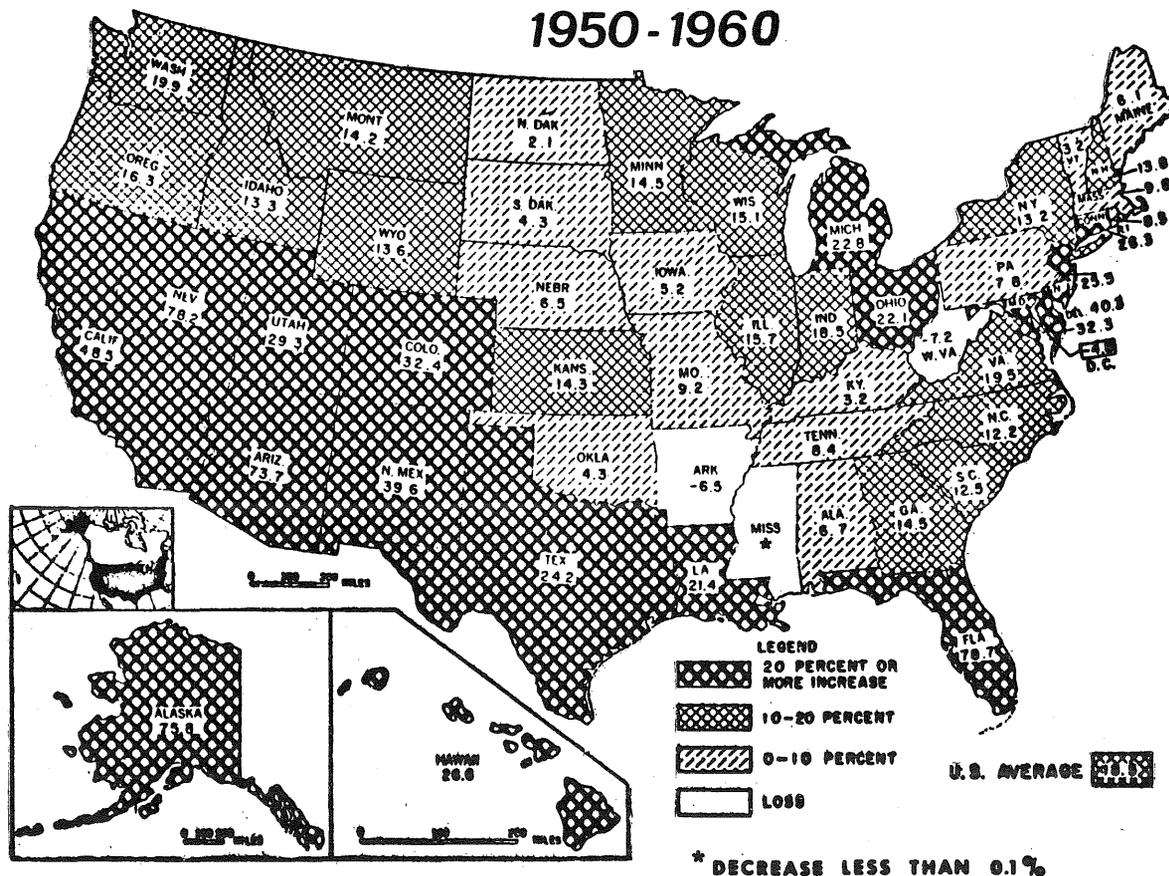
Projections of Population Growth and Distribution – According to the U. S. Bureau of Census, the population of Minnesota increased to 3,413,864 in 1960 and at present contains 1.9 percent of the people of the United States, ranking it 18th in the Union. Its growth since 1850 is shown below:

## MINNESOTA POPULATION GROWTH, 1850-1960

<u>Year</u>	<u>Population</u>	<u>Percent Increase</u>
1850	6,077	---
1860	172,023	2,730.7
1870	439,706	155.6
1880	780,773	77.6
1890	1,310,283	67.8
1900	1,751,394	33.7
1910	2,075,708	18.5
1920	2,387,125	15.0
1930	2,563,953	7.4
1940	2,792,300	8.9
1950	2,982,483	6.8
1960	3,413,864	14.5

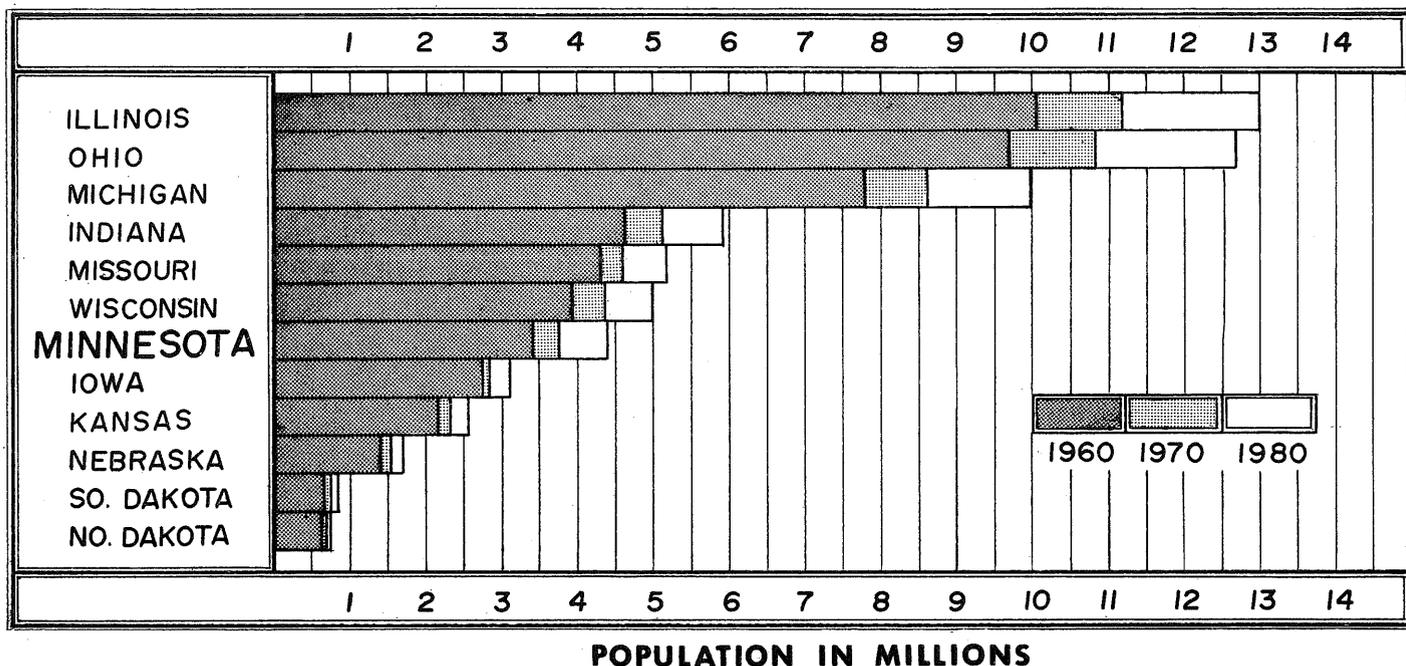
Between 1950 and 1960, 24 of the 50 states grew more rapidly than Minnesota. Its percentage increase of 14.5 percent is slightly below the 18.5 percent growth for this 10-year period experienced by the Nation as a whole. Minnesota's percentage change between 1950 and 1960 relative to that of other states in the union is illustrated on the map below

## Percent Change in Population by State, 1950-1960



SOURCE: 1960 CENSUS OF POPULATION VOL. I

# PROJECTED GROWTH OF STATES IN THE NORTH CENTRAL REGION



SOURCE: U.S. BUREAU OF CENSUS, POPULATION ESTIMATES, SERIES P-25,  
SERIES II-B, NO. 301, JANUARY, 1965

## POPULATION GROWTH AND PROJECTIONS

U. S. BUREAU OF CENSUS PROJECTION SERIES II-B, IN THOUSANDS

	<u>1960</u>	<u>1970</u>	<u>1975</u>	<u>1980</u>	<u>1985</u>
United States	179,323	208,249	225,123	244,566	265,575
North Central Region	51,619	56,747	60,673	65,378	70,571
Illinois	10,081	11,222	12,047	13,028	14,113
Ohio	9,706	10,867	11,705	12,690	13,763
Michigan	7,823	8,658	9,271	9,999	10,801
Indiana	4,662	5,145	5,519	5,958	6,437
Missouri	4,320	4,613	4,879	5,205	5,571
Wisconsin	3,952	4,384	4,719	5,114	5,547
MINNESOTA	3,414	3,754	4,054	4,409	4,797
Iowa	2,758	2,818	2,944	3,110	3,302
Kansas	2,179	2,313	2,427	2,573	2,739
Nebraska	1,411	1,549	1,617	1,708	1,813
South Dakota	681	753	788	835	890
North Dakota	632	669	704	749	799

In 1962 the Outdoor Recreation Resources Review Commission published figures in Study Report 23 which projected Minnesota's population to 4,297,000 by 1976 and 6,293,000 by the year 2000 – an increase of over 2,800,000 or 84 percent by the end of this century.

Although more current advanced information published in U. S. Bureau of Census Population Estimates, Series P. 25, No. 31, February 26, 1965, indicates that the 1976 O.R.R.R.C. projection may be high, the O.R.R.R.C. data appears to be sufficiently valid at this time to permit its continued use.

An additional projection by the Minnesota Health Department indicates that Minnesota's population will exceed 4 million by 1973. This projection also appears to be higher than the more recent Bureau of Census estimates, but like the O.R.R.R.C. projection, just as valid.

Population projections are based on the two components of population change, natural increase, ie., births over deaths and net migration along with assumptions as to what effect scientific, economic, technological and sociological changes may have upon these components. Demographers are the first to admit that what actually happens may differ substantially from the assumptions used and that in the case of populations, this uncertainty increases with time. Projections to such distant periods, as for example the year 2020, would have to be built largely upon the fertility, mortality and migration rates of a generation as yet unborn and should be used with the knowledge that these figures are presented as logical assumptions.

Beginning early in this Century, Minnesota's birth rate has been one of a long-term gradual decrease that reached and remained under 20 per 1,000 population during the 1930's. In the 1940's it rose to the low 20's and reached 26.1 per 1,000 in 1959. In recent years an abrupt drop in birth rate has occurred reducing per 1,000 figures to 25.6 in 1960, 25.0 in 1961, 24.3 in 1962 and 22.7 in 1963. Preliminary 1964 information indicates this drop is continuing. The death rate for Minnesota shows a long-term gradual decline which has continued below 10 per 1,000 population since 1946 and at present is slightly above 9 per 1,000 (1963 figure). The remaining factor, net migration, indicates that outward trends beginning in 1940 to 1950 continued into the 1950 decade and this will probably continue in the 1960's.

In summary, it seems probable that the O.R.R.R.C. projections, which form the background for the demand section of Minnesota's plan, will be somewhat higher than what might be indicated as a result of more current information.

#### A CHANGING POPULATION

Not only has Minnesota's population been increasing, but it has also been undergoing vast and important changes which in many ways will affect our recreational resources.

Urbanization – Clearly, one of the most significant changes which has occurred is that of urbanization or the movement into cities and metropolitan areas. Describing as urban those persons living in population centers of 2,500 or more, Minnesota's population has been becoming increasingly urban with the result that in 1960, 62 percent of the population was termed urban, compared to 64 percent for the Nation as a whole.

#### PERCENTAGES OF MINNESOTA POPULATION – URBAN – RURAL – 1850 to 1960

Year	Percent	
	Urban	Rural
1850	0.0	100.0
1860	9.4	90.6
1870	16.1	83.9
1880	19.1	80.9
1890	33.8	66.2
1900	34.1	65.9
1910	41.0	59.0
1920	44.1	55.9
1930	49.0	51.0
1940	49.8	50.2
1950	53.9	46.1
1960	62.2	37.8

Forecasts indicate Minnesota will be 70 percent urban by 1970 and by 1980 the percentage may be well over 80 percent.

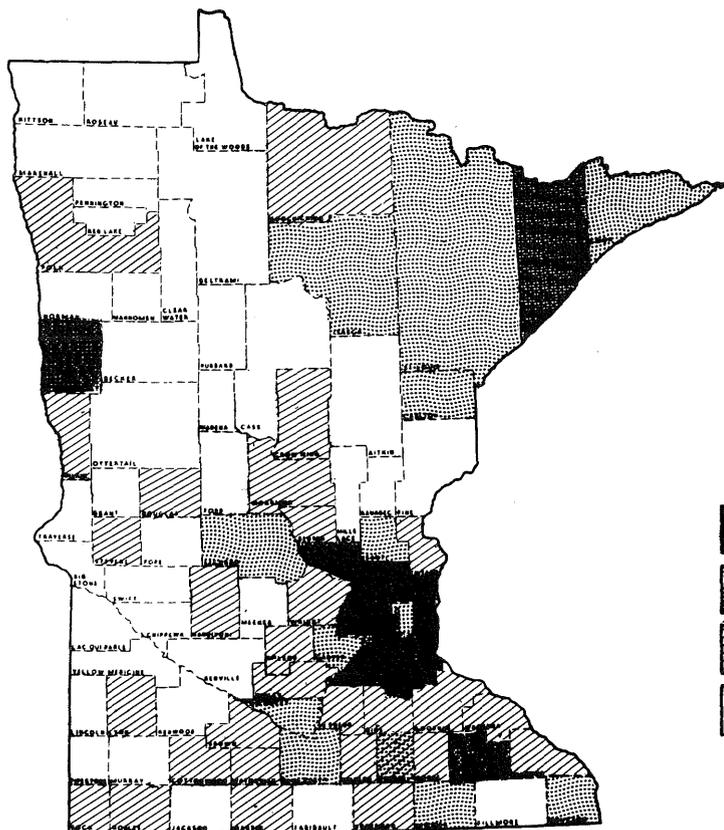
Minnesota's rural population declined from 1,358,000 in 1950 to 1,293,000 in 1960; a drop of 65,000 or 4.8 percent in ten years. During the same period the urban population increased from 1,625,000 in 1950 to 2,121,000 in 1960; an increase of 496,000 or 30.5 percent.

The U. S. Bureau of Census further breaks down rural figures into farm and non-farm populations. Of the totals above, the farm population has decreased from 740,000 in 1950 to 588,000 in 1960 while the non-farm segment increased from 618,000 in 1950 to 705,000 in 1960. In other words, Minnesota's rural farm population dropped about 20 percent in the 1950's while rural non-farm increased 14 percent.

Ramsey, Hennepin, Anoka and St. Louis counties have the greatest proportion of urban population, 97, 96, 84 and 73 percent, respectively. Fifteen counties have half or more of their population in urban places. Twelve of these most urban counties are in the south-southeastern part of the state. St. Louis and Lake counties are in the northeastern section. Pennington is in the northwestern part with more than half of its population (7,112) in urban Thief River Falls. All of these 15 urban counties, except Lake, Pennington and Nicollet have cities of over 10,000 population in their boundaries, and several of them have smaller towns in addition.

Minnesota's Counties - Minnesota is divided into 87 counties and 50 of these gained in population between 1950-1960. Twenty-one increased more than 10 percent with greatest percentage gains experienced in: Anoka, 141.4; Lake, 76.8; Dakota 59.7; Washington, 51.8; Olmsted, 35.9; Scott, 32.9; and Clay 28.7.

Eleven counties in north-central and northwestern Minnesota experienced reductions of 10 percent or more. Ten of these counties have no population centers of 2,500 or more and by census definition are completely rural counties.

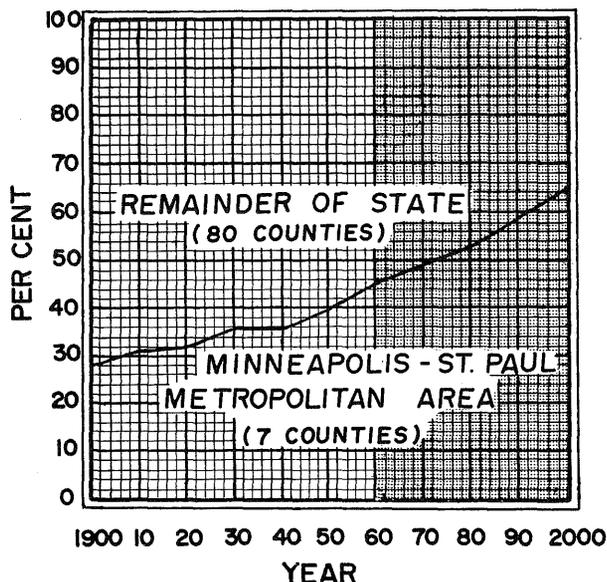


**County Population Change 1950 - 1960**

-  INCREASE 20 PER CENT OR MORE
-  INCREASE 10-20 PER CENT
-  INCREASE 0-10 PER CENT
-  DECREASE

Numerically, the greatest increases between 1950 and 1960 occurred in Hennepin County, which increased by 166,275, followed by Ramsey, 67,193; Anoka, 50,337, Dakota, 29,284; St. Louis, 25,526; Washington, 17,888 and Olmsted, 17,304 – counties in which Minnesota’s major cities are located. The greatest decreases between 1950 and 1960 occurred in Cass County whose population decreased by 2,748, followed by Otter Tail, 2,360; Roseau, 2,351; Todd, 2,301 and Aitkin, 2,165.

In 1960 the Twin Cities Metropolitan Planning Area or the seven counties of Anoka, Carver, Dakota, Hennepin, Ramsey, Scott and Washington collectively contained over a million and one-half people or almost 45 percent of Minnesota’s population. Projections by the Metropolitan Planning Commission indicate that by the year 1970 nearly one-half of the people of Minnesota will live in the Twin Cities Metropolitan Area and by the year 2000 this number will exceed 4 million or 68 percent of the population of the State.



**PROJECTED POPULATION GROWTH of the Minneapolis - St. Paul seven county metropolitan area expressed as percentage of the projected population of the state**

 **PROJECTED**

In other words, if these projections hold true, the 80 remaining Minnesota Counties which contained nearly 1.9 million people as of 1960 will not, when considered collectively, experience any population growth while the seven county Metropolitan Area will increase by two and one-half million. A graph of this growth is shown above.

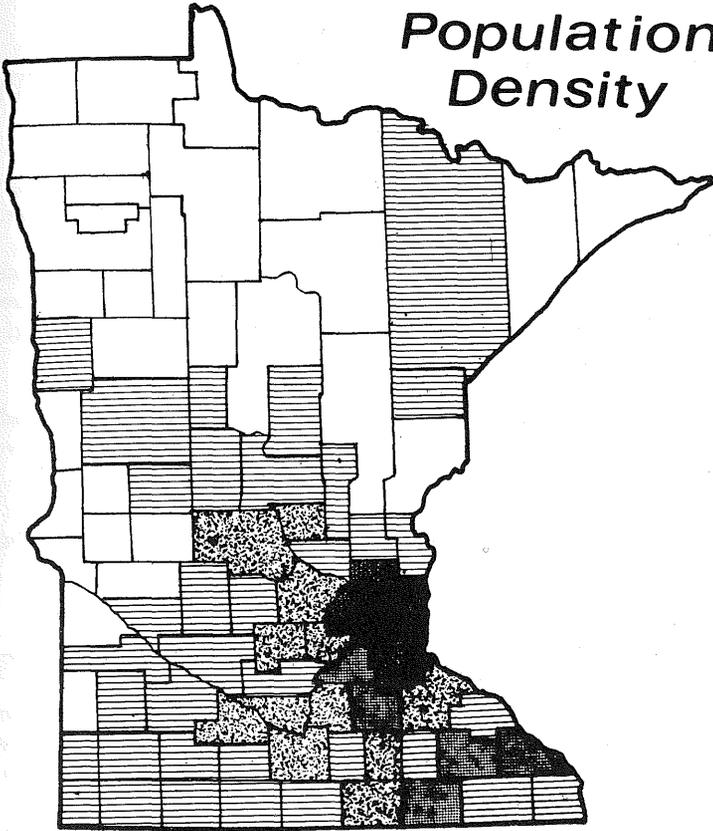
MINNESOTA

Number of Inhabitants - AREA AND POPULATION OF COUNTIES, URBAN AND RURAL:  
1960 and 1950\*

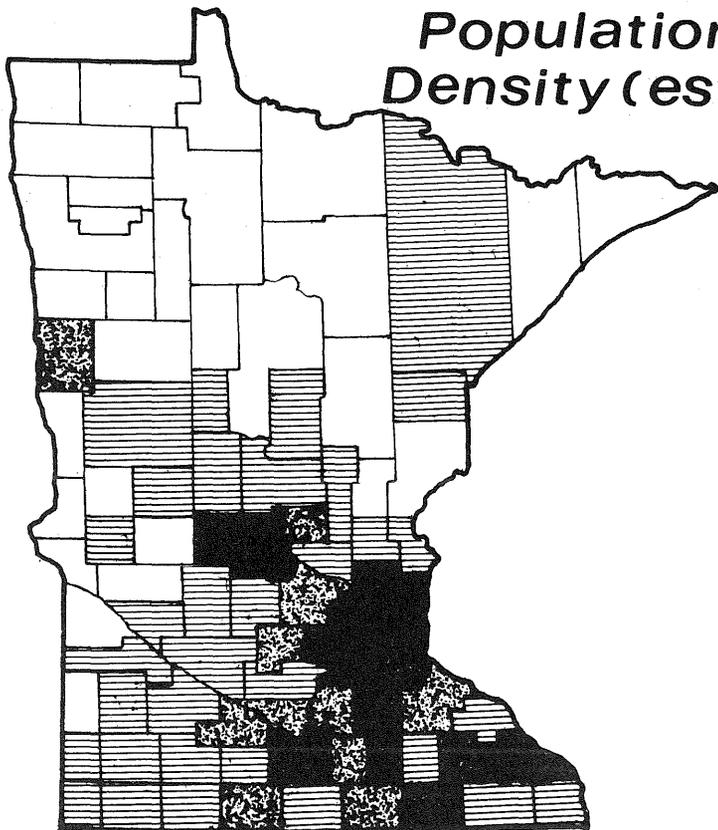
[Minus sign (-) denotes decrease. Percent not shown where less than 0.1]

County	Land area in square miles, 1960	1960 population						1950 population			Percent increase, 1950 to 1960								
		Total		Urban			Rural			Total	Urban	Rural							
		Number	Per square mile	Total	Percent of total population	Urbanized areas	Other urban territory	Total	Places of 1,000 to 2,500				Other rural territory						
The State.....	80,009	3,413,864	42.7	2,122,566	62.2	1,513,023	609,543	1,291,298	199,775	1,091,523	2,982,483	1,624,914	1,357,569	14.5	30.6	-4.9			
Aitkin.....	1,824	12,162	6.7	...	...	...	...	12,162	1,829	10,333	14,327	...	14,327	-15.1	...	-15.1			
Anoka.....	425	85,916	202.2	76,468	89.0	76,468	...	9,448	9,448	35,579	19,367	16,212	141.5	294.8	...	-41.7			
Becker.....	1,315	23,959	18.2	5,633	23.5	...	...	5,633	1,083	17,243	24,836	5,787	19,049	-3.5	-2.7	-3.8			
Beltrami.....	2,517	23,425	9.3	9,958	42.5	...	...	9,958	13,467	24,962	10,001	14,961	-6.2	-0.4	-10.0				
Benton.....	404	17,287	42.8	7,247	41.9	...	...	7,247	1,112	8,928	15,911	6,383	9,528	8.6	13.5	5.4			
Big Stone.....	510	8,954	17.6	2,674	29.9	...	...	2,674	6,280	6,280	9,607	7,030	7,030	-6.8	3.8	-10.7			
Blue Earth.....	740	44,385	60.0	23,797	53.6	...	...	23,797	20,588	2,759	17,829	18,809	19,518	15.8	26.5	5.0			
Brown.....	613	27,676	45.1	17,307	62.5	...	...	17,307	10,369	...	10,369	25,895	15,200	10,695	6.9	13.9	-3.0		
Carlton.....	860	27,932	32.5	9,013	32.3	...	...	9,013	18,919	2,640	16,279	24,584	7,685	16,899	13.6	17.3	12.0		
Carver.....	358	21,358	59.7	2,501	11.7	...	...	2,501	18,857	3,094	15,763	18,155	...	...	...	3.9			
Cass.....	2,053	16,720	8.1	...	...	...	...	16,720	2,766	13,954	19,468	...	19,468	-14.1	...	-14.1			
Chippewa.....	582	16,320	28.0	6,256	38.3	...	...	6,256	10,064	1,358	8,706	16,739	5,991	10,748	-2.5	4.4	-6.4		
Chisago.....	419	13,419	32.0	...	...	...	...	...	13,419	1,108	12,311	...	...	...	...	...	5.9		
Clay.....	1,050	39,080	37.2	25,054	64.1	25,054	...	14,026	2,902	11,124	30,363	14,870	15,493	28.7	68.5	-9.5			
Clearwater.....	1,005	8,864	8.8	...	...	...	...	8,864	1,385	7,479	10,204	...	...	...	...	...	-13.1		
Cook.....	1,403	3,377	2.4	...	...	...	...	3,377	1,301	2,076	2,900	...	...	...	...	...	...	16.4	
Cottonwood.....	640	16,166	25.3	3,691	22.8	...	...	3,691	12,475	2,955	9,520	15,763	3,165	12,598	2.6	16.6	-1.0		
Crow Wing.....	999	32,134	32.2	15,527	48.3	...	...	15,527	16,607	1,037	15,570	30,875	15,434	15,441	4.1	0.7	7.4		
Dakota.....	571	78,303	137.1	52,915	67.6	43,950	8,965	25,388	3,368	22,020	49,019	31,301	17,718	59.7	69.1	43.3			
Dodge.....	435	13,259	30.5	...	...	...	...	13,259	3,173	10,086	12,624	...	...	...	...	...	...	5.0	
Douglas.....	637	21,313	33.5	6,713	31.5	...	...	6,713	14,600	1,314	13,286	6,319	14,985	...	...	...	6.2		
Fairbault.....	713	23,685	33.2	7,097	30.0	...	...	7,097	16,588	3,166	13,422	23,879	3,843	20,036	-0.8	84.7	-17.2		
Fillmore.....	859	23,768	27.7	2,628	11.1	...	...	2,628	21,140	6,243	14,797	...	...	...	...	...	...	-13.6	
Freeborn.....	702	37,891	54.0	17,108	45.2	...	...	17,108	20,783	34,517	...	13,545	24,465	...	...	...	...	26.3	
Goodhue.....	758	33,035	43.6	10,528	31.9	...	...	10,528	22,507	6,817	15,690	32,118	10,645	21,473	2.9	-1.1	4.8		
Grant.....	557	8,870	15.9	...	...	...	...	8,870	1,521	7,349	9,542	...	...	...	...	...	...	...	-7.0
Hemlock.....	565	842,854	1,491.8	827,219	98.1	827,219	5,185	15,635	6,368	9,267	676,579	612,113	64,466	24.6	35.1	-75.7			
Houston.....	565	16,588	29.4	5,187	31.3	...	...	5,187	11,401	2,424	8,977	...	...	...	...	...	...	...	-21.0
Hubbard.....	932	9,962	10.7	3,047	30.6	...	...	3,047	6,915	...	6,915	3,027	8,058	-10.1	0.7	-14.2			
Isanti.....	442	13,530	30.6	2,728	20.2	...	...	2,728	10,802	...	10,802	12,123	2,978	9,145	11.6	-8.4	18.1		
Itasca.....	2,663	38,006	14.3	7,265	19.1	...	...	7,265	30,741	5,795	24,946	33,321	6,019	27,302	14.1	20.7	12.6		
Jackson.....	698	15,501	22.2	3,370	21.7	...	...	3,370	12,131	1,789	10,342	16,306	3,313	12,993	-4.9	1.7	-6.6		
Kanabec.....	525	9,007	17.2	...	...	...	...	9,007	2,329	6,678	9,192	...	...	...	...	...	...	...	-2.0
Kandiyohi.....	824	29,987	36.4	10,417	34.7	...	...	10,417	19,570	...	19,570	28,644	9,410	19,234	4.7	10.7	1.7		
Kittson.....	1,124	8,343	7.4	...	...	...	...	8,343	1,527	6,816	9,649	...	...	...	...	...	...	...	-13.5
Koochiching.....	3,129	18,190	5.8	6,778	37.3	...	...	6,778	11,412	2,479	8,933	16,910	6,269	10,641	7.6	8.1	7.2		
Lac qui Parle.....	773	13,330	17.2	...	...	...	...	13,330	4,146	9,184	14,545	...	...	...	...	...	...	...	-8.4
Lake.....	2,132	13,702	6.4	8,418	61.4	...	...	8,418	5,284	...	5,284	7,781	4,400	3,381	76.1	91.3	56.3		
Lake of the Woods.....	1,308	4,304	3.3	...	...	...	...	4,304	1,597	2,707	4,955	...	...	...	...	...	...	...	-13.1
Le Sueur.....	441	19,906	45.1	4,229	21.2	...	...	4,229	15,677	5,338	10,339	19,088	2,713	16,375	4.3	55.9	-4.3		
Lincoln.....	540	9,651	17.9	...	...	...	...	9,651	1,138	8,513	10,150	...	...	...	...	...	...	...	-4.9
Lyon.....	713	22,655	31.8	9,543	42.1	...	...	9,543	13,112	1,297	11,815	22,253	8,943	13,310	1.8	6.7	-1.5		
McLeod.....	498	24,401	49.0	9,423	38.6	...	...	9,423	14,978	1,263	13,815	22,198	7,491	14,707	9.9	25.8	1.8		
Mahnomen.....	574	6,341	11.0	...	...	...	...	6,341	1,462	4,879	7,059	...	...	...	...	...	...	...	-10.2
Marshall.....	1,800	14,262	7.9	...	...	...	...	14,262	2,007	12,255	16,125	...	...	...	...	...	...	...	-11.6
Martin.....	707	26,986	38.2	9,745	36.1	...	...	9,745	17,241	2,483	14,758	25,655	8,193	17,462	5.2	18.9	-1.3		
Meeker.....	620	18,887	30.5	5,078	26.9	...	...	5,078	13,809	...	13,809	18,966	4,608	14,358	-0.4	10.2	-3.8		
Mille Lacs.....	568	14,560	25.6	...	...	...	...	14,560	4,174	...	4,174	10,386	...	...	...	...	...	...	-4.0
Morrison.....	1,136	26,641	23.5	7,551	28.3	...	...	7,551	19,090	...	19,090	25,832	6,737	19,115	3.1	12.4	-0.1		
Mower.....	703	48,498	69.0	27,908	57.5	...	...	27,908	20,590	...	20,590	42,277	23,100	19,177	14.7	20.8	7.4		
Murray.....	408	14,743	20.8	...	...	...	...	14,743	3,689	11,054	14,801	...	...	...	...	...	...	...	-0.4
Nicollet.....	559	23,196	50.5	14,411	62.1	...	...	14,411	8,785	...	8,785	20,929	12,542	8,387	10.8	14.9	4.7		
Nobles.....	712	23,365	32.8	9,015	38.6	...	...	9,015	14,350	1,215	13,135	22,435	7,923	14,512	4.1	13.8	-1.1		
Norman.....	885	11,253	12.7	...	...	...	...	11,253	2,064	9,189	12,909	...	...	...	...	...	...	...	-12.8
Olmsted.....	655	65,532	100.0	40,663	62.1	...	...	40,663	24,869	4,461	20,408	48,228	29,885	18,343	35.9	36.1	35.6		
Otter Tail.....	2,000	48,960	24.5	13,733	28.0	...	...	13,733	35,227	3,712	31,515	51,320	12,917	38,403	-4.6	6.3	-8.3		
Pennington.....	622	12,468	20.0	7,151	57.4	...	...	7,151	5,317	...	5,317	12,965	6,926	6,039	-3.8	3.2	-12.0		
Pine.....	1,412	17,004	12.0	...	...	...	...	17,004	3,524	13,480	18,223	...	...	...	...	...	...	...	-6.7
Pipestone.....	464	13,605	29.3	5,324	39.1	...	...	5,324	8,281	1,019	7,262	14,003	5,289	8,734	-2.8	1.0	-5.2		
Polk.....	2,012	36,182	18.0	15,544	43.0	...	...	15,544	20,638	1,704	18,934	35,900	12,401	23,499	0.8	25.3	-12.2		
Pope.....	681	11,914	17.5	2,631	22.1	...	...	2,631	9,283	1,099	8,184	12,862	2,666	10,196	-7.4	-1.3	-9.0		
Ramsey.....	160	422,525	2,640.8	417,322	98.8	417,322	5,203	2,459	2,744	355,332	335,798	19,534	18.9	24.3	-73.4				
Red Lake.....	432	5,830	13.5	...	...	...	...	5,830	1,520	4,310	6,806	...	...	...	...	...	...	...	-14.3
Redwood.....	874	21,718	24.8	4,285	19.7	...	...	4,285	17,433	1,141	16,292	22,127	3,813	18,314	-1.8	12.4	-4.8		
Renville.....	980	23,249	23.7	...	...	...	...	23,249	7,898	15,351	23,954	...	...	...	...	...	...	...	-2.9
Rice.....	495	38,988	78.8	25,633	65.7	...	...												

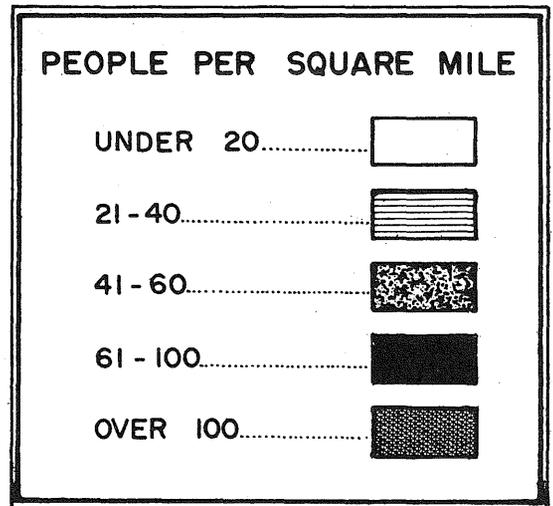
## 1960 Population Density



## 1970 Population Density (est.)



Since the turn of the century, the density of Minnesota's population has nearly doubled; increasing from 21.9 people per square mile in 1900 to 42.7 people per square mile in 1960. This is compared to a density of 50.5 people per square mile found for the Nation as a whole. Projections of Minnesota's population indicate that densities will increase to about 48 people per square mile by 1970, and could surpass 70 people per square mile by the year 2000.



Within the State, county populations as of 1960 had densities ranging from 2 per square mile in Cook County to 2,641 people per square mile in Ramsey County. By 1970, Cook County can expect to have an increase of less than one person per square mile while Ramsey can expect to have an additional 415 people per square mile. (The opposite maps show the existing densities of Minnesota counties and the densities projected for 1970.)

## AGE STRUCTURE OF THE POPULATION

Fluctuating birth and migration rates and a declining death rate have not only influenced the growth of Minnesota's population, but have changed its age structure as well. As the ages of people and their numbers will, in part, determine participation rates in the various forms of outdoor recreation, it may be instructive to consider what age structure changes have occurred in the past and what the projections hold for the future.

Census records indicate that it has been only recently that national trends toward a more mature population have been reversed. In 1790, for example, one-half of the male population of the United States was under 15.9 years of age. By 1950, the median age had progressively increased so that one-half of the male population was under 29.9 years or a median twice that of the early years of settlement. The median age of males and females combined showed a decline for the first time in 1960, when it dropped from 30.2 in 1950 to 29.5 in 1960. Minnesota trends in age structure (Figure 3) although deviating slightly, have characteristically followed national trends and in 1960 the average Minnesota citizen with a median age of 28.6 years was slightly less than a year younger than the average U. S. citizen.

The population pyramids showing the age composition of Minnesota's population at 20-year intervals, are included in (Figure 1). High birth and death rates of the 19th Century provided the broad based pyramid of 1900 with relatively large numbers of young people. By 1920, birth and mortality rates had declined, reducing this youthful base. Continuation of this trend into the depression years of the 1930's resulted in a definite narrowing at the base of the 1940 pyramid. By 1960, the high birth rates of more recent years began to affect the age distribution and this feature, along with the deficit in young adults and the gains of adults over 45, are the most evident characteristics of our present population.

A comparison of the 1960 Minnesota population pyramid with that of the nation (Figure 2), indicates that Minnesota has percentage-wise fewer people in age groups 20-54 years, and more people 0-14 years and 60 and over, than does the Nation. As of 1960, over 1.4 million (41 percent) of the people in Minnesota were under 21 years of age. Projections by the Minnesota Health Department indicate that by 1970 this same age group will increase to over 1.7 million or 45 percent of the projected total population. During the same period, persons in age groups 65 years and older who numbered 354,000 or 10.5 percent of Minnesota's population in 1960 are expected to increase to 444,000 by 1970, at which time they are expected to comprise 11.5 percent of the population. This will mean that percentage increases in the young, and old age groups will have to be made at the expense of the middle age group (21 to 64 years) and this group is expected to decline from 48 percent in 1960 to 43 percent in 1970. Numerically this means that those in age group 21 to 64 years will increase from 1,647,000 in 1960 to 1,674,000 in 1970 - an increase of only 27,000 people.

Natural projections adapted from O.R.R.R.C. Study Report 23 (Figure 3) indicate that by the year 2000 the percentage of people in older age groups will decline, the very young will maintain their present percentage and the teenagers and young adults will increase.

How precise these long-range projections might eventually be is a matter of conjecture - for one must realize that by the year 2000, people born prior to and including 1965 will be 35 years of age or older. As the over 35 age group has never occupied more than 43 percent of the population of Minnesota, it would seem that estimates for the year 2000, being based on a population, perhaps 60 percent of which has not as yet been born, could vary considerably from what actually occurs.

# Age-Sex Composition of the Population in Minnesota Compared to the United States in the Year 1960

FIGURE 1

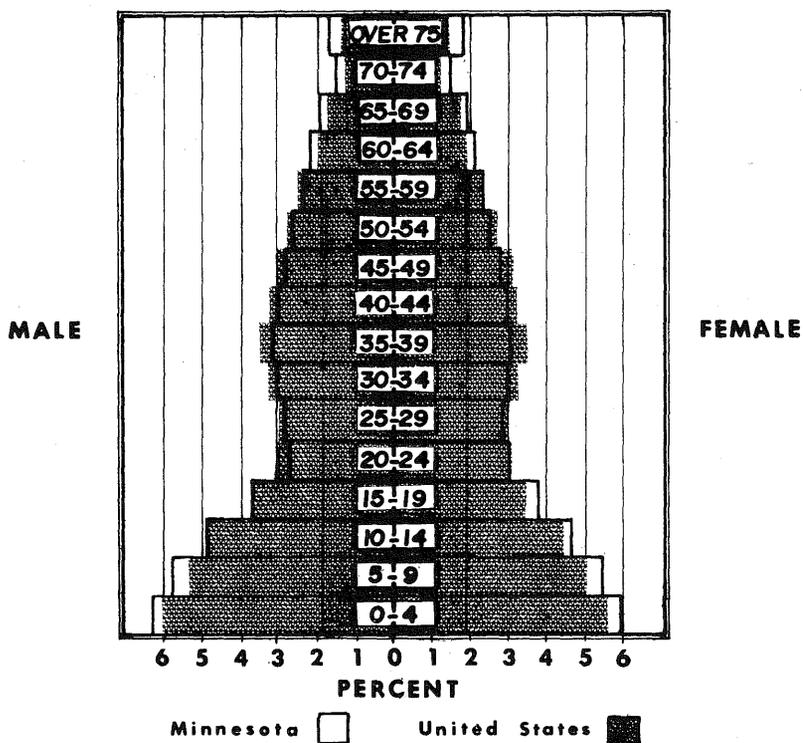
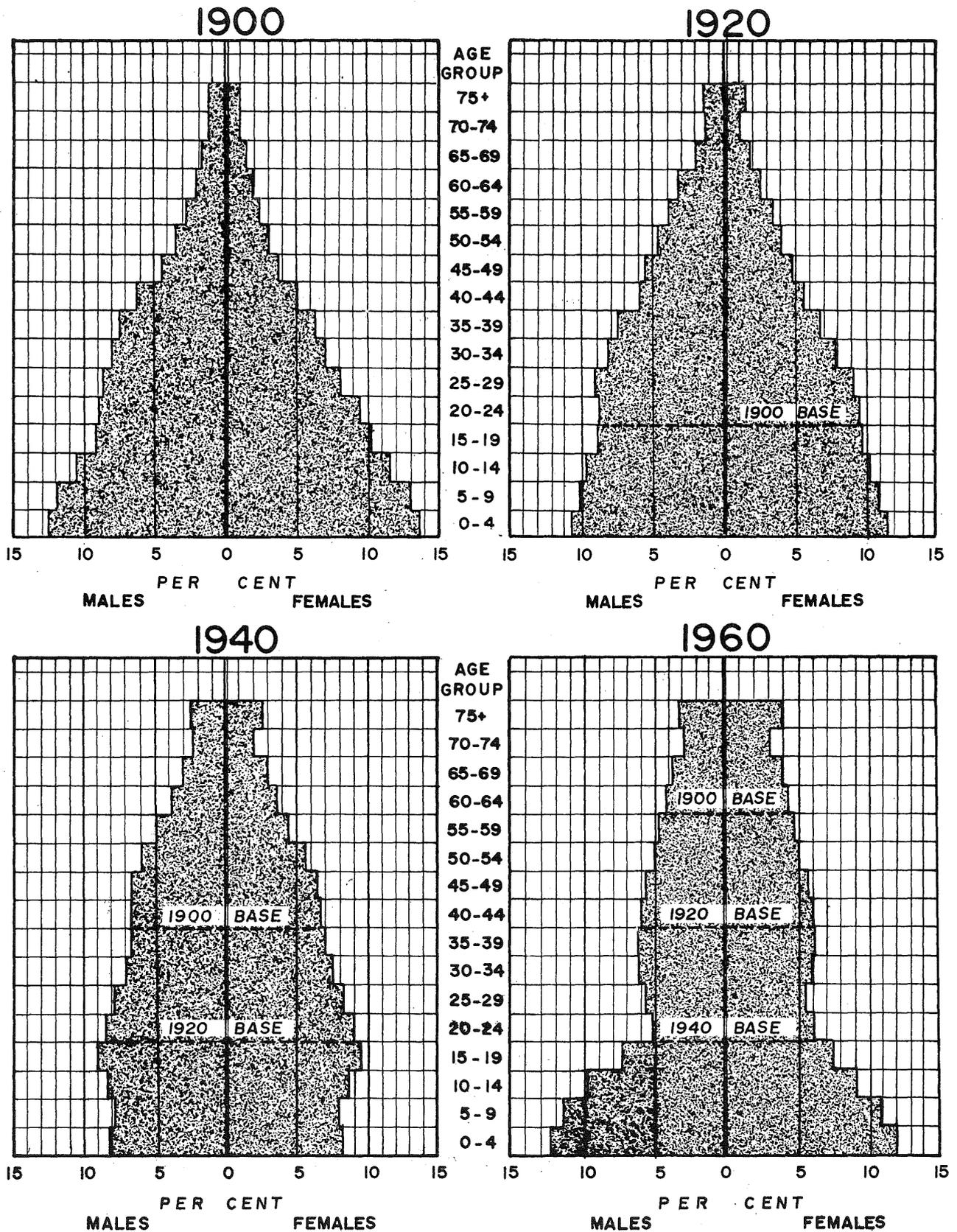


FIGURE 2

# POPULATION PYRAMIDS FOR MINNESOTA 1900, 1920, 1940, 1960

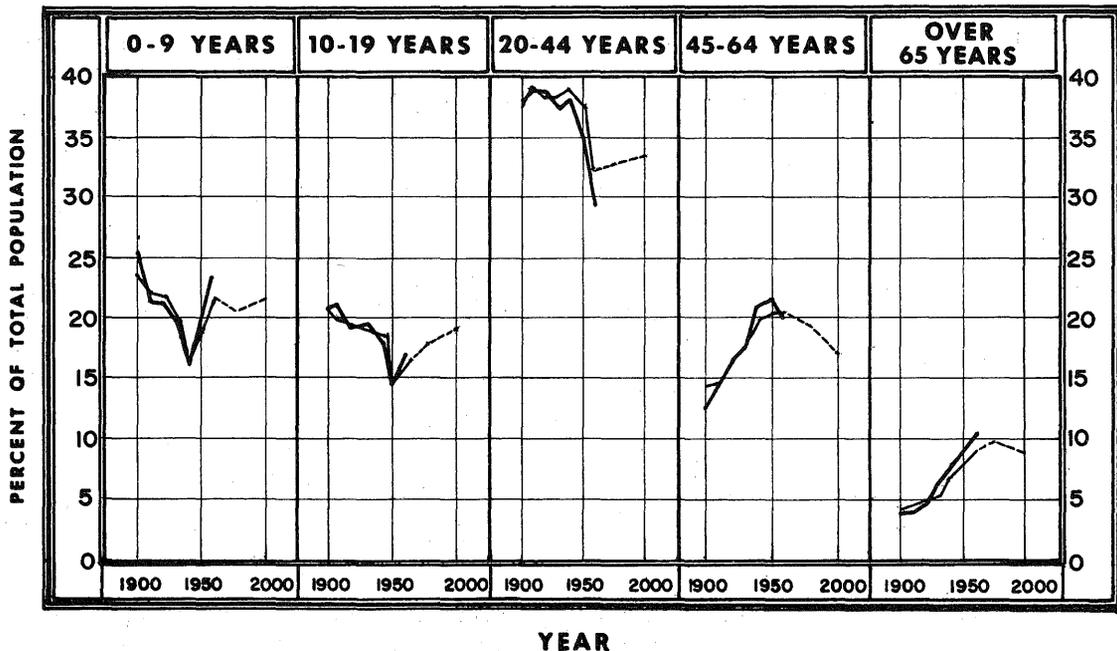


# Trends in the Relative Size of Five Age Groups, 1900 to 1960 With National Projections to the Year 2000

Minnesota  United States  U.S. (Projected) 

FIGURE 3

## AGE GROUP



SOURCE: ORRRC STUDY REPORT 23

## EMPLOYMENT AND OCCUPATIONAL STATUS

The size and composition of the labor force and the amount and character of unemployment are considered both as indicators of and contributors to the general prosperity and economic well being of the state. These and the related factors of education, income and leisure are shown by O.R.R.R.C. to have an influence upon the types and amounts of recreational activity in which people engage. Knowledge of employment and occupational trends should, when available, provide a more accurate judgment of Minnesota's future recreational needs.

In Minnesota, as well as nationally, many changes have been occurring in the size and occupational status of the working population. Defining the labor force as that segment of the population 14 years of age or older working or actively seeking work, the U. S. Bureau of Census shows that the National labor force has grown from 56 million in 1940 to 73 million in 1960. Projections indicate this number will probably increase to 96 million by 1976 and exceed 142 million by the year 2000.

Minnesota's labor force which numbered 1,101,000 in 1940, increased to 1,304,000 in 1960. O.R.R.R.C. Report 23 shows the labor force increasing to 1,770,000 in the year 1976, and to 2,540,000 in the year 2000. In other words, the labor force of both the United States and the State of Minnesota is expected to nearly double in the next 35 years.

To place employment of Minnesota's civilian labor force in proper perspective, a brief look at the relationship between the labor force, total employment and the relative size of its farm and non-farm employment is useful.

Comparison of United States, Upper Midwest, and Minnesota figures is shown below:

### POPULATION 14 AND OVER

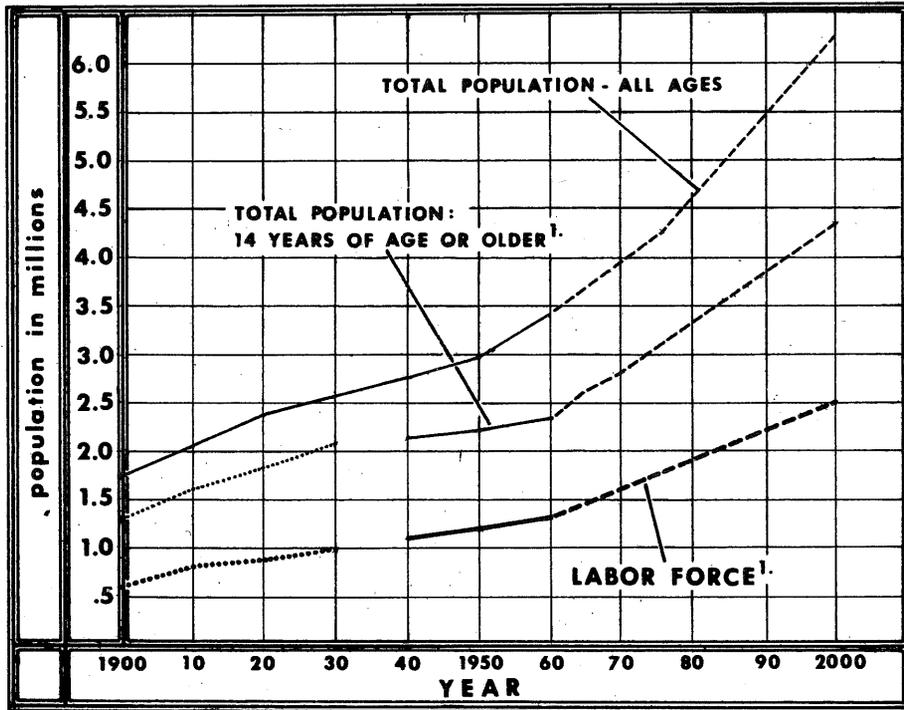
	Number (in thousands)	Percent Population 14 and over	Percent Non-agricultural	Percent Agricultural	Percent Unemployed
United States	68,144	54.0	88.7	6.2	5.1
Upper Midwest	2,332	54.1	77.2	17.3	5.5
Minnesota	1,299	55.4	81.3	13.6	5.0
Twin Cities Metropolitan Area	599	58.8	94.9	1.3	3.8

Source: Adapted from the Upper Midwest Economic Study, Study Paper No. 5 (Dec. 1962) Employment and Earnings in the Upper Midwest: 1950-1960 by R. Stephen Rodd and James M. Henderson.

Minnesota has a lower percent of non-agricultural workers than the nation as a whole but a higher percentage than the Upper Midwest. Historically, the agricultural share of the total civilian labor force has continued to decline in the decade 1950-1960. It declined from 22 percent to 14 percent in Minnesota as compared to a national decline of from 12 percent in 1950 to 6 percent in 1960.

The major occupational groupings of Minnesota's employed are shown on the following pages.

# LABOR FORCE PROJECTIONS for Minnesota



<sup>1</sup> Graph depicts the number of people 14 years of age or older 1940 to 2000 and (dotted line) 10 years of age or older 1900 to 1930.

LABOR FORCE STATUS OF MINNESOTA'S POPULATION -

Projected 2.

	1900	1910	1920	1930	1940	1950	1960	1976	2000
Total Population	1,751,394	2,075,708	2,387,125	2,563,953	2,792,300	2,982,483	3,413,864	4,297,000	6,293,000
Total									
10 years or older		1,628,635	1,877,132	2,076,201	3,342,067	2,382,371	2,616,148		
14 years or older				1,873,617	2,152,104	2,200,940	2,344,475	3,073,000	4,389,000
<sup>1.</sup> Labor Force	645,874	835,452	907,013	992,798	1,101,464	1,187,954	1,303,828	1,770,000	2,540,000
Armed Forces					2,600	2,187	4,863		
Civilian Labor Force					1,098,864	1,185,767	1,298,965		
Employed					928,899	1,143,872	1,233,408		
Unemployed					169,965	41,895	65,557		
Not in Labor Force					1,050,640	1,012,986	1,040,647		
Inmates of Institutions							38,843		
Enrolled in School							184,074		

1. Figures refer to numbers of people 10 years of age and over 1900 to 1930 and 14 years of age and over 1940 to 2000.
2. O.R.R.R.C. Study Report 23.

ECONOMIC GROWTH PATTERNS

The State of Minnesota is divided into two economic regions; the metropolitan center of the Twin Cities and the area of smaller cities and rural areas of the rest of the state.

The Twin Cities metropolitan area is the largest urban center in the Upper Midwest and is the thirteenth largest in the nation. Of the 22 metropolitan areas over one million in population, the Twin Cities ranked eighth in population growth between 1950 and 1960.

Like the rest of Minnesota, the Twin Cities area is greatly influenced by the region's farming and natural resources exploitation. (In total employment, the food product processing is almost two and one-half times the national average. Transportation is one and a half times as important in the Twin Cities as in the rest of the nation's non-agricultural employment).

The greatest single structural feature that distinguishes the Twin Cities from other parts of the state is its manufacturing. There are 150,000 persons employed in manufacturing or one-quarter of all employment, with factories in every sector. In addition to large amounts of food processing, there is relatively heavy specialization in paper products, printing and publishing, instruments, non-electrical machinery and fabricated metal products. Most service activities grew less rapidly than in the nation, except for federal government employment.

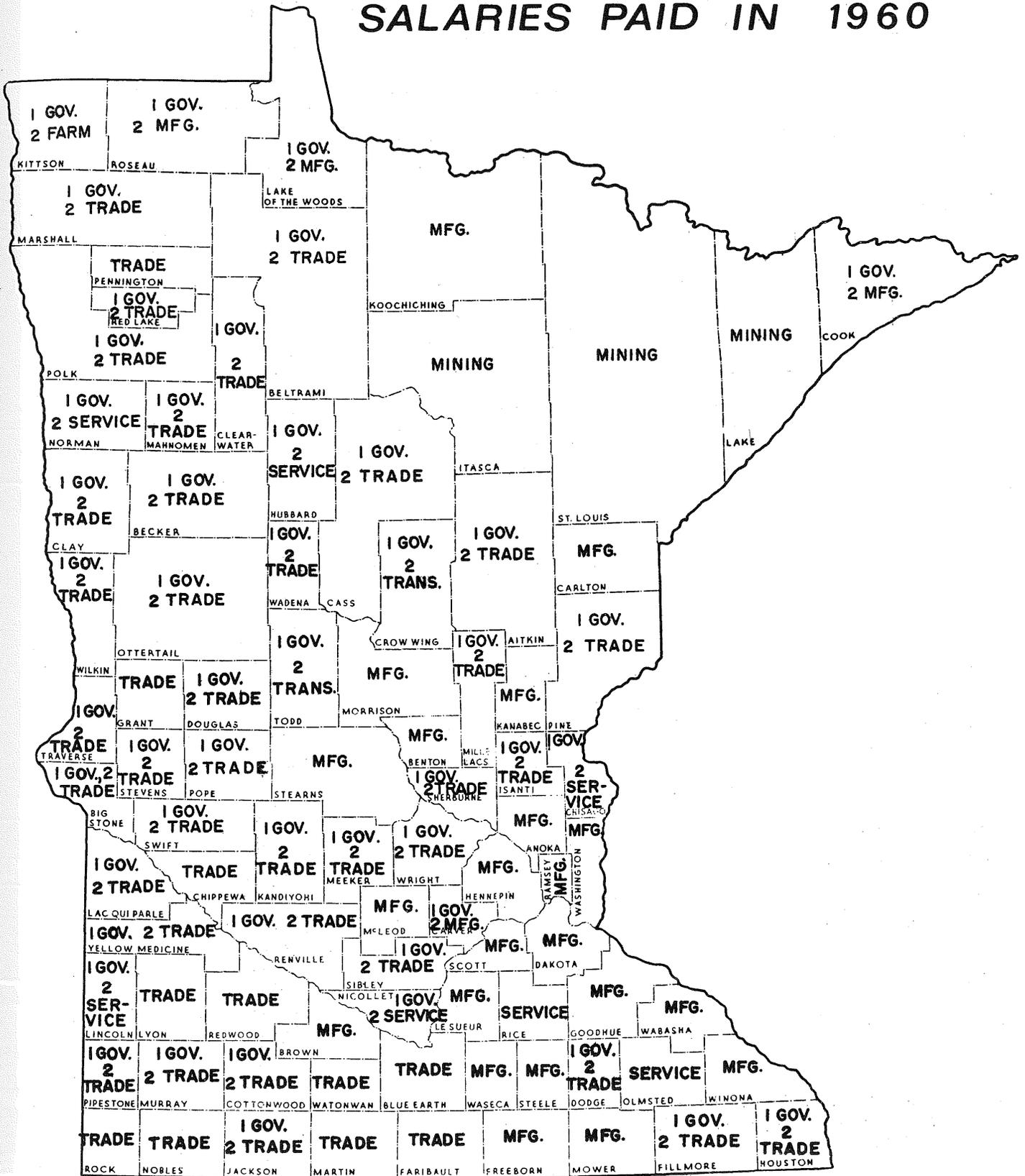
Non-metropolitan Minnesota is above the national average in farming, forestry and iron ore mining.

This region of Minnesota is dominated by a farming economy. Manufacturing provides almost 17 percent of all employment outside of farming, mainly in the eastern half of the state. Iron mining accounts for another 3.3 percent. Railroads, retailing and local government have comparatively high shares in total employment.

There is specialization in all food products, particularly meat, and dairy manufacturing, lumber production, paper products and iron mining. All of these except meat packing are increasing in their degree of specialization.

Manufacturing employment in Minnesota exceeded the national percentage growth rate between 1950 and 1960. The location of these areas is somewhat scattered throughout the state, but the heaviest concentration is likely in the metropolitan area and to the southeast quarter of the state.

# MAIN SOURCES OF WAGES AND SALARIES PAID IN 1960



SOURCE: ECONOMIC BASE STUDY, UPPER MISSISSIPPI RIVER BASIN SERVICE AREA TECHNICAL REPORT NO. 2

MINNESOTA  
 MAJOR OCCUPATIONAL GROUPING OF THE EMPLOYED  
 1940 - 1976

OCCUPATIONAL GROUP	1940	1950	1960	1976
Professional, Technical	72,118 7.7	98,735 8.6	141,329 11.5	249,000 14.6
Farmers, Farm Managers and Farm Laborers	279,672 30.0	255,981 22.4	173,542 14.1	168,000 9.9
Managers, Officials and Proprietors	83,357 8.9	100,000 8.7	102,839 8.3	191,000 11.2
Clerical	153,173 16.4	136,070 11.9	170,797 13.8	271,000 15.8
Sales		81,180 7.1	90,761 7.4	126,000 7.4
Craftsmen and Foremen	86,111 9.2	141,791 12.4	149,417 12.1	217,000 12.7
Operatives	103,808 11.1	158,448 13.9	174,844 14.2	222,000 13.0
Service	103,750 11.1	102,795 9.0	136,205 11.0	204,000 12.0
Laborers (except farms and mine)	42,065 4.5	54,742 4.8	47,480 3.8	61,000 3.6
Occupations not reported	7,445 0.8	13,546 1.2	46,194 3.7	
<b>Total</b>	<b>931,499</b>	<b>1,143,358</b>	<b>1,233,408</b>	<b>1,709,000</b>

Source: Years 1940-1960 U. S. Bureau of Census  
 1976 O.R.R.R.C. Study Report 23, Table B-6, Page 45.

# MAJOR OCCUPATIONAL GROUPINGS OF THE EMPLOYED IN MINNESOTA

OCCUPATIONAL GROUP	PER CENT EMPLOYED IN EACH GROUP			
	1940	1950	1960	1976
PROFESSIONAL, TECHNICAL	7.7	8.6	11.5	14.6
FARMERS, FARM MANAGERS, FARM LABORERS	30.0	22.4	14.1	9.9
MANAGERS, OFFICIALS, PROPRIETORS	8.9	8.7	8.3	11.2
CLERICAL SALES	16.4	11.9 7.1	13.8 7.4	15.8 7.4
CRAFTSMEN, FOREMEN	9.2	12.4	12.1	12.7
OPERATIVES	11.1	13.9	14.2	13.0
SERVICE	11.1	9.0	11.0	12.0
LABORERS EXCEPT FARM & MINE	4.5	4.8	3.8	3.6
OCCUPATION NOT REPORTED	0.8	1.2	3.7	

# income

## PERSONAL INCOME

Personal income is defined as the current income received by individuals, unincorporated businesses and non-profit institutions from all sources. In 1963 total personal income in the United States was \$461,610 million of which 1.8 percent or \$8,152 million was attributable to Minnesota. Per capita income is obtained by dividing total income by estimated total population.

In 1963, Minnesota ranked 23rd among the 50 states. This is about \$120 below the per capita figure of \$2,449 calculated for the nation as a whole. Minnesota, however, ranked above the nearby states of North and South Dakota, Iowa, Nebraska and Kansas but below Wisconsin, Missouri, Michigan, Illinois, Indiana, and Ohio. A comparison of the personal income of Minnesota with that of the North Central United States and the United States is shown below:

### PERSONAL INCOME, 1940-1963

	<u>1940</u>	<u>1950</u>	<u>1955</u>	<u>1960</u>	<u>1963</u>
1.					
<u>UNITED STATES</u>					
Total Personal Income (millions of dollars)	78,522	222,473	306,598	399,028	461,610
Total Personal Income (percent of U.S.)	100.0	100.0	100.0	100.0	100.0
Per Capita Personal Income (dollars)	595	1,491	1,866	2,217	2,449
Per Capita Personal Income (percent of U.S.)	100.0	100.0	100.0	100.0	100.0
<u>NORTH CENTRAL UNITED STATES</u>					
Total Personal Income (millions of dollars)	24,313	70,598	94,891	118,318	133,607
Total Personal Income (percent of U.S.)	30.96	31.73	30.95	29.65	28.94
Per Capita Personal Income (dollars)					
Per Capita Personal Income (percent of U.S.)					
<u>MINNESOTA</u>					
Total Personal Income (millions of dollars)	1,467	4,184	5,450	7,094	8,152
Total Personal Income (percent of U.S.)	1.87	1.86	1.78	1.78	1.77
Per Capita Personal Income (dollars)	526	1,397	1,710	2,074	2,329
Per Capita Personal Income (percent of U.S.)	88	94	92	94	95

<sup>1</sup> beginning 1960 includes Alaska and Hawaii.

Source: U. S. Bureau of Census, Statistical Abstract of the U. S.: 1965, p., 334-335

In Minnesota the median family income in 1959 was \$5,573, a 75 percent increase over the 1949 figure of \$3,184. Nationally, the median family income in 1959 was \$5,657 or \$84 higher than Minnesota. In 1949, however, the national median was \$101 below the median for Minnesota indicating that national median family incomes have been increasing at a faster rate than Minnesota incomes. The distribution by numbers and percent of families within various income groups is indicated below:

### MINNESOTA

#### Distribution of the income of families and unrelated individuals: 1959

Number and percent in each income group:

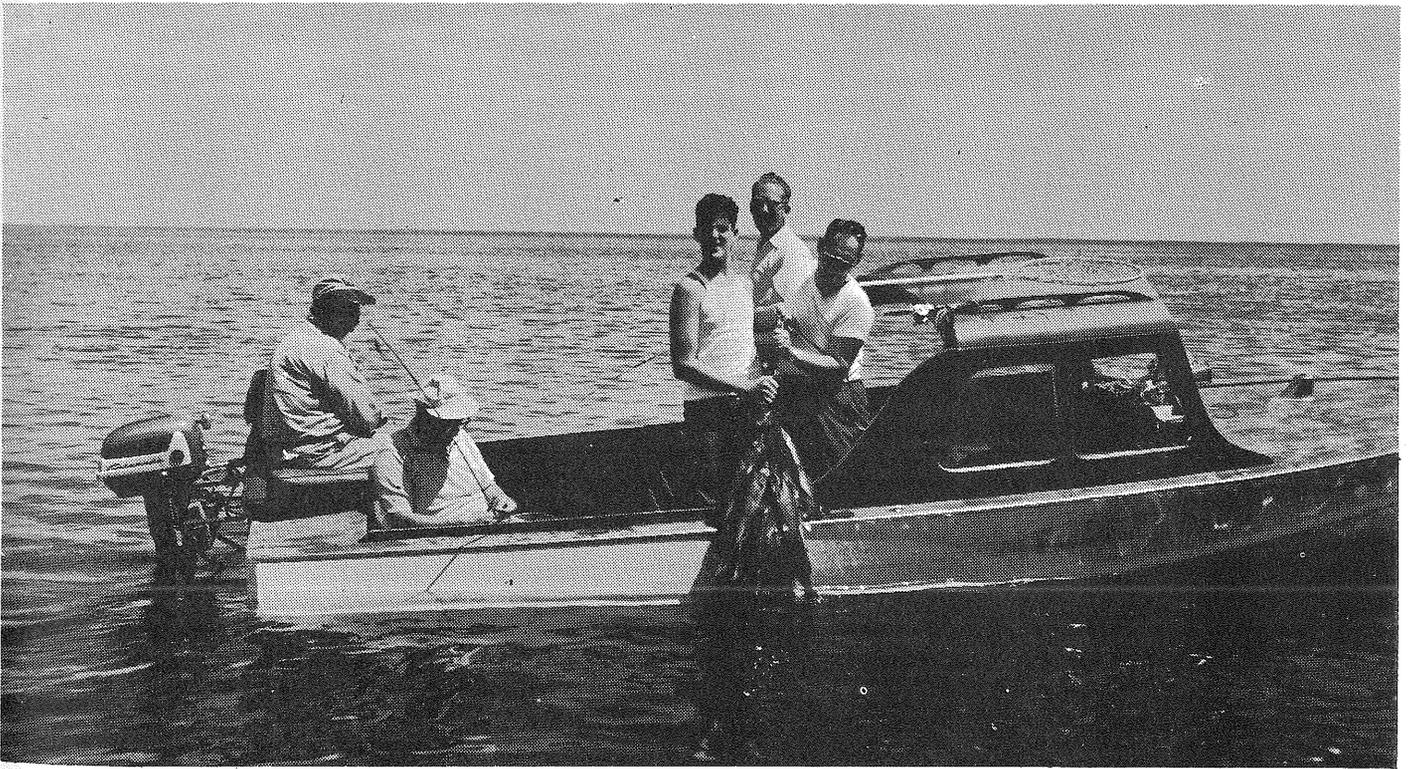
	Under \$2000	\$2000 to \$2999	\$3000 to \$3999	\$4000 to \$4999	\$5000 to \$5999	\$6000 to \$6999	\$7000 to \$9999	\$10,000 and Over	Median Income (dollar)
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#### MINNESOTA - Total

All Families	836,723	106,912	71,854	82,031	95,009	109,102	94,094	169,017	108,704	5573
Percent Distribution	100.0	12.8	8.6	9.8	11.4	13.0	11.2	20.2	13.0	

Source: U.S. Bureau of Census, U.S. Census of the population: 1960, Detailed Characteristics Minnesota. Final Report PC (1) - 250., p. 25-522.

## leisure time



The amount of leisure time a person has available is one of the four major factors affecting the demands for outdoor recreation. The demand for recreation will be broadened by the increasing number of leisure hours. According to O.R.R.R.C. Report 26, the average work week in 1960 in the North Central Region was 38.7 hours. This is expected to shrink to 35.6 hours by 1976 and down to 30.9 hours by the year 2000. While the shorter work week is becoming the rule, longer paid vacations are also in evidence. In 1960, the average vacation was 1.8 weeks, but by 1976, this is expected to be 2.6 weeks and by the year 2000, the 3.5 week vacation will be the average. In 1960, the average number of holidays was 5.7. The number of holidays is expected to increase to 7.9 days by 1976, and to 9.2 days in 2000.

The average 6.4 days per person spent away from home on vacation in 1960 will be 8 days in 1976 and 10.1 days by 2000.

The next order of business is what will the worker do with this new time. If it were evenly distributed through the week, additional time spent for recreation would probably be for activities not far from home. But, if the time were given in package, say at the end or beginning of the week, it would possibly be used for longer recreation trips. Of course, not all the new time will be spent for outdoor recreation. Increased leisure does, however, provide a guide to the kind of recreation areas and facilities needed.

## mobility

One of the greatest stimulants to recreation is mobility – the ease with which one gets around. In some ways mobility is the most difficult demand factor to estimate and predict. New methods of transportation and new technological improvements will undoubtedly allow greater ease, speed and safety than imagined today.

A factor that will add a measure of mobility for recreation-seeking Americans is the completion of the federal interstate highway system scheduled for 1972. (Minnesota's portion of this network will increase east-west traffic on Interstate 90 and 94 and the north-south traffic of Interstate 35). When the Great River Road along the Mississippi River to the Canadian border is completed, recreation seekers will not only have an avenue of travel, but a route with superb scenery. The Great Circle Route, a magnificent new drive which opened in 1960, completely circles Lake Superior. It has opened virgin lands and vistas along its entire length. The breathtaking 1,080 mile drive has meant a tremendous increase in travel through the 150-mile North Shore Drive, Minnesota's portion of this drive.

O.R.R.R.C. reports that the distance traveled per person on vacation will increase considerably. In 1960, O.R.R.R.C. found the average distance traveled per person on vacation was 1,290 miles. This is expected to grow to 1,730 miles in 1976 and to 2,280 miles by the year 2000. Destinations are usually a day's drive from the point of origin, says O.R.R.R.C. In Minnesota, this is presently about 500 miles but the interstate system will facilitate travel of 625 miles in a day's drive.

O.R.R.R.C. found that 53 percent of the nation's adults took vacation trips of less than 500 miles from home; 17 percent traveled 500 to 1,000 miles; and 27 percent took trips of 1,000 miles or more. According to this source, vacationers in Minnesota, Wisconsin and Michigan tend to take trips of less than 500 miles. Lengths of trips vary between two days to two weeks or more. In the Upper Midwest, 82 percent of vacation trips are made in family-owned cars; eight percent by plane; and five percent by rail or bus. Rented cars account for less than 0.5 percent of vacation travel.

### PRESENT AND PROJECTED RECREATIONAL TRAFFIC THRU MINNESOTA ON MAIN ROUTES\* (U. S. origins, two-way, thousands of persons)

	<u>1963</u>	<u>1976</u>	<u>2000</u>
Eastern U. S. to western vacation areas	240	530	960
Central U. S. to Canadian vacation areas	153	215	380

\*Source: M.O.R.R.C.

**WESTBOUND RECREATIONAL TRAFFIC—SUMMER TOURIST SEASON  
THROUGH TWIN CITIES, 1963**

From:	To:	<u>South Dakota</u>	<u>North Dakota</u>	<u>Mountain States</u>	<u>Pacific States</u>	<u>Total to West</u>
Wisconsin		4,830	5,670	10,045	3,605	24,150
Illinois		2,205	6,405	2,835	1,365	12,810
Other E. N. Central		1,155	3,675	3,360	2,940	11,130
Mid-Atlantic-New England		700	1,575	490	4,760	7,525
E. S. Central-S. Atlantic		420	1,400	700	1,890	4,410
Total from E. and S. E.		<u>9,310</u>	<u>18,725</u>	<u>17,430</u>	<u>14,560</u>	<u>60,025</u>

Through Albert Lea, 1963

From:						
Wisconsin		28,844	—	1,820	2,846	33,510
Illinois		6,153	284	504	305	7,246
Other E. N. Central		3,748	—	—	168	3,916
Mid-Atlantic-New England		242	—	—	—	242
E. S. Central-S. Atlantic		648	—	—	—	648
Total from E. and S. E.		<u>39,635</u>	<u>284</u>	<u>2,324</u>	<u>3,319</u>	<u>45,562</u>
Grand Total from E. and S.E.		<u>48,945</u>	<u>19,009</u>	<u>19,754</u>	<u>17,879</u>	<u>105,587</u>

Source: M.O.R.R.C. Report No. 1, Preliminary Report

Not only has Minnesota's network of highways facilitated travel in the state, but new horizons have been opened in outdoor recreation through technical improvements making it easier to get around. Take the station wagon for instance. With all of its new gadgets for comfortable travel and camping, many families can now take relatively inexpensive trips over a longer period of time. The outboard motor and cartop or trailer drawn boats, have made it possible for families of even the most modest means to be yachtsmen and have increased water mobility. House trailers and light weight houseboats are other examples of advances which have made it possible for more families to enjoy the outdoors on a limited budget. Today's outdoor recreation seeker is much more mobile than his predecessors of a generation ago.

**RECREATIONAL TRAVEL (RESORTS)**

In an effort to measure significant segments of the travel industry, the Research Division of the Department of Business Development made a study of travel at resorts and motels in Minnesota. Agencies contributing to the findings in this survey are the Division of Hotels, Resorts and Restaurants, Health Department and the Minnesota Outdoor Recreation and Resources Commission. The purpose of the study was to determine the number of registrations, the total number of persons, the state of residence and the expenditures at hotels and motels in Minnesota, 1963.

Resorts — A questionnaire was mailed to all resorts licensed by the Health Department. Of 3,201 resorts contacted, 640 or 20 percent returned questionnaires.

As shown on the following table, in 1963, there were 314,800 registrations at the 640 resorts involving 1,051,900 persons. (The following tabulation shows the total number of persons visiting counties with over one hundred resorts:)

<u>County</u>	<u>Number of Persons</u>
Otter Tail	117,700
Cass	115,700
Crow Wing	115,200
St. Louis	91,500
Beltrami	64,000
Douglas	56,500

(Continued on next page)

<u>County</u>	<u>Number of Persons</u>
Hubbard	55,300
Becker	48,500
Itasca	48,300
Aitkin	37,000
All others	302,200
Total	1,051,900

About 71 percent of the total resort occupancy is concentrated in ten counties. The percent of traffic in some counties is greater or less than the number of resorts as some counties have a greater number of persons per resort through the season.

The next consideration was the state of residence of persons in Minnesota resorts, 1963.

Resort Occupancy by Residence -

From Minnesota	50.9%	535,400
From other States	49.1%	516,500
		1,051,900

PERCENT OF OUT-OF-STATE RESORT OCCUPANTS -

	<u>1963 Percent</u>	<u>Number, 1963</u>	<u>1948 Percent</u>
Iowa	28	144,100	21
Illinois	23	120,100	27
Indiana	8	39,800	4
Nebraska	7	35,100	7
Missouri	7	34,100	12
North Dakota	7	34,100	4
Canada	5	23,800	6
Kansas	3	21,200	6
Wisconsin	3	16,500	3
South Dakota	3	14,000	3
Michigan	2	8,300	2
Ohio	1	7,200	1
California	1	5,200	1
Other States	2	13,000	3
		516,500	

RECREATIONAL TRAVEL (MOTELS)

The same method of sampling was used for motels as that for resorts. Questionnaires were sent to all 836 motels in Minnesota licensed through the Health Department. About 22 percent or 180 questionnaires were returned. The state was divided into 16 counties containing the greatest number of motels - Becker, Beltrami, Clay, Cook, Crow Wing, Douglas, Hennepin, Hubbard, Itasca, Koochiching, Lake, Olmsted, Otter Tail, Polk, Ramsey, and St. Louis.

	<u>Motels</u>		<u>Returned Questionnaires</u>	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
Counties with greatest number of Motels	450	53.8	95	52.8
All other Counties	386	46.2	85	47.2
Total	836	100.00	180	100.00
Motel Registrations	1,612,600			
Total persons in occupancy	2,547,300			

Motel occupancy is made up of business, pleasure and necessity travelers. Since the total occupancy averages less than two persons per registration, the figure suggests a high degree of business travel. There is a higher degree of duplication in motels than in resorts. The motel customers are often traveling businessmen, within and from out-of-state, who follow general travel routines through the state and often use the same accommodations.

### MOTEL OCCUPANCY BY RESIDENCE

	<u>1963 Percent</u>	<u>Number</u>
Minnesota	49.1	1,250,600
Out-of-State	50.9	1,296,600
TOTAL	<u>100.00</u>	<u>2,547,200</u>

### PERCENT OF OUT-OF-STATE MOTEL OCCUPANTS

	<u>1963 Percent</u>	<u>Number</u>
Illinois	23.7	307,300
Iowa	17.5	226,900
Wisconsin	12.6	163,400
Canada	9.7	125,800
North Dakota	5.7	73,900
South Dakota	4.3	55,800
Indiana	3.9	50,600
Nebraska	3.6	46,700
Michigan	3.0	38,900
Missouri	3.0	38,900
California	2.4	31,100
Ohio	2.2	28,500
New York	1.9	24,600
Texas	1.0	12,900
All Other	5.5	71,300
TOTAL	<u>100.00</u>	<u>1,296,600</u>

The division between Minnesota and out-of-state residence is at the 50-50 margin. Since motel occupants are highly business oriented, the more highly populated states such as California, New York, Texas and Ohio show higher penetration into Minnesota than they did in the resort travel study.

### SUMMARY

#### Registrations -

Motels	1,612,600
Resorts	314,800
TOTAL	<u>1,927,400</u>

#### Persons in Occupancy -

Motels	2,547,300
Resorts	1,051,900
TOTAL	<u>3,599,200</u>

## SUMMARY (Continued)

### Residence of Occupants –

#### Minnesota –

Motels	1,250,600
Resorts	535,400
	<hr/>
TOTAL	1,786,000

#### Out-of-State

Motels	1,296,000
Resorts	516,500
	<hr/>
TOTAL	1,813,100

Water Travel – Waterways were the first shipping routes and the only avenues of transportation in early Minnesota. Steamboats appeared on the Mississippi in the 1820's, then railroads replaced the steamboats after the Civil War.

Public transportation by water as a means of access to recreational developments is of little importance today. Lake Superior as a link in the Great Lakes System, is the major avenue of commercial water travel into Minnesota. The Mississippi River is used for recreation travel by small private craft and excursion boats, but there are no present means of public transportation aside from freight. The development of the Mississippi River nine-foot channel connecting the Twin Cities with New Orleans. has had great impetus to the use of pleasure craft.

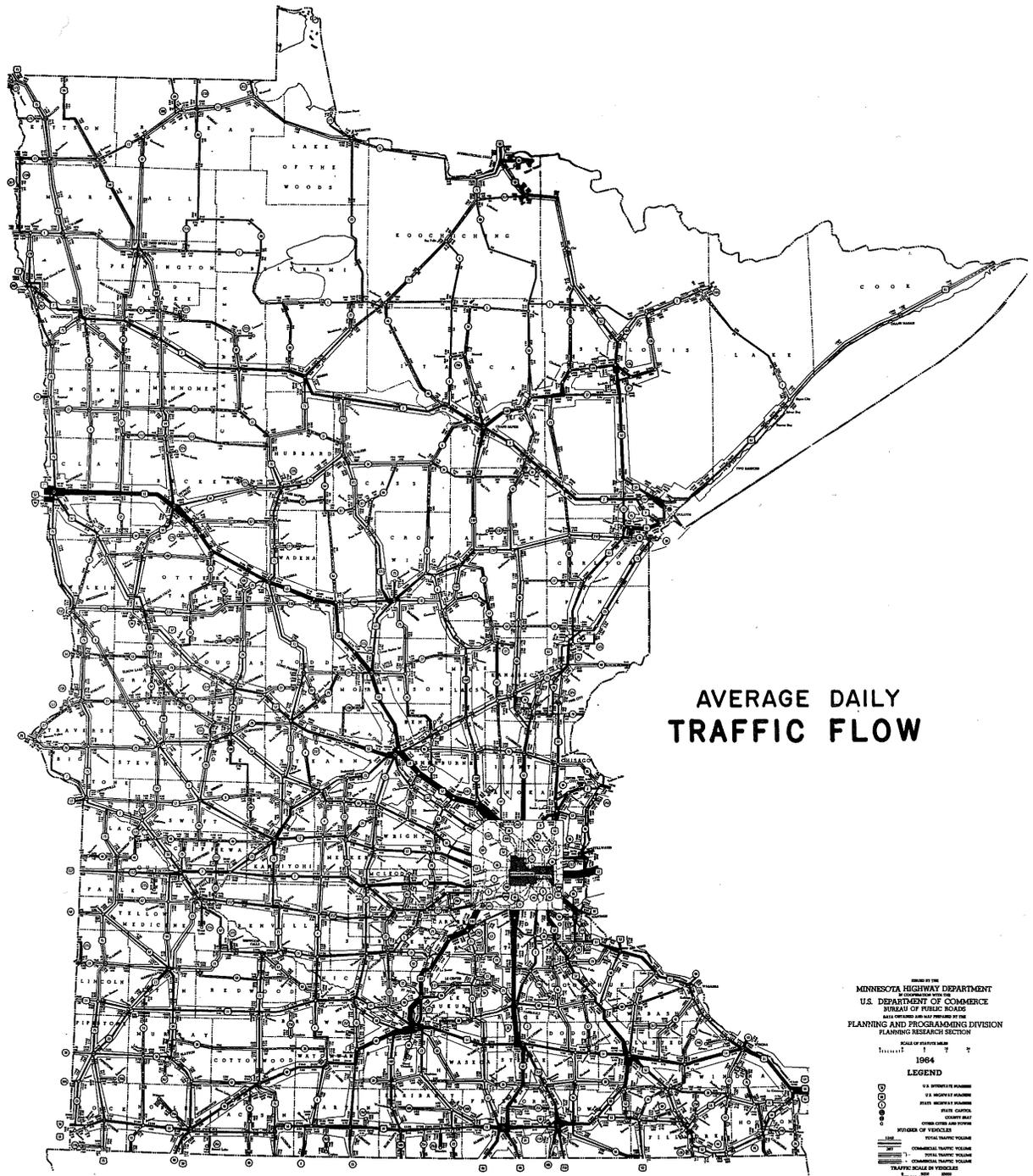
Railroads – Before the automobile, railroads supplied the only important means of access to recreational districts for camping, fishing and hunting. (Railroads cover the state so completely that only in the northern and northeastern parts is the distance to a railroad over ten miles from any point.) As Minnesota's recreational values became known, resorts and hotels sprang up, generally near the railroads. Some resorts and organized camps still depend upon the railroads to transport their visitors and necessary supplies. Today, Minnesota has about 8,200 miles of railroads. The Twin Cities form the chief rail center of the Upper Mississippi Valley. The total number of persons carried within and through Minnesota by rail in 1953 was 2,941,043. This had dropped to 1,778,455 in 1963.

Highways – The primary position of the railroads in carrying people to recreational sectors has passed to the motor vehicles and air travel. The rapid development of the state-wide highway system has had far reaching importance to the recreation industry. The presence of recreational developments, private or public, has affected the location of highways.

(The potential market for tourists is expected to increase by 40 percent or the equivalent of 21.2 million persons when the Interstate Highway System is completed. This will increase the share of upper income families ranging from \$7,000 to \$8,000 a year to over \$15,000 a year. There is expected to be a 53 percent increase in families in the \$7,000 to \$8,000 bracket, a 65 percent increase in the \$8,000 to \$10,000 bracket, an 84 percent increase in the \$10,000 to \$15,000 per year group and a 91 percent increase in the \$15,000 or over group. These people will bring added disposable income into the state.)

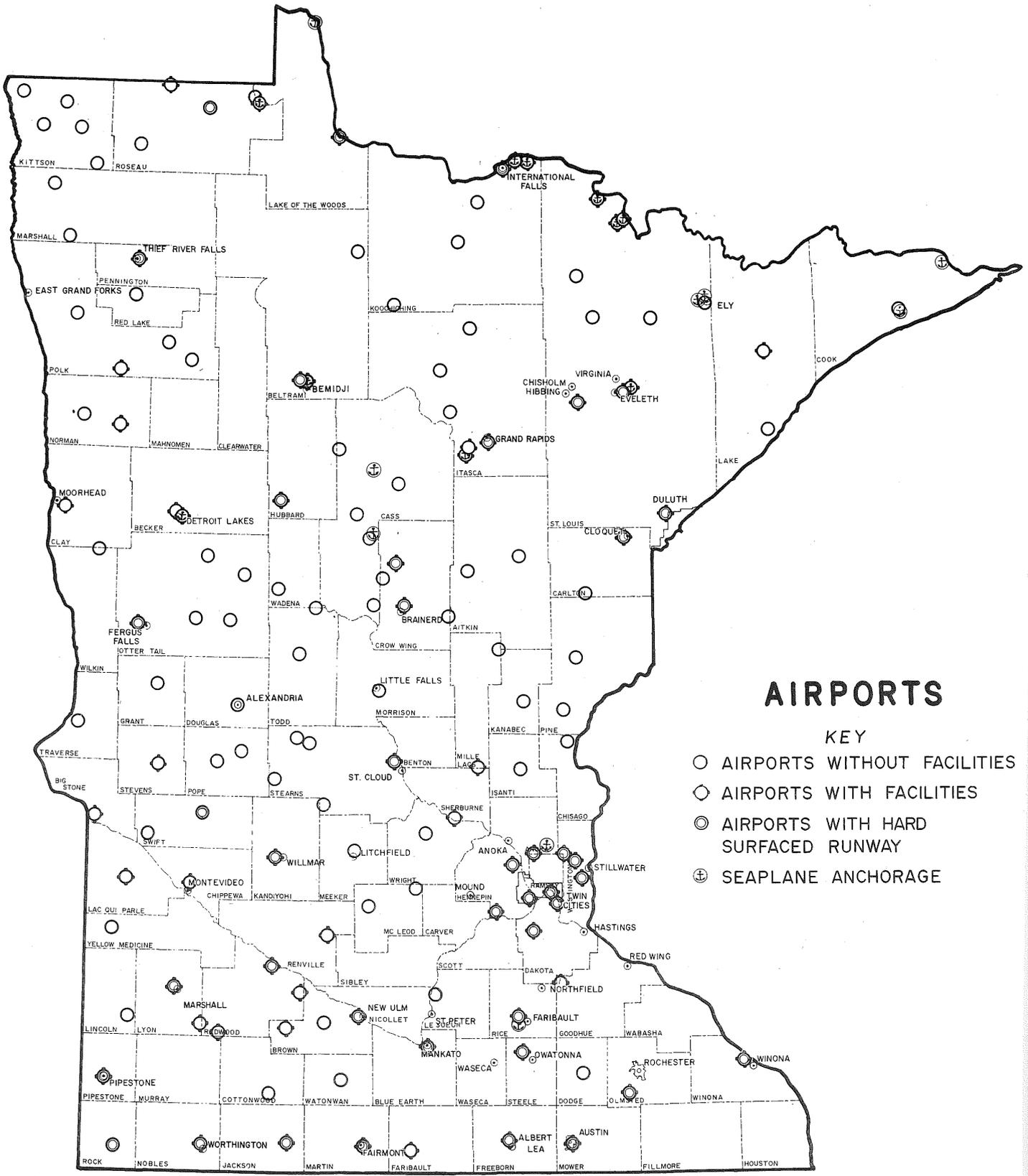
Air Travel – Air transport lines connect the Twin Cities and at least ten other towns with the large population centers of the country and furnish means for distant visitors seeking recreation to reach Minnesota quickly and easily. The state has more than 200 public and private airports. There are presently 2,600 non-commercial aircraft in Minnesota and 80,000 in the United States.

Over the years, mobility has changed distinctly. (The nation-wide bus system had its origin in 1914 when a miner, Carl E. Wickman, began transporting miners to Hibbing. He and a partner began buying bus lines in other states and in 1928, they named their company the Greyhound Lines). First the railroad, now the highways and air travel have opened wider recreation fields.



# AVERAGE DAILY TRAFFIC FLOW

DIVISION OF THE  
**MINNESOTA HIGHWAY DEPARTMENT**  
**U.S. DEPARTMENT OF COMMERCE**  
**BUREAU OF PUBLIC ROADS**  
 ROAD OPERATIONS AND MAINTENANCE DIVISION  
**PLANNING AND PROGRAMMING DIVISION**  
 PLANNING RESEARCH SECTION  
 SCALE OF ROADWAY WIDTH  
 1 7 7  
**1964**  
**LEGEND**  
 (Symbol: Circle with dot) U.S. HIGHWAY NUMBER  
 (Symbol: Circle with horizontal lines) STATE HIGHWAY NUMBER  
 (Symbol: Circle with vertical lines) STATE CAPITAL  
 (Symbol: Circle with diagonal lines) COUNTY SEAT  
 (Symbol: Circle with cross-hatch) OTHER CITY AND TOWNSHIP  
 (Symbol: Circle with horizontal lines) NUMBER OF VEHICLES  
 (Symbol: Circle with vertical lines) TOTAL TRAFFIC VOLUME  
 (Symbol: Circle with diagonal lines) COMMERCIAL TRAFFIC VOLUME  
 (Symbol: Circle with cross-hatch) LOCAL TRAFFIC VOLUME  
 (Symbol: Circle with horizontal lines) COMMERCIAL TRAFFIC VOLUME  
 TRAFFIC SCALE BY VEHICLE  
 1000 2000  
 TOTAL TRAFFIC VOLUME BY VEHICLE NOT SHOWN  
 IN SCALE FOR THE REASON COMMERCIAL TRAFFIC  
 VOLUME AND VEHICLE SHOWN BY SEPARATE LINE



# AIRPORTS

## KEY

- AIRPORTS WITHOUT FACILITIES
- ◐ AIRPORTS WITH FACILITIES
- ⊙ AIRPORTS WITH HARD SURFACED RUNWAY
- ⊕ SEAPLANE ANCHORAGE

JUNE 30, 1965

## RECREATION AREAS AND FACILITIES OF NEIGHBORING STATES

There are a great many recreation areas in neighboring states which bring tourists through and serve the people in Minnesota.

Vacationers taking The Great Circle Route from Duluth can side-trip to the Apostle Islands or Mackinac Island from the south shore of Lake Superior or take a boat to Isle Royale National Park from Grand Portage National Monument on the north shore of Lake Superior.

According to the Superintendent of Grand Portage National Monument, statistics indicate that travel has more than doubled since the new Highway 61 has been relocated. He indicated that the Monument received approximately ten percent of the border crossing travel in 1962. In 1965, when the new highway was in operation, the Monument received approximately 22 percent of the travel. The boat travel between Grand Portage and Isle Royale National Park has generally followed the same trend. The highway, which passes within half a mile of the temporary visitor center, was opened to traffic in the late fall of 1963. Visitation to the Monument in 1964 (April-September) totaled 56,405 as compared to 32,446 for the same period in 1963.

Altogether in 1964, 298,552 persons passed through the Grand Portage Station, according to U. S. Customs and Immigration travel records.

Michigan's Upper Peninsula and northwestern Wisconsin have many ski hills and toboggan slides as well as summer homes used by Minnesotans.

The St. Croix and Mississippi Rivers form the boundary between Minnesota and Wisconsin and are used for many types of recreation. Both states have numerous state parks along these rivers. The Wisconsin Dells attract weekend family excursions to see the underground caves.

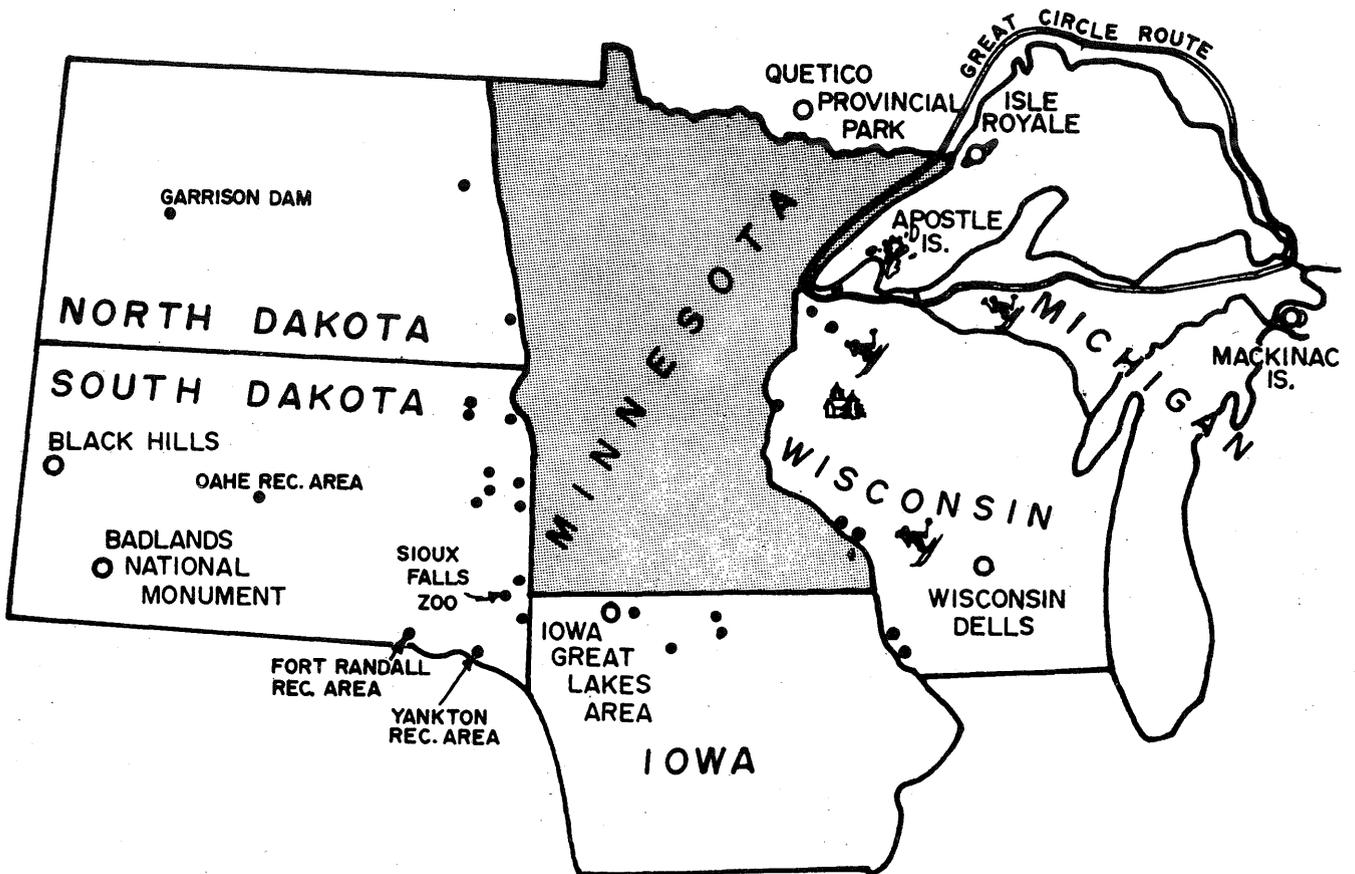
Iowa has a number of recreation areas near the Minnesota border, such as the Great Lakes Region in northwestern Iowa and the trout streams and campgrounds in the northeast.

In western South Dakota there is big and small game hunting; the Black Hills and Bad Lands draw a number of Minnesota residents. The damming of the Missouri River has given South Dakota excellent facilities for water oriented activities.

In North Dakota and Ontario, Canada, there are various types of hunting and fishing. The Quetico Provincial Park, which comprises over a million acres, is adjacent to Minnesota's Boundary Waters Canoe Area and is used in conjunction by canoers, campers, hikers and other recreationists.

# OUT OF STATE RECREATION AREAS

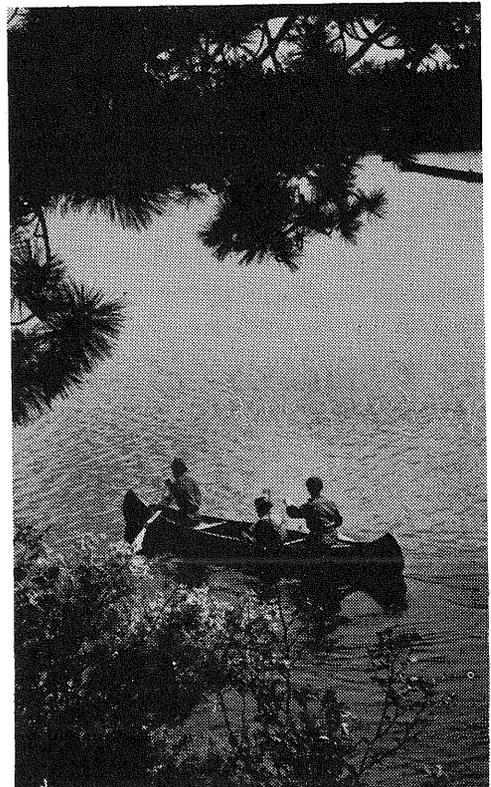
C A N A D A



## KEY

- DOT INDICATES CAMPGROUND, PARK OR RECREATION AREA.
- CIRCLE INDICATES LARGE, POPULAR PARK, MONUMENT OR ATTRACTION.
- ⛷ SKIER INDICATES NUMEROUS SKI RESORTS IN AREA.
- 🏠 HOUSE INDICATES POPULAR SUMMER HOME AREA

# DEMAND BY ACTIVITY



## INTRODUCTION

Outdoor recreation means many things to many people. To some it means the excitement of watching a Twins baseball game. To others it means silent cogitation as the sun sinks beyond a lake deep in the northern pines. It can be enjoyed alone or in the company of others. It can be enjoyed in the untouched wilderness or at a construction made by man.

In order to provide opportunities for all, and for everyone to find the type of outdoor activities desired, it is necessary to study what people do and what they seek – the factors that contribute to recreational pursuits. Speaking generally, people usually seek simple, age-old forms such as walking, sightseeing, fishing, hunting, boating, camping or picnicking.

Outdoor recreation activities are tied inseparably to the land and water. Some activities require specialized open space with little or no development and a minimum of facilities. These include hunting, fishing, boating and sightseeing. Others, camping, for instance, require more highly developed facilities. Still others are dependent upon climatic conditions such as snowy slopes for skiing, or warm waters for swimming.

Most community activities are located fairly close to those who participate – they must be if the demands are to be met. A large number of activities do not require specific conditions and can be available throughout the state in desirable places. These include golf, tennis, horseback riding, picnicking and hiking.

The factors described in the preceding Chapter – population, income, leisure time and mobility – contribute a great deal to the build-up in demand for various activities. Minnesota's population is increasing; so even if there were no change in the amount of recreation demanded by individuals, the total demand would probably climb accordingly. But, speaking in general terms, it is anticipated that each individual will probably increase his rate of participation in outdoor activities.

Mobility influences the demand for activities in that individuals will be able to move farther and faster to enjoy the recreational pursuits they desire. Take leisure time as another example. This will rise partly from a decline in the length of the work week. There will be longer paid vacations and higher wages. The amount of free time will put increased pressure on recreation activities.

The most comprehensive investigation of present and future demands for all types of major outdoor recreation activities was undertaken by the Outdoor Recreation and Resources Review Commission, (O.R.R.R.C.) in 1962. According to O.R.R.R.C., the following socio-economic characteristics have a significant influence on outdoor recreation:

1. Age and sex of the population
2. Occupation
3. Education
4. Place of residency
5. Level of income

Referring once again to O.R.R.R.C., not every activity is influenced equally by each of the above factors. Camping and hiking, for instance, are affected by the level of family income more than walking for pleasure and bicycling.

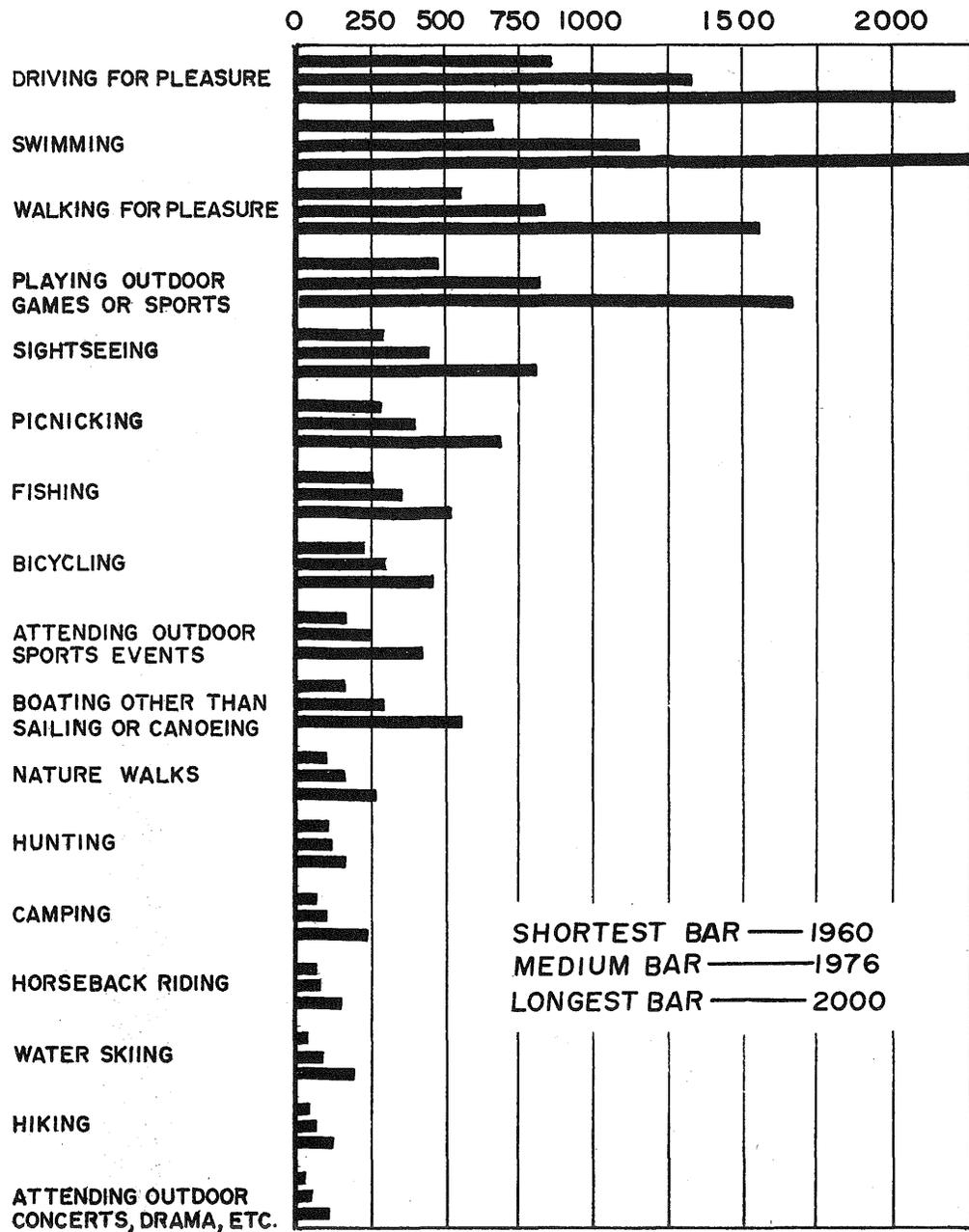
Another important factor, but a difficult one to estimate, is the rapidity with which outdoor facilities are expanding. Administrative decisions by both public and private agencies have a great influence on this factor.

One of the key ingredients of effective planning, whether short or long-range, is accurate input data. In planning for the various recreational activities, Minnesota realizes that wide gaps exist in our knowledge of recreational participation rates and that many avenues remain to be explored. Often we have used O.R.R.R.C. or other figures that are applicable to the Nation or the North Central Region, but leave much to be desired when used for the state or its subdivisions. In some cases, our lack of information has prevented us from making logical projections and where this has occurred the omission has been noted.

Plans are now being made to correct these problems and include more complete data in the forthcoming comprehensive plan. A recreation survey will be undertaken to improve the accuracy of our state input. This should result in more precise projections and in the future more accurate programming. Specific objectives of the survey will be to determine, by probability sampling, the type and amount of recreational activity in which our citizens engage and the extent to which they would like to engage in different or additional activities, both based on the socio-economic characteristics of the participants.

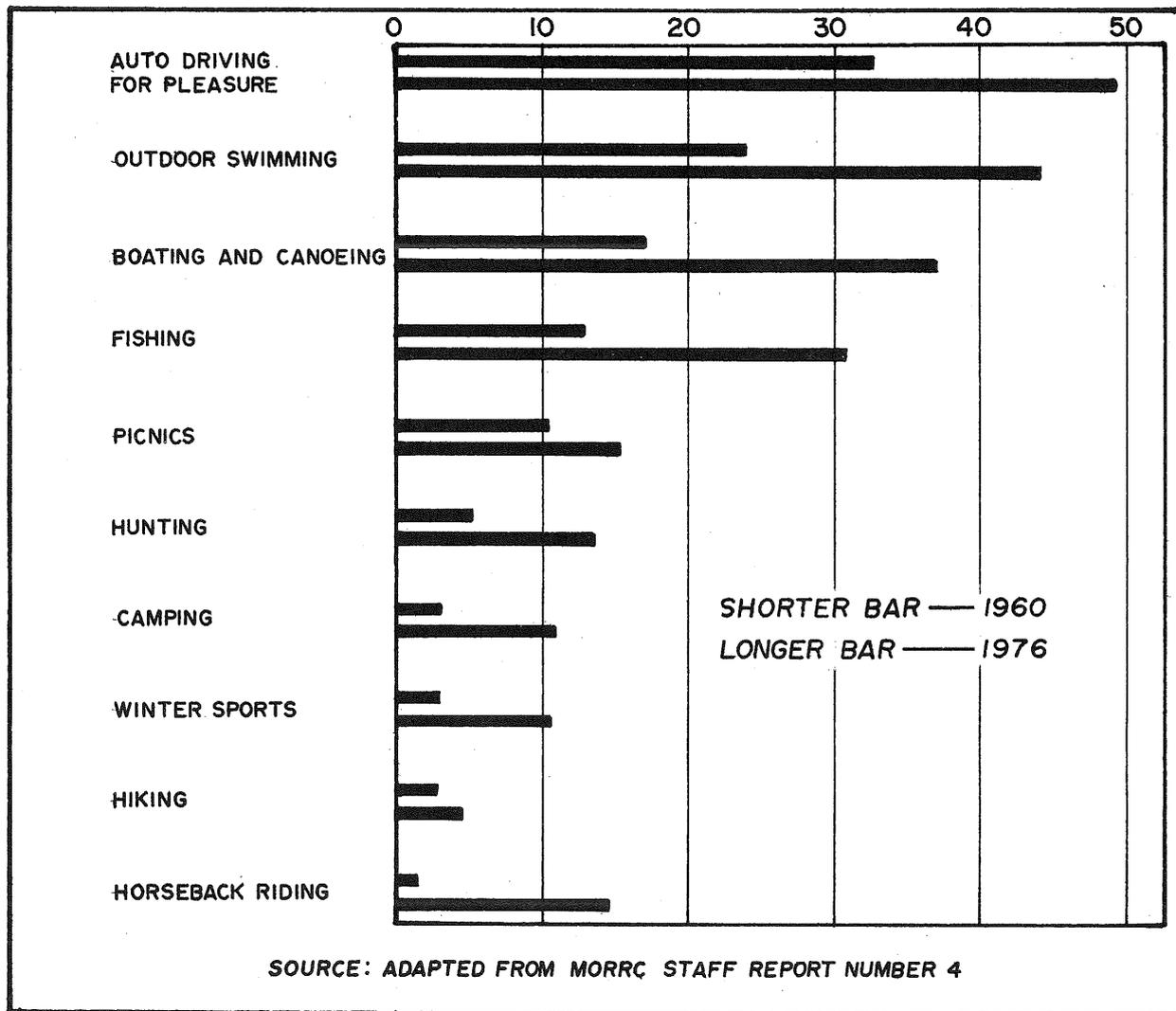
In summary, increases in population, leisure time, income, mobility and many other factors will affect the participation and, therefore, the recreational demands of the future. How well we will be able to cope with the future depends largely on how accurately we gauge this demand and apply the principles of conservation.

**NUMBER OF OCCASIONS OF PARTICIPATION  
IN OUTDOOR SUMMER RECREATION IN THE NATION  
1960 COMPARED WITH PROJECTIONS FOR 1976 AND 2000 (IN MILLIONS)**



SOURCE: ORRRC NATIONWIDE ACTIVITIES PARTICIPATION RATIO

**ESTIMATED MINNESOTANS PARTICIPATING  
IN MAJOR OUTDOOR RECREATIONAL ACTIVITIES  
1960 compared with 1976 projection (in millions of person days)**



\*There is no simple way of measuring the demands for recreation activities and even more difficult to project these demands into the future. The best indicator to learn what the present demands are is to determine how many individuals are participating in major recreational activities. The number of people participating should then be interpreted in terms of number of days, "person days" spent in recreational pursuits. (See the following table.) The number of people participating in various activities were obtained from a survey analysis conducted by the Highway Department of approximately 50,000 highway travelers during the summer of 1964.

Considering the future demands placed on recreational activities, the known participation rates can be projected by applying these numbers to the anticipated population growth. (This is seen in the table, Projected Participation in Major Outdoor Recreation Activities by Minnesotans, 1976.) Using this as a criterion, it is estimated that Minnesota will see a 107 percent increase in the market for facilities and services by 1976. Driving for pleasure is expected to continue to lead all activities. The growth in interest in winter sports is expected to rise by 285 percent, horseback riding by 730 percent and camping by 276 percent, suggesting capital investment opportunities to meet this demand.

### ESTIMATED NUMBER OF MINNESOTANS PARTICIPATING IN MAJOR OUTDOOR RECREATION ACTIVITIES, 1960 -

Activity	Persons (000)	Average Days Per Participation	Person Days (000)	Percent of Person Days
Auto Driving for Pleasure	2,526	12.7	32,080	28.8
Outdoor Swimming	1,536	15.5	23,808	21.3
Boating and Canoeing	1,161	14.9	17,299	15.5
Fishing	1,297 (1045)	10.0	12,970	11.6
Picnics	2,560	4.0	10,240	9.2
Hunting	649 (586)	8.0	5,192	4.7
Camping	512	5.7	2,918	2.6
Winter Sports	273	9.8	2,675	2.4
Hiking	580	4.4	2,552	2.3
Horseback Riding	239	7.5	1,793	1.6
<b>TOTALS</b>	<b>11,333</b>		<b>111,527</b>	

### PROJECTED PARTICIPATION IN MAJOR OUTDOOR RECREATION ACTIVITIES BY MINNESOTANS, 1976 -

	Persons (000)	Percent Increase 1960-76	Person Days	Percent Increase 1960-76
Auto Driving for Pleasure	3,314	31	49,710	55
Outdoor Swimming	2,149	40	43,625	83
Boating and Canoeing	1,775	52	36,920	113
Fishing	1,978	52	30,650	136
Picnics	3,368	32	15,493	52
Hunting	1,057	63	13,424	158
Camping	1,032	102	10,939	276
Winter Sports	573	110	10,314	285
Hiking	845	46	4,732	85
Horseback Riding	731	206	14,839	730
<b>TOTALS</b>	<b>16,822</b>	<b>49</b>	<b>230,646</b>	<b>107</b>

\*Source: M.O.R.R.C. Report "Private Enterprise in Recreation"

# pleasure driving and sightseeing

Pleasure Driving – Pleasure driving is the most popular year-around activity. It ranks as “number one” not only in Minnesota, but in the entire nation. It ranges from an evening drive near home to long trips to view the varied works of man and nature. It is often combined with other activities such as picnicking, walking, sightseeing and other recreational visits.

One reason for the high participation rate is that driving can be done all year. Also, all ages can take part either as drivers or as passengers. Traffic conditions, scenery, vegetation, either man-made developments or the lack of them are all contributing factors.

The typical recreation travelers are families with children, but small groups of adults are also numerous. The average size of these groups is three or four persons. Sundays and holidays are the most popular days with July, August and September the peak months. However, since this is a year-around activity, there are high participation rates at all times of the year.

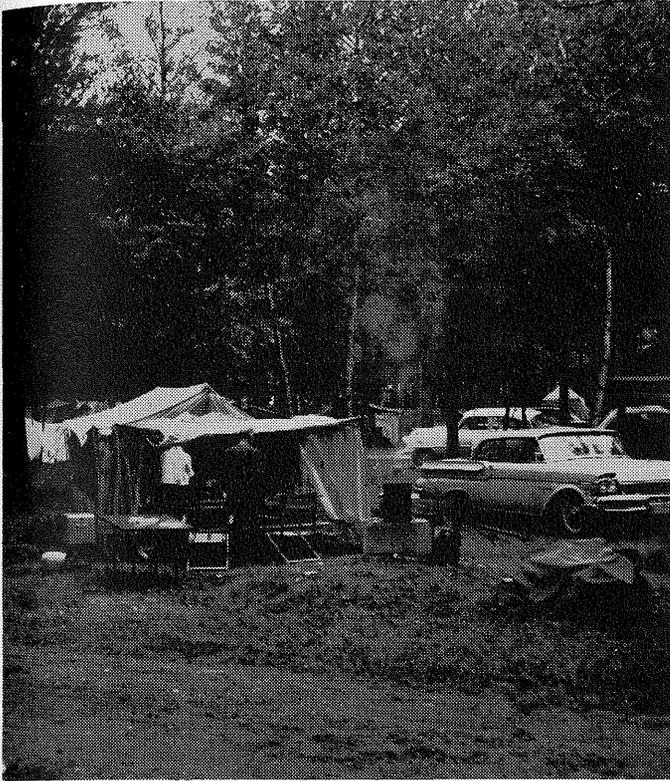
Many roads are designated specifically for quick travel from the shortest distance with no particular thought to scenic values. Minnesota is fortunate in having magnificent scenic resources. Some scenic roads follow parts of historic routes such as the Hiawatha Pioneer Trail, others such as the Great River Road follow the Mississippi River and still others are tree-lined drives in the metropolitan areas. Planners not only at the state level, but local and national levels are paying particular attention to the need for highways as travelways for the outdoor recreation seeker. The new Interstate System under construction is being built with consideration for scenic values as well as for quick travel. The Great River Road along the Mississippi River is an example of such development – it can be enjoyed for both its scenic value and for speed. The same is true of the Great Circle Route. Although only recently established, both these routes have increased the tourist travel into Minnesota.

Sightseeing – Sightseeing is tied in closely with driving for pleasure. A sightseeing visit may be during a day's pleasure drive, a picnic, hike or in connection with one of many other activities.

Minnesota's sightseeing attractions are innumerable. From the man-made sight of the state capitol in St. Paul to the superb natural wilds of the Boundary Waters Canoe Area, Minnesota is abundantly endowed with a broad panorama of scenic rewards.

The spectrum includes the natural beauty of our parks, forests, wildlife areas, roaring waterfalls along the North Shore, the crashing waves of Lake Superior; historic attractions such as the sites of the Sioux Uprising; architecture and other features that reflect ethnic backgrounds – Norwegian, Swiss, French and others. All contribute to an understanding of why Minnesota is popular not only with her residents, but with her visitors as well.

The predominant group participating is the family group with children, but as is the case with driving for pleasure, the adult group is also an important one. Casual sightseers make up the largest group numerically according to O.R.R. R.C., but the viewing may also be an intensive study of the environment. (No study has been made of the total number of sightseeing visits in Minnesota, so it is not possible to predict the trends and projections at this time. Further study will be conducted and the result included in the forthcoming long-range plan.)



## camping

Camping is one of the fastest growing pursuits of vacationing families, weekend travelers, and one-night excursionists. This sport is enjoyed for the sheer pleasure in itself or as part of many other outdoor activities. In Minnesota, facilities range from primitive to modern with a wide choice in public and private sites.

Camping all over the country has been increasing. National recreation surveys forecast that within the next five years, camping demands will increase by 55 percent. State and federal facilities cannot keep up with this national trend. Private landowners, farmers, resort owners and municipalities are developing camping facilities and offer some facilities to the public for a fee.

More rugged campers seek wilderness conditions, but most family groups prefer many of the comforts of civilization in an uncrowded environment. Modern plumbing, hot showers, laundry and bad weather shelters are generally expected and provided in family campgrounds throughout the state.

Although the majority of people prefer modern camping, wilderness camping with primitive conditions is important. Figures from the U. S. Forest Service show that the number of visitors to the Boundary Waters Canoe Area have increased from 101,000 visitors consisting of 353,000 man days in 1957 to 228,000 visits consisting of 685,000 man days in 1963.

The number of visitors to the Chippewa and Superior National Forests increased from 100,000 visits in 1957 to 112,500 visits in 1964. The number of man days has increased at a greater rate than visits. In 1957, the 100,000 visitors stayed 285,000 man days or 2.8 days per visit and in 1964, the 112,500 visitors stayed 391,800 man days or 3.5 days per visit.

Primitive camping is also provided at state forests. Samples of usage are taken each year by the field foresters. In 1961, according to sample surveys by foresters, there were 47,274 visits based on visitors per night. In 1962, this had risen to 51,050 and in 1963 to 88,504.

There has been a great deal of publicity concerning the number of overnight campers at highway waysides. Waysides provide criteria as to the number of people passing through the state. The major concern of the overnight camper is the availability of facilities where he can rest for the next day's trip. His demands are somewhat different from those of the destination camper. The destination camper requires a variety of outdoor recreational activities, a variety in the environment and a scenic, pleasing area in which to enjoy his stay.

The camping demands run especially high around the metropolitan area. According to O.R.R.R.C. surveys of the north central region, camping participation was the greatest among residents of the Standard Metropolitan Area and smaller cities – the areas of Minnesota's greatest population growth. Further studies will be made to determine the demand for camping in and around Minnesota's metropolitan center.

A recent survey in Lake County shows that the average camping party stays two nights and a total of \$24.25 is spent in the immediate area. When facilities and services encourage an average stay of three nights, the expenditures per party rise to \$36.50.

In state parks over a ten-year period, August, 1954 to July, 1964, there was an increase in camping of 550 percent. From July 1, 1954 to June 30, 1955, there were 93,000 campers. July, 1963 to June 30, 1964, the number had increased to 516,658.

Because of the sheer numbers, variety and differences in taste or desires, it is difficult to explain the "why" of camping participation. Who camps in Minnesota? Where do the campers come from? For this report, the tourist travel in state park camping grounds is used. The following information was adapted from "Study and Analysis of Minnesota State Park Camping Data, 1961."

The surrounding states of Iowa, North Dakota, and Nebraska have high average lengths of stay and contribute a larger number of users. This is probably due to the lack of alternative areas for aesthetic enjoyment, fishing and hunting opportunities within comparable distance. Iowa campers tended to be dispersed throughout the state, with a larger number of camping in the northern part. This, tied in with the long average length of stay supports the hypothesis that Minnesota is a primary destination for Iowa campers. The same idea holds true for North Dakota, South Dakota, and Nebraska campers, with the exception that North Dakota campers tend to stay mainly within northern Minnesota. South Dakota and Nebraska campers are evenly distributed throughout the state, except for the heavy use of camp-grounds near the border access areas. This indicates the importance of providing a favorable impression in order to retain and disperse this use throughout the state.

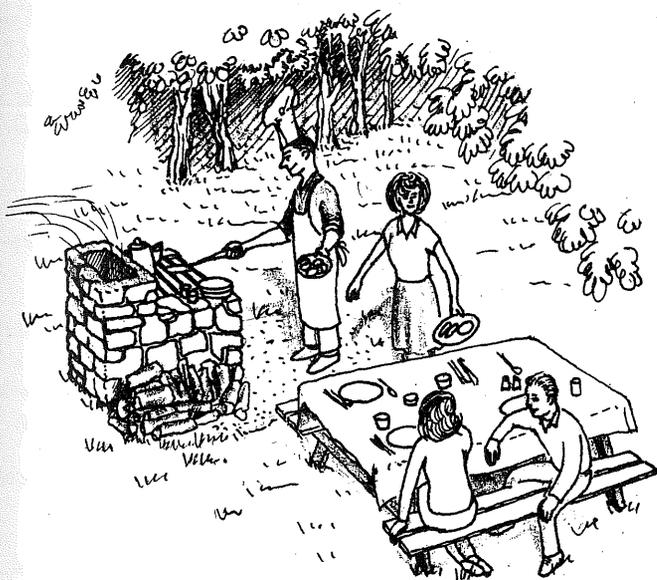
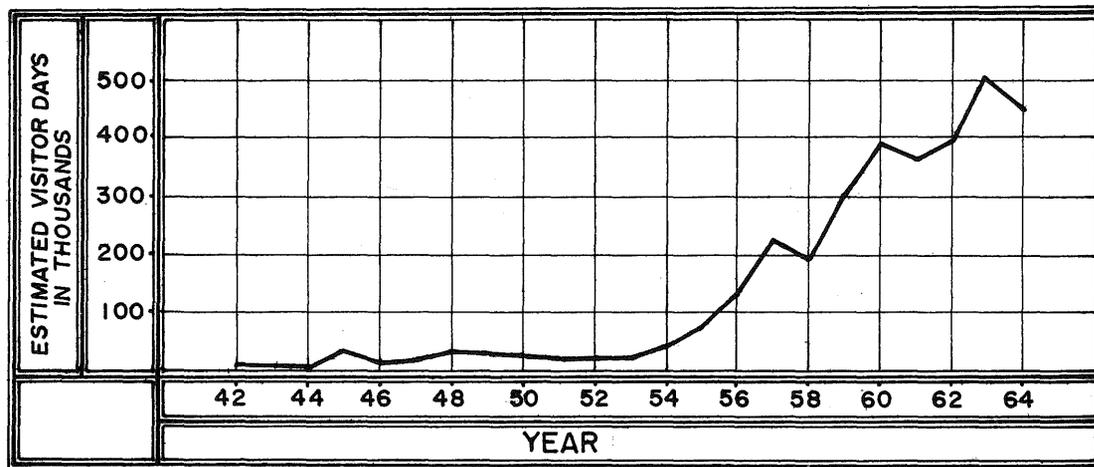
The amount of use is not necessarily related to size of the area. Factors such as quality and available facilities enter into the picture. Gooseberry Falls with the highest attendance, has only 638 acres and Itasca with the second highest attendance, has 32,214 acres.

Every state, including Alaska and Hawaii, was represented in the Minnesota State Park System during the 1961 summer vacation season. Several foreign countries are represented each year including a large number of Canadian travelers. Much of this use is secondary in nature as many campers are visiting friends or relatives in the state. But this is not the only reason for a visit to Minnesota. Many vacationers visit Minnesota to enjoy the state's aesthetic and pleasant environment. Several people undoubtedly visit Minnesota because it lies on the route to the west and they must pass through. The same idea holds true for those people traveling through the state with Canada as their primary objective. Fishing and hunting attract their share of recreationists.

Over half of the campers in Minnesota were from within the state itself. The second largest number came from Iowa and the least came from South Carolina. If the states are ranked by the percent of the state's population (not accounting for repeated visits by the same group or individual), the rank order changes. North Dakota would be ranked first instead of Iowa, meaning that it contributed a higher percentage of its population to Minnesota campgrounds than did Iowa.

The average length of stay per person is generally highest for neighboring states. Michigan, Wisconsin and Ohio have low figures implying that the campers from these states are passing through the state. All three states show heavy use of campgrounds in the southern portion along the westward route, the North Shore Drive and the northern route west across Minnesota.

# MINNESOTA STATE PARKS: estimated visitor days spent camping



## picnicking

Picnicking is a favored recreational pursuit throughout the year. From prepared lunches at roadside parks to elaborate cook-outs at well equipped sites, picnic grounds receive heavy use.

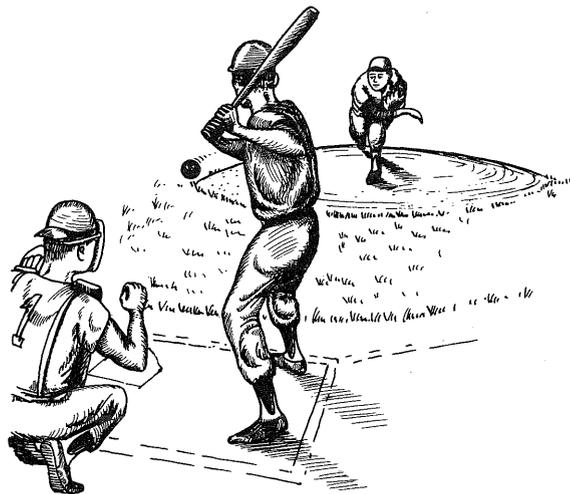
The popularity of picnicking partly rests on its simplicity and the universal food appeal. The time taken to enjoy a picnic outing is never more than a day. As with fishing, one may spend little or as much money as he wishes on equipment. The small expenditure involved in reaching a site also contributes to its popularity. The food normally consumed at home is eaten in the open air. The cost may vary with the income level of the picnickers.

Picnicking is done in conjunction with other activities such as sightseeing, fishing, hiking and driving for pleasure. This is a very social activity. The average group is usually four or five persons. Sunday is the most popular day for a picnic, followed by holidays and Saturdays. Nationally, it is enjoyed by 53 percent of the population according to O.R.R.R.C. National recreation surveys forecast that within the next five years, the demand for picnic grounds will increase by 37 percent.

Here in the north central region, women exceed men in the amount of picnicking done. Picnicking increases with family incomes of \$6,000 to \$7,999 then declines. There are higher rates of participation among higher income classes in large, urban areas. This suggests that picnicking is an attractive way to escape the pressures of urban life. Picnicking is most often engaged in by professional, technical, white-collar workers and craftsmen.

The proposed demand study will help a great deal in determining the demand for picnicking in Minnesota. This study will be available for the forthcoming comprehensive plan.

## outdoor sports and games



Facilities for almost any game that can be played outdoors are provided at an increasing number of schools, resorts and parks. Baseball, volleyball, tennis are traditional, but facilities for archery, trap and skeet shooting, horse-shoe, and shuffleboard are increasing each year.

No detailed study has been made of the demand for playing outdoor sports and games in Minnesota, but plans for the comprehensive plan include this type of analysis. The figures used in this section have been derived from the O.R.R.C. reports.

According to O.R.R.C., playing outdoor sports or games is the third most frequently engaged in activity on a Nation-wide basis. The annual participation rate is 13 occasions per person compared to nearly 18 for walking for pleasure and nearly 21 for driving for pleasure, the top two national activities.

The reasons for playing outdoor games and sports are varied. It may be for the physical exercise, to achieve skill or strictly for the enjoyment associated with the game. Prestige with associates is also a factor and often motivates a higher rate of skill – greater prestige seems to accrue with greater skill. The expenditure for some games or sports may be small while for others it involves buying expensive equipment and the payment of fees. In some cases, membership in a club or organization is also desired. At many clubs not only a membership is required, but also proper facilities and a fee for each time one participates. The money outlay differs with each game, with the age of the player, his social status and his level of skill.

During the summer of 1960, when the O.R.R.C. surveys were conducted, 30 percent of those surveyed engaged at least once in an outdoor game or sport. Seventy percent were between 12 and 17 years of age; ten percent were males 65 and over. Income contributes substantially. There were .74 occasions per person for the income group of less than \$1,500 annually as compared to over 6 for families earning more than \$15,000.

The participation rate is highest in the metropolitan areas where there were almost five occasions per person compared to nearly four in small urban areas and three in rural areas. For the population 25 years and older, playing outdoor sports and games is related to the amount of formal schooling. The rate increases from .11 for persons with less than four years of formal schooling to four for those with four years or more of college.

In summary, golf, tennis and baseball are the games with the greatest number of participants. Eight percent indicated a preference for outdoor games and sports as their first choice, six percent mentioned it as second, and five percent said it was third.

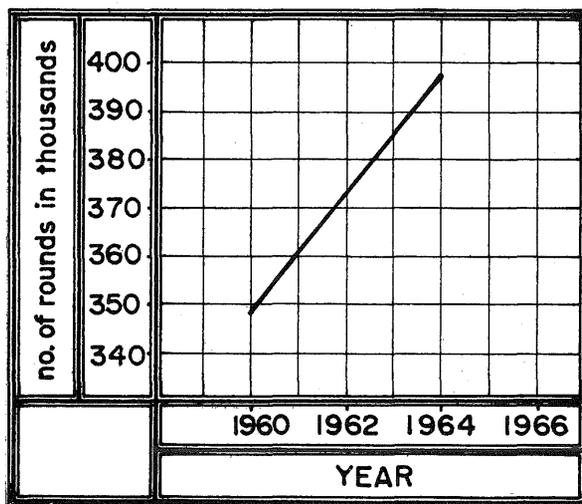


# golf

In the Minneapolis-St. Paul area, approximately 90 new holes of golf have been built since 1960. With the addition of these new golf courses, the number of rounds played on the eight Minneapolis-St. Paul public courses has increased from 348,356 played in 1960 to 397,037 played in 1964, or an average increase of 12,170 rounds per year.

According to O.R.R.R.C., of the activities mentioned as preferences in playing outdoor games and sports, golf was named the most frequently. The main reason for not participating in golf seemed to be lack of time. According to respondents in the O.R.R.R.C. Report, lack of facilities and finances do not necessarily restrict those who prefer golf. The median age of golfers is relatively high, around 38 for men and 35 for women, reflecting the interest in golf by people of middle age and older. (Nation-wide, 300 golf courses were added in 1963 and 900 planned for 1964.)

## ROUNDS OF GOLF PLAYED on Minneapolis - St. Paul public courses



INFORMATION SOURCE: MPLS. - ST. PAUL PARK BOARDS



## hiking and walking

Whether it's with a pack and camping equipment or just a stroll in the great outdoors, hiking and walking is a popular activity for young and old alike – a close association with nature and exercise are the rewards. To clarify the heading, it includes hiking along trails with a pack and simply walking for pleasure on a day's excursion or a short jaunt in the outdoors.

Very little substantial information was available on hiking and walking in Minnesota when this plan was prepared. This omission will be corrected in the forthcoming report.

Hiking – Hiking is primarily a summer-time activity. Referring to O.R.R.R.C., slightly more than half the hiking trips during the summer of 1960 were by younger people between the ages of 12 and 17. In fact, 17 million days or parts of days were spent by this age group from June to August, 1960. Hiking is not considered an expensive activity, but the participation is associated with income. There is practically no participation among families with an annual income of less than \$1,500, but rises among groups earning \$10,000 to \$15,000 per family. The peak income group for this region is the \$8,000 to \$9,999 bracket.

Because the urban population must usually travel from home to open country to do their trail hiking, trips are often overnight or longer. The main challenge is physical which accounts for the high rate of participation by young people. Hiking is more frequently a group activity and a favored outdoor experience for youth organizations and study groups.

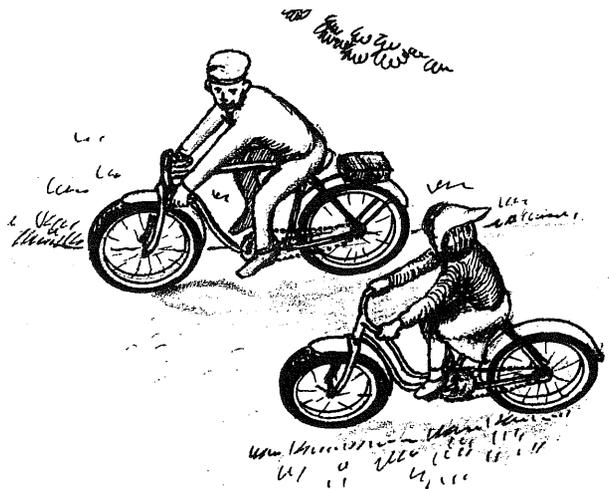
Walking – The counterpart to hiking, walking for pleasure, is second only to driving for pleasure according to O.R.R.R.C. On a Nation-wide basis, each American walks for pleasure approximately 18 times annually.

In cities of over one million, the participation is greater, while the rural strollers are lowest. Seventeen percent of the city dwellers in areas of over one million expressed walking as their favorite activity. It was the favorite activity of six percent of the rural people.

Although walking is free, there is an income relationship. Higher rates are recorded among low and high income groups with the lower rates among the middle income group. Education shows little association to this activity below the college group. Within the college group, the rates of participation increase with the years of education.

A person out for a stroll takes in the scenery and then moves on. It may be enjoyed during the day or at night. A few hours may be devoted at one time and occasionally the entire day.

## bicycling



As the streets of Minnesota's urban areas become more crowded, bike riders are taking to the outlying trails and rural roads. Planned group trips utilizing roads and trails, range from short excursions to trips lasting several days. These extended trips are often associated with camping. A study is planned to determine additional bicycling information in this state for inclusion in the forthcoming plan, which will aid in determining the need and placement of additional cycling trails.

Bicycling is almost altogether a youth activity. According to O.R.R.R.C., in 1960, 18 percent of the total number of participants were older than 17 years. The age group 12 years to 17 years cycled ten days on the average. O.R.R.R.C. determined the cycling population on the whole spent over a day and a half on biking sprints during the three summer months. In the North Central Region, 11 percent of those surveyed by O.R.R.R.C. participated in this sport. In this region, the number of days spent was 20.5 per participating person and 2.4 days per the total people surveyed.



## horseback riding

Parks, resorts, farms and cross-country trails are being used by a rising number of equestrians. Almost extinct a generation ago, horseback riding is enjoying a vigorous comeback. There is an anticipated 206 percent increase in the number of horsewomen and men in 1976 over 1960 and a total increase of 730 percent by the year 2000.

Most group rides seem to be cross-country trail rides sponsored by rider associations. Many saddle clubs sponsor mass trail rides or camporees during the summer months. The best known event, the "Horseman's Holiday," is held each year at Lake Carlos State Park near Alexandria, where some 600 to 800 riders spend a three or four-day weekend. Other well-known rides are the St. Cloud to Minneapolis ride in connection with the Aquatennial and a trail ride along the St. Croix. A growing consideration by vacationing families is for horseback facilities at large resorts.

# nature study

From self-guiding nature trails to simply being in an outdoor setting, individuals, families and groups are learning about their surroundings by studying nature. The classroom is being moved into the outdoors where "learning by doing and seeing" is replacing the text book and test tube theory.

Outdoor classrooms can combine learning with recreation through nature study. Observing nature, collecting specimens and photography – all are part of this activity, a strong element in the total recreation picture. Nature study frequently takes place in combination with other recreational interests including picnicking, camping and driving for pleasure. When groups are concerned with identifying and learning about the natural elements of their surroundings, preservation is stimulated. Science, education and recreation – all three values are directly involved in the study of nature.

Major types of areas for outdoor study are: 1. the landscapes where scenic routes, vegetation and wildlife are observed; 2. geomorphic features where geology is interpreted; 3. seasonal occurrences such as spring flowers and fall color; 4. historic areas representing the Ages of the Fur Trader, Indian, French, English and American periods; 5. contemporary, man-made developments such as dams, bridges and reservoirs.

Here in the north central region, typified by hot summers and severe winters, the heaviest participation is in the fall and spring, but the participation rate is probably related more closely to the school year than to the "heat" of summer. Youths go on nature study walks more than other age groups. The 12 to 17 year group accounts for about a third of all nature study walks according to O.R.R.R.C.

# hunting

Minnesota has a rich wildlife heritage. The abundance of wildlife and the variety of wildlife habitat provides a wealth of hunting opportunities and makes Minnesota one of the nation's outstanding hunting states. Approximately 15 different hunting seasons covering a period of six months are established annually and certain animals considered as predatory may be hunted the year around.

Determining the number of Minnesotans who hunt is not an easy task and at present the sale of hunting licenses is the best basis for estimating the hunting population. However, one person may buy two licenses, one for small game and one for big game. The total license sales is not equal to the total number of hunters. The method also excludes those who hunt, but are unlicensed – such as those who hunt on their own land. To overcome these problems calculations were guided by results of a mail poll of deer hunters showing that two out of three Minnesota big game hunters also hunt small game. Certain other assumptions concerning the amount of hunting done by unlicensed Minnesota hunters also were made.

These estimates show that a larger percentage of Minnesotans hunt than do residents of the United States as a whole or residents of the North-central United States. Comparisons are shown below:

## ESTIMATED NUMBER OF PERSONS 12 YEARS OLD AND OLDER WHO HUNTED IN 1960 IN THOUSANDS –

<u>Grouping</u>	<u>Total Number of Persons 12 and over</u>	<u>Persons Who Hunted</u>		<u>Hunted Big Game</u>		<u>Hunted Small Game</u>		<u>Hunted Waterfowl</u>	
			<u>%</u>		<u>%</u>		<u>%</u>		<u>%</u>
United States <sup>1</sup>	131,226	14,637	11.2	6,277	4.8	12,105	9.2	1,955	1.5
North Central U.S. <sup>1</sup>	36,982	4,694	12.7						
Minnesota <sup>2</sup>	2,479	428	17.3	242	9.8	388	15.7	127	5.1

1. Figures adapted from the 1960 National Survey of Fishing and Hunting.

2. Figures supplied by the Minnesota Department of Conservation.

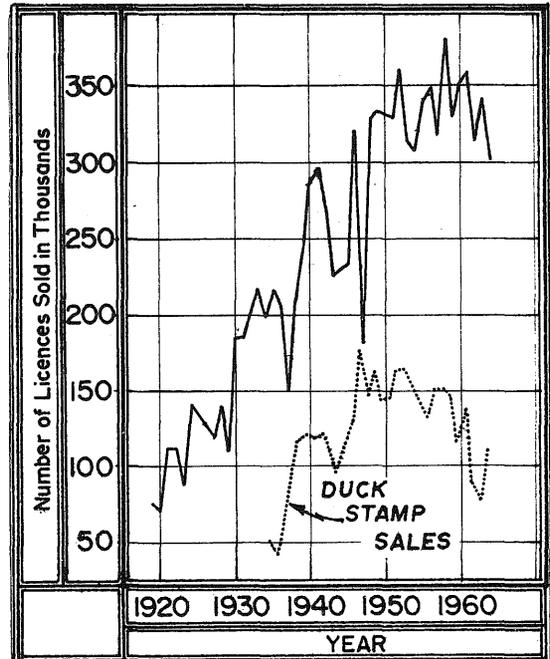
This information also indicates that although in 1960 Minnesota had only two percent of the nation's people 12 years of age and older, resident hunters comprised three percent of the nation's hunters. Of approximately 15 million hunters in the nation today, 428,000 are Minnesotans. Minnesota had in 1960, nearly four percent of the big game hunters, three percent of the small game hunters and seven percent of the waterfowl hunters in the United States.

Calculations based on license sales are also useful in making projections indicating future numbers of hunters. These, however, do not take into account the effects of space for hunting and changes in animal populations.

Small Game – Disregarding yearly fluctuations, the number of licensed small game hunters has increased from 76,000 in 1919 to a peak of 382,000 in 1958. In recent years, the number has declined to about 302,000. In other words, there were five times as many small game hunters in 1958 as there were in 1919, but a recent decline in number of about 80,000 has reduced this ratio to about four times as many.

Using decennial census data we can also show past trends in terms of the percentage of Minnesota's population 16 years of age and older licensed to hunt small game. This percentage has increased from nearly five percent in 1920 to approximately 16 percent in 1960.

## SMALL GAME LICENSE SALES



### ESTIMATED NUMBERS OF MINNESOTANS PARTICIPATING IN SMALL GAME HUNTING –

	<u>1920</u>	<u>1930</u>	<u>1940</u>	<u>1950</u>	<u>1960</u>
Minnesota population					
Total-all ages	2,387,125	2,563,953	2,792,300	2,982,483	3,413,864
16 years & older	1,599,604	1,733,118	2,052,870	2,116,648	2,238,516
16 years & older, licensed to hunt small game	71,382	183,567	286,586	330,582	350,362
16 years & older percent licensed	4.5	10.6	14.0	15.6	15.7

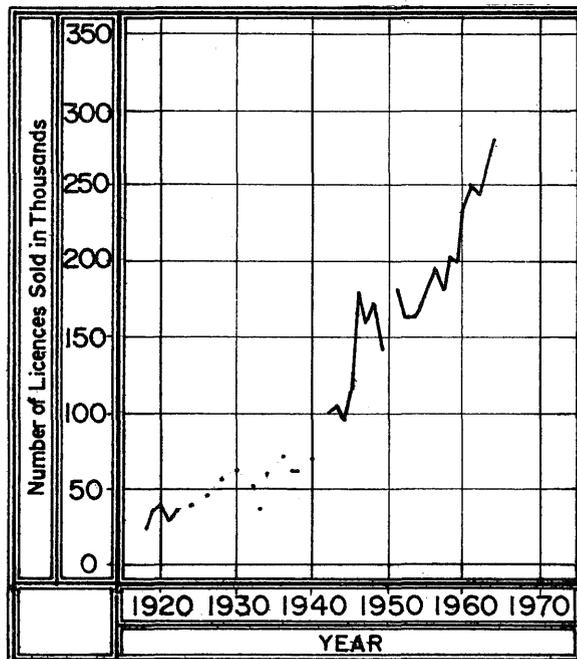
Federal duck stamps, required of all licensed small game hunters who hunt migratory waterfowl, show increases from fiscal year 1935 when 51,000 were sold to 1947 when 175,000 were sold. Since this date, duck stamp sales have dropped to 128,000 in 1964, but at least some of this drop can be attributed to more restricted hunting seasons.

Minnesota Department of Conservation, Special Publ. 12 by John B. Moyle, shows three projections of small game hunters for 1970. Projection III is considered to be the most reasonable and most likely. These projections are shown below:

	1960	1970		
		Projection I	Projection II	Projection III
Small game hunters	352,000	361,000	332,000	342,000

Recent trends would seem to suggest that a peak has been reached in the numbers of hunting small game and that stability or even a decline in numbers can be expected.

## BIG GAME LICENSE SALES



Big Game – Licensed big game hunters have increased from 24,000 in 1918 to the present high of 279,000 in 1964. This is a 12-fold increase in the past 46 years. Considering the entire population of Minnesota, the percentage licensed to hunt big game has increased from two percent in 1920 to seven percent in 1960.

### ESTIMATED NUMBERS OF MINNESOTANS PARTICIPATING IN BIG GAME HUNTING –

	1920	1930	1940	1950	1960
Minn. population total all ages	2,387,125	2,563,953	2,792,300	2,982,483	3,413,864
All ages licensed to hunt big game	39,116	62,515	69,290	161,422*	233,593
All ages percent licensed	1.6	2.4	2.5	5.4	6.8

\* There was no season in 1950. This figure is a mean for 1949 and 1951.

Moyle (loc. cit.) has made three projections of licensed big game hunters for 1970. As is the case of small game hunting predictions, projection III is considered to be the most reasonable and most likely. These projections are shown below:

	1960	1970		
		Projection I	Projection II	Projection III
Big Game Hunters	234,000	235,000	275,000	283,000

More recent trends would seem to suggest that big game hunters in Minnesota may exceed 300,000 prior to 1970

DUCK STAMP SALES BY YEAR



<u>Fiscal Year</u>	<u>Number of Federal Duck Stamps Sold</u>
1934-35	51,536
1935-36	44,062
1936-37	72,460
1937-38	97,609
1938-39	116,461
1939-40	120,034
1940-41	118,931
1941-42	121,032
1942-43	110,986
1943-44	95,446
1944-45	115,415
1945-46	130,757
1946-47	175,151
1947-48	145,926
1948-49	162,300
1949-50	143,496
1950-51	145,708
1951-52	162,486
1952-53	163,109
1953-54	154,004
1954-55	143,886
1955-56	131,985
1956-57	150,550
1957-58	151,156
1958-59	147,895
1959-60	118,624
1960-61	139,065
1961-62	85,251
1962-63	78,071
1963-64	111,977

MINNESOTA  
HUNTING LICENSE SALES FOR CALENDAR YEARS, 1918-1964

Year	SMALL GAME			BIG GAME FIREARMS		
	Resident	Non-Resident	Total	Resident	Non-Resident	Total
1918						23,893
1919			75,846			34,178
1920			71,382			39,116
1921			113,661			28,323
1922			114,243			35,598
1923			87,373			
1924			139,000			39,165
1925			131,591			
1926			126,676			44,934
1927			117,016			
1928			139,156			56,610
1929			110,536			
1930			183,567			62,515
1931			184,096			
1932			195,689			52,537
1933			215,729			36,933
1934			197,326			60,820
1935			216,440			
1936			207,120			70,877
1937			150,788			62,622
1938			210,447			61,568
1939			241,483			
1940	286,586	395	286,981	69,242	48	69,290
1941	295,014	493	295,507			
1942	270,134	526	270,660	101,488	83	101,571
1943	224,829	480	225,309	105,336	146	105,482
1944	230,765	380	231,145	96,283	205	96,488
1945	233,672	474	234,146	115,048	352	115,400
1946	320,514	829	321,343	176,985	837	178,797
1947	182,201	381	182,582	157,954	993	160,096
1948	327,232	664	327,896	174,552	1,095	173,498
1949	333,316	1,180	334,496	141,923	706	142,629
1950	330,582	1,598	332,180			
1951	326,072	1,552	327,624	180,921	760	181,681
1952	358,772	1,800	360,572	162,873	961	163,834
1953	312,768	1,360	314,128	162,806	676	163,482
1954	307,573	1,288	308,861	169,066	617	169,683
1955	340,617	1,195	341,812	173,040	562	173,602
1956	347,728	1,404	349,132	193,855	615	194,470
1957	318,230	1,424	319,654	180,028	488	180,516
1958	378,071	1,596	379,667	203,430	552	203,982
1959	329,414	1,384	330,798	200,102	520	200,622
1960	350,362	1,308	351,670	233,593	621	234,214
1961	359,516	1,116	360,632	250,031	632	250,663
1962	313,402	866	314,268	244,166	676	244,842
1963	340,664	1,023	341,687	257,333	771	258,104
1964	300,798	1,010	301,808	278,032	1,021	279,053



## snow skiing

Whether the visit is for a week, weekend or day, Minnesota ski operators go out of their way to make the skier's trip a success. The increasing numbers of ski enthusiasts are finding modern facilities, good snow conditions and lively entertainment for a Minnesota skiing holiday. Many ski centers have complete facilities for a fun-filled skiing vacation — both on and off the slopes.

The invigorating climate of Paul Bunyan Land provides good skiing conditions. Ski areas are easy to reach when traveling Minnesota's modern highways and well-kept roads. Most Minnesota ski centers offer instruction to both young and old.

The Bureau of Business-Economic Research of the University of Minnesota, the State Department of Business Development and the Federal Reserve Bank of Minneapolis recently conducted a project to determine just how much skiing is done in Minnesota, the skiing days, the destination of the skiers and other pertinent skiing information. The following facts and figures were taken from this survey.

Questionnaires were designed to describe the skiing facilities, use and profitability. They were mailed to 98 ski resorts of which 73 responded for a 74 percent return. The states surveyed were Minnesota, Montana, North Dakota, South Dakota, Upper Michigan and northwestern Wisconsin. For this report we are using Upper Michigan and northeastern Wisconsin compared with Minnesota.

### PARTICIPANTS

Skiing all over the nation has been on the increase. Depending upon who counts and what is considered a skier there were about five to 11 million skiing Americans in 1964. The U. S. Ski Association in 1964 estimated this number will rise to 45 million by 1985.

In the 1963-1964 skiing season, resort respondents from Minnesota, Upper Michigan and northwestern Wisconsin indicated they sold 418,528 ski lift or tow tickets. This is a substantial increase from 179,528 in the 1959-1960 season. As judged by the number of lift tickets sold, the Minnesota ski slopes were used 20 percent more each year in the last two seasons than the previous three seasons.

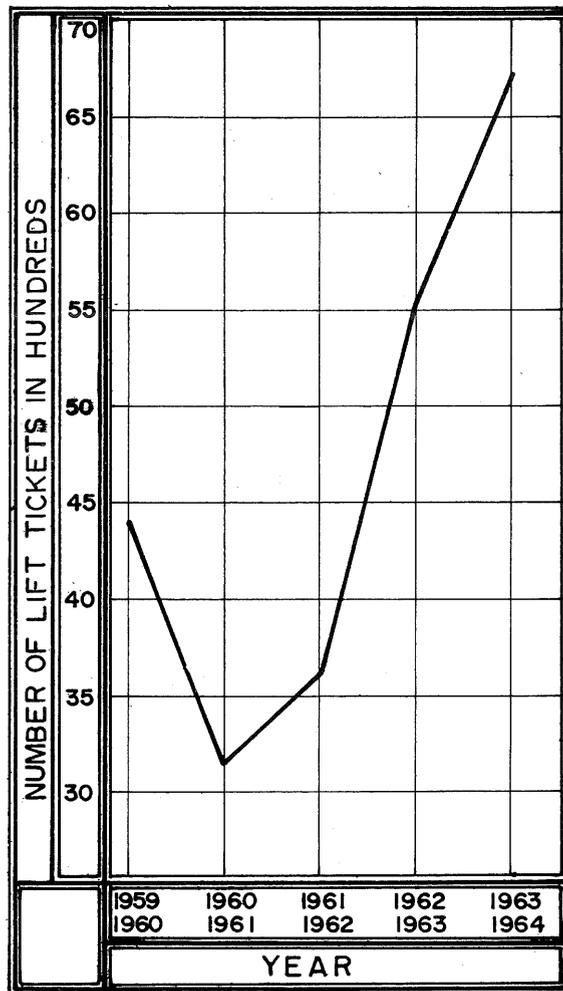
With the rising population, particularly in the Twin Cities, there will be increasing demand for this sport. Presently, there are a number of ski areas within a half hour drive of the metropolitan area. The annual income of the typical skier is \$8,850. With the general rising level of personal income, more individuals will be in this bracket.

### THE SKIING SEASON

Probably no one watches snow more anxiously than the operator of a ski resort. To circumvent snowfall irregularities, snow making equipment has been acquired at six Minnesota resorts. Two Minnesota resorts use snow hauling equipment.

If weather and snow permit, skiing often extends from Thanksgiving to April. But, more typically, the season is from mid-December to mid-March. During the severe 1964-65 winter with its extraordinary snowfalls, skiing lasted from the first part of December to Easter at some northern ski chalets. The season was nearly this long state-wide.

**AVERAGE NUMBER OF LIFT TICKETS SOLD  
PER SKI AREA IN MINNESOTA FROM  
1959 TO 1964**



Information Source: Ninth Federal Reserve  
District Bank

The number of skiable days are shortened, of course, with poor snowfall and above freezing temperatures. The utilization of snow-making equipment has a big effect on the skiing days. With favorable weather, many which otherwise are open on weekends only operate on weekdays as well. In the 1959-1960 season, the average respondent resort operated 52 skiable days. In the 1963-64 season there were 63 skiable days, the highest of the report period. The fewest was in the 1961-62 season when the average was 42, obviously a season with low snowfall.

**THE SKIING SEASON (Days)**

<u>Season</u>	<u>Minnesota</u>	<u>Upper Michigan</u>	<u>N.W. Wisconsin</u>
1963-1964	63	89	64
1962-1963	47	89	60
1961-1962	42	84	71
1960-1961	43	87	56
1959-1960	52	90	60

**DESTINATION OF SKIERS**

Most of the Minnesota skiers are drawn from the immediate vicinity of the area or from distances short enough for convenient automobile travel. Resorts that attract a quantity of out-of-staters usually have regular train, plane and bus services. Chartered trains or planes are infrequent, but chartered buses are common. Most of the bus companies contacted in and around the Twin Cities reported the bulk of their chartered bus trips were to ski areas within a 150 mile radius.

In a study of the northeastern United States, 88 percent of the skiers during the 1962-63 season traveled solely by auto to their favored ski area, three percent went by bus and the remaining by a combination of either auto, train, bus or plane.

## CAPACITY

The average capacity of the responding resorts was 741 skiers. About half the capacity was used on average weekends, with about seven percent on average weekdays. Around the Twin Cities skiers often wait 15 minutes or longer for each use of the lift which would indicate an above average use.

## THE BUSINESS OF SKIING

Promotion plays a big role in a ski resort's success. Local motels or hotels will pay advertising costs knowing that good ski business is also bringing overnight guests. Resorts often seek contracts with ski clubs and special rates to attract the group to their ski area.

Skiing as a business is a risky one. With the unpredictable weather conditions, many operators consider snow making equipment essential. Equipment can result in an outlay of \$100,000 to \$200,000, but it is the only way to assure a good ski season. Respondents were asked what dollar investment would be required to duplicate present skiing facilities. The replacement cost of the average Minnesota ski resort was \$139,176.

### AVERAGE REVENUE AT SKI RESORTS\*

	<u>Minnesota</u>	<u>Upper Michigan</u>	<u>N.W. Wisconsin</u>
Lift or Tow Tickets	\$12,844 (12)	\$54,588 (8)	\$3,633 (6)
Restaurant & Canteen	3,172 (10)	1,204 (7)	1,082 (6)
Equipment Rental, Sale and Repair	5,328 (9)	3,400 (4)	2,709 (5)
Other	2,120 (5)	1,150 (2)	3,300 (2)

(The above figures mirror the number of Upper Michigan resorts serving cities, like Detroit and Chicago.)

\*The number in parenthesis indicates the number of resorts comprising the average. (A total of 12 resorts comprise the average revenue figure of \$12,844 from lift or tow tickets in Minnesota.)

In the five state area, 30 resorts reported information on profits. Eleven indicated a loss; 17 reported a profit and two broke even. Based on 26 replies, the average resort reported profits before taxes of \$2,474.

This would indicate that ski areas generally are low profit enterprises. Ski areas, however, can be operated in conjunction with other industries including motels, restaurants, and can be kept open in the summer with paid "rides" on the chair lifts, stables and other forms of entertainment provided.

## winter sports other than skiing

Minnesotans are year around sports enthusiasts - in the winter the state becomes a Winter Wonderland, a mecca for outdoor fun. But the opportunities for winter activity are relatively unexplored and unpublicized. For the state to assume its "total" recreation role, it is necessary to develop its potential as the winter-fun capital of the midwest.

Even boating can be done in Minnesota during the winter months. Although sailing, canoeing, rowing and speed-boating are strictly for open water, ice boating is a good replacement on Minnesota lakes.

Although there are no toboggan runs as such, in the winter slopes and golf courses become winter playgrounds for tobogganing and coasting. Fire places, tables and shelters are available through the winter in some parks where winter enthusiasts can enjoy a picnic near a roaring fire after tobogganing, sledding or skating. Main roads into state parks are kept open and the parks are available for snowflake camping.

Deer, squirrel and rabbit hunting seasons are also during the winter months. With the disappearance of heavy summer visitation to recreation areas, birds and other wildlife become bolder and easier to see and identify. After a fresh snow, identification of animal tracks is a good winter sport.

Fishing is often best in the winter especially for walleyes, crappies and kingsized perch. Roads are often plowed especially for this activity and villages of ice houses dot many lakes. On Mille Lacs alone, over 5,000 ice fishing houses have been counted. Mille Lacs annually produces about 530,000 pounds of walleyes; roughly 40 per cent are taken during the winter months. Fish house structure licenses have increased from 28,000 in 1955 to 65,000 in 1964.

Creel census on 76 lakes by fisheries personnel of the Department of Conservation from 1952 to 1965 revealed that winter angling makes up 26 percent of all angling trips; spearing three percent; summer angling makes up the remaining 71 percent. The entire family can join this sport with a minimum of expense, but maximum enjoyment. Many resorts throughout the state offer complete facilities for ice fishing.

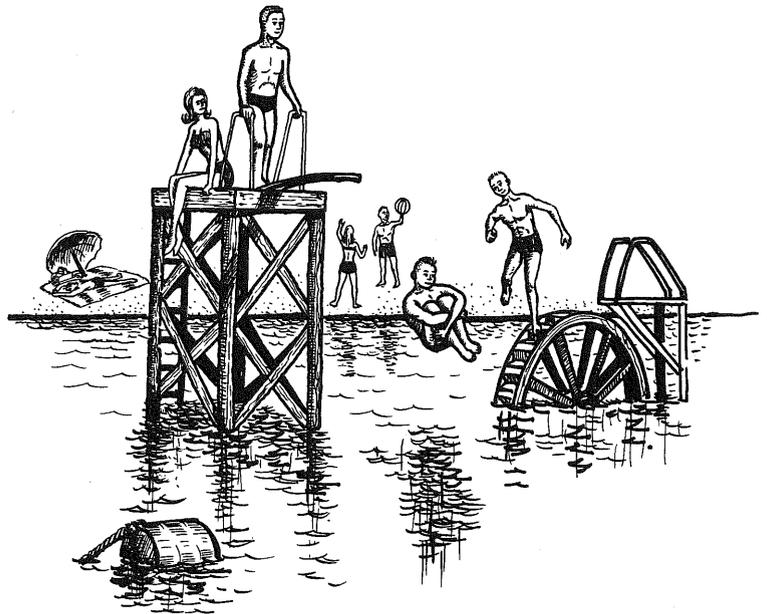
The relatively new sport of snow cruising would be a big boon to attracting winter recreationists to the great snow belt country. Country clubs, ski resorts, motels and even boat marinas have become interested in developing snowmobile rentals to boost winter business. Snow cruising is a winter sport enjoyed by all age groups. Estimated sales figures of Canada's largest snowmobile brands illustrate the growth of the market. In 1961, some 3,300 units were sold. In 1962, these figures jumped to 7,900 and in 1963, there were 14,200 units sold. The snowmobile market in this country is about four years behind Canada, but is expected to catch up quickly. Probably not more than 5,000 were sold in the United States in 1962, but this was expected to jump to about 7,000 units during the 1964-1965 season.

Other possibilities for winter enjoyment include moon-light sleigh rides, cutter rides or excursions across the wintry terrain in a horsedrawn roadster. Wheels of the traditional hay-rack can be replaced by runners.

Winter travelers in the state find hockey – the king of winter sports. In addition to high school hockey, many towns have well-organized boys' hockey programs. Northern Minnesota is the home of competitive hockey and the birthplace of many Olympic and national champions. Both Minneapolis and St. Paul have professional hockey teams with games scheduled throughout the winter. There are hundreds of pleasure ice skating rinks.

With so much invested in parks, resorts and other public and private recreation spots, there is a great need for publicity to keep these areas going all year, particularly with the relatively short summer season. Relaxing, refreshing activities can be enjoyed in Minnesota the year around.

## swimming



Swimming is growing in popularity with Minnesota's residents and visitors of all ages. A good swimming beach is a major consideration when the public, especially families, chooses a vacation. On weekends and holidays in particular, the beaches in and around the Twin Cities are crowded with swimmers and sunbathers. Besides actual swimming and sunbathing, participants picnic, camp, play in or near the water or engage in other activities in conjunction.

Because of Minnesota's transitional climate, swimming is confined chiefly to the summer months although indoor pools are gaining in popularity. O.R.R.C. surveys of nation-wide swimming trends show that almost half of the demand is for facilities within a few miles of home. One-fifth of the demand is for facilities within day or weekend distance and

one-third for tourist vacation facilities farther from urban areas. Nearly two-thirds of the nation-wide demand is for facilities in or near urban areas.

The O.R.R.R.C. studies predict the annual visits per capita for outdoor swimming will be about 1.5 times the 1960 number by the year 1980. By 2000, swimming visits are expected to be three times the 1960 total.

Based on a survey conducted by M.O.R.R.C., in Minnesota, outdoor swimming in 1960 was participated in by 1,536,000 persons. Each person, on the average, spent 15 days swimming in that year, for a total of 23,808,000 days. By 1976, the number is expected to rise to 2,149,000 persons or a 40 percent increase. This is a projected total of 43,625,000 person days or an increase of 83 percent. Additional information is being gathered to determine the demand for rural beaches, urban beaches – public and private, – quarries and swimming holes.

## fishing

From kids with cane poles to the "pros" with casting and fly fishing outfits – Minnesotans and their vacationing visitors are fishermen; for this activity is one of the most popular forms of outdoor recreation in the State.

Although no one knows exactly how many or what percentage of our population fishes, the best indication can be obtained from the sale of fishing licenses which are required of all residents and non-residents 16 years of age or older. These records show that in 1960, 1,041,000 residents or 46 percent of the 2,239,000 residents in this age group were licensed to fish. Assuming that those 12 to 15 years old fish in the same proportion as their elders (they actually fish more according to 1960 National Survey of Fishing and Hunting) it is estimated that there are 1,153,000 fishermen 12 years of age and older residing in the state. The number of Minnesota fishermen is compared with national and regional estimates below:

### ESTIMATED NUMBER OF PERSONS 12 YEARS OLD AND OLDER WHO FISHED IN 1960, IN THOUSANDS

<u>Grouping</u>	<u>Total number of persons 12 and over</u>	<u>Total persons who fished Number</u>	<u>Percent</u>
United States <sup>1</sup>	131,226	25,323	19.3
North Central U. S. <sup>1</sup>	36,982	8,172	22.1
Minnesota <sup>2</sup>	2,479	1,153 <sup>2</sup>	46.5

Fishing in Minnesota is more than twice as popular as it is in the nation as a whole or the north central region.

Although Minnesota had only 1.9 percent of the nation's 131.2 million people 12 years of age and older in 1960, resident Minnesota anglers made up 4.6 percent of the nation's anglers.

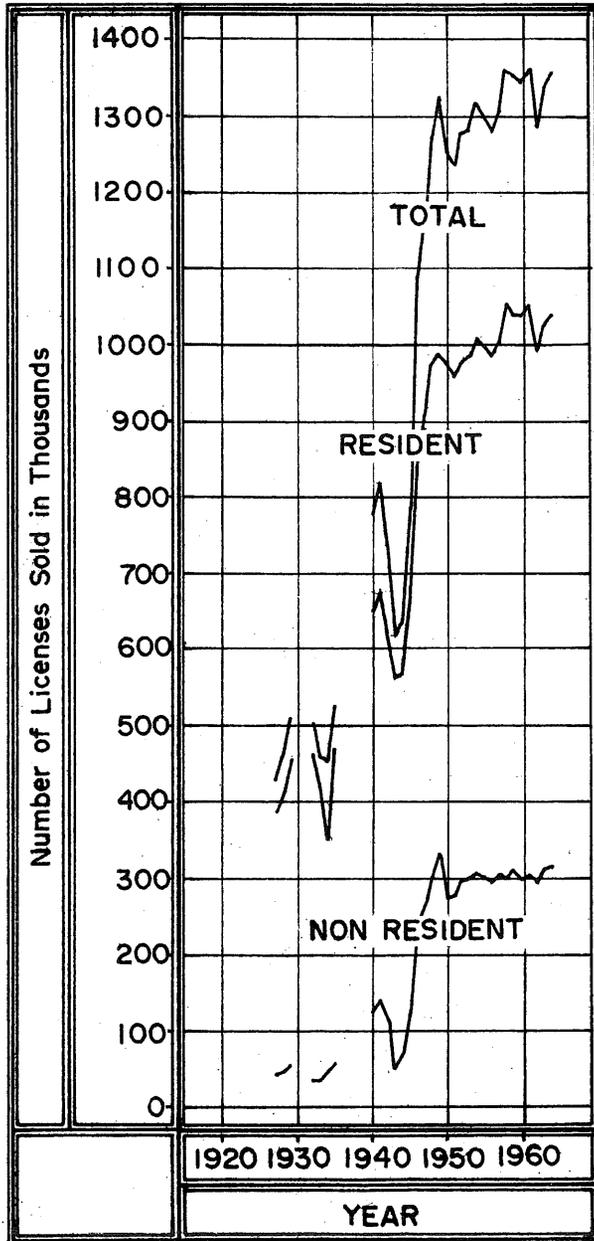
<sup>1</sup> Figures adapted from the 1960 National Survey of Hunting and Fishing.

<sup>2</sup> Figures applied by the Minnesota Department of Conservation.

License records which extend back to 1927 are one of our best indicators of what has occurred and probably what will occur in the future. Since 1927, resident sales have increased from 386,000 to 1,039,000 in 1964 or by about two and one-half times. Non-resident sales during the same period increased from 42,000 to 316,000 or about seven and one-half times. Most of the increase, however, occurred in the years immediately following the Second World War. Increases since that time have been relatively small. Straight line projections of recent trends would seem to indicate that by 1970, non-resident licenses will increase to about 320,000 and resident licenses to about 1,090,000 for a total of about 1,410,000 licensed fishermen.

Earlier projections of licensed fishermen for 1970 were made by Moyle in 1961, in Minnesota Department of Conservation, Spec. Publ. 12. Based on assumptions regarding rural-urban population changes, Projection III was mentioned as being the most reasonable and likely of the three. The three projections are shown as follows:

# ANGLING LICENSE SALES



	1960	1970		
		<u>Projection I</u>	<u>Projection II</u>	<u>Projection III</u>
Resident & non-resident fishermen	1,345,000	1,370,000	1,285,000	1,378,000
Residents only	1,039,000	1,070,000	985,000	1,078,000

Source: Moyle, John B., 1961. Some Considerations on Fishing and Hunting Trends in Minnesota. Minn. Dept. Conservation, Spec. Publ. 12.

Moyle also noted that his projections were all lower than those made for the United States as a whole in the 1960 National Survey of Fishing and Hunting.

On the basis of recent trends in Minnesota fishing license sales, it appears that Minnesota will experience only moderate increases in numbers of licensed fishermen between now and 1970—perhaps an additional 65,000 over 1960 figures — a far less optimistic increase than is indicated for the nation by O.R.R.R.C. Study Report 7 or the 1960 National Survey of Fishing and Hunting.

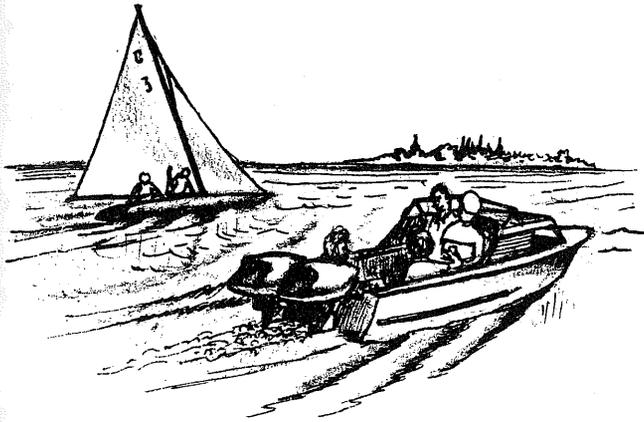
### MINNESOTA LICENSE SALES FISHING LICENSES FOR CALENDAR YEAR

Year	Resident Angling Licenses			Non-Resident Angling Licenses			Total Angling Licenses
	<u>Individual</u>	<u>Comb. X 2</u>	<u>Total</u>	<u>Individual</u>	<u>Comb. X 2</u>	<u>Total</u>	
1927	184,945	201,226	386,171	42,388		42,388	428,559
1928	207,064	204,420	411,484	48,176		48,176	459,660
1929	224,320	230,408	454,728	57,733		57,733	512,461
1930							
1931							
1932	246,507	219,056	465,563	37,645		37,645	503,208
1933	290,572	129,182	419,754	37,338		37,338	457,092
1934	286,259	65,296	351,555	49,254		49,254	400,809
1935	423,810	46,906	470,716	58,175		58,175	528,891
1936							
1937							
1938							
1939							
1940	650,834		650,834	62,186	64,524	126,710	777,544
1941	387,125	290,580	677,705	64,446	76,664	141,110	818,815
1942	296,137	326,602	622,739	53,003	63,600	116,603	739,342
1943	239,291	323,626	562,917	27,486	23,958	51,444	614,361
1944	238,461	329,448	567,909	36,676	31,460	68,136	636,045
1945	263,941	396,020	659,916	59,449	61,786	121,235	781,196
1946	339,061	511,340	850,401	103,535	135,652	239,187	1,089,588
1947	340,218	566,084	906,302	111,798	152,282	264,080	1,170,382
1948	348,919	622,412	971,331	122,420	178,654	301,074	1,272,405
1949	350,861	638,344	989,205	130,239	204,690	334,929	1,324,134
1950	312,690	661,810	974,500	277,022		277,022	1,251,522
1951	278,958	679,048	958,006	279,206		279,206	1,237,212
1952	279,093	699,914	979,007	299,509		299,509	1,278,516
1953	275,724	708,264	983,988	301,068		301,068	1,285,056
1954	279,379	727,724	1,007,103	307,094		307,094	1,314,197
1955	271,732	727,562	999,294	301,606		301,606	1,300,900
1956	261,483	720,144	981,627	297,867		297,867	1,279,494
1957	258,551	744,548	1,003,099	305,776		305,776	1,308,875
1958	271,154	781,758	1,052,912	301,868		301,868	1,354,780
1959	263,436	775,736	1,039,172	310,720		310,720	1,349,892
1960	258,517	780,144	1,038,661	302,462		302,462	1,341,123
1961	264,022	786,254	1,050,276	144,812	164,016	308,828	1,359,104
1962	237,391	751,654	989,045	122,462	176,346	298,808	1,287,853
1963	245,804	779,602	1,025,406	126,041	187,956	313,997	1,339,403
1964	246,094	793,050	1,039,144	124,764	191,590	316,354	1,355,498

MINNESOTA LICENSE SALES  
FISHING LICENSES FOR CALENDAR YEAR

<u>Year</u>	<u>Spearing Licenses</u>	<u>Structure Licenses*</u>	<u>Non-Resident Minn. - S. D. Short Term</u>	<u>Resident Old-Age Fish</u>
1927	7,660			
1928	4,916			
1929	7,136			
1930				
1931				
1932	12,913			
1933	11,708			
1934	12,586			
1935	9,076			
1936				
1937				
1938				
1939				
1940	17,709			
1941	10,511			7,130
1942	13,977			10,699
1943	11,260			9,482
1944	19,071			8,401
1945	28,380			6,003
1946	34,654			7,808
1947	39,240		16	5,953
1948	22,528		170	5,123
1949	39,421		129	4,756
1950	43,030		230	4,762
1951	34,699		314	5,383
1952	47,667		368	7,222
1953	61,586		326	6,752
1954	62,784		250	6,041
1955	64,835	28,452	312	3,387
1956	50,363	40,900	487	2,608
1957	50,534	45,194	497	2,672
1958	54,557	52,421	714	2,891
1959	54,514	59,683	1,008	2,778
1960	52,802	58,370	1,094	2,439
1961	55,118	64,175	1,499	2,308
1962	46,827	58,080	965	2,041
1963	47,879	60,772	965	1,922
1964	53,879	64,984	826	1,785

\*Includes ice houses licensed for rental purposes.



## boating

Minnesota boaters have opportunities, state-wide, for enjoying their sport. For the adventurous canoeist, the fast-moving streams and rivers are unsurpassed. Lakes and rivers provide innumerable opportunities for powercraft, float-boating, sailboats and canoes alike. For just paddling about, the ponds and smaller lakes are nearly everywhere.

As stated in "Launching Sites Used by Pleasure-Boat Owners in Minnesota Lakes" (M.O.R.R.C.) there were 143,700 individual boat owners in Minnesota in 1964. Adequate accesses and suitable water are the two basic resources most demanded by Minnesota boaters. According to a survey made in 1963, by the Minnesota Outdoor Recreation Resource Commission, 14 percent of the boat owners use private fee accesses. In a questionnaire sent by M.O.R.R.C. to resort owners, 58 percent of the 1,390 respondents indicated they offer boat launching facilities for a fee. (The median fee charged is 75 cents.) As noted in M.O.R.R.C. Report 4, the demand for boat launching facilities will increase by 39 percent within the next 15 years.

Less than five percent of the public access points in the state are in the seven county metropolitan area where 23 percent of Minnesota's non-cottage launchings are made. Of all the launchings made in the state, 44 percent are from the metropolitan area. Fifty-two percent of boat launchings are in lakes which are within the launcher's home area; 48 percent travel relatively long distances to launch their boats. This indicates that the greatest boater density can be found in the metropolitan area which provides 1.53 acres per boat for nearby Lake Minnetonka, 1.8 at White Bear Lake, 1.7 at Forest Lake as compared to 95.2 acres per boat for larger lakes such as Leech Lake outside the metropolitan area.

Minnesota ranked eighth in the nation in the use of outboard motors in 1964, according to a report issued jointly by the Outboard Boating Club and the National Association of Engine and Boat Manufacturers.

The popularity of boating has skyrocketed throughout the nation during the past 15 years. To show how boating has increased, the following figures are quoted from the National Association of Engine and Boat Manufacturers and the Outboard Industry Association:

1947 - 2,440,000  
1952 - 4,333,000  
1963 - 7,678,000

These totals include inboard and outboard boats, sail boats, row boats, canoes, dinghies and other small craft. In 1963, for example, there were 813,000 inboard boats, 4,239,000 outboards, 495,000 sail boats, and 2,131,000 row-boats, dinghies and other small craft. Estimated retail expenditures have risen from \$905,000 in 1947 to \$2,581,000 in 1963.

Using O.R.R.R.C. figures, there could be a 75 percent increase in boating participation. This does not include sailing and canoeing. Leisure time and increased income are essential factors affecting participation.

Little information is available on canoeing in rivers and streams outside the Quetico-Superior Canoe Country including the Boundary Waters Canoe Area of the Superior National Forest. The following information was obtained from a survey conducted by the Lake States Experimental Station, of the Superior-Quetico canoe country, 1961. It was reported that most visitors to the canoe country were non-residents. Only one-third were residents and almost as many

were from Illinois. The survey indicated that the typical visitor traveled approximately 600 miles to reach the area. The same study indicated an average canoe trip in the Boundary Waters was from five to eight days. Most visitors were young; approximately one-third were 17-24 years old, one-fourth were 25-34 years of age, and only three percent were over 54 years of age. From June 11, 1961, to September 9, 1961, 72,400 people visited the Boundary Waters Canoe Area. Of this number 32,000 were canoeists.

Projected use of this area by the Forest Service is as follows: By 1976 visits are expected to rise to 319,000, an increase of 207 percent over 1959. By 2000, 785,000 visits are expected or 655 percent more than in 1959. The Wildland Research Center in 1962, predicted a 239 percent increase from 1959 to 1976 in man days spent in the Canoe Area and a 706 percent rise by 2000. The estimates, both by the Forest Service and by the Wildland Research Center, suggest much faster growth in use of the Boundary Waters than for outdoor recreation in general.

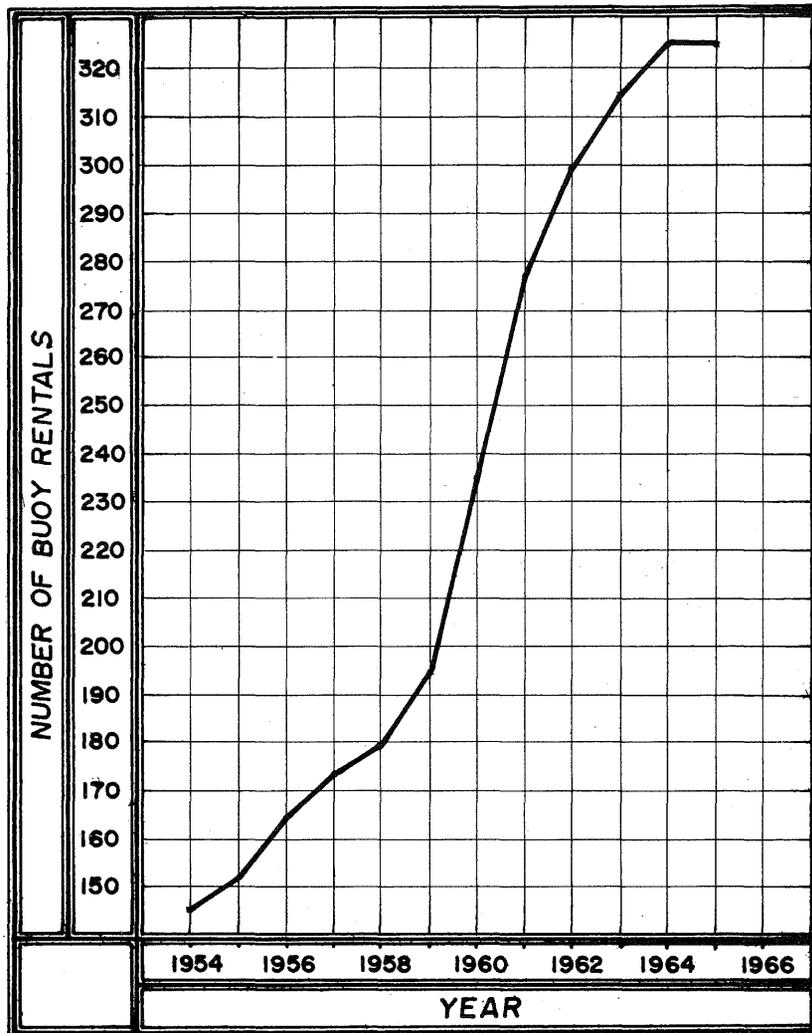
All outdoor recreation activities were predicted to increase 58 percent from 1960 to 1976 and 184 percent by 2000 (O.R.R.R.C., 1962). General camping and boating (other than canoeing and sailboating) were predicted to increase only about one-third as fast as use of the Boundary Waters Canoe Area.

Accurate counts kept by a canoe operator of the railroad portage into Lac La Croix since 1957 shows that the number of canoes increased 83 percent in four years. The rapid growth of young people's camps means still more canoeing. The largest group is the Boy Scout Canoe Base on Moose Lake. In 1948, less than 500 Scouts used the base; in 1961, 2,340 poured through - almost five times as many. In addition to these camps for youth, many camps elsewhere in Minnesota and Wisconsin now send some groups to the area for canoe trips.

The demand for sailing has increased 2.25 times in the past ten years in Minneapolis. In 1964 and 1965, the city lakes have reached capacity for the existing facilities. Beginning in 1966, Minneapolis is considering limiting buoy rentals to city residents only.

The following graph shows the increase in buoy rentals in Minneapolis and also indicates the increase in sailing in the metropolitan area.

# MINNEAPOLIS SAILBOAT BUOY RENTALS



INFORMATION SOURCE: City of Minneapolis  
Park Board

# water skiing

The open water of our famous 14,000 lakes, and the vast network of waterways attract a multitude of outdoorsmen to the sport of water skiing not only from Minnesota, but from surrounding states less endowed with the physical properties necessary for this activity. Most of these people are participants, but in lieu of the growing number of water shows, many spectators are attracted to this sport.

Water skiing can accurately be described as the fastest growing sport in America. The sport started as an aquatic stunt in 1924, and now has become a highly organized activity, claiming over 9,000,000 United States participants. The main reason for the spectacular growth is that it is a sport which can be enjoyed by the entire family. In 1965, the four day Minneapolis Aquatennial brought together more than 200 top American skiers representing 42 states. There were 12,400 qualifying contestants. When the nationals were staged in Minneapolis in 1965, they attracted over 35,000 spectators.

According to O.R.R.R.C., the water skiing demands in the United States will increase by more than 100 percent by 1980 and around 390 percent by the year 2000. An increase in participation rests more upon an increase in the use of boats and an increase in available leisure time than other factors. (Additional information will be included in the future plan.)

# skin and scuba diving

Skin diving, especially SCUBA, demands clear, clean water. These activities are becoming more popular as the participation increases in other associated water-oriented sports, including swimming, boating and fishing. Skin and SCUBA clubs and associations are striving to minimize conflicts with other activities to promote safety. Major problems in these activities lie in access to suitable areas, adequate safety instruction for divers, their protection by certification of equipment and protection from boats.

In 1960 there were approximately 4,000 skin and scuba divers in the metropolitan area. By 1965 this number had increased to 6,000. (More detailed information will be included in the comprehensive plan.)



# events

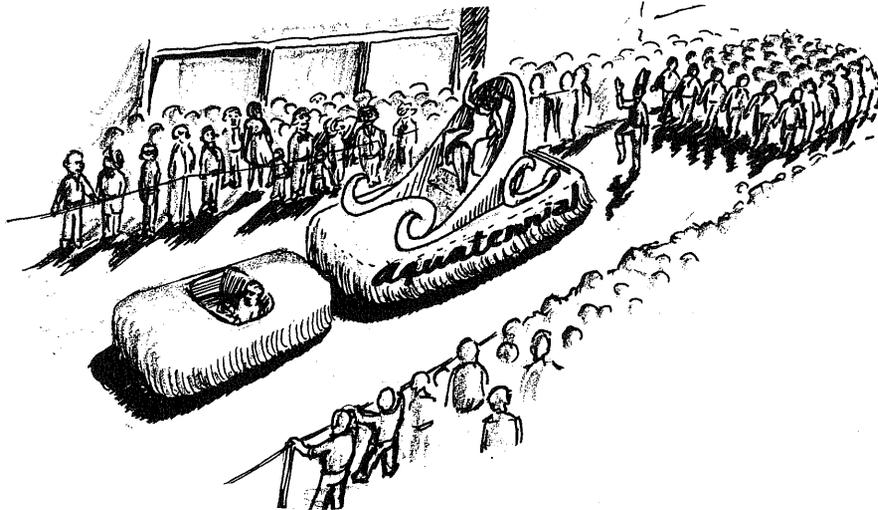
A form of recreation that may involve a number of other forms of activity such as travel, camping or picnicking, is the peculiar form of sightseeing termed viewing "events". The contrasting seasons contribute to the variety in events ranging from the ridiculous to the sublime. From cultural events to wood chopping contests and dog sled races to Easter egg hunts, Minnesota has a wide range of spectator and participant events. The state's rich historical heritage involving the Voyageurs, woodsmen and fur traders, as well as Indian, and various European cultures contribute to this variety.

Spectators find their recreation in both physical activity and observing. A Viking football game or a Twins baseball game may mean considerable excitement and activity on the part of the spectator. Cultural events like music concerts, art exhibits, plays and others involve observers in a more passive manner although for some the activity may be highly stimulating emotionally.

The greatly diversified events list involves such things as watching deer in roadside zoos, fishing derbies, symphony concerts, golf tournaments, flower exhibits, dances and balls, ski races, fairs and festivals, cat, dog and horse shows, canoe races, tennis tournaments, blossom tours, curling games, archery meets, band concerts, rodeos, sailing regattas, air flights, gem and mineral shows, caravan trips, fireworks displays, chess tournaments, fashion shows, Indian pow wows, antique auto races and many others.

An outstanding festival drawing multitudes of people is the annual Minneapolis Aquatennial, a ten-day colorful outdoor summer event featuring parades, stage shows, water ballets, sailboating, speedboating, national water skiing contest, and other sports on eleven lakes in Minneapolis. For over a quarter of a century, the Aquatennial has grown until it now is a high-point of mid-summer festivals. Annually, 2,500 volunteers contribute to its success. An additional 50,000 participate in the 200 events. In a poll conducted in 1955, over half the Minnesota adult population had attended the Aquatennial during the last quarter century. It is estimated that in 1964, at least ten percent of all Minnesotans attended one or more of the events.

The primary purpose of events similar to the Aquatennial is to stimulate business in the area. Taking the Aquatennial as an example, businesses in Minneapolis receive a 30-fold return on their investment each year. Approximately \$3,500,000 has been invested. It is estimated that \$100,000,000 has been returned to Minneapolis from out-of-town participants, visitors and conventioners who visit the city during the festival.



Contrasting with the Aquatennial is the St. Paul Winter Carnival held each year in late January. It is now in its 80th year. Depending on the weather, there are usually between 150,000 and 200,000 spectators who line the streets of downtown St. Paul for the Grand Parade. An estimated 1,500,000 put on warm clothing to see the Carnival's approximately 80 events. National speed skating, ski jumping, dog team sled races, wood chopping, curling, and ice fishing contests, hockey tournaments, snowmobile rallies and other ice and snow activities illustrate the truism that winter can be fun, too.

Although many art, music, drama and other cultural events are not staged out-of-doors, they illustrate the great interest in culture in this state and serve as a drawing card for out-of-staters. At the Walker Art Center in 1950, there were 37,381 persons viewing the art exhibits; in 1955 the number had risen to 110,502; in 1960 there were 157,686 and in 1964 the number had risen to 245,000. At the Guthrie Theatre, now in its third year, there were 193,344 attendants in 1963 and in 1964 the total was 251,334, or a 30 percent increase over the first year.

Other cultural events which draw people from far and wide include the Minneapolis Symphony Orchestra which has been presenting seasonal concerts since 1905, Music Under the Stars, Old Log Theatre and many others.

Many events throughout the state are of major local importance. There is scarcely a weekend in the boating season when class boats, motor boats, or water skiers are not competing. The various Homecoming and "big" games, track meets and baseball games at colleges and high schools probably run into the millions.

Professional football, baseball, hockey and other sports events also claim high attendance records. At the time of this writing, July, 1965, there had been 33 home Twins baseball games attended by 469,000 persons. During the 1964 season there were 80 home Twins baseball games attended by 1,433,116 fans.

In 1958, Minnesota's Centennial Year, a celebration was begun known as Voyageurs Days, commemorating the colorful fur-trade era. The celebration brings bands, parades, baked bean, fried potato and walleye fillet feeds. Many similar events are held throughout the year. (No estimates are available as to the total number attending these events.)

From a modest beginning 104 years ago, fairs have become multimillion dollar businesses. Fairs are important events for this type of sightseeing. Though there are a large number of county fairs and festivals, the most significant is the State Fair.

The 1964 State Fair set a new all time attendance record of 1,228,474 exceeding the previous record set during the 1958 Centennial Exposition by nearly 35,000 admissions. 1964 marked the tenth consecutive year in which more than a million admissions have been reported. From 1960 to 1964, there have been 6,462,306 State Fair visitors. At the State Fair Grounds there are 51 permanent buildings on the 300-acre area, with 28 acres of parks, eight miles of paved streets, 25 miles of sidewalk and an electrical plant capable of taking care of a city of 20,000. There is space for 25,000 automobiles.

The viewing of events frequently introduces a problem in the study of recreational travel flow not shared by other recreational interests. This is the movement of traffic into a central city rather than away from it. Tourist, and for that matter, local attractions to the metropolitan center creates traffic and parking problems that call for consideration of additional facilities. Local attractions include architecture, industry, museums, amusement parks, art galleries and countless others.

Besides attractions within cities, airports, dams, observatories, industrial plants and special sites are also visited. Many of these man-made developments need interpretative services for full understanding and enjoyment.

The following list gives an idea of what was going on throughout July, August and September in Minnesota:

National Indian Contest	Hymn Sings
Centennial Show Boat	Jazz Concerts
Annual Paul Bunyan Carnival	Canoe Derbies
County Fairs	Raspberry Festival
Fishing Derbies	Kids Day Parade
Parades	Plant Tours
Talent Shows	Song of Hiawatha Pageants
Red Lake Indian Pow Wow	Bar-B-Que Days
Fiesta Days	Golf Tournaments
Lighted Boat Parades	Polka Celebrations
Fourth of July Fireworks	Jaycees Aquacade
Chief Bug-Ah-Nah-Ghe-Shig Celebration	Ridiculous Days
Whiz Bang Days	Minnesota USA Day
Calithumpian Parade	Smokey Timbertennial
Art Displays	Timber Cutting Contests
Tennis Tournaments	Queen Coronations
Horse Thieves Detective Picnic	Novelty Events
Band Concerts	Fishermen's Picnics
Twins Baseball Games	Tractor Pulling Contests
Picnics and Barbecues	Paul Bunyan Summer Theatre
Lumber Jack Days	Port-O-Rama Days
Community Sings	Pigeon Show
State Trap Shoots	Apple Orchard Days
Steamboat Days	Music Clinics
Pop Music Ice Revues	Drum and Bugle Corps Competitions
Tours	Resorters Golf Tournaments
Capitol Days Celebration	Babe Ruth Regional Tournament
Water Cades	Indian Princess Beauty Contest
Class Reunions	Antique Show
Norway Days	Folk Dance Festival
Dixie Land Band Concerts	Conventions
Sheriffs Convention	Coaches Clinics

Muskie Days	Corn-on-the-Cob Festivals
Krazy Daze	Pow Wow Days
Water Carnivals	Turkey Days
Bean Hole Days and Flea Market	Fishing Contests
Homecoming Celebrations	Airplane Rides
Farm Management Tours	German Harvest Festivals
Aquatennial	German Band Concerts
Harvest Festivals	Square Dancing
Back to School Days	Mum Gardens Display
Farm-to-Market Days	Corn and Soybean Day
Vikingsword Days	Opportunity Days
Kernel's Parties	Plow Matches
Defeat of Jesse James Days	Bowhunters Tournament
Farmers Market Days	Auctions
Fast Pitch Softball Tournaments	Space Shoot
Box Car Days	Watermelon Days
Steam Engine Days	King Turkey Day
Mulligan and Trap Shoot	Football Games
Ram Show	Kolacky Days
National Barrow Show	Operas

Many events may involve an unsatisfied demand such as turnaway figures. In other cases, there are persons who did not attend an event because they knew the activity would be sold out. These people are in an unexpressed demand class.

#### CONCLUSION

As areas and opportunities are made available for recreation, interest in the forms that can be pursued increase. In other words, availability generates interest.

For many types of outdoor recreation activities, demand is likely to keep pace with the facilities. But, where the resource or facility is limited, interest in that form is not likely to increase as rapidly. If there is high interest and participation in the activity, but facilities eventually cannot cope with the demand, over-crowding is likely to result and this, in turn, leads to a slowing of interest.

Some presently popular activities may be "fads" whose futures will be different. Technological improvements or other unknown factors may provide a wholly new activity not considered in this survey. (One example might be the sport of soaring or the small submarines exhibited at the World's Fair in New York selling for around \$1,000.) The interest people have in various outdoor activities is changeable and often unmeasurable.



**S U P P L Y**  
**S E C T I O N**

# SUPPLY

Before an analysis can be made of what Minnesota needs recreationwise to meet the demands of present and future generations, and before an action program can be developed to meet the needs, an analysis must be made of what the state has to offer now. The following chapter deals with present programs, areas and facilities, and potential areas on the federal, state, county, and municipal levels and presents an assessment of the private sector. Inventory of potential areas is confined initially to those outstanding sites known and desired by the state and its political subdivisions.

As the following pages will show, the supply of outdoor opportunities in Minnesota is vast. To administer the supply, many agencies, both governmental and non-governmental, are involved. There is an interdependence between these agencies. Non-governmental interests are frequently stimulated by the development of public resources. Government depends on non-government organizations to supply certain types of recreation services.

It is the government's (public) agency's role to acquire and manage very large or relatively large tracts, usually of special historic, scenic or waterfront value, to which the public demands access, and which could not be owned and managed profitably by private individuals or firms. Government, for example, need not develop a Disneyland or Paul Bunyan Village but must own a Yosemite or Itasca.

Private enterprise supplies recreation to the public at an acceptable quality and price. It is interested in a satisfactory return at a reasonable cost. Investment by commercial interests in the recreation field are part of the state's over-all economic development.

Membership organizations also supply Minnesotans with recreation. Facilities and services by these organizations are restricted to those requested by their organized group. Voluntary groups supply services to youth, the aged, the handicapped and to families. Membership associations and voluntary organizations are regulated by the government only to the extent necessary to meet health, safety and welfare requirements.

For inventorying Minnesota's recreation areas, the following classification system was used. These classes will be referred to throughout this chapter. (The system was established by the Bureau of Outdoor Recreation.)

## Class I – High Density Recreation Areas (Municipal Parks – Publicly Owned)

Physical Requirements – Physiographic features such as topography, soil type, drainage, etc., should be adaptable to special types of intensive recreation use and development. An attractive natural setting is desirable; however, manmade settings are acceptable. There are no specific size criteria and there is great variation in size from one area to another.

Location – Usually within or near major centers of urban population, but may occur in national parks and forests remote from population concentrations.

Activities – Intensive day or weekend type, such as picnicking, water sports, group field games and other activities for many people. Although high density areas are subject to heavy peakload pressure at certain times, they often sustain moderate use throughout the year.

Developments – High degree of facility development which often requires heavy investment. They are usually managed exclusively for recreation purposes. Development may include a road network, parking areas, bathing beaches and marinas, bath houses, artificial lakes, playfields, sanitary and eating facilities.

Responsibility – Commonly held under municipal, county, regional or state ownership. Many commercial resorts have similar characteristics and collectively provide a significant portion of recreation opportunities for urban population centers.

## Class II – General Outdoor Recreation Areas (Some State and County Parks, Wayside Rest Areas)

Physical Requirements – May have varied topography, interesting flora and fauna within a generally attractive natural or manmade setting adaptable to providing a wide range of opportunities. These areas range in size from several acres to large tracts of land.

Location – Usually more remote than Class I areas; however, relatively accessible to centers of urban population and accommodate a major share of all outdoor recreation. Included are portions of public parks and forests, public and commercial camping sites, picnic grounds, trail parks, ski areas, resorts, streams, lakes, coastal areas and hunting preserves.

Activities – Extensive day, weekend, and vacation use types such as camping, picnicking, fishing, hunting, water sports, winter sports, nature walks and outdoor games.

Developments – Generally less intensive than Class I areas. Includes, but not limited to, access roads; parking areas, picnic areas, campgrounds, bathing beaches, marinas, streams, natural and or artificial lakes. Areas are equipped with some manmade facilities, which may vary from simple to elaborate. Thus, campgrounds may have only the barest necessities for sanitation and fire control or they may have ample and carefully planned facilities such as cabins, hot and cold running water, laundry equipment, stores, museums, small libraries, entertainment and playfields. Other features may include permanent tows for ski areas, fully equipped marinas, lodges, dude ranches and hotels.

Responsibility – Federal, state or local governments, including regional parks and recreation authorities, and private clubs and other forms of private ownership assisted by public agencies on problems of access and development of basic facilities.

### Class III – Natural Environment Areas (Wildlife Management Areas, Forests, Some State & County Parks)

Physical Requirements – Varied and interesting land forms, lakes, streams, flora and fauna within attractive natural settings.

Location – Usually more remote from population centers than Class I and II areas and occur throughout the country and on an acreage basis are the largest class in both public and private ownership.

Activities – Extensive weekend and vacation types dependent on quality of the natural environment, such as sightseeing, hiking, nature study, picnicking, camping, swimming, boating, canoeing, fishing and hunting. The primary objective is to provide for traditional recreation experience in the outdoors commonly in conjunction with other resource uses. Users are encouraged to enjoy the resource "as is" in natural environment.

Developments – Access roads, trails, picnic and campsite facilities and minimum sanitary facilities. There may be other compatible uses of the area such as watershed protection, water supply, grazing, lumbering, and mining provided such activities are managed so as to retain the attractiveness of the natural setting.

Responsibility – Federal, state or local governments, including regional park and recreation authorities and private ownership.

### Class IV Areas – Outstanding Natural Areas (Glacial Lake – Interstate Park)

Physical Requirements – Outstanding natural features associated with an outdoor environment that would merit special attention and care in management to insure their preservation in their natural condition. Includes individual areas of remarkable natural wonder, high scenic splendor, or features of scientific importance. One or more such areas may be part of a larger administrative unit, such as a national park or forest.

Location – Any place where such features are found.

Activities – Sightseeing, enjoyment and study of the natural features. Kinds and intensity of use are limited to the enjoyment and study of the natural attractions so as to preserve the quality of the natural features and maintain an appropriate setting. May be visited on a day, weekend or vacation trip.

Developments – Limited to minimum development required for public enjoyment, health, safety and protection of the features. Wherever possible, access roads and facilities, other than trails and sanitary facilities should be kept outside of the immediate vicinity of the natural features. Visitors are encouraged to walk to the features or into the area when feasible. Improvements should harmonize with and not detract from the natural setting.

Responsibility – Public agencies (federal, state and local) and private landowners, with assistance from public agencies, who may identify, set aside and manage natural features. Generally the federal government assumes responsibility for the protection and management of natural areas of national significance; the states for areas of regional or state significance; and local government and private owners for areas of primarily local significance.

Class V – Primitive Areas  
(Boundary Waters Canoe Area of the Superior National Forest)

Physical Requirements – Extensive natural, wild and undeveloped areas and setting removed from the sights, sounds and smells of civilization. Essential characteristics are that the natural environment has not been disturbed by commercial utilization and that the areas are without mechanized transportation. The area must be large enough and so located as to give the user the feeling that he is enjoying a “wilderness experience”. The site may vary in different parts of the country. These areas are inspirational, aesthetic, scientific and cultural assets of the highest value.

Location – Usually remote from population centers.

Activities – Camping out on one’s own without mechanized transportation or permanent shelter or other conveniences.

Developments – No development of public roads, permanent habitations or recreation facilities except trails. No mechanized equipment allowed except that needed to control fire, insects and disease. Commercial use of the area that may exist at the time of establishment should be discontinued as soon as practical.

Responsibility – Usually federal, but may also be by state agencies or private landowners.

Class VI – Historic and Cultural Sites

Physical Requirements – These are sites associated with the history, tradition or cultural heritage of national, state or local interest and are of enough significance to merit preservation or restoration.

Location – The location of the feature establishes the site.

Activities – Sightseeing, enjoyment and study of the historic or cultural features. Kinds and intensity of use limited to this type of study and enjoyment.

Developments – Management should be limited to activities that would effect such preservation and restoration as may be necessary to protect the features from deterioration and to interpret their significance to the public. Access to the area should be adequate but on-site development limited to prevent overuse. Development should not detract from the historic or cultural values of the site.

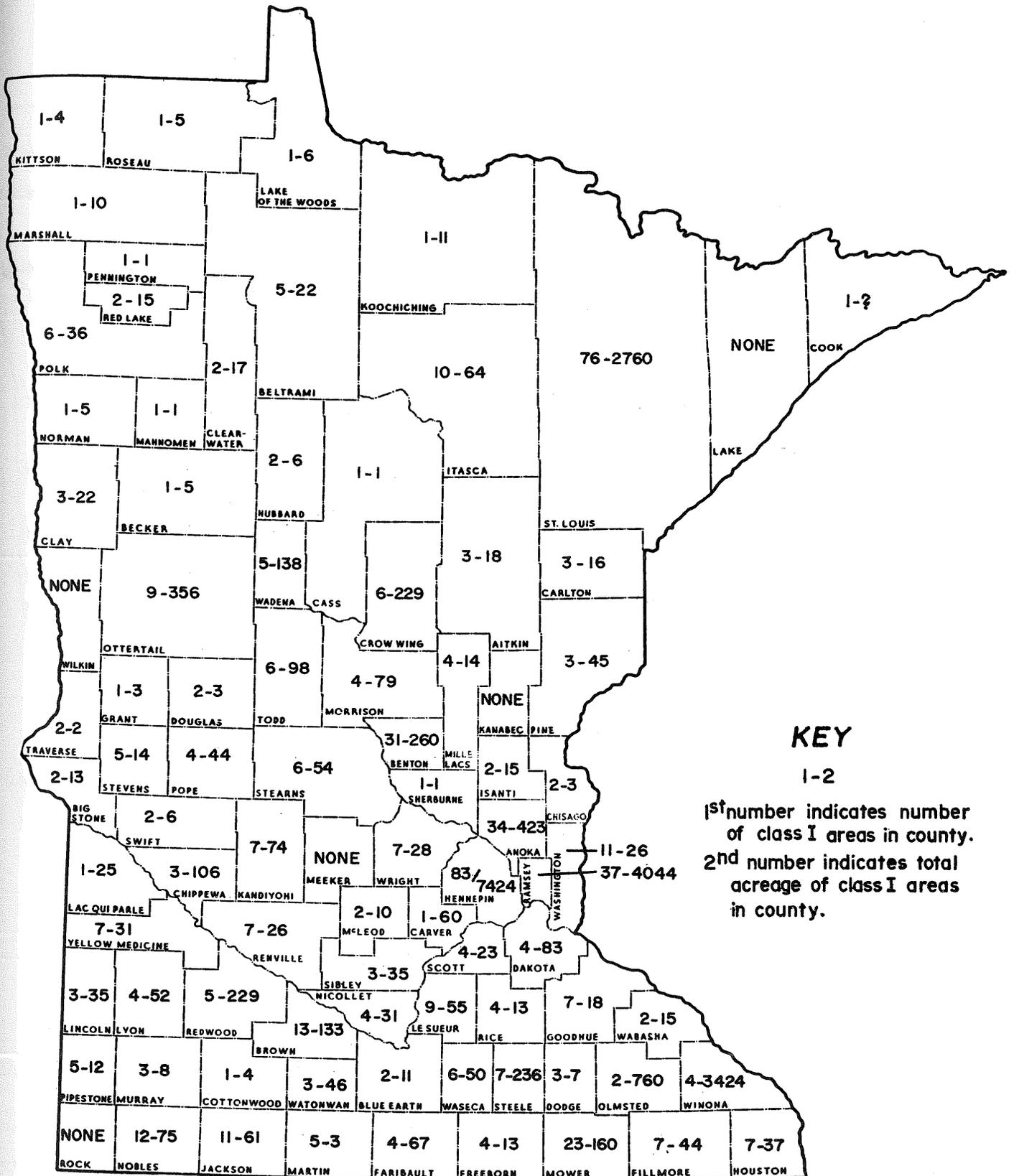
Responsibilities – Public agencies (federal, state and local) and private landowners who identify, set aside and manage historic and cultural areas.

MINNESOTA PUBLIC LAND CLASS BY COUNTY

County	Acres in County	1960 Population	Total Acres Recreation Land	Number of Recreation Areas	Class I Acres	Class II Acres	Class III Acres	Class IV Acres	Class V Acres	Class VI Sites
Aitkin	1,272,960	12,162	416,042	42	18	7,020	409,004			2
Anoka	283,520	85,916	14,812	45	423	100	14,289			
Becker	914,560	23,959	130,637	43	5	16	130,616			1
Beltrami	1,955,200	23,425	341,647	29	22	318	341,307			1
Benton	260,480	17,287	874	36	260	11	603			
Big Stone	334,800	8,954	3,408	20	13	576	2,819			
Blue Earth	481,920	44,385	851	13	11	130	710			1
Brown	395,520	27,676	1,697	19	133	841	723			
Carlton	559,360	29,932	58,609	15	16	86	58,507			
Carver	239,360	21,358	274	3	60		214			
Cass	1,523,200	16,720	536,580	19	1	191	536,388			
Chippewa	374,400	15,320	3,037	15	106	19	2,912			1
Chisago	284,160	13,419	8,855	10	3	75	8,677	100		
Clay	673,280	39,080	5,195	22	22	380	4,793			
Clearwater	659,200	8,864	39,115	17	17	650	38,448			1
Cook	990,720	3,377	707,637	20		166	477,575		229,896	2
Cottonwood	412,800	16,166	3,281	11	4		3,277			
Crow Wing	731,520	32,134	14,525	27	229	608	13,688			1
Dakota	376,320	78,303	1,011	12	83	47	881			1
Dodge	278,400	13,259	91	8	7		84			
Douglas	462,720	21,313	4,123	26	3	1,085	3,035			
Faribault	459,520	23,685	1,451	12	67	26	1,358			
Fillmore	549,760	23,768	1,070	18	44	24	1,002			
Freeborn	459,520	37,891	244	14	13	55	177			
Goodhue	493,440	33,035	1,467	20	18	337	911	201		
Grant	367,360	8,870	2,523	13	3		2,520			
Hennepin	389,760	842,854	13,504	103	7,424	442	5,638			3
Houston	364,800	16,588	14,796	16	37	427	14,332			
Hubbard	637,440	9,962	82,792	24	6	3	82,783			
Isanti	288,640	13,530	3,134	11	15	5	3,114			
Itasca	1,856,000	38,006	576,401	37	64	498	575,839			
Jackson	458,880	15,501	1,778	21	61	201	1,516			
Kanabec	339,200	9,007	11,042	11		23	11,019			
Kandiyohi	551,680	29,987	3,441	27	74	131	3,236			
Kittson	719,360	8,343	11,565	5	4	895	10,666			
Koochiching	2,030,720	18,190	877,081	19	11	13	877,057			
Lac qui Parle	496,000	13,330	3,372	24	25	464	2,883			1
Lake	1,472,640	13,702	837,444	25		913	520,905		315,626	
Lake of the Woods	1,147,520	4,304	308,806	12	6	2,757	306,043			
Le Sueur	298,880	19,906	1,684	22	55	16	1,613			1
Lincoln	346,240	9,651	2,988	29	35	4	2,949			
Lyon	458,240	22,655	5,196	35	52	501	4,643			
McLeod	321,920	24,401	1,082	9	10	1	1,071			
Mahnomen	375,680	6,341	14,431	17	1	16	14,414			
Marshall	2,952,000	14,262	81,154	6	10	283	80,861			1
Martin	465,280	26,986	437	11	3	3	431			
Meeker	409,600	18,887	715	6		1	714			

MINNESOTA PUBLIC LAND CLASS BY COUNTY (Cont'd.)

County	Acres in County	1960 Population	Total Acres Recreation Land	Number of Recreation Areas	Class I Acres	Class II Acres	Class III Acres	Class IV Acres	Class V Acres	Class VI Sites
Mille Lacs	432,000	14,560	51,595	21	14	2,217	49,364			1
Morrison	740,480	26,641	1,147	12	79	112	956			2
Mower	449,920	48,498	382	26	160		222			
Murray	461,440	14,743	4,310	31	8	398	3,904			
Nicollet	293,760	23,196	260	12	31	207	22			1
Nobles	460,160	23,365	584	21	75	13	496			
Norman	566,400	11,253	3,213	11	5		3,208			
Olmsted	419,840	65,532	2,885	10	760	109	2,016			
Otter Tail	1,416,320	48,960	6,748	42	356	424	5,968			1
Pennington	398,080	12,468	245	4	1	4	240			
Pine	913,280	17,004	150,512	26	45	206	150,261			1
Pipestone	296,960	13,605	1,311	13	12	228	1,071			1
Polk	1,297,920	36,182	4,486	34	36	29	4,421			
Pope	459,520	11,914	3,092	14	44	1,290	1,758			
Ramsey	109,440	442,525	4,646	52	4,044	602				5
Red Lake	276,480	5,830	313	5	15	111	187			1
Redwood	559,360	21,718	1,743	16	229		1,514			
Renville	628,480	23,249	68	12	26	2	40			2
Rice	327,040	38,988	791	11	13	628	150			
Rock	310,400	11,864	352	1		352				1
Roseau	1,073,280	12,154	157,359	8	5	1	157,353			
St. Louis	4,295,040	231,588	1,608,271	136	2,760	1,995	1,411,676		191,840	5
Scott	323,960	21,909	511	10	23	2	486			
Sherburne	286,080	12,861	4,810	14	1	40	4,769			1
Sibley	377,660	16,228	221	6	35	1	185			
Stearns	892,160	80,345	1,277	18	54	17	1,206			
Steele	273,280	25,029	733	13	236	12	485			
Stevens	366,720	11,762	1,611	21	14	364	1,233			
Swift	478,720	14,936	3,501	19	6	250	3,245			
Todd	627,200	23,119	2,806	22	98	6	2,702			
Traverse	371,840	7,503	25	7	2	13	10			
Wabasha	342,400	17,007	7,019	20	15	221	6,783			
Wadena	346,240	12,199	15,210	10	138	36	15,036			
Waseca	272,000	16,041	1,523	11	50		1,473			
Washington	268,160	52,432	594	24	26	504	64			1
Watonwan	279,680	14,460	529	12	46	11	472			
Wilkin	481,280	10,560	3,506	6		2	3,504			
Winona	404,480	40,937	28,567	16	3,424	783	24,360			
Wright	458,240	29,935	1,869	26	28	131	1,710			2
Yellow Medicine	458,120	15,523	2,455	29	31	1	2,423			
<b>TOTAL</b>	<b>53,803,520</b>	<b>3,413,864</b>	<b>7,232,979</b>	<b>1,081</b>	<b>22,419</b>	<b>31,680</b>	<b>6,441,217</b>	<b>301</b>	<b>737,362</b>	<b>43</b>



**KEY**

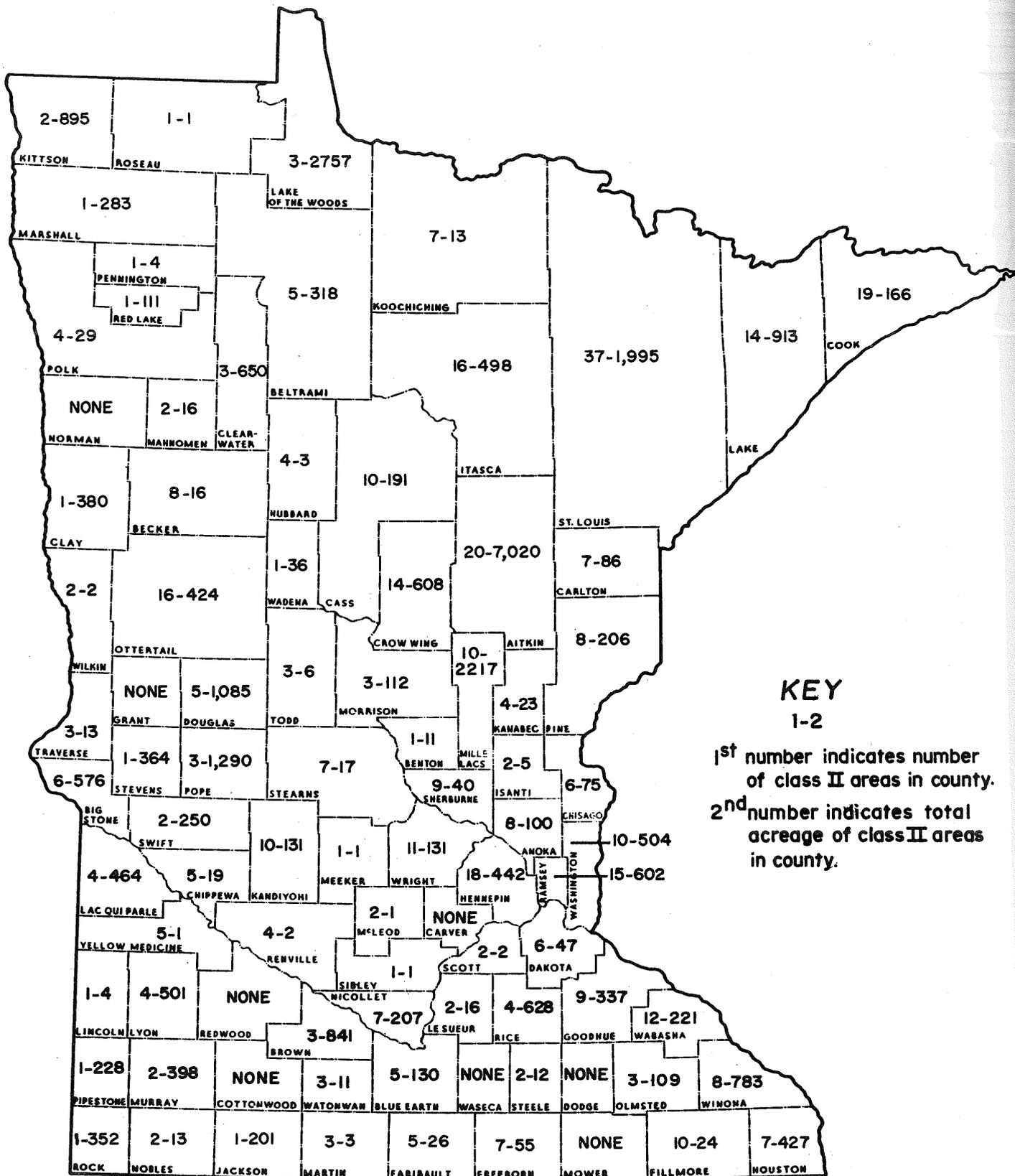
1-2

1st number indicates number of class I areas in county.  
 2nd number indicates total acreage of class I areas in county.

**TOTAL PUBLIC OWNERSHIP OF CLASS I AREA BY AGENCY**

AGENCY	NUMBER OF AREAS	ACREAGE
COUNTY	6	277
MUNICIPAL	591	22,142
<b>TOTAL</b>	<b>597</b>	<b>22,419</b>

NOTE: Because of inventory problems, this map does not include all city, municipal, and county parks or wayside rest areas and public accesses.



**KEY**

1-2

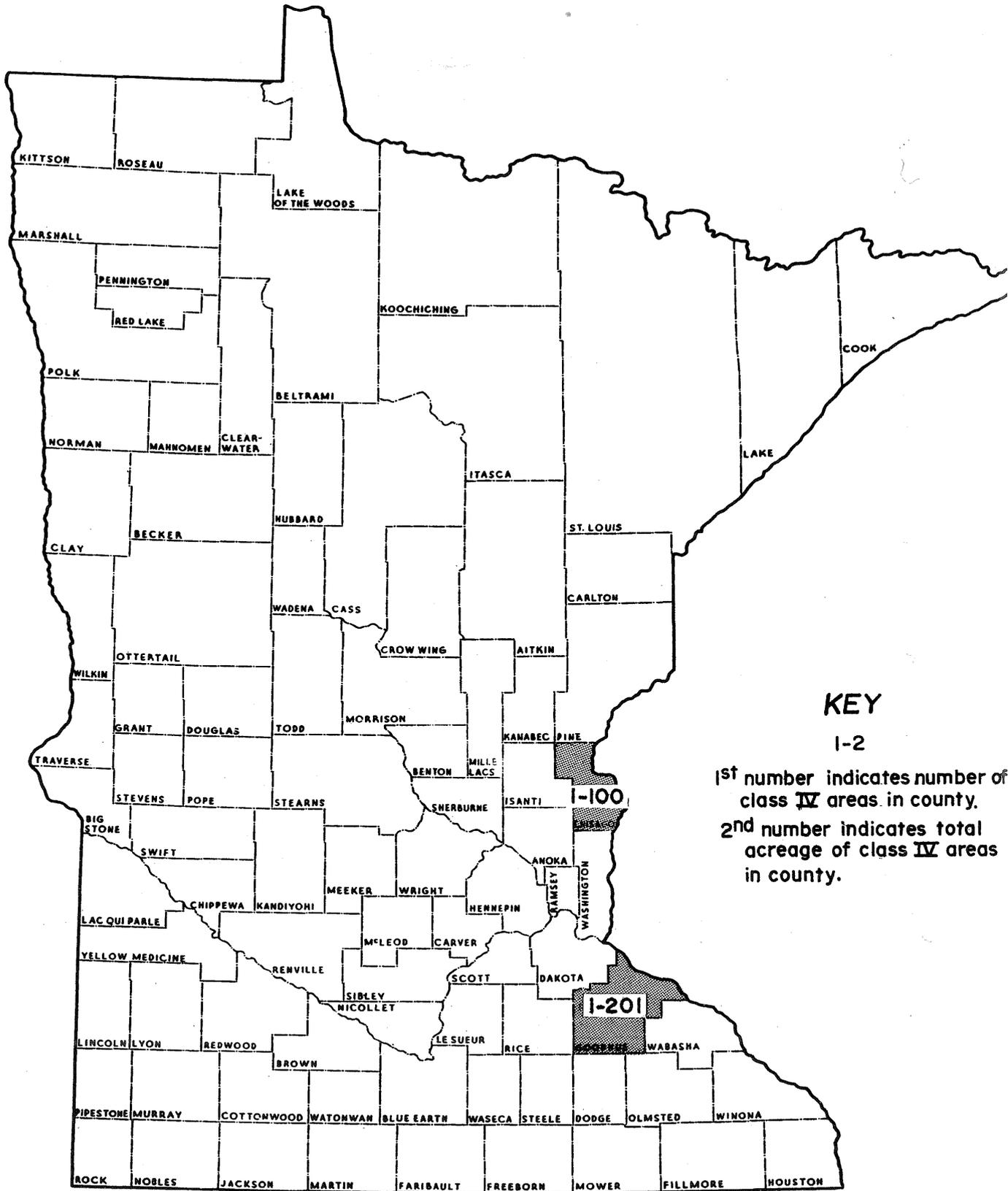
1<sup>st</sup> number indicates number of class II areas in county.  
 2<sup>nd</sup> number indicates total acreage of class II areas in county.

**TOTAL PUBLIC OWNERSHIP OF CLASS II AREA BY AGENCY**

AGENCY	NUMBER OF AREAS	ACREAGE
STATE	424	23,576
COUNTY	65	8,104
<b>TOTAL</b>	<b>489</b>	<b>31,680</b>

NOTE: Because of inventory problems, this map does not include all city, municipal, and county parks or wayside rest areas and public accesses.





**KEY**

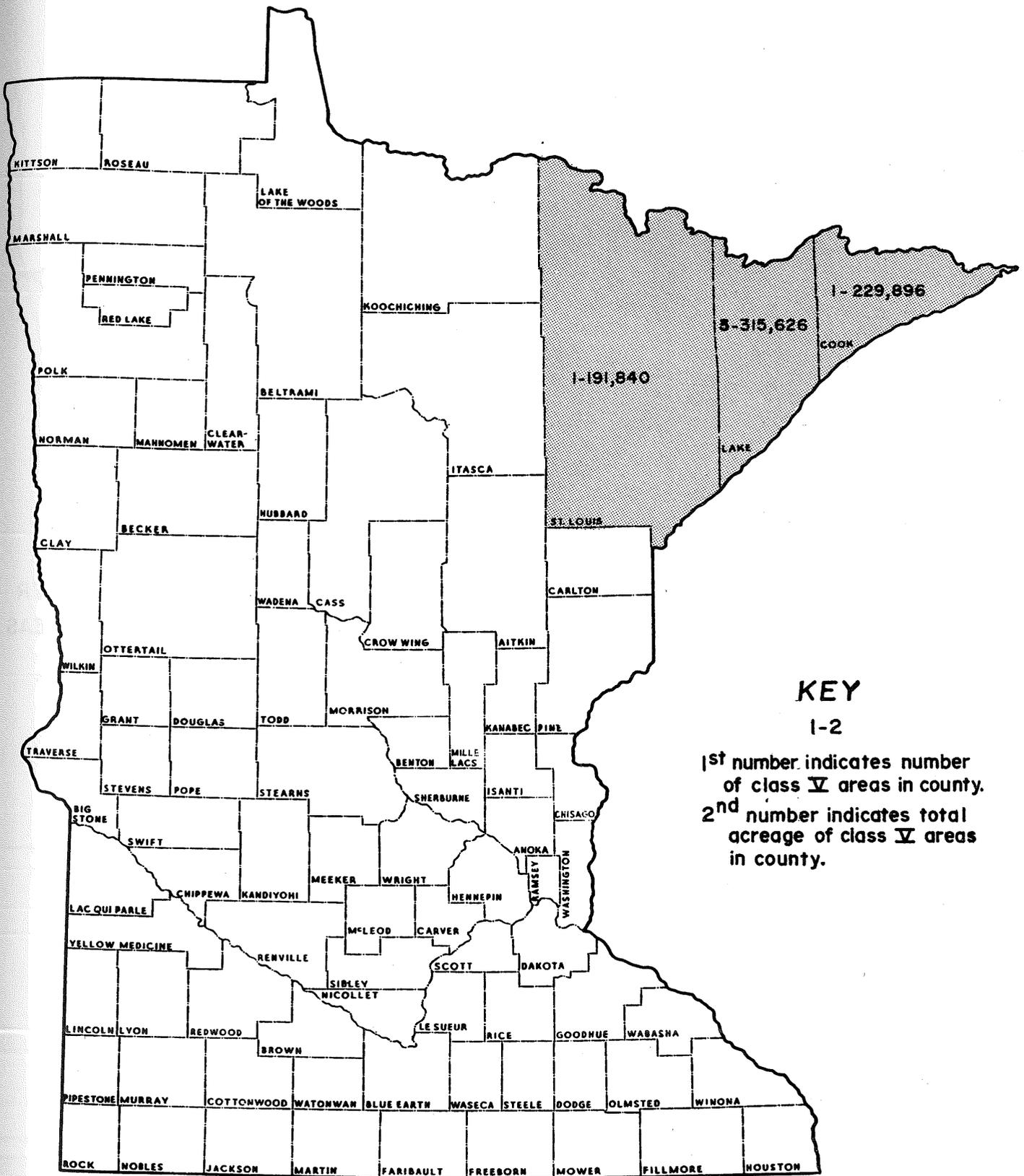
1-2

1<sup>st</sup> number indicates number of class IV areas in county.

2<sup>nd</sup> number indicates total acreage of class IV areas in county.

**TOTAL OWNERSHIP OF CLASS IV AREA BY AGENCY**

AGENCY	NUMBER OF AREAS	ACREAGE
STATE	2	301
<b>TOTAL</b>	<b>2</b>	<b>301</b>



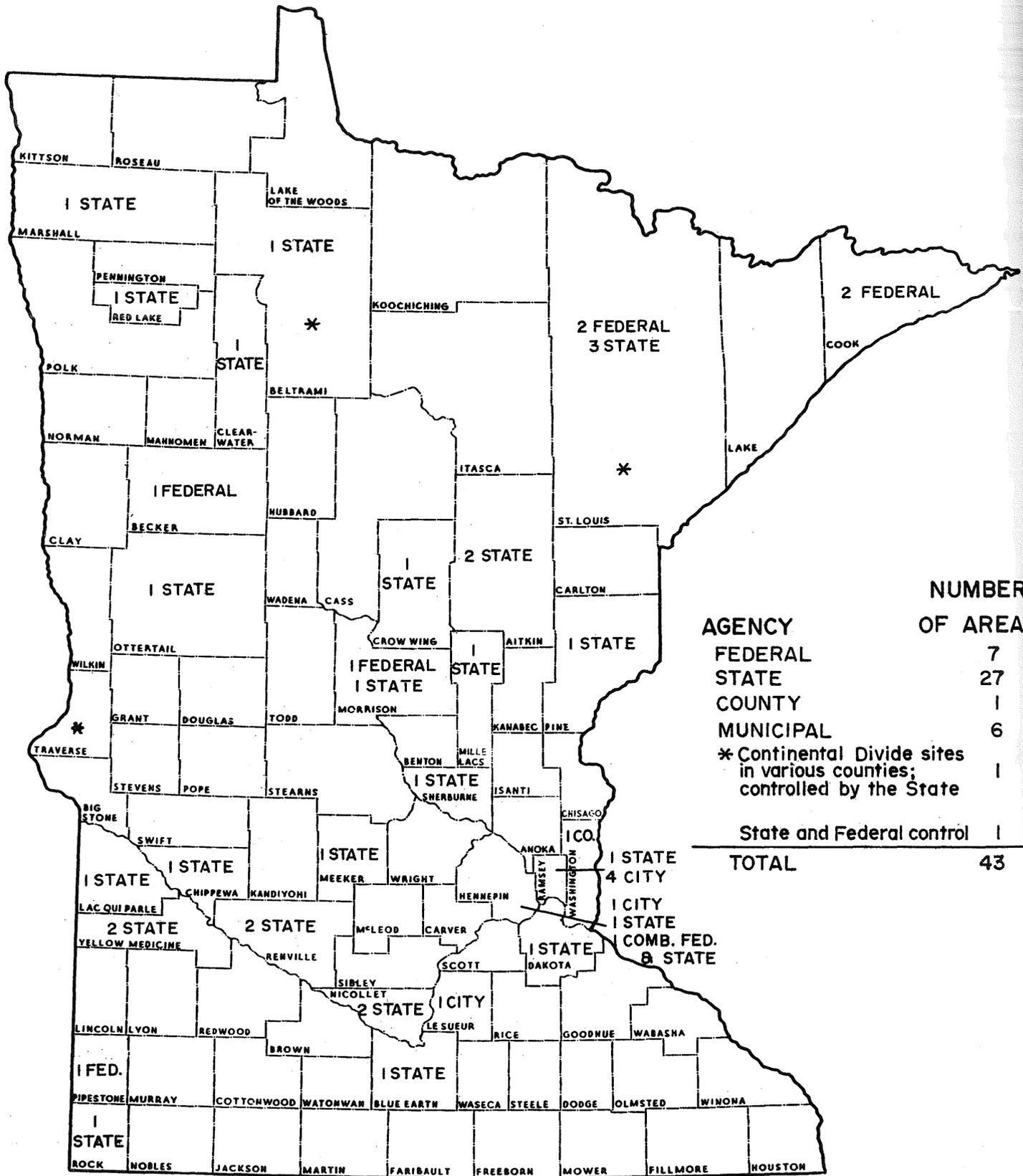
**KEY**

1-2

1<sup>st</sup> number indicates number of class V areas in county.  
 2<sup>nd</sup> number indicates total acreage of class V areas in county.

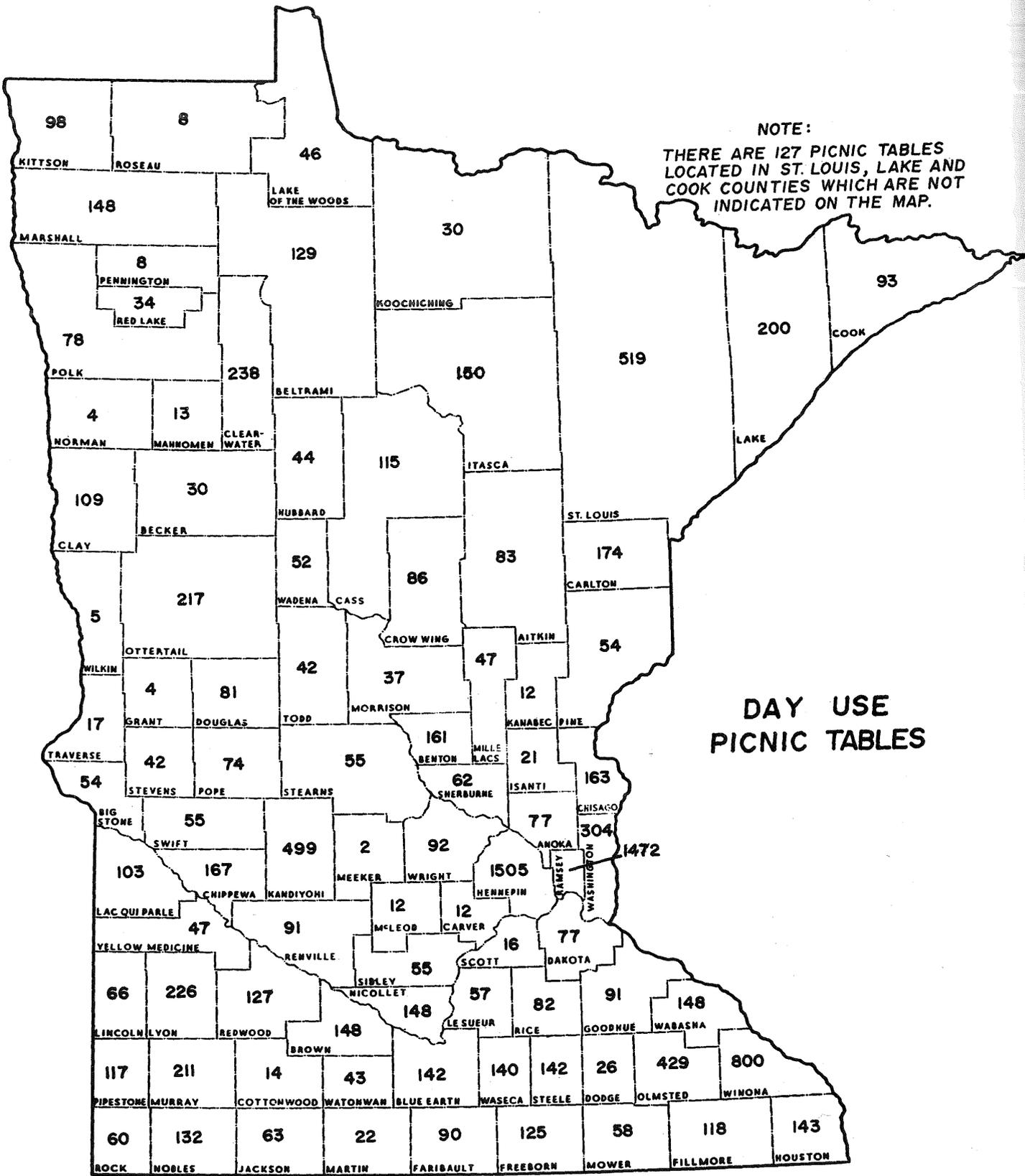
**TOTAL OWNERSHIP OF CLASS V AREA BY AGENCY**

AGENCY	NUMBER OF AREAS	ACREAGE
FEDERAL	1	736,656
STATE	2	706
<b>TOTAL</b>	<b>3</b>	<b>737,362</b>



**TOTAL OWNERSHIP OF CLASS VI AREA BY AGENCY**

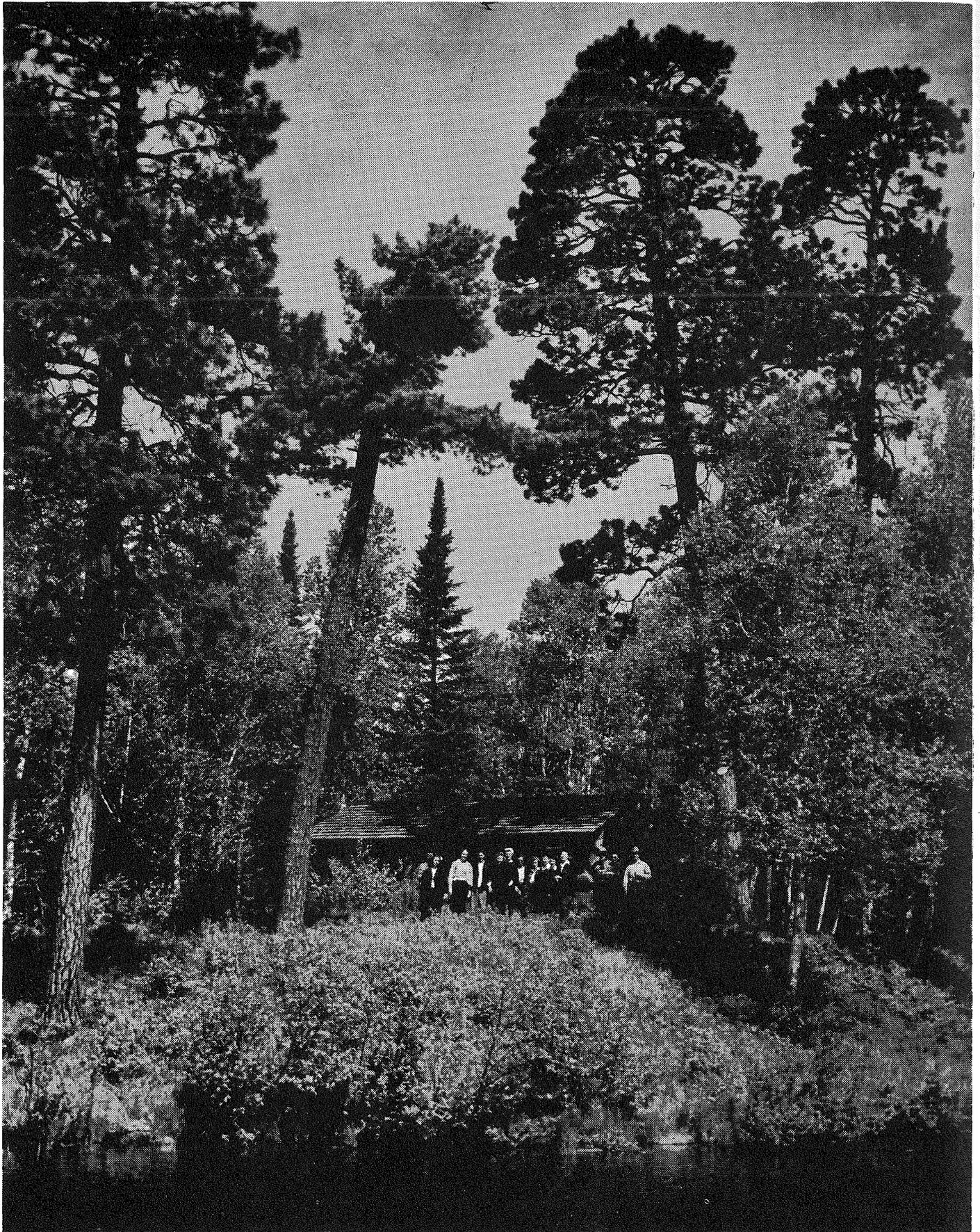




**DAY USE  
PICNIC TABLES**

**NOTE: MUNICIPAL TABLES BASED ON 20% QUESTIONNAIRE RETURN**





**parks**

#### ITASCA

One can look at Itasca's magnificent stands of virgin Norway pine – our State Tree – and reflect that some of these lofty sentinels probably looked down on Henry Schoolcraft when he discovered the source of the Mississippi River in 1832, or perhaps even upon Father Louis Hennepin as he canoed the area in 1680.

## PARKS – FEDERAL – CLASS VI, 598 ACRES (TWO AREAS)

### NATIONAL PARK SERVICE

The first National Park was created by Congress in 1872. Today, there are 31 – one is being considered in Minnesota. There are 80 National Monuments in the country – two are right here in Minnesota. Together, they hosted 137,000 visitors in 1960.

Grand Portage National Monument – 315 acres: In the extreme northeastern corner of Minnesota, on the shore of Lake Superior, is Grand Portage National Monument, which, in the late 1700's was the great distribution center of the famed North West Fur Company of Montreal, Canada. Because of its unique role in history, the area was designated as a National Monument in March, 1960.

The nine-mile portage trail lies between Lake Superior and the unnavigable falls and rapids of the Pigeon River. From here traders and voyageurs of the colorful North West Company transported goods and furs by canoe over 2,000 miles of wilderness of the Canadian Northwest.

Today, the wilderness of Grand Portage is preserved much as it was during the great fur-trade era. A weathering, hewn-timber building on the Lake Superior Bay has been reconstructed on an excavated site once the great depot of the fur company. The Portage bisects an Indian reservation occupied by the Grand Portage Band of the Minnesota Chippewa Indian Tribe.

Pipestone National Monument – 283 acres: For at least three centuries a large proportion of the ceremonial pipes used by American Plains Indians and other tribes was produced from the unusual red stone quarries at Pipestone National Monument, one mile north of Pipestone. This unique area was preserved by an Act of Congress, August, 1937, when it was made a National Monument.

The stone taken by the Indians was the object of reverence and the entire area traditionally held in awe. Even the earliest white men to visit the northern reaches of the Mississippi River heard of this site and its legend. Indian legend tells that tribes fought here to avenge their wrongs. Their blood supposedly flowed so freely that it mixed with Pipestone River's waters and colored the rocks over which it flowed. The Great Spirit, so the legend goes, blessed the area, declaring it Indian land – no war or violence was ever to be raised again on its ground.

Today, by Federal Law, the stone is reserved for the American Indians and is quarried each year under special permits issued by the National Park Service. Thus, final preservation of the quarries and the right of Indians of all tribes to use them has been established.

Pipestone National Monument is part of Mission 66, a ten-year federal conservation program to unfold the potential of national and historic values of National Park System areas. Mission 66 benefits to the monument include a visitor center, trailside and roadside interpretative exhibits and improvements to trails and landscaping. A new visitor center was opened in 1958.

### PROPOSED VOYAGEURS NATIONAL PARK – 107,788 land acres, 58,457 water acres.

Today, a portion of the Voyageurs Highway, lying immediately to the west of Canada's Quetico-Superior area and east of International Falls, is being proposed as a Voyageurs National Park. More specifically, the area being considered is east of Black Bay of Rainy Lake and includes the Kabetogama Lake and peninsula, Rainy Lake south of the Canadian border and east of Black Bay and part of Namakan Lake. In 1962, a field investigation by the National Park Service was done in co-operation with the State of Minnesota and the U. S. Forest Service, resulting in a proposal to establish the park.

There is great opportunity and challenge here to protect the Voyageurs Route, a vital part of the border lakes country and to preserve this region of great scenic, natural and historic significance for the nation's people. Its historic past must be considered and planned before the opportunity is lost.

PARKS – STATE – CLASS II, 22,627 ACRES; CLASS III, 93,916 ACRES; CLASS IV, 301 ACRES; CLASS VI, 148 ACRES – TOTAL 116,992 ACRES, 88 AREAS

### DEPARTMENT OF CONSERVATION – DIVISION OF STATE PARKS

Areas under the jurisdiction of the State Parks Division include state parks, waysides, recreation reserves, and historic sites. As of June 30, 1964, there were 88 units in the system. These units contain 116,992 acres of actual

ownership of land. They range in size from 29,050 land acres in Itasca State Park to several .1-acre state monuments.

The largest portion and most desired state recreation areas are in the northern lakes region, but no part of Minnesota lacks potential recreation sites. This distribution indicates the drawing power of the northern lakes and shoreline and its uniqueness as a vacation center. Distribution in the northern part of the state is also due to Minnesota's settlement and the high cost of land in the southern farmland region.

State Parks – The major units in the system are the 60 areas classed as state parks. State parks are a combination of superlative, scenic characteristics with varied, extensive recreational opportunities, often containing significant historical, archaeological, ecological, geological or other scientific values. Preserving its native landscape and withholding all its natural resources from commercial use are essential to any state park. Ordinarily, they are not less than 500 acres. Twenty-five state parks are currently within this acreage.

State Waysides – There are ten waysides under State Park jurisdiction. (Characteristics of state waysides will be described under the following section or "Waysides".)

State Recreation Reserves – Five of the total park areas are classed as recreational reserves. They are preferably no less than 400 acres and provide recreation beyond the responsibility of local government. Presently, one of these reserves, Zippel Bay, is over 400 acres.

State Historic Sites – The Division operates 12 historic sites including seven historic monuments. (These will be discussed further under "Historic and Archaeologic Sites".)

#### STATE OWNED GROUP CAMPS

<u>County</u>	<u>Name of Camp</u>	<u>Location</u>	<u>Total Yearly Attendance— 1964</u>
Beltrami	Lake Bemidji State Park Group Camps	Lake Bemidji State Park	1,773
Brown	Flandrau State Park Group Camp	Flandrau State Park	1,212
Clearwater	Elk Lake Group Camp Squaw Lake Group Camp	Itasca State Park Itasca State Park	1,742
Douglas	Lake Carlos State Park Group Camp	Lake Carlos	2,008
Kandiyohi	Sibley State Park Group Camp	Sibley State Park	6,064
Lyon	Camden State Park Group Camp	Camden State Park	449
Murray	Lake Shetek State Park Group Camp	Lake Shetek State Park	3,750
Pine	Head of the Rapids Group Camp Norway Point Group Camp St. John's Landing Group Camp	St. Croix State Park St. Croix State Park St. Croix State Park	21,560
St. Louis	Minnesota Vocational Education Camp	N.W. shore Auto Lake	919
Winona	Whitewater Group Camp	Whitewater State Park	7,518
TOTAL			46,995



# MINNESOTA'S STATE PARKS

- STATE PARK
- ◻ STATE PARK HISTORIC SITE
- W STATE PARK WAYSIDE

JUNE 30, 1964

STATE PARK SYSTEM

June 30, 1964

*UNDEVELOPED AS OF JUNE 30, 1964			LAND ACREAGE--Ownership	FISHING		PICNIC TABLES	PICNIC SHELTER BUILDINGS	CAMPING UNITS--MODERN	CAMPING UNITS--PRIMITIVE	SWIMMING BEACH	HISTORIC INTERPRETATION	NATURE TRAIL (SELF GUIDING)	HIKING TRAIL	PRIMITIVE CAMP--SCOUT OR WILDERNESS	GROUP CAMP BUILDINGS	BOAT ACCESS	BOATS
STATE PARKS	COUNTY	LOCATION		LAKE	RIVER												
Banning*	Pine	1 mi. N. Sandstone															
Baptism River	Lake	33 mi. N.E. of Two Harbors	706		x	4							x				
Bearhead Lake	St. Louis	10 mi. E. of Tower	3386	x		18			12				x	x			
Beaver Creek Valley	Houston	3 mi. W. Caledonia	420		x	60			15				x	x			
Big Stone Lake	Big Stone	5, 15 & 17 N.W. of Ortonville	517	x					12							x	
Birch Coulee	Renville	1.5 mi. N. Morton	82		x	31					x	x	x				
Blue Mounds	Rock	7 mi. N.E. Luverne	352			60	x	40		x	x	x	x				x
Buffalo River	Clay	12.5 mi. E. Moorhead	380			93		36		x			x	x			
Camden	Lyon	7 mi. S.W. Marshall	470		x	165	x		58	x			x	x	x		
Caribou Falls	Cook	45 mi. N.E. Two Harbors	92		x	3							x				
Carley	Wabasha	4 mi. S. Plainview	211			6	x		12				x				
Cascade River	Cook	10 mi. W. Grand Marais	1895		x	9			36				x				
Chas. A. Lindbergh	Morrison	2 mi. S. Little Falls	110		x	15	x	10			x	x	x				
Crow Wing	Crow Wing	8.5 mi. S.W. of Brainerd	468		x	30			30				x				
Father Hennepin	Mille Lacs	.5 mi. N.W. of Isle	198	x		32	x	92					x			x	
Flandrau	Brown	N.W. corner of New Ulm	836		x	58	x		58	x		x	x	x	x	x	x
Forestville*	Fillmore	West of Preston															
Ft. Ridgely	Nicollet	7 mi. S. Fairfax	225	x		101							x	x			
Ft. Snelling	Hennepin, Dakota and Ramsey	Junction of Minn. & Mississippi Rivers	342	x	x						x	x	x				
Frontenac	Goodhue	1.5 mi. E. Frontenac Station	501		x				20				x				
Geo. Crosby	Manitou	Lake															
Glacial Lakes*	Pope	3.5 mi. E. of Little Marais	4040	x	x								x				
Gooseberry Falls	Lake	5 mi. S. Starbuck	1287														
Grand Mound*	Lake	40 mi. N.E. Duluth	718		x	130	x	130			x	x	x	x			
Helmer Myre	Koochiching	11 mi. W. International Falls															
Interstate	Freeborn	5 mi. S.E. Albert Lea	120			74	x	65					x	x	x	x	
Itasca	Chisago	At Taylors Falls	168		x	150	x	60			x	x	x	x	x	x	x
	Hubbard, Clearwater & Becker	Midway between Bemidji and Park Rapids	29050	x	x	200		232		x	x	x	x	x	x	x	x
Jay Cooke	Carlton	West of Duluth	8920		x	97	x	95			x	x	x	x			
J.A. Latsch	St. Louis																
Judge C. R. Magney	Winona	14 mi. N. Winona	322			4											
Kilen Woods	Cook	15 mi. E. of Grand Marais	1355			7			24				x	x			
Kodonce River	Jackson	7 mi. N.W. Jackson	201		x	12	x		11			x	x				
	Cook	11 mi. E. of Grand Marais	128	x	x	5							x				

STATE PARK SYSTEM

June 30, 1964

STATE PARKS	COUNTY	LOCATION	LAND ACRES—Ownership	FISHING		PICNIC TABLES	PICNIC SHELTER BUILDING	CAMPING UNITS—MODERN	CAMPING UNITS—PRIMITIVE	SWIMMING BEACH	HISTORIC INTERPRETATION	NATURE TRAIL (SELF GUIDING)	HIKING TRAIL	PRIMITIVE CAMP—SCOUT OR WILDERNESS	GROUP CAMP BUILDINGS	BOAT ACCESS	BOATS
				LAKE	RIVER												
Lac qui Parle	Lac qui Parle and Chippewa	8 mi. N.W. of Montevideo	439			30	x			x			x	x			
Lake Bemidji	Beltrami	6 mi. N. Bemidji	285	x		45	x	146		x			x		x	x	x
Lake Bronson	Kittson	2 mi. E. of town of Lake Bronson	894		x	90	x	48		x			x		x	x	x
Lake Carlos	Douglas	10 mi. N. of Alexandria	1073	x		47		76		x	x	x	x	x	x	x	x
Lake Louise*	Mower	29 mi. S.E. Austin															
Lake Maria*	Chisago	Near Monticello															
Lake Shetek	Murray	3 mi. N. of Currie, 10 mi. S.W. of Tracy	397	x		200	x	80		x		x	x	x	x	x	x
Little Elbow Lake*	Mahnomen	16 mi. E. Waubun	40														
McCarthy Beach	St. Louis	20 mi. N.W. of Hibbing	880	x		120	x	75		x			x			x	x
Maplewood*	Otter Tail	E. Pelican Rapids	311														
Mille Lacs Kathio	Mille Lacs	5 mi. N.W. Onamia	6419	x	x	47		29					x	x			
Minneopa	Blue Earth	6 mi. W. Mankato	116		x	100	x	20					x				
Monson Lake	Swift	3 mi. S.W. Sunberg	199			38	x		x				x				
Nerstrand Woods	Rice	10 mi. S.W. of Northfield	563			51	x		35				x	x			
Old Mill	Marshall	17 mi. N.E. of Warren	285		x	140	x		30	x			x	x			
O.L. Kipp*	Houston & Winona	.5 mi. from LaCrescent															
Rice Lake*	Steele & Dodge	12 mi. W. Owatonna															
St. Croix	Pine	20 mi. E. Hinckley	23592		x	26	x	151		x	x	x	x	x	x	x	x
Sakatah Lake*	LeSueur & Pine	Near Waterville	61														
Savanna Portage	Aitkin	10 mi. N.E. of McGregor	13739	x		5					x		x				
Scenic	Itasca	40 mi. N. of Grand Rapids	1753	x		30	x	88		x	x	x	x	x		x	x
Sibley	Kandiyohi	7 mi. W. New London	1174	x		75	x	125		x	x	x	x	x	x	x	x
Temperance River	Cook	2 mi. E. Schroeder	112		x				28				x	x			
Tower Soudan*	St. Louis	At Village of Tower	982														
Traverse Des Sioux*	Nicollet	.5 mi. N. St. Peter	2														
Upper Sioux Agency*	Yellow	8 mi. S.E. of Granite Falls															
Whitewater	Winona	Midway between Winona & Rochester	748		x	125	x	60		x	x	x	x	x		x	
Wm. O'Brien	Washing- ton	2 mi. N. Marine-on-St. Croix	487		x	125	x	60		x	x	x	x	x		x	
<b>SUB TOTAL</b>			112,050	16	26	1701	25	1718	381	17	13	19	44	23	9	16	12

STATE PARK SYSTEM  
June 30, 1964

Authorized by legislature, 1963 - Undeveloped as of June 30, 1964			LAND ACREAGE - OWNERSHIP	FISHING		PICNIC TABLES	PICNIC SHELTER BUILDING	CAMPING UNITS - MODERN	CAMPING UNITS - PRIMITIVE	SWIMMING BEACH	HISTORIC INTERPRETATION	NATURE TRAIL (SELF GUIDING)	HIKING TRAIL	PRIMITIVE CAMP - SCOUT OR WILDERNESS	GROUP CAMP BUILDINGS	BOAT ACCESS	BOATS
STATE HISTORIC SITES	COUNTY	LOCATION		LAKE	RIVER												
Acton Mon.	Meeker	4 mi. S. Grove City ¼ mi. W. Highway 4	.10								x						
Brook Park Mon.	Pine	Adjacent to Brook Park	.10								x						
Camp Release	Lac qui Parle	2 mi. W. Montevideo, Highway 212	18														
Chippewa Lac qui Parle	Chippewa	8 mi. N.W. Montevideo E. bank of Minnesota River	17								x						
Count Beltrami	Beltrami	12 mi. N. Bemidji near Lake Julia	1								x						
Hinckley Mon.	Pine	Adjacent to Hinckley Highway 48	.10								x						
Jos. R. Brown	Renville	7 mi. S. Sacred Heart	3			4					x						
Milford Mon.	Brown	3 mi. N. Essig, 1 mi. W. New Ulm, Highway 14	1								x						
Moose Lake Mon.	Carlton	Adjacent to town of Moose Lake, Highway 61.	.10								x						
Old Crossing Treaty	Red Lake	10 mi. N.E. of Crookston, N. Bank of Red River	111	x		15					x						
Sam Brown Mon.	Traverse	W. edge of Browns Valley	6								x						
Schwandt	Renville	12 mi. S. Renville	.10								x						
Wood Lake Mon.	Yellow Medicine	12 mi. S.E. Granite Falls	1								x						
<b>SUB TOTAL</b>			158.5	1		19					12						
<b>SCENIC WAY-SIDES</b>																	
Cross River	Cook	25 mi. S.W. of Grand Marais	600		x												
Devil's Track Falls	Cook	1 mi. N.E. of Grand Marais	240		x												
Flood Bay	Lake	Near Two Harbors North Shore Drive	27			6											
Inspiration Peak	Otter Tail	12 mi. W. Parkers Prairie	82			8	x						x				
Pine Tree	Beltrami	1 mi. W. Blackduck	32	x		12			14				x			x	
Ray Berglund	Cook	4 mi. E. Tofte	46			3					x		x				
Sleepy Eye	Brown	In town of Sleepy Eye	5	x			x			x				x		x	
St. Croix Islands	Washington	Above Stillwater	39														
Split Rock	Lake	8 mi. S.W. Beaver Bay	35		x	1							x				
Toqua Lakes	Big Stone	.5 mi. S. Graceville	40	x		34							x				
<b>SUB TOTAL</b>			1146	3	3	64	2		14	1	2		5	1		2	

STATE PARK SYSTEM  
June 30, 1964

STATE RECREATION AREAS	COUNTY	LOCATION	LAND ACREAGE—Ownership	FISHING		PICNIC TABLES	PICNIC SHELTER BUILDING	CAMPING UNITS—MODERN	CAMPING UNITS—PRIMITIVE	SWIMMING BEACH	HISTORIC INTERPRETATION	NATURE TRAIL (SELF GUIDING)	HIKING TRAIL	PRIMITIVE CAMP—SCOUT OR WILDERNESS	GROUP CAMP BUILDINGS	BOAT ACCESS	BOATS
				LAKE	RIVER												
Oronoco	Olmsted	Adjacent to Village of Oronoco	105	x		x											
Pomme de Terre	Stevens	1 mi. S.E. Morris	364	x		20	x						x				x
Schoolcraft	Cass	8 mi. S. Deer River	212		x	25			30				x				x
Split Rock Creek	Pipestone	1 mi. S. Ihlen	228		x	18			7					x			x
Zippel Bay	Lake of the Woods	9 mi. N. Graceton on Lake of the Woods	2727	x		20			20	x			x				x
SUB TOTAL			3636	3	2	93	1		57	1			3	1			4
GRAND TOTAL			116,990 acres	23	31	1877	28	1718	452	19	27	19	52	25	11		22 12

PARKS – STATE (Programs)

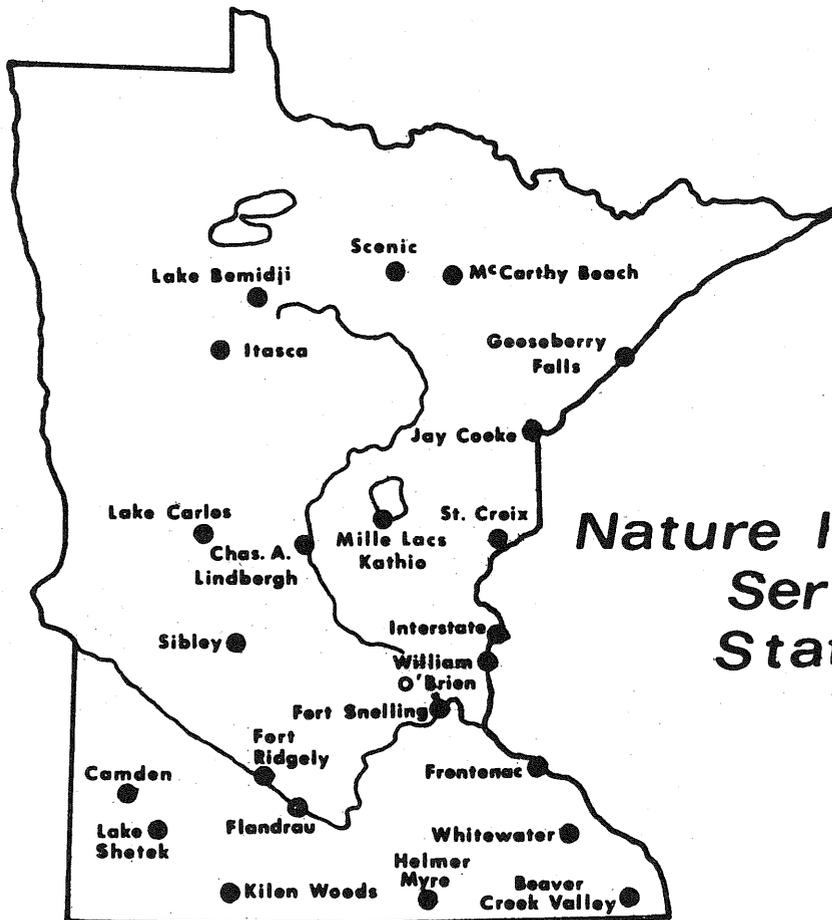
To carry out the programs involved in the state park system, the Division of State Parks, Department of Conservation, is divided into four categories: Interpretative Services, Maintenance and Operation, Revenue Operations, and Park Acquisition and Development.

Interpretative Services – A number of state parks offer “Natural Resources Interpretation Services” to increase the public’s enjoyment and understanding of natural areas. Services are presented free to the public in cooperation with the University of Minnesota, Museum of Natural History.

State Park Interpretative Services

- (1) William O’Brien: Park naturalist conducted trail walks, boat trips and evening programs, self-guiding nature trail.
- (2) Interstate: Park naturalist conducted trail walks, boat trips, evening programs; self guiding nature trail; museum.
- (3) St. Croix: Self-guiding nature trail; museum.
- (4) Jay Cooke: Self-guiding nature trail.
- (5) Gooseberry Falls: Park naturalist conducted trail walks, caravans, and evening programs; self-guiding nature trail.
- (6) McCarthy Beach: Self-guiding nature trail (in preparation).
- (7) Scenic: Self-guiding nature trail; museum.
- (8) Lake Bemidji: Self-guiding nature trail (in preparation).
- (9) Itasca: Park naturalist conducted trail walks, caravans, boat trips, and evening programs; self-guiding nature trail; museum.
- (10) Mille Lacs Kathio: Self-guiding nature trail (in preparation).
- (11) Charles A. Lindbergh: Self-guiding nature trail (in preparation), museum.
- (12) Lake Carlos: Self-guiding nature trail, evening programs.
- (13) Sibley: Self-guiding nature trail.
- (14) Flandrau: Self-guiding nature trail (in preparation).
- (15) Fort Ridgely: Self-guiding nature trail; museum.
- (16) Camden: Self-guiding nature trail.
- (17) Lake Shetek: Self-guiding nature trail; evening programs.

- (18) Kilen Woods: Self-guiding nature trail.
- (19) Helmer Myre: Self-guiding nature trail.
- (20) Beaver Creek Valley: Self-guiding nature trail (in preparation).
- (21) Whitewater: Park naturalist conducted trail walks, caravans and evening entertainments; self-guiding nature trail; museum.
- (22) Frontenac: Self-guiding nature trail (in preparation).
- (23) Fort Snelling: Park Naturalist and historical interpreter conducted trail walks and day and evening programs: self-guiding nature trail; museum.



## Nature Interpretative Service in State Parks



Interpretative services are offered in 23 state parks. Six have park naturalists who conduct nature trails in all 23 and museums in eight parks.

## MAINTENANCE AND OPERATION

The maintenance and operation of state parks is under the general direction of a Chief of Maintenance and Operation, who in turn supervises five Regional Managers, who are charged with the direction of Park Managers and Park Rangers assigned to the 88 state park units. Individual park responsibilities include the maintenance and operation of historic sites, natural areas, picnic areas, campgrounds, group camps, swimming beaches, water supplies, sanitary facilities, roads, trails, parking areas, overlooks, and other similar types of areas and facilities. Funds for maintenance and operation are provided by the legislature through general revenue sources.

## REVENUE OPERATIONS

The Division of State Parks receives revenue from a number of sources. The state park vehicle permit is required for each vehicle entering any state park which has an area in excess of 50 acres. This represents a major source of revenue. Fees are charged for overnight camping, group camping, and for cabin, room and boat rental. Thirty-six state parks have campgrounds in which a fee of \$1.50 is charged for each vehicle per night.

Group camps are available in nine state parks. The facilities usually constitute a complex of frame buildings that will accommodate groups of up to 150 persons. The camps are made available at nominal cost to organizations sponsoring youth programs. Such organizations qualify on a priority basis, depending on whether they are financed through charitable, semi-charitable, or private sources.

The division operates a lodge and dining room in Itasca State Park, and rents cabins in Whitewater and St. Croix State Parks. Another major source of revenue is the operation of refreshment and souvenir outlets in 24 areas.

## PARK ACQUISITION AND DEVELOPMENT

These activities are under the general supervision of the Park Planner. The division is constantly evaluating new park possibilities and land additions to existing state parks. Acquisition and development programs are authorized and financed by legislative action and appropriations. They are further supplemented by various federal aid programs, and to a limited extent, through the use of welfare recipients and reformatory and prison inmates where possible.

## PARKS - STATE (Potential)

New areas for park purposes are becoming increasingly difficult to acquire. Expansion of existing parks is also of prime importance as suitable land is being sliced away for other purposes.

Basic data regarding desirable acreage, present land ownership, the extent of local participation and potential park areas being considered as state parks is being collected on all suitable areas. Assistance is expected from the National Outdoor Recreational Resources Survey and the National Park Service in connection with the Mission 66 Program.

A survey was conducted in 1961 to determine suitable park areas by the Department of Conservation and the National Park Service. Thirty-one areas were suggested for inclusion in the park system. Other locations, equally as significant have been identified but development and land cost estimates have not been prepared. Before they can be considered, specific locations, desirable acreages, land ownership and the extent of local participation must be determined.

## NEW PARKS

Since 1953, 30 new state park units have been authorized by the legislature. Three park units have been authorized for permissive transfer to city jurisdiction.

Parks added to the system since 1953 are as follows:

		<u>Statutory Boundary as of June 30, 1964 (Acres)</u>
Banning	1963	2,766
Bear Head Lake	1961	4,419
Big Stone Lake	1961	2,280
Cascade River	1957	1,895
Cross River	1961	2,560
Crow Wing	1959	729
Devil's Track River	1961	240
Flood Bay	1961	27
Forestville	1963	2,440
Fort Snelling	1961	1,907
Frontenac	1957	950
George Crosby Manitou	1955	5,080
Glacial Lakes	1963	1,367
Grand Mound	1963	64
Judge C. R. Magney	1959	1,355
Lake Louise	1963	1,140
Lake Maria	1963	1,241
Little Elbow Lake	1963	3,112
Maplewood	1963	5,499
Mille Lacs Kathio	1957	9,609
O. L. Kipp	1963	1,360
Rice Lake	1963	956
Sakatah Lake	1963	746
Savanna Portage	1961	15,054
Schoolcraft	1959	212
Temperance River	1957	112
Tower Soudan	1963	982
Traverse Des Sioux	1963	300
Upper Sioux Agency	1963	330
Zippel Bay	1959	2,738
	TOTAL	71,520 acres

Parks deleted from the system and transferred to municipal authority:

Alexander Ramsey	1957	187
Garvin Heights	1961	17
Horace Austin	1955	40
	TOTAL	244 acres

PARKS – COUNTY (Outdoor Recreation Areas) – Class I 277 acres, Class II 8,104 acres, Class III 10,693 acres, – Total 19,073 acres; 71 areas

Outdoor recreationists seek new experiences – canoeists seek new waters, campers and sightseers seek new vistas. The horizons in Minnesota are almost limitless, but many of these new areas are not available to the public until they have been planned, developed and publicized.

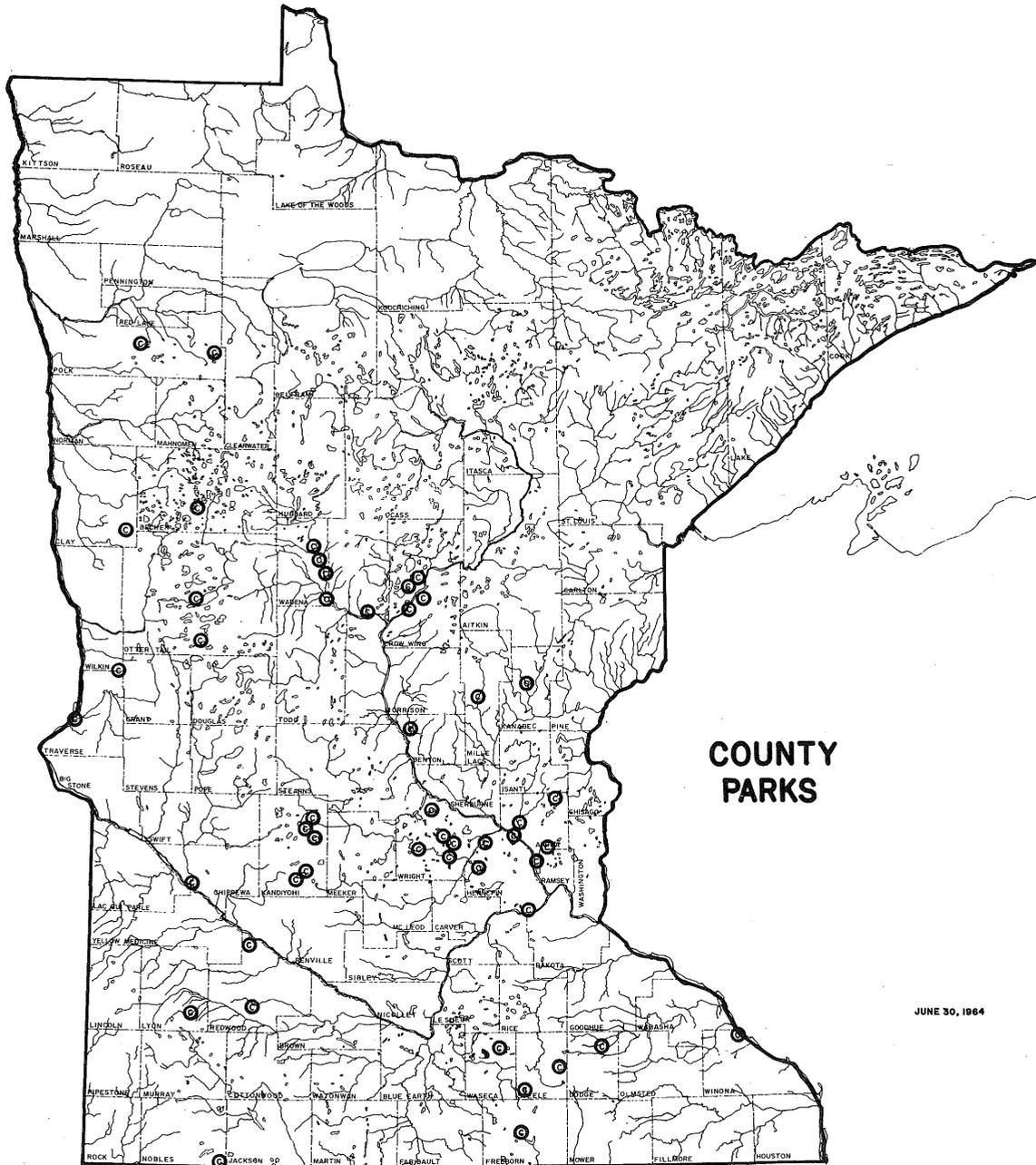
Because of the county park law, passed in 1961, many of these areas may now become available – county parks are seen as one answer to providing more opportunities for these new experiences. The act relating to county parks, M.S. 1961, Chapter 512, provides for the establishment, maintenance and operation of county parks. Such parks are defined as all areas existing or to be acquired by any county under any law for public park purposes, public access to waters, or related outdoor recreational purposes.

Funding may be by tax levy at a rate not exceeding ten percent at the maximum levy authorized by law for the Road and Bridge Fund; contribution from any governmental subdivisions; gifts, grants and loans of money or other

property from the United States, the state, or any other source; fees from use of park units; and bonds issued for purposes of acquisition and improvement of parks.

The County Board of any county having or proposing to establish a county park or parks will have jurisdiction over the construction and maintenance of the facilities and the operation, administration and policing of the area.

Some Minnesota counties have initiated recreational development programs with little more than land and determination. Their progress is to be admired. To date, there are 17 counties with county owned parks comprising a total of 19,073 acres. Considerations given by the county park boards are first, that land is the prime ingredient in attracting recreation seekers and second, that people on vacation have money to spend where they have their fun.



COUNTY PARKS, JUNE 30, 1964  
Source: Bureau of Outdoor Recreation Inventory Forms.

County	Name of Park (Campsite)	Acreage	No. Campsites		Picnic Tables		Boat Access Parking Spaces	
			Existing	Potential	Existing	Potential	Existing	Potential
Aitkin	McGrath	560		5		5		1
	Sandy	240		30		0		1
	Bass Lake	450		30		0		1
	Willow River	320		2		2		1
	Willow River	320		4		0		1
	Twin Springs	1720		4		0		
	Pokegama Creek	41		8		0		
	Long Lake	560						
	Snake River	1540		40		0		
	Highway 65	2			2	5	1	1
	Logan	119		20		0		
	Aitkin	3	3	15		0	1	1
	Libby	289		15		0		
	Palisade	3		8	3	10	1	1
Jacobson	762	3	50	0	0	1	1	
Anoka	Highland	14			20	20		
	Martin Lake	57	3		25	25		
	Rum River	8			20	20		
	Round Lake	2			3	3		
	Golden Lake	4			15	15		
Becker	Chilton	208			0	10	6	10
	Sportsmen's	45			3	10	1	2
Benton	Barton Beach	11			8	8	25	25
Crow Wing	Fawn Lake	85						
	French Rapids	120						
	Crow Wing	4820						
Dodge	Chas. Fitzgibbons	4						
Hennepin	Wawatasso	39						
	Lake Rebecca	1745						
	Morris T. Baker	251	90	90	500	500	100	100
	Elm Creek	847						
	Hyland	1093						
	Hassan	1683						
Kanabec	Indian Mounds	13			12	12		
Kandiyohi	Kandiyohi #1	27	35	35	24	24		
	Kandiyohi #2	25	40	40	35	60		
	Kandiyohi #3	13	40	40	100	100		
	Kandiyohi #4	8			48	48		
	Kandiyohi #5	10	40	40	60	60		
Lyon	Garvin	27						
Polk	Maple Lake	25			25	50	20	20
	Tilberg	25			15	40	25	25
Ramsey Co.	Beaver Lake	25						
	Bellaire	2			10	10		
	Island Lake	92			34	200		
	Joy	29			17	50		
	Keller	248		30		150	30	50
	Lake Gervais	5			8	20		
	Lake Josephine	37			7	15		
	Lake McCarrons	12			38	75	10	20
	Lake Owasso	11			20	50	10	10
	Snail Lake	39			18	50	10	30
	Ramsey Co. Golf Course	107						

COUNTY PARKS, JUNE 30, 1964  
(Continued)

County	Name of Park (Campsite)	Acreage	No. Campsites		Picnic Tables		Boat Access Parking Spaces	
			Existing	Potential	Existing	Potential	Existing	Potential
Ramsey Co.	Tony Schmidt	35			33	75	50	75
	Turtle Lake	9			110	110		
	Wakefield	41			8	10		
	White Bear Beach	7			6	10	20	20
Steele	Beaver Lake	5						
	Rice Lake	7						
Traverse	Traverse	11			10			
	Unnamed	10						
Wadena	Cottingham	36			4	14		
Winona	Winona Farmers	27			40	52		
Wright	Stivewalt	2						
	Riverside	14			2	26		
	Unnamed	10						
	Crawford Lake	4			1	5		
	Schroeder	7						
	Allbright	44			3	28		
	Carl A. Johnson	40				6		
Limestone	2							
TOTAL		19073.	254.	506.	1287.	1983.	311.	396.

POTENTIAL AREAS LOCAL		Acreage		Significant features										Type of use			Activities											
		Total land and water within area	Water surface	Lake (1)	Reservoir (1)	River	Seashore	Forest	Prairie	Desert	Mountains	Biological	Historical or archeological	Geological	Day and weekend	Vacation	Out-of-State target	Tourist en route	Picnicking	Hiking and riding	Camping	Boating	Swimming	Fishing	Hunting	Nature study	Winter sports	Wilderness experience
Parks:	Counties:																											
Carey Lake	St. Louis	1,400	260	x			x				x			x			x	x	x	x	x	x	x			x	x	
Juggler Lake	Becker	400	350	A			x				x			x			x	x	x	x	x	x	x			x	x	
Pine Mountain Lake	Cass	320	1,400	A			x				x			x			x	x	x	x	x	x	x			x	x	
Squaw and Papoose Lakes	Cass	1,440	200	x			x				x			x			x	x	x	x	x	x	x			x	x	
Spring Lake-Hastings Bluff	Dakota	750			x		x				x	x		x			x	x	x	x	x	x	x			x	x	
Green Lake	Isanti	440	600	A			x				x			x			x	x	x	x	x	x	x			x	x	
Berning's Mill	Hennepin	300					x				x			x			x	x	x	x	x	x	x			x	x	
Crow River	Hennepin	300					x				x			x			x	x	x	x	x	x	x			x	x	
Elm Creek	Anoka	2,000	25	x			x				x			x			x	x	x	x	x	x	x			x	x	
Lake Sarah	Hennepin	400	250	x			x				x			x			x	x	x	x	x	x	x			x	x	
Wolsfield Lake	Hennepin	700	50	x			x				x			x			x	x	x	x	x	x	x			x	x	
Whaletail Lake	Hennepin	550	250	x			x				x			x			x	x	x	x	x	x	x			x	x	
Halstad's Bay	Hennepin	700	8,500	A			x				x			x			x	x	x	x	x	x	x			x	x	
Gray's Bay	Hennepin	850	300	x			x				x			x			x	x	x	x	x	x	x			x	x	
Nine Mile Creek	Hennepin	2,000					x				x			x			x	x	x	x	x	x	x			x	x	
Boiling Spring	Scott	30					x				x			x			x	x	x	x	x	x	x			x	x	
Millers Lake	Carver	600	200	x							x	x		x			x	x	x	x	x	x	x			x	x	
Lake Washington	Meeker	30	2,400	A			x				x			x			x	x	x	x	x	x	x			x	x	
Clearwater Mill	Wright	40				x	x				x			x			x	x	x	x	x	x	x			x	x	
Loon Lake	Jackson	245	600	A			x				x			x			x	x	x	x	x	x	x			x	x	
Lake Hanska	Brown	80	1,300	A			x				x			x			x	x	x	x	x	x	x			x	x	
Bass Lake	Faribault	110	130	A			x				x			x			x	x	x	x	x	x	x			x	x	
Byllesby Reservoir	Goodhue	200	1,435	A										x			x	x	x	x	x	x	x			x	x	
Zumbro Reservoir (2)	Wabasha	300	750	A										x			x	x	x	x	x	x	x			x	x	
Trout Creek	Winona	1,000					x				x			x			x	x	x	x	x	x	x			x	x	
Fugle's Mill	Olmsted	23					x				x	x		x			x	x	x	x	x	x	x			x	x	

(1) An "A" indicates water surface acreage is adjacent to area.

(2) Suggested area—qualifications not wholly determined. Further study required.

Source: "Parks for America," National Park Service, 1961. Although most of these potential areas will fit county designation, some could also be considered by municipalities.

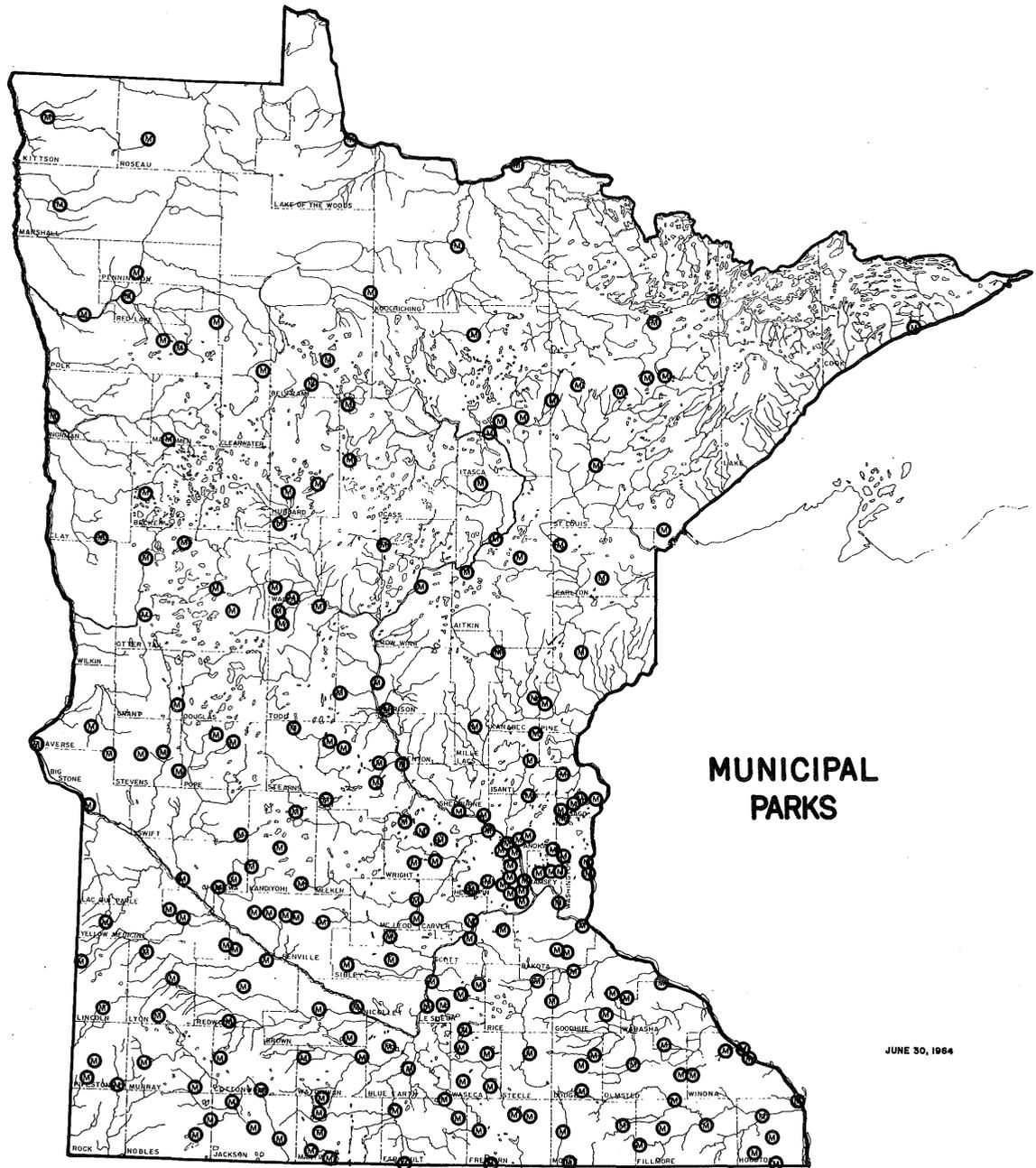
#### PARKS - MUNICIPAL - Class I, 22,463 acres, 587 areas

Municipal parks are usually located within or adjacent to a community and provide recreational activities for the local population. An area standard of approximately ten useable acres per 1,000 population is usually accepted as an adequate amount of land for municipal park purposes. Municipal parks are divided into various types of recreation facilities - neighborhood parks, playgrounds, playfields, and athletic facilities, special community-wide facilities and general community-wide recreation areas.

The activities are particularly appropriate to communities as, in general, they are group activities requiring small acreage, and may be quickly enjoyed by a large percentage of the population for short play periods. Ample provision for such recreation is necessary.

To obtain the data in the following table, questionnaires were mailed to the 849 incorporated villages and cities in Minnesota in May, 1965. The tabulation presents the summary of parks, campgrounds, number of picnic tables and camping sites maintained by 243 reporting municipalities. Statistically, this data cannot be projected to cover all the municipalities in the state with any degree of accuracy.

Near the town of Zumbrotta in Goodhue County is Minnesota's only remaining covered bridge. There are excellent possibilities for establishing this as a city park.



CITY OWNED (MUNICIPAL) CAMPGROUNDS AND PARKS, JUNE 30, 1964  
(In 243 Minnesota Municipalities)

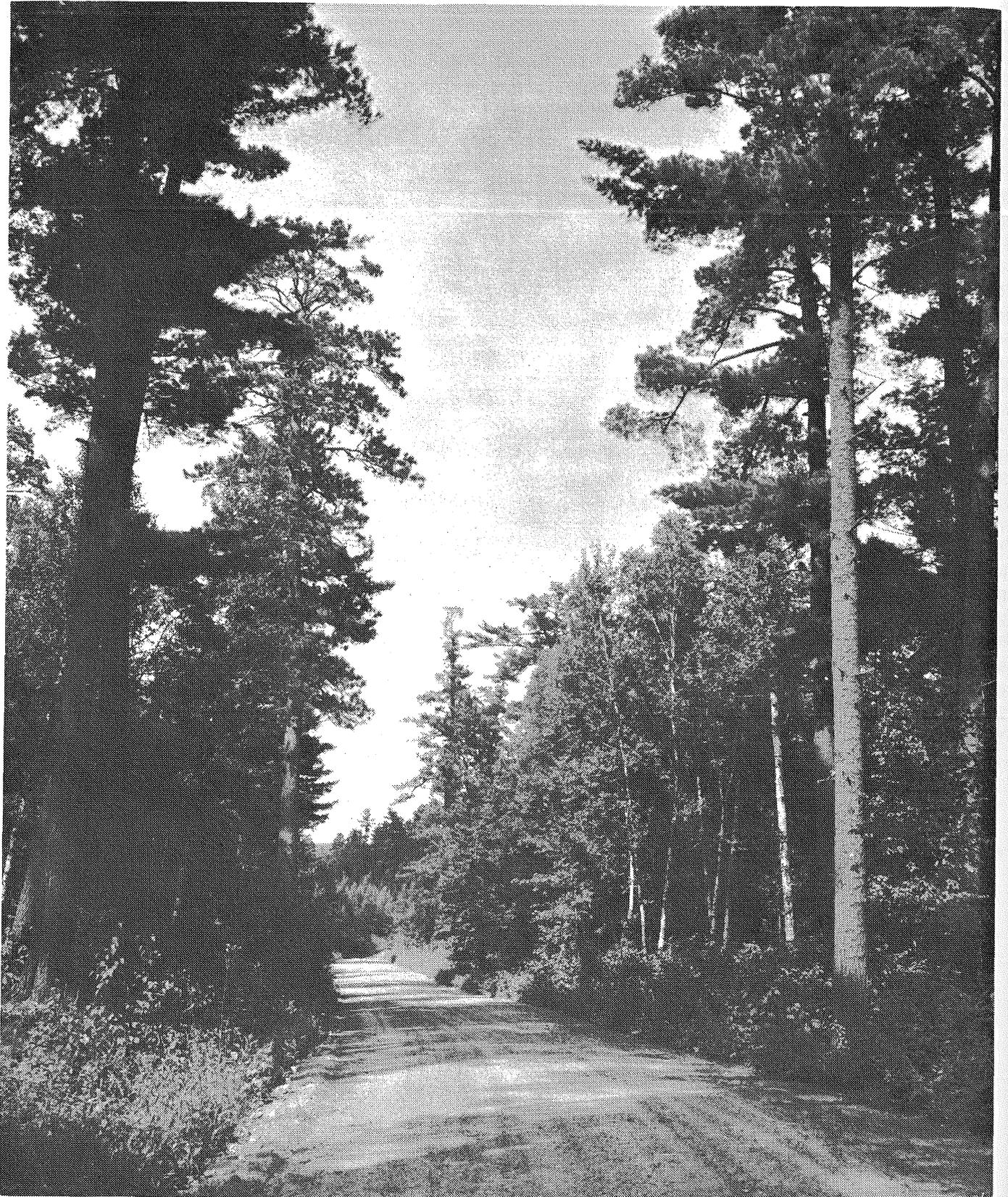
County	Park	Campgrounds	Access	Beach	Acreage	Tables	Sites
Aitkin	3		2		21	31	3
Anoka	34		1		422.6	*	
Becker	1				5	7	
Beltrami	5		4	2	27.5	45	18
Benton	31		1		259.88	161	
Big Stone	2		2	2	16.67	15	11
Blue Earth	2		1	1	12.7	31	1
Brown	13		2	1	132.9	72	
Carlton	3		2	1	16	61	17
Carver	1		1		60	10	
Cass	1		1		1.5	10	
Chippewa	3				106	165	3
Chisago	2		3	3	2.5	12	
Clay	3			1	22	16	1
Clearwater	2			1	17	36	20
Cook	1		1	1	0	45	60
Cottonwood	1				4.2	12	
Crow Wing	5		1	1	109.7	12	3
Dakota	4		1		86.5	70	5
Dodge	3				7.3	26	2
Douglas	2		1	1	33	22	
Faribault	4		1	1	67	69	
Fillmore	7		1		43.5	97	11
Freeborn	4		1		12.5	25	
Goodhue	7				17.7	51	
Grant	1		1	1	3	4	
Hennepin	83		5	9	7423.70	896	
Houston	7			1	38.56	69	
Hubbard	2	1	1	3	8.25	31	6
Isanti	2				15	15	1
Itasca	10		5	4	70.56	18	1
Jackson	11		2	1	63.5	51	
Kandiyohi	5		2	2	46.1	136	3
Kittson	1				4	8	
Koochiching	3		2	3	17.33	9	3
Lac qui Parle	1			1	25	63	1
Lake of the Woods	1		2		6	10	1
LeSueur	9		1	1	59	57	20
Lincoln	3		1	1	35	61	4
Lyon	4			1	52	55	1
Mahnomen	1				1	2	
Marshall	1				10	8	
Martin	5				3.42	16	
McLeod	2			1	11	10	1
Mille Lacs	4		2		13.5	22	2
Morrison	4		3	1	80.27	7	
Mower	23		1		160	55	
Murray	3			2	7.5	9	
Nicollet	4		1		33	32	
Nobles	12		3	2	75.2	129	2
Norman	1				5	4	4

CITY OWNED (MUNICIPAL) CAMPGROUNDS AND PARKS, JUNE 30, 1964 (Continued)

County	Park	Campgrounds	Access	Beach	Acreage	Tables	Sites
Olmsted	2				760	399	
Otter Tail	9	1	4	4	355.8	163	2
Pennington	1				1	*	
Pine	3		2	1	47.25	11	3
Pipestone	5	1			12	98	10
Polk	6		1		36.45	30	2
Pope	4	1		2	54	68	20
Ramsey	34		3	4	3919.70	1154	
Red Lake	2			1	15.5	19	10
Redwood	5		1	2	234.1	126	1
Renville	7				25.5	56	2
Rice	4			1	14.5	20	
Roseau	1				5	6	6
St. Louis	76	3	8	15	2843.04	314	49
Scott	4		1	2	23.5	11	
Sherburne	1		4	1	17	15	1
Sibley	3		2	2	35	50	1
Stearns	6		2	2	54.8	45	50
Steele	7		1	1	245.5	142	47
Stevens	5				19	22	
Swift	2				6	9	1
Todd	6			1	98	28	2
Traverse	2				3	7	
Wabasha	2	1	2	2	17	90	3
Wadena	5		2	1	141	48	50
Waseca	6		2	4	49.7	140	51
Washington	11		3	6	103.95	162	
Watonwan	3	1	2		46	36	*
Winona	4	1	1	3	3446	550	1
Wright	7		4	6	31.6	75	1
Yellow Medicine	7	1			31	44	3
<b>TOTAL</b>	<b>587</b>	<b>11</b>	<b>104</b>	<b>111</b>	<b>22,463.43</b>	<b>6,816</b>	<b>521</b>

\*Number of picnic tables or camping sites not reported.

# scenic and memorial drives, trails and parkways



## MEMORIAL AND TRAIL HIGHWAYS – Total Mileage, 3,206

In Minnesota there are 11 roadways which have been given special designation in addition to the official highway number. Six of these are designated as memorials to outstanding men in Minnesota's history; four are designated as Trails or Roads which provide the automobile traveler with a route of special interest. Another trail of special historic and scenic interest – the Hiawatha Pioneer Trail – became a reality by action of the 1965 legislature. The Great Circle Drive connects with Canada, Michigan and Wisconsin in providing a route around Lake Superior. Minnesota's North Shore Drive is this state's portion of this drive. Except for the North Shore Drive, these roadways are little known and publicized.

### THE CAPITOL HIGHWAY

This was the first specially designated highway in the state. It was so designated by an act of the legislature, approved on April 16, 1927. The drive extends from St. Paul to the southern boundary of the state. The State Capitol is the northern terminus. The 150 mile route goes through Minneapolis and St. Paul on University Avenue, past the State Capitol, then south.

### COLVILL MEMORIAL HIGHWAY

In 1933, the legislature designated the Colvill Memorial Highway to honor the memory of General William Colvill, commander of the famous First Minnesota Regiment at the Battle of Gettysburg. This memorial covers 90 miles on Trunk Highway 19 from Gaylord to Red Wing, the city in which General Colvill died in 1905.

### FLOYD B. OLSON MEMORIAL HIGHWAY

Minnesota's 22nd Governor, Floyd B. Olson, was honored in 1937 when the legislature designated the entire route of Trunk Highway 55 in memory of him. Governor Olson served from 1931 until his death in 1936. The Olson Highway covers 220 miles. Its route in Minneapolis passes through the neighborhood in which Governor Olson grew up.

### EVERGREEN MEMORIAL DRIVE

To honor the World War veterans of St. Louis, Pine and Carlton counties, the legislature in 1947 established the Evergreen Memorial Drive, 56 miles of Trunk Highway 23, Askov to Duluth. Specific provision was made in the act prohibiting the display, outside of municipalities, of signs or advertisements within 300 feet of the drive.

### THEODORE CHRISTIANSON MEMORIAL DRIVE

The legislature named the Theodore Christianson Drive in 1949. Governor Christianson served from 1925 to 1931. The 182 mile drive is in the vicinity of Dawson, Governor Christianson's hometown.

### P. H. MCGARRY MEMORIAL DRIVE

Five miles of Trunk Highway 371 in Cass county were named the P. H. McGarry Memorial Drive by an act of the 1957 legislature. This drive, in the vicinity of Walker, commemorates P. H. McGarry, Walker businessman, early leader in the development of northern Minnesota, and member of the 1909 state legislature.

### YELLOWSTONE TRAIL

Trunk Highway 212 from the Wisconsin state line to the South Dakota state line was named the Yellowstone Trail by the legislature in 1959. This trail is a part of a long-used tourist route to Yellowstone National Park.

### SIoux TRAIL

Minnesota's Sioux heritage was memorialized by legislative designation, in 1961. The 228 mile "Sioux Trail" route runs along the Minnesota River. Nicollet, Renville and Chippewa counties marked their portions of the Sioux Trail with the same design adopted by the Commissioner of Highways.

### GREAT RIVER ROAD

The Great River Road follows generally the course of the Mississippi for 749 miles in Minnesota. This road is part of an interstate route which follows the river from north to south. It has had considerable impact on bringing tourists into the state.

## ARTHUR V. ROHWEDER MEMORIAL HIGHWAY

The most recent (1961) memorial route to be designated by the legislature commemorated Arthur V. Rohweder, long-time president of the Minnesota Safety Council. Because of relocation and construction on Trunk Highway 61 from Lester Park in Duluth to Two Harbors, this memorial highway is not yet completed.

## HIAWATHA PIONEER TRAIL

In 1963, the governors of Illinois, Wisconsin, Iowa and Minnesota began the planning for the Hiawatha Pioneer Trail, one of several Heritage Trails throughout the country being promoted by the American Petroleum Institute. This route covers some 2200 miles from Chicago to the Twin Cities. This roadway was designated by signs following its designation by the 1965 legislature.

## GREAT CIRCLE DRIVE

The 1080 mile Great Circle Drive completely circles Lake Superior. It includes Minnesota's North Shore Drive, Canada, Michigan and Wisconsin and serves as a link in the 4,500 mile Trans-Canada Highway. It has meant a tremendous increase in travel through the wondrous Minnesota north country.

## FEDERAL POLICY

The Federal Recreation Advisory Council has recently recommended that each state develop a system of Scenic Roads and Parkways as part of an over-all recreation plan and as part of a national program. (See M.O.R.R.C. Report "A National Program of Scenic Roads and Parkways.")

President Lyndon B. Johnson, on February 8, 1965, sent a message to the Council Congress proposing a broad program to preserve natural beauty, including a program to, ". . . insure that the roads themselves are not destructive of nature and natural beauty. Second, to make our roads ways to recreation and pleasure."

The President recommended to Congress the use of up to three percent of all federal-aid funds from the present highway law. These funds would be used without matching for the preservation of natural beauty, billboard, junkyard and other controls.

## ROAD BEAUTIFICATION

Federal Funds - Federal funds are presently available for scenic acquisitions, to provide roadside parks, etc., from the 1958 Highway Act, Title 23, Section 319. This act permits the state to use federal-aid money, not to exceed three percent of the total federal-aid to the state without matching state funds. Any amount over three percent must be matched.

Minnesota is the first state in the United States to receive approval for use of these funds. Because the money must be deducted from the total allocation of federal highway funds made available to the states, most states have been reluctant to use this source of money.

Minnesota has received permission to use \$150,000 of this money for beautification features at certain sites on trunk highways 26, 61, 16 and I-90 in southeastern Minnesota between the Iowa border and Winona.

State Funds - A Scenic Board for Billboard Control (14 members) was established by the 1965 Minnesota Legislature. It is a beginning in recognizing the need for beautification of our highways. At the request of the Bureau of Public Roads, the Minnesota Highway Department has recently filed a proposal with Washington for a scenic highway and parkway program for Minnesota. Total estimated mileage is 1,722 at a cost of \$85 million or \$2,234,893 a year to maintain. The following list shows the potential scenic highways and parkways selected from this survey.

North Shore Drive  
Minnesota River Scenic Road  
Mississippi River Scenic Drive  
Metropolitan Scenic Drive  
St. Croix Valley Scenic Drive  
Root and Whitewater River Drive

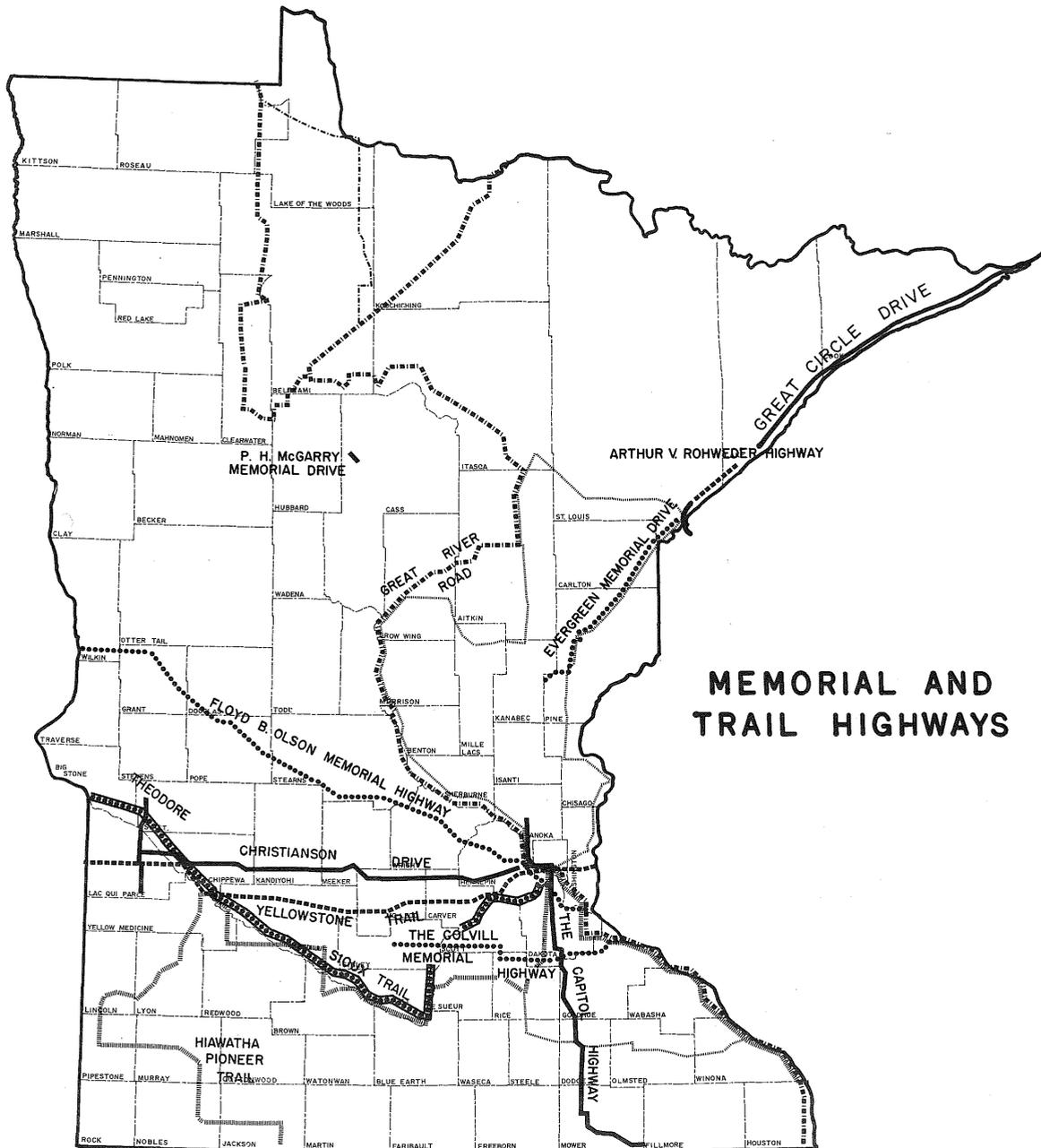
Mille Lacs Lake Circle  
Duluth Skyline Drive  
Jay Cooke Scenic Road  
Evergreen Memorial Drive  
Rainy River Scenic Drive  
Otter Tail Lake Drive

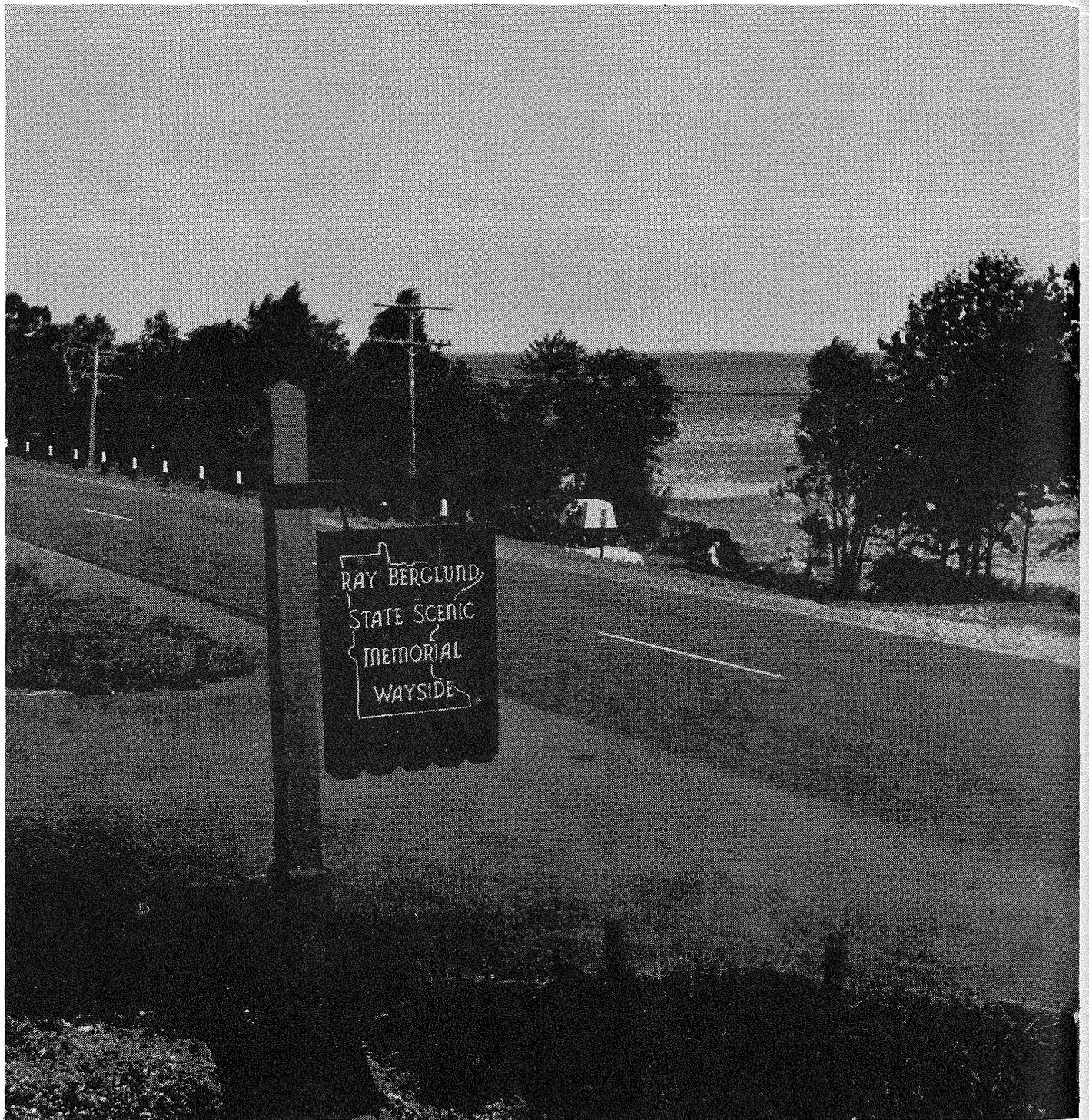
Lake Winnibigoshish Drive  
Mesabi Range Drive  
Grand Rapids Effie Scenic Drive  
Ely Scenic Drive  
Gunflint Trail  
Fernberg Road

The Highway Department has defined scenic roads and parkways as follows:

A scenic highway is a road (in a rural area) or a street (in an urban area) having roadsides, or traversing areas, of relatively high aesthetic or cultural value. Accommodations for picnicking, parking, walking, camping and other recreation potential may be built into the scenic corridor itself, or the highway may provide pleasant access to such facilities.

A parkway is a scenic highway for noncommercial traffic, with full or partial control of access, and usually within a park or a ribbon of parklike developments. It has also been identified as an elongated park, featuring a design for pleasure travel and embracing scenic, recreational, or historic features.





# waysides

WAYSIDES – STATE – CLASS II, 961 ACRES, 352 AREAS (DEPARTMENT OF HIGHWAYS)

## DEPARTMENT OF HIGHWAYS

The Department of Highways had as of August 1, 1965, developed 266 wayside rest and picnic areas and 86 scenic overlook sites. Of the 352 total, 100 acres are associated with historical and geographical markers, while 58 are associated with lake and river access. These areas provide service facilities as follows:

- 352 Wayside rest and scenic overlooks have a total of 1061 picnic tables
- 5 Wayside rests provide overnight trailer camping sites.
- 102 Areas provide toilet facilities.
- 58 Areas have drinking water supplied.

There are 30 wayside areas over five acres in area and total 662 acres. The total state area in wayside use under the Highway Department is 961 acres.

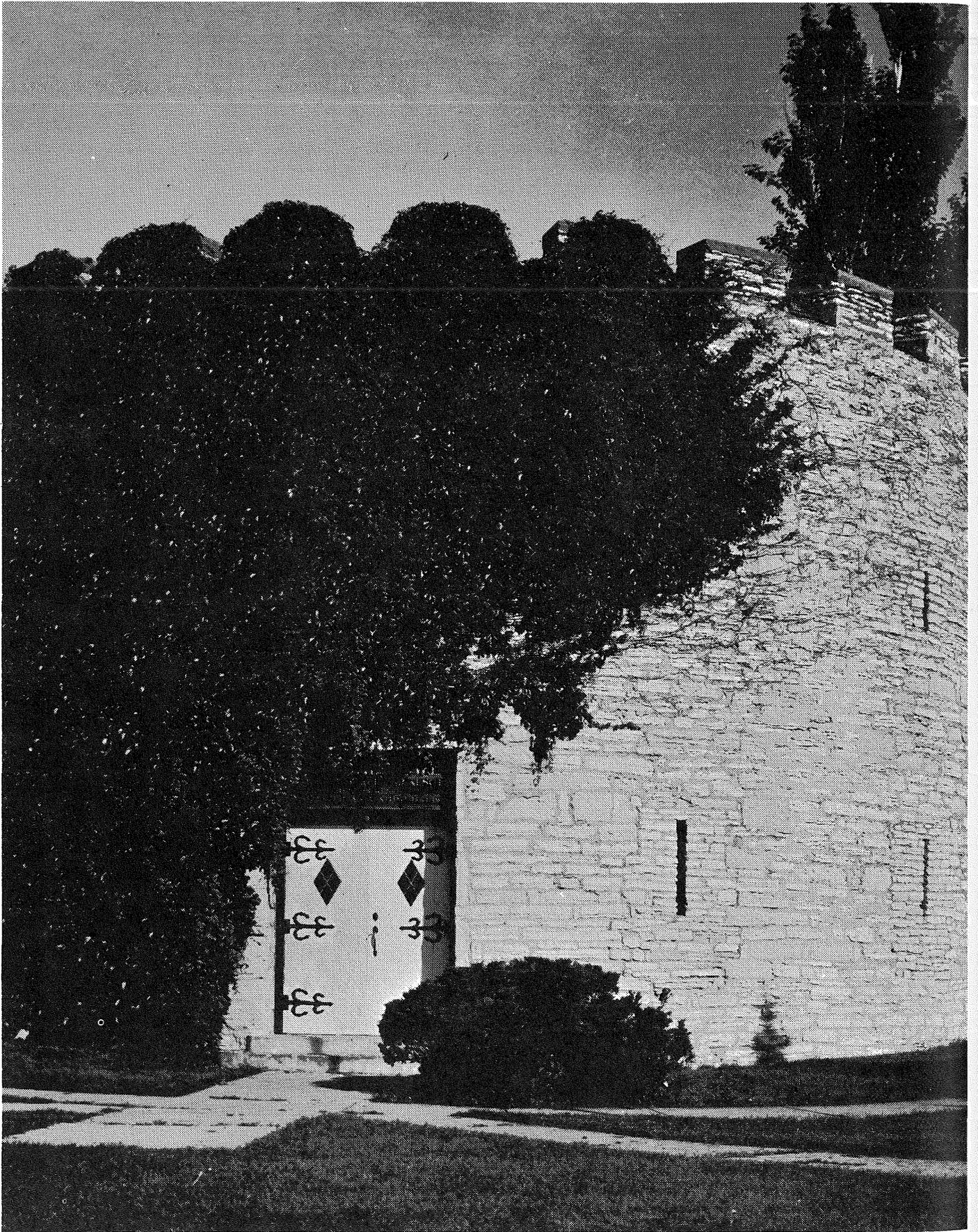
Regular Highway Department maintenance crews maintain the rest areas. They are established to provide the traveler with an off the road area for rest, for a picnic or short stay. The basic facility is a parking area marked by an approach sign and entrance sign. Water source, tables, refuse containers, sanitary facilities and fireplaces are commonly provided.

## DEPARTMENT OF CONSERVATION – DIVISION OF STATE PARKS

There are ten waysides under the jurisdiction of the Department of Conservation. These are included in the state park system (see State Parks). Wayside rests are smaller areas than state parks located along or close to major highways and have scenic, historic or scientific significance. The Department of Conservation's waysides provide travelers with a place to stop, rest, picnic, see historic sites or enjoy the landscape.

## WAYSIDES – POTENTIAL

The Highway Department is suggesting an additional 57 Wayside Rests in order to have rest areas at intervals of 35 to 40 miles between each on the trunk highway system. This would mean a rest area for approximately each hour of driving time. The department has in current planning identified 28 waysides for construction along the Interstate Highway System.



## historic and archaeologic sites

### FORT SNELLING

After this, Wapeassina told us in full detail how their land belonged to the Sioux and the Ojibways, and how the white man had torn it from them by force; how these pale faces were always extending further and growing more dangerous and were collecting daily more troops in their newly built and troublesome Fort Snelling on the Upper Mississippi River.

From speech of Chippewa Chief,  
"Hole-in-the-Day"

## HISTORIC SITES – CLASS VI, 43 SITES (FEDERAL, STATE, COUNTY AND MUNICIPAL – 36 PRIVATE)

Historic sites are places where something significant has happened to merit their preservation. There may or may not be tangible remains such as buildings associated with the event. Historic sites provide an educational experience for both the young and the not so young. They help visualize the past and show how people once lived.

The Minnesota Historical Society lists 79 major historical sites as accepted by M.O.R.R.C., June 30, 1964. This list includes geological and archaeological, Indian, fur trade, mission, Sioux Uprising, historic village, agricultural, government building and industrial sites and historic houses.

Comprehensive plans have not been made to preserve the good examples of pioneer travel routes in the state. Trails, portages, roads and railroads are the early routes of transportation which reflect a vital role in the building of Minnesota. A great many historic portages survive, as do segments of the earliest trails, military roads and railroads. Sections of the Red River Ox Cart Trail, as an example, are well preserved at the Kelley Homestead and Crow Wing State Park.

In listing historic sites, the Minnesota Historical Society has evaluated each in terms of its historical significance. These sites have not been assessed in terms of land area or the costs of acquisition or capital investments needed.

(In 1963, an antiquities act was passed which, among other things, protects archaeological values and regulates field archaeology on public lands at the state, county and municipal levels. As a counterpart to this act, the 1965 legislature passed a Minnesota Historic Sites Act which accomplished the following objectives: the preservation of major historic sites on a state-wide basis and places the authority of the state behind a definite policy to further their preservation; establishes an official designation of state historic sites ((85 are now recognized in the 1965 act)); and provides for the protection of 19 historic sites either located on property owned by the state or the Minnesota Historical Society.)

## HISTORIC SITES – FEDERAL

For a site to be eligible for and receive federal sponsorship, it must possess significant national interest and/or national importance. Seven sites are owned or partially owned by the federal government. Flat Lake Mounds, on the Tamarac National Wildlife Refuge, is administered by the Fish and Wildlife Service. Eagle Mountain, on the Superior National Forest, is administered by the Forest Service. Two sites, Duluth Ship Canal and Minnesota Point Lighthouse are administered by the Coast Guard, and the two National Monuments are administered by the National Park Service, U. S. Department of the Interior. Old Fort Snelling is a combination of state and federal ownership.

## NATIONAL PARK SERVICE, DEPARTMENT OF THE INTERIOR

The federal historic sites act (federal chapter 593) designates the National Park Service as the agency responsible for the direction and administration of the federal program "for the preservation of historic sites, buildings, objects and antiquities of national significance."

In addition to the two National Monuments, Pipestone and Grand Portage, there are four National Historic Landmarks. (The two monuments are reviewed in the Park Section as they are part of the National Park Service Program).

A National Historic Landmark has national designation only. There are no provisions for federal ownership or financing. The four landmarks are located at James J. Hill House, Kathio, Oliver H. Kelley and Fort Snelling. These sites are state-owned with national status.

## HISTORIC SITES – STATE

The Historic Sites Program in Minnesota is administered by the Minnesota Historical Society, State Conservation Department, State Highway Department, University of Minnesota and the Minnesota State Archives Commission.

A state historic site possesses significant state-wide value to the historic heritage of Minnesota. Other criteria generally considered are the site's accessibility and integrity. Twenty-eight historic sites are presently owned or partially owned by the state.

## MINNESOTA HISTORICAL SOCIETY

The Society was founded in 1849 by the first territorial legislature. This makes it older than the state. (Minnesota was admitted to the Union in 1858).

The Minnesota Historical Society is the custodian of the state's historical records and is intimately involved in efforts to preserve historic sites. The Society has the responsibility for preserving and interpreting the state's history in cooperation with other state agencies. Six sites have been given to the Society since 1958. A seventh, Conner's Fur Post in Pine County, is owned by the state, but administered by the Historical Society, 1965.

The Society is a semi-state institution receiving operating funds from the legislature. Specific functions are established by the legislature. It is governed by an Executive Council elected by its members.

#### DEPARTMENT OF CONSERVATION – DIVISION OF STATE PARKS

The Department of Conservation, Division of State Parks, is the state agency which administers the greatest number of historic sites. The Department is responsible for a number of state monuments. Historic sites are interpreted with the advisory assistance of the Historical Society.

#### DEPARTMENT OF HIGHWAYS

The Department of Highways erects and maintains historic markers along trunk highways.

#### UNIVERSITY OF MINNESOTA

The University of Minnesota presently owns and administers one historic site.

#### MINNESOTA STATE ARCHIVES COMMISSION

The Minnesota State Archives Commission was established by an act of the legislature in 1947 to guide the preservation and reproduction of public records of the state. Membership includes the Attorney General, the Commissioner of Administration, the Public Examiner and the Director, Minnesota Historical Society.

#### HISTORIC SITES – COUNTY AND MUNICIPAL

A regional or county historic site is one of historic significance to the immediate area. A good example is the first court house in Pope County, a log structure at Glenwood. Five historic sites are owned by municipalities and one by a county.

Numerous counties and local municipalities are undertaking comprehensive planning programs and inventorying their recreational and economic assets. With the exception of the planning programs in St. Louis, Lake and Washington counties, there has been limited recognition of local historic sites. According to M.O.R.R.C., most counties feel that historic sites are beyond their resources.

Currently, the county efforts are oriented mainly toward developing county museums and preserving school houses and log cabins. Counties and municipalities are becoming increasingly active in providing historic markers. Some County Historical Societies provide lectures to schools and other groups upon request.

#### HISTORIC SITES – PROGRAM

The urgency for an adequate state-supported historic sites program has become critical in recent years.

The program for the establishment and maintenance of historic sites as authorized as a part of the Omnibus Natural Resources Act by the 1963 legislature, provides for an effective state-wide effort to preserve, interpret and mark historic sites in Minnesota. This program is under the direction of the Minnesota Historical Society in cooperation with the Departments of Conservation and Highways.

The historic sites program will enable the Minnesota Historical Society and the Department of Conservation to perform three vital functions long needed for the state. (1) Administering and developing the six historic properties owned by the Minnesota Historical Society. (2) Providing the technical assistance to county historical societies on the problems relating to historic sites throughout the state. (3) Assisting in the development of interpretative programs (museum exhibits, markers and publications) in the state parks that preserve historic sites.

During the 1965–67 biennium, interpretative programs are slated for Fort Ridgely and Itasca State Parks. Acquisition of Redwood Ferry and the Lower Sioux Agency near Morton is scheduled for 1965. Additional property will be acquired at the William G. LeDuc estate at Hastings. In 1967, interpretative programs have been budgeted for the Oliver H.

Kelley Homestead near Elk River, the Joseph R. Brown Wayside near Sacred Heart, the Seppman Mill near Mankato, the Upper Sioux Agency near Granite Falls, Crow Wing State Park near Brainerd and Old Mill State Park in Marshall County.

## HISTORIC SITES – MONUMENTS, MARKERS AND MUSEUMS

### MONUMENTS

Since the beginning of the Historic Sites Program, Minnesota legislatures have established 23 state monuments; 16 of which relate to the Sioux Uprising; others are located in cemeteries. The state monument program has been heavily weighed toward the commemoration of graves. All but one of the monuments is in the form of a shaft or statue. The last monument to be established, the Sam Brown House is a distinct exception, for it consists of a historic log cabin owned and maintained by the state and marked with an appropriate plaque.

The first state monument was established at Fort Ridgely in 1873, the last at Browns Valley in 1929. Eighteen of the 23 existing monuments were erected before 1920. This important element in Minnesota's Historic Sites Program, has been inactive for 36 years.

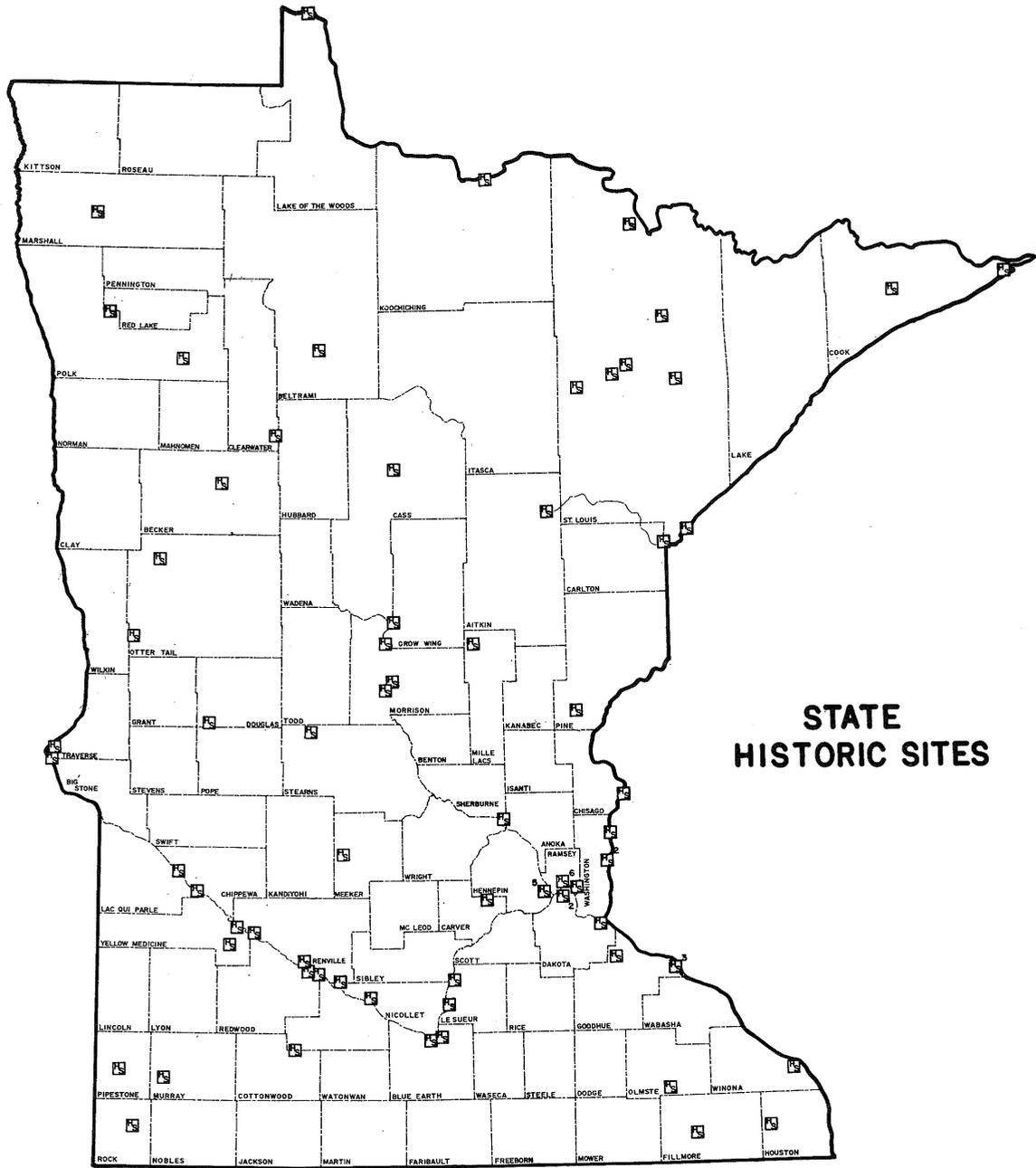
While all monuments are owned by the state, 12 are locally maintained, four receive small grants-in-aid from the state, six are located in state parks and one is maintained by the Highway Department.

### MARKERS

"Roadside history" in Minnesota began in the 1930's under a Work Projects Administration Program and was sponsored jointly by the Minnesota Historical Society and the Highway Department. There are believed to be over 140 historical markers erected in the state, but 109 were inventoried.

### HISTORIC SITES MUSEUMS

Minnesota has 14 historic sites museums. Four are maintained by the Historical Society, 8 by State Parks and two by the National Park Service. Museums owned by private interests or local communities have not been inventoried.



## STATE HISTORIC SITES

JUNE 30, 1964

MAJOR HISTORIC SITES – JUNE 30, 1964

Federal	County	Location	Commemorating
Flat Lake Mounds	Becker	N.E. of Detroit Lakes within the Tamarac National Wildlife Refuge.	One of few remaining groups of undisturbed burial mounds in Minnesota.
Pipestone Quarry	Pipestone	Within Pipestone National Monument 1 mi. N. City of Pipestone.	One of the Nation's best known Indian sites. In "The Song of Hiawatha", Henry Wadsworth Longfellow immortalizes this area. Indians gathered here to obtain red stone and carve their ceremonial pipes.
Grand Portage	Cook	Within Grand Portage National Monument. North Shore of Lake Superior. Western tip of state or Canadian border.	Headquarters of North West Fur Company, late 1700's. One of the nation's most important fur trade sites.
Eagle Mountain	Cook	Within Superior National Forest.	Highest point in state, 2,301 feet.
Duluth Ship Canal	St. Louis	City of Duluth	Site influenced development of Duluth Harbor.
Minnesota Point Lighthouse	St. Louis	City of Duluth	Lighthouse operated 1858–1878
State –			
Minnesota Man	Otter Tail	Three mi. north Pelican Rapids.	First American skeleton to be discovered in geologically dated Ice Age deposits of some 11,000 years ago.
Fort Ripley	Morrison	Mississippi River within Camp Ripley between Brainerd and Little Falls.	State's second military post, 1848–1877. Associations carried out with Winnebago, and Chippewa Indians. (See Old Crow Wing.)
Source of the Mississippi River	Clearwater	Itasca State Park, 23 mi. N. Park Rapids.	Source of the Mississippi River.
Old Crossing	Red Lake	In Old Crossing Treaty Historic Wayside on Red Lake River near Huot.	Site of treaty, 1863, paving way for settlement of Red River Valley. Important Red River ox cart crossing.
Acton	Meeker	Three mi. South, 1¼ mi. west, Grove City.	First Indian attack – in Sioux Uprising of 1862.
Old Crow Wing	Crow Wing	Junction of Crow Wing and Mississippi Rivers. Crow Wing State Park.	One of the state's oldest ghost towns. Scene of Indian battle 1768. Once Chippewa settlement, fur posts, crossing of Red River Oxcart Trail over Mississippi River.
Bourassa's Fur Post	St. Louis	One mi. N.W. Crane Lake at mouth of the Vermilion River.	Site of long occupied French post (1730's). British posts later controlled access to St. Louis River canoe route.
Lac qui Parle Mission	Chippewa	In Chippewa Mission State Historical Wayside. Southeast end of Lac qui Parle Lake. Eight miles N.W. of Montevideo.	Protestant Mission, nucleus of white settlement in Minnesota Valley. Site of first school and church in valley. First cloth in valley woven here. Site where Bible first translated into Sioux language.
Birch Coulee	Renville	Birch Coulee State Park, 1.5 mi. North of Morton.	Ambush of white troops during Sioux Uprising.
Camp Release	Lac qui Parle	In Camp Release State Memorial Wayside. Two miles west of Montevideo.	Sioux surrendered 269 prisoners at close of Sioux Uprising, 1862.

	County	Location	Commemorating
Ruins of Joseph R. Brown House	Renville	In Joseph Brown State Memorial Wayside, 7 mi. S. Sacred Heart.	Site of "Farther and Gay Castle", home of one of Minnesota's pioneer citizens.
*Upper Sioux Agency	Yellow Medicine	West bank of Yellow Medicine River, 9 miles north of Echo or 8 miles S.E. of Granite Falls. Upper Sioux Agency State Park.	Early focal point in Sioux Uprising. An early day federal installation to serve Upper Sioux.
Chas. Lindbergh House	Morrison	In Chas. Lindbergh State Park, south of Little Falls.	Home of senior Lindbergh, lawyer and controversial political figure. Boyhood home of first aviator to fly alone, non-stop, New York to Paris, 1927.
Old Mill	Marshall	In Old Mill State Park 17 mi. N.E. Warren.	Example of early frame flour mill in western Minnesota.
Soudan Mine	St. Louis	One-half mile N. of Hwys. 1 and 196 at Tower-Soudan. Soudan State Park. Vermilion Iron Range.	First mine to ship Minnesota iron ore. Deepest underground mine in the state.
Count Beltrami Memorial Park	Beltrami	12 mi. N. Bemidji.	Count Beltrami visited here in 1823. He declared Lake Julia source of the Mississippi.
Seppman Mill	Blue Earth	Near Mankato	Finest remaining example of a Dutch windmill in Minnesota.
*Private ownership—1963 legislature authorized acquisition as a state park.			
County —			
Washington County Court House	Washington	Town of Stillwater	Minnesota's oldest remaining county courthouse.
City —			
Brown Valley Man	Traverse	Hwy. 27, N. of Brown Valley	Type site of early bison hunting culture on edge of plains.
Indian Mounds Park	Ramsey	City of St. Paul	Only remaining large mounds in metropolitan area. Represents prehistoric cultures.
Carver's Cave	Ramsey	St. Paul	One of the earliest known state landmarks.
Minnehaha Falls	Hennepin	Minneapolis	Subject of Longfellow's poem "Song of Hiawatha".
Chapel of St. Paul	Ramsey	St. Paul	Nucleus for settlement of St. Paul.
Wm. W. Mayo House	Le Sueur	Town of Le Sueur	Mayo Clinic founder's home and birthplace. Built by Mayo, 1859.
Old State Capitol Site	Ramsey	City of St. Paul	Site of territorial and first state capitol.
Blue Mound (partial state Cons. Department)	Rock	North of Luverne. Blue Mound State Park.	3 mi. long bluff from which county took its name. Possible location of Indian buffalo drives.
Continental Divide (Highway and Cons. Dept.)	Traverse St. Louis Beltrami	Near Browns Valley N. Virginia, Lake Julia, N. Bemidji State Forest.	Points where watersheds of the continent divide.
Traverse des Sioux (Highway and Cons. Dept.)	Nicollet	In Traverse des Sioux State Park, 2 miles north of St. Peter.	Crossing for Indians, fur traders, and Red River oxcarts. Site of treaty with Sioux, 1851. Location of ghost town.
St. Louis River and Savanna Portages (State Cons. Dept. and private)	St. Louis Aitkin	Jay Cooke State Park near Duluth and Savanna Portage State Park, 7 mi. N. of McGregor.	One of the Nation's most important fur trade routes connecting Lake Superior and the Mississippi River.

	County	Location	Commemorating
Old Fort Snelling (State and Federal)	Hennepin	Fort Snelling State Park south side of the Twin Cities.	First military post in Minnesota. Cradle of northwest settlement.
Fort Ridgely (State Cons. Dept. and private)	Nicollet	In Fort Ridgely State Park, 7 miles south of Fairfax.	Major military post associated with Sioux Uprising, 1862. Defense of this fort a turning point in Sioux Uprising.
Wood Lake (State Cons. Dept. and private)	Yellow Medicine	12 mi. southeast Granite Falls, Hwy. 67, Co. road 17, then west 7/10 mile. Wood Lake State Monument.	Last decisive encounter of Sioux Uprising.
Minnesota Historical Society –			
*Kathio	Mille Lacs	Shore of Mille Lacs Lake Near Vineland.	“Capitol” of ancient Sioux empire. Scene of battle, about 1745, when the Chippewas drove the Sioux from Mille Lacs area.
Connor’s Fur Post	Pine	1 mi. west of Pine City on the Snake River.	Wintering post of North West Fur Company, 1804.
Alexander Ramsey House	Ramsey	City of St. Paul	Home of Minnesota’s first Territorial Governor.
Wm. G. LeDuc House	Dakota	Town of Hastings	Home of one of Minnesota’s leading pioneers. Architecturally significant.
Minnehaha Depot	Hennepin	Minnehaha Park, Mpls.	Example of small, frame railroad depot.
Oliver H. Kelley Homestead	Sherburne	On the Mississippi River, 2 mi. S.E. Elk River.	Home of Oliver Kelley, organizer of the National Grange.
Private –			
Buffalo Ridge	Murray	S.W. Lake Wilson	Summit of Coteau des Prairies. Possible prehistoric Indian site of religious significance.
Grand Mound	Koochiching	S. shore on Rainy Lake near its junction with Big Fork River. 15 mi. W. International Falls.	Largest remaining mound in Minnesota.
Kensington Runestone Discovery	Douglas	Ohman Farm near Kensington.	Runestone discovered in 1898.
Petroglyphs	Cottonwood	West of Comfrey	Only central or southern Minnesota example of late prehistoric and historic Sioux carvings.
Sweeney Fort	Goodhue	In town of Welch	One of 3 prehistoric Indian forts in Minnesota.
Yucatan Fort	Houston	In town of Yucatan	Best example of prehistoric Indian fort in the state. Iowa Indians made a futile stand against Sioux here.
**Fort Beauharnois	Goodhue	On Point au Sable, east of Villa Maria Academy in Old Frontenac	Most important French fur post in area. Location of first Christian Church in Minnesota. Mission of St. Michael the Archangel erected in 1727.
Fort St. Charles	Lake of the Woods	Northwest Angle, Magnuson’s Island. Accessible by boat and plane from Baudette or road from Warroad.	French fur trade fort. Headquarters of explorer La Verendrye, 1732–1744, in in search of Northwest passage.

\* An archaeological site and an Indian site. A museum has been built largely with private funds.

\*\* Mission of St. Michael the Archangel also considered an historic site.

	County	Location	Commemorating
Lower Sioux Agency	Redwood	Nine mi. N.W. Morgan, 9 mi. E. Redwood Falls.	Early objective of Sioux, 1862.
Redwood Ferry	Redwood Renville	Minnesota River immediately below Lower Sioux Agency.	First battle between the white soldiers and Indians in Sioux Uprising.
Site of Hanging of 38 Sioux	Blue Earth	City of Mankato	Climactic event of Sioux Uprising. Called "America's greatest mass execution."
Frontenac	Goodhue	1.5 mi. E. Frontenac Station	State's first summer resort. Best remaining example of pre-Civil War Village. Adjoins site of Fort Beauharnois.
Mesabi	St. Louis	S.W. Hoyt Lakes S.E. Aurora	Start of settlement and development of Mesabi and Vermilion Iron Ranges.
*Old Mendota	Dakota	On Mississippi River, immediately south of St. Paul.	Important American Fur Post Company. Early pioneer settlement. Home of Henry H. Sibley, fur trader and first elected Minnesota Governor and Alexander Faribault, pioneer fur trader.
Taylor's Falls	Chisago	In town of Taylor's Falls	Early lumbering village. One of few remaining groups of buildings—pioneer period, 1850's and 1860's.
Burbank Griggs House	Ramsey	City of St. Paul	Associated with transportation pioneer, Burbank, and wholesaling family, Griggs.
James J. Hill House	Ramsey	City of St. Paul	Empire builder, James J. Hill, associated with this home. Famous railroad tycoon.
Old Bakken Cabin	Polk	Southwest of McIntosh	Best remaining known example of pioneer log cabin in Minnesota.
Sinclair Lewis House	Stearns	Town of Sauk Centre	Home of Minnesota's best known novelist, author of "Main Street", "Babbitt" and others.
Convention Site	Washington	Town of Stillwater	Birthplace of Minnesota territory. Scene of public meeting first step in creating Minnesota territory.
Fugle's Mill	Olmsted	4 mi. S. of Simpson	Small stone flour and grist mill powered by Root River. Operated 1868 to about 1910.
Harkin-Massopust Store	Nicollet	9 mi. N.E. of New Ulm	One of few remaining examples of typical frame country stores.
Hull-Rust-Mahoning Mine	St. Louis	In town of Hibbing on the Mesabi Range.	Biggest and richest of Minnesota's high-grade open pit iron mines.
Meighen Store	Fillmore	Town of Forestville	One of few remaining examples of typical brick country stores.
Wendelin E. Grimm Homestead	Carver	State Hwy. 5 to western outskirts of Victoria; ten N. on Carver Co. Road 11 and W. on 7.	Home of Wendelin Grimm who introduced "Grimm Alfalfa" into the U.S.
Peter Gideon Homestead	Hennepin	In Gideon Memorial Park at Manitou on S.W. shore of Lake Minnetonka.	Home of Peter Gideon who owned and planted many apple orchards throughout Minnesota. Gideon apple named after him.
Site of first Commercial Sawmill	Washington	In town of Marine on the St. Croix	First commercial sawmill in Minnesota.
Mountain Iron Mine	St. Louis	Village of Mt. Iron on the Mesabi Range.	First mine to ship iron ore from the Mesabi. Discovered by the Merritt brothers.

\* Listed both as historic village and fur trade site.

EDUCATIVE REFERENCE LIBRARY  
STATE OF MINNESOTA

	County	Location	Commemorating
Nicollet Island—Falls of St. Anthony	Nicollet	On Mississippi River at Minneapolis.	Early settlement of Minneapolis. Once site of world's largest flour mill. Site of first hydroelectric station in nation.
Pickwick Mill	Winona	15 mi. S.E. Winona City	Earliest remaining example of water powered stone flour mill, 1850's.
Pike's Fort	Morrison	Near Little Falls	Served as winter headquarters of Zebulon Pike, 1805-06, while Pike searched for Mississippi source.
Sugar Point	Case	On Leech Lake	Site of battle between Chippewa Indians and Army Troops, 1898. Last Indian Uprising in U.S.

## PREHISTORIC ARCHAEOLOGY

There are at least 12,000 years of human occupation preceding the arrival of the earliest French traders. These years of man's existence are recorded in the archaeological sites which exist in this state.

### BIG GAME HUNTERS

These sites give us records of the earliest big game hunters moving into the upper Mississippi region as the last of the continental ice sheets receded. One such site is the Chambers' Creek site in Itasca State Park.

### "OLD COPPER" CULTURE

By 5000 B.C., men were making weapons and tools of copper in this region, the earliest known use of metal anywhere in the world. Though many of these very early copper tools have been found accidentally in agricultural and construction activities, no burial or campsite of these early people has ever been excavated in Minnesota. A campsite of the "Old Copper" culture exists in Kathio State Park near Mille Lacs Lake.

### BURIAL MOUNDS

Minnesota possesses thousands of prehistoric burial mounds. The number decreases each year as more fall to extensive land utilization. A field survey conducted by the Minnesota Historical Society recorded over 11,000 mounds. Recent archaeological work indicates that there are twice this number. It is believed that all state park areas have some evidence of burial mounds. Considerable excavation of burial mounds has taken place and we know that in Minnesota they were being built by at least 1000 B.C. and that they continued to be constructed up to the beginnings of the historic period. There are indications that the first construction of burial mounds, a complex which spread over the entire eastern United States, began here. The interpretation of this archaeological complex should be an important part of any program of development of public lands.

### AGRICULTURAL PEOPLES

Later prehistoric times brought the arrival of corn growing villages of agricultural people into southern Minnesota. By 1200 A.D. there were several large villages on the lower Mississippi, the upper Des Moines, Blue Earth and Minnesota rivers. Many of these large village sites have been destroyed. Several important sites still remain and offer good possibilities for archaeological interpretation. One of these is the Orwell Farm site in Otter Tail County.

LIST OF KNOWN PREHISTORIC ARCHAEOLOGICAL SITES IN MINNESOTA

(Minnesota Historical Society)

<u>County</u>	<u>Total Sites</u>	<u>Sites tested or excavated</u>	<u>County</u>	<u>Total Sites</u>	<u>Sites tested or excavated</u>
Aitkin	8	2	Mahnomen	2	0
Anoka	10	1	Martin	14	2
Becker	18	1	Meeker	5	0
Beltrami	27	4	Mille Lacs	10	7
Benton	2	0	Morrison	12	0
Big Stone	22	7	Mower	2	0
Blue Earth	13	7	Murray	13	5
Brown	6	3	Nicollet	9	1
Carlton	0	0	Nobles	3	0
Carver	6	0	Norman	11	2
Cass	26	3	Olmsted	1	0
Chippewa	25	2	Otter Tail	36	5
Chisago	21	0	Pennington	0	0
Clay	3	0	Pine	6	0
Clearwater	13	9	Pipestone	1	0
Cook	4	1	Polk	17	7
Cottonwood	3	1	Pope	12	3
Crow Wing	13	4	Ramsey	9	0
Dakota	23	2	Red Lake	2	1
Dodge	0	0	Redwood	10	0
Douglas	7	7	Renville	13	1
Faribault	3	2	Rice	14	0
Fillmore	14	8	Rock	9	0
Freeborn	9	0	Roseau	11	2
Goodhue	86	6	St. Louis	9	5
Grant	4	1	Scott	30	2
Hennepin	98	4	Sherburne	17	2
Houston	21	3	Sibley	6	1
Hubbard	5	0	Stearns	8	0
Isanti	13	0	Steele	1	0
Itasca	14	8	Stevens	2	0
Jackson	4	1	Swift	0	0
Kanabec	20	2	Todd	2	0
Kandiyohi	11	2	Traverse	37	8
Kittson	22	2	Wabasha	35	1
Koochiching	5	3	Wadena	6	0
Lac qui Parle	9	0	Waseca	3	0
Lake	0	0	Washington	23	4
Lake of the Woods	8	0	Watonwan	0	0
Le Sueur	7	0	Wilkin	15	3
Lincoln	7	2	Winona	15	3
Lyon	0	0	Wright	40	0
McLeod	1	0	Yellow Medicine	24	4
Marshall	12	4			

Types of Sites

Total of Sites

1,160

Mound groups

Burial sites (non-mound)

Habitation sites

Rock shelters

Dance rings

Caves

Other

Bison kill sites

Total excavated sites

170



# forests

## FOREST MUSIC

To a person alone in a woods for the first time after a long interval every sound is novel and more or less charged with mystery. The wind stirred the tree tops and impinging boughs clattered and the trunks groaned under the torsion, each tree with its own doleful note. The few remaining pines added their sighing to the many melancholy sounds belonging to the autumn forest at night . . . even the distant howling of wolves was silenced.

Camping in Pine County from  
C. A. Herrick's "Mammals of  
Minnesota", 1892.

FORESTS—FEDERAL—CLASS III, 2,033,866 ACRES; CLASS V, 736,649 ACRES, 2,770,515 ACRES, TWO AREAS

The Forest Service, U.S. Department of Agriculture, administers 2,770,515 acres of federal land in the Chippewa and Superior National Forests of Minnesota.

The Chippewa and Superior, like all of the nation's 187 National Forests, are managed under the basic principles of multiple uses of the land itself and the sustained yield of the resources on it. The National Forest Multiple Use Act, Public Law 86-517, June 2, 1960, defines multiple use as follows:

"Multiple Use Means - The management of all the various renewable surface resources of the National Forests so that they are utilized in the combination that will best meet the needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; that some land will be used for less than all of the resources; and harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land, with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest unit output."

To meet the increasing demands of recreation use in the National Forests, "Operation Outdoors" was initiated in 1957. This five-year program was an intermediate step in planning future recreation needs in the National Forests. Through new construction and expansion, it provides new family camping units, improves sanitary facilities and increases the access to areas through road and trail developments. Operation Outdoors is included in the program for National Forests known as "Operation Multiple Use", a blueprint to assure that National Forest resources will contribute their full potential in pace with national expanding population and economy.

The National Forests are open for use by the people for many of the recreational activities listed in this plan. The 2¾ million acres in forest ownership are available to the hunter and fisherman under the state laws. The recreationist may use the forest for hiking, sightseeing, boating, canoeing, nature study, swimming, water skiing, winter sports and other activities without charge. A fee for camping was authorized by Public Law 88-578.

To facilitate the use of forest land the Forest Service provides the following within the two forests:

NATIONAL FORESTS - 1964

	Unit	Chippewa	Superior
Camping	Units	479	674
Picnicking	Tables	121	127
Hiking trails	Miles	7	418
Canoe trails	Miles	0	605
Summer homes	Units	311	199
Resorts	Sites	11	10
Winter sport-ski areas	Areas	1	4
Lake access-boat landings	Sites	47	74
Roads	Miles	598	514
Wildlife Habitat	Acres	642,301	2,128,214
Recreation visits	All uses	729,700	1,071,000

Timber management activities under the multiple use program are summarized as follows:

	Chippewa	Superior
Planted and seeded—acres	2,656	6,033
Stand improvement—acres	2,782	4,175
Volume timber sold—board feet	59,244,000	112,349,000
Volume timber cut—board feet	43,404,000	114,156,000

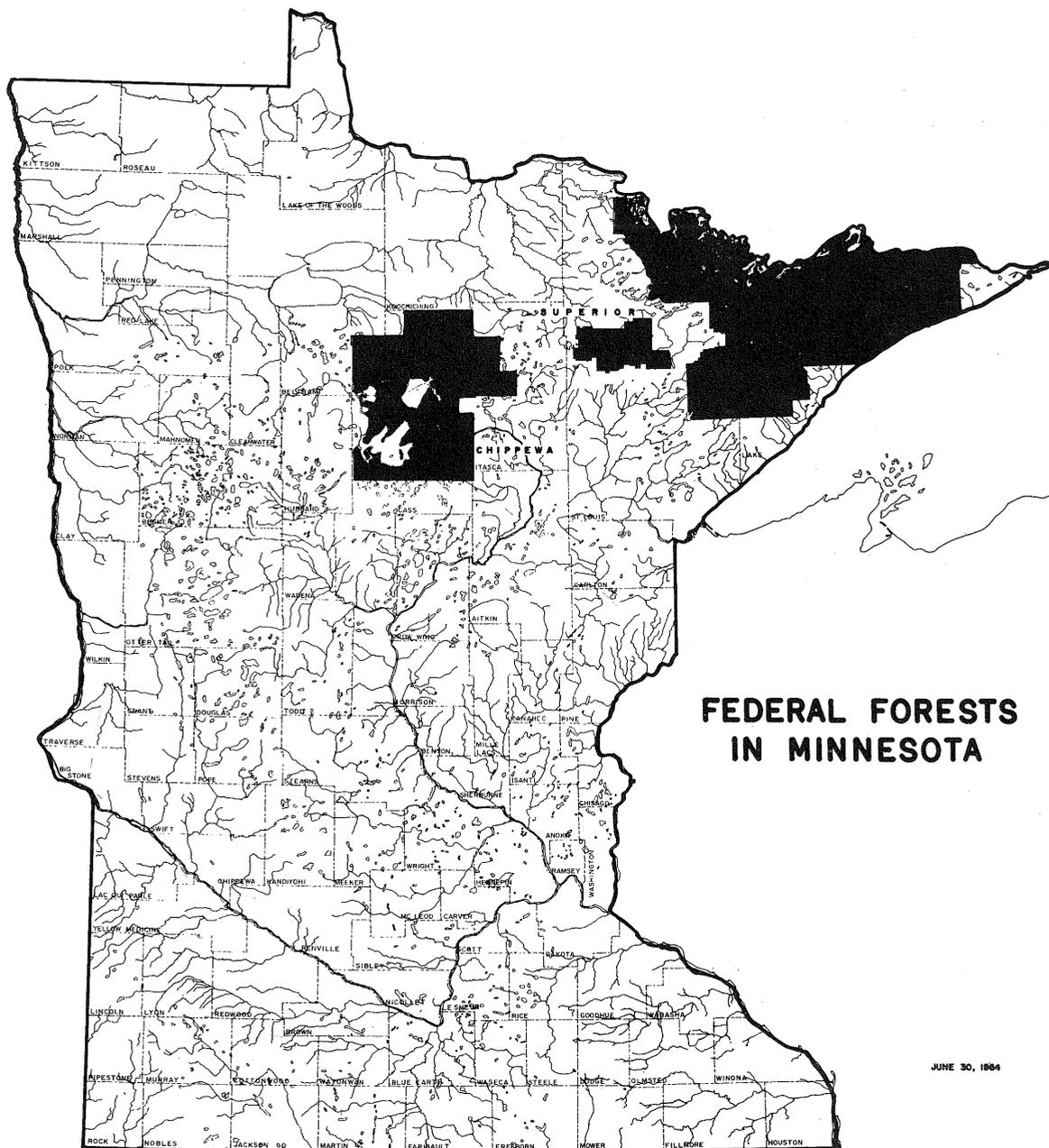
To perpetuate the valuable resources of wood, water, wildlife and recreation from the forests to the user, the Forest Service applies the management practices of a multiple use plan. This plan provides for the use and enjoyment of the resources for the greatest number of people. The forests must serve many purposes.

On most lands, timber production and watershed protection receive top priority, but in parts such as the Boundary Waters Canoe Area in the Superior National Forest, wilderness preservation and recreational values are given top

priority. Resource management plans are coordinated to attain stability of streamflow and a continuous increasing yield of forest products. The maintenance of productive wildlife habitat open to public hunting and fishing and the development of outdoor recreational facilities for public use and enjoyment is given high consideration in National Forest Management.

A National Forest camp unit consists of parking space, table, benches, fireplaces, tent and trailer space. Developed camp and picnic areas within National Forests have water supplies and adequate sanitary facilities. Forest recreation areas are planned to retain the natural setting to the greatest extent possible. They are not provided with electricity, laundry rooms and similar conveniences. During busy seasons, time limits at more heavily used areas of 10 to 15 days are imposed. In the North Central Region, over eight million seek the National Forests.

Significant trends have been observed in camping, boating, hiking, skin diving, nature study, bow hunting, exploration, photography, rock collecting, horseback riding and outdoor education at National Forests. The Forest Service encourages private and public agencies to develop winter sports areas where suitable. Permits are also issued for such uses as power line right-of-ways and concessions.



SUPERIOR NATIONAL FOREST

Gross area is 3,728,578 acres, of which 2,128,214 acres are in National Forest ownership, June 30, 1964. Of this total, 97,598 acres are owned in the Kabetogama and Pigeon River purchase units.

Well-worn portages, paintings on rocks, Ojibway and French place names, songs, legends and a way of the wilderness live in the Superior National Forest as a reminder to the modern vacationer of his link with a rich, romantic past. In 1909, conservation crusader President Theodore Roosevelt authorized this magnificent area as a National Forest - then only 1,018,638 acres.

The northern boundary follows the international Ontario, Canada-U. S. border. The 2,000 lakes within the forest make up one-fifth of the total acreage.

Today, this forest and lakeland covers an area larger than the total area of Delaware, Rhode Island and the District of Columbia. At its core and along its northern terminus, is a one million acre area, accessible only by water, comprising the famous Boundary Waters Canoe Area.

The Superior National Forest is home for more moose than any other National Forest and, except for Alaska, has the largest timber wolf population in the U. S. The Forest Service provides and improves the wildlife habitat in cooperation with the state.

Over 380,000 fishermen visit its lakes and streams and an additional 64,000 nimrods take advantage of its excellent hunting. Photographers, naturalists, ornithologists and sightseers seek its roaring streams or quiet lakes, superb stands of virgin pine, black spruce, balsam fir, northern white cedar and tamarack for study and relaxation. The Forest Service developed 801 camp and picnic units. A new visitor center at Ely provides interpretative devices as an explanation of the resources within the forest.

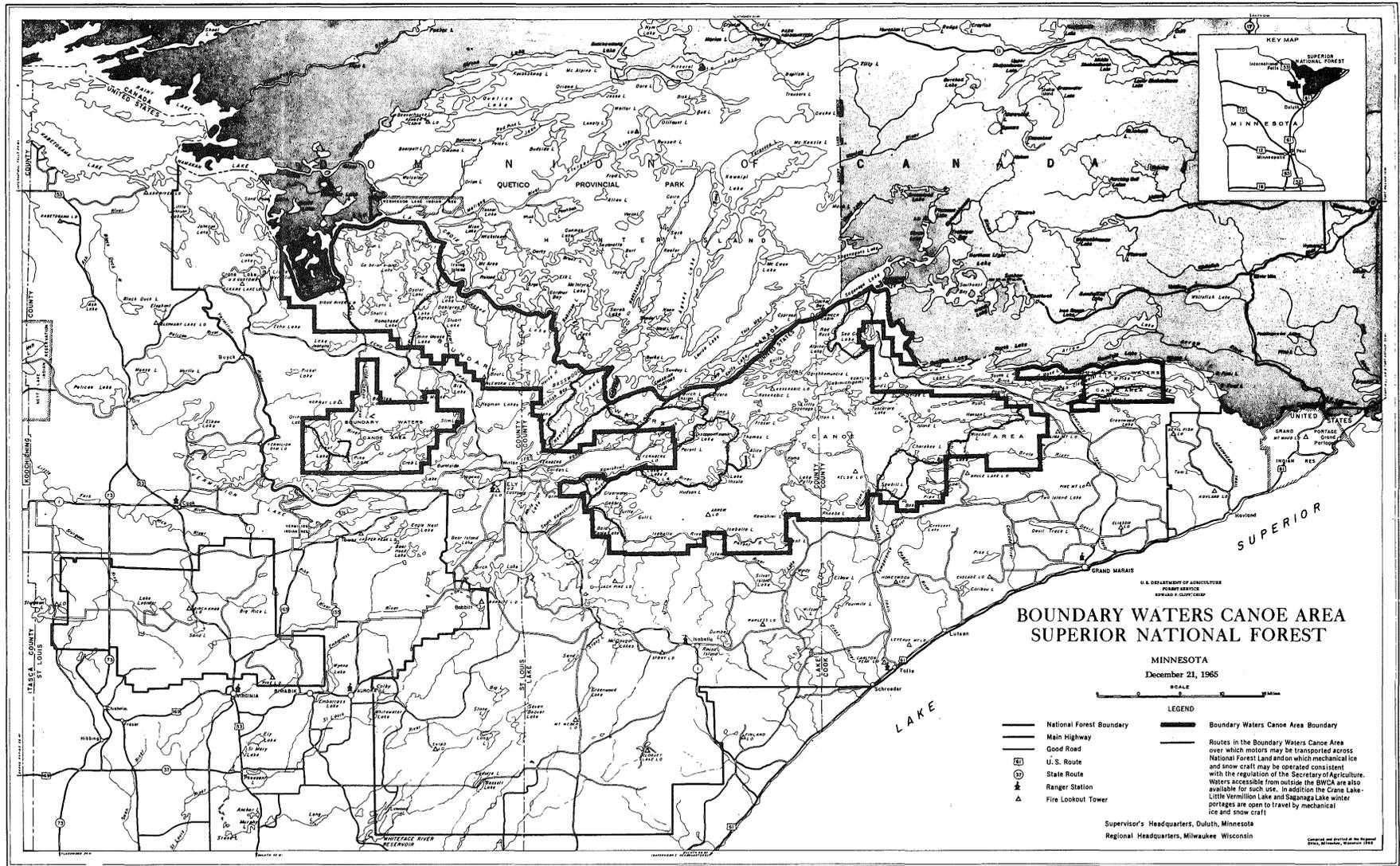
The Forest Service is meeting increasing demands for outdoor recreation with further development of recreational sites and facilities.

Legend: C-camping, P-picnicking, DW-drinking water, S-swimming, F-fishing, B-boating, WS-winter sports.

SUPERIOR NATIONAL FOREST

Forest Supervisor, Duluth.

RECREATION SITE	LOCATION	FACILITIES				ACTIVITIES		
		C	P	DW	S	F	B	WS
Baker Lake	20 mi. No. of Tofte	4		W		X	X	
Big Rice Lake	10 mi. NE of Virginia off ST-53	3		L		X	X	
Birch Dam	9 mi. SE. of Ely, just off ST-1	4		L		X	X	
Birch Lake	18 mi. SE. of Ely, near Babbitt		1	L				
Plantation Wayside								
Bird Lake	6 mi. E. of Aurora		3	W		X		
Boulder Lake	25 mi. NE. of Tofte		2	L		X		
Wayside								
Boundary Waters	Mostly via Ely, Tofte, Crane	350		L	X	X	X	
Brown's Bay	20 mi. NW. of Crane Lake, access by boat only	10		L	X	X	X	
Cadotte Lake	29 mi. SE. of Aurora off CO-16		27	W	X	X	X	
Canoe Area	Lake, and Grand Marais on Gunflint Trail, Ely-Buyck Road, Fernberg Road, Sawbill Road and Crane Lake							
Cascade River	16 mi. NW. of Grand Marais, at jct. of Devils Track and Bug House Roads		2	SP		X		
Wayside								
Devils Track Lake	11 mi. NW. of Grand Marais. Gunflint Trail then Devils Track Lake Airport road	12		W		X		
Dumbell Lake	5 mi. E. of Isabella on forest road	3		W		X		
East Bearskin Lake	30 mi. NW. of Grand Marais, off Gunflint Trail	11		W		X	X	
Elixir Lake	11 mi. E. of Isabella		1	SP				
Wayside								
Fall Lake	8 mi. E. of Ely	48	25	W	X	X	X	
Farm Lake	6 mi. E. of Ely	3		L		X	X	
Fenske Lake	12 mi. NW. of Ely on Ely-Buyck Road	14	3	W		X	X	
Flour Lake	31 mi. NW. of Grand Marais, off Gunflint Trail on Clear-water Lake Road	38		W		X	X	
George Washington	25 mi. SE. of Ely on ST-1, 2 mi. NW. of junction with ST-2		3	W				
Plantation Wayside								
Hammer Bay	30 mi. NW. of Crane Lake, 10 access by boat only			L	X	X	X	
Iron Lake	40 mi. NW. of Grand Marais on Gunflint Trail	7		W		X		
Isabella River	4 mi. W. of Isabella	8	3	W		X		
Kawishiwi Lake	30 mi. NW. of Tofte	5		L		X	X	
Kimball Lake	14 mi. NE. of Grand Marais, off Gunflint Trail on Mink Lake forest road	7		W		X	X	
Lake Jeanette	42 mi. NW. of Ely, 10 mi. E. of Buyck, just off Ely-Buyck road	9		L		X	X	
Lake Leander	19 mi. NW. of Virginia, 15 mi. NE. of Chisholm		21	W	X	X		
Lake One	21 mi. NE. of Ely, off the end of Fernberg Road	4		L		X	X	
Lichen Lake	26 mi. NE. of Tofte		1	L		X		
Wayside								
Lookout Mountain	2½ mi. N. of Virginia on US-53							X
Meander Lake	31 mi. NW. of Ely, just off Ely-Buyck Road		3	L		X		
Moose Lake	18 mi. NE. of Ely, 2 mi. off Fernberg Road	9		L		X	X	
Moose River	18 mi. NW. of Ely		1	R		X		
Wayside								
Ox-Bow	6 mi. N. of Tofte on Sawbill Trail	3		SP		X		
Pfeiffer Lake	11 mi. SW. of Tower	2	14	W	X	X		
Pike Lake	14 mi. W. of Grand Marais at end of Pike Lake Road	5		W		X		
Pine Lake	24 mi. NE. of Tofte		1	L		X	X	
Wayside								
Portage River	26 mi. NW. of Ely, on Ely-Buyck Road		2	R		X	X	
Wayside								
Sawbill Lake	24 mi. N. of Tofte at end of Sawbill Trail	18	2	W		X	X	
Sioux River	36 mi. NW. of Ely, on Ely-Buyck Road		2	R		X	X	
Wayside								
South Birch Lake	32 mi. SE. of Ely		5	W				
South Kawishiwi	12 mi. SW. of Ely, just off ST-1	12	8	L	X	X	X	
River								
Stony River	8 mi. W. of Isabella		1	R		X		
Wayside								
Temperance River	12 mi. N. of Tofte on Sawbill Trail	8		W		X		
Trails End	55 mi. NW. of Grand Marais near end of Gunflint Trail	36	4	L		X	X	
Twin Lakes	12 mi. NE. of Isabella		3	L		X		
Wayside								
Upper Poplar River	17 mi. N. of Tofte on Sawbill Trail and 6 mi. E. on Honeymoon forest road	4		SP		X		
White Pine	25 mi. N. of Two Harbors on FH-2		3	W				
Whiteface Reservoir	15 mi. SE. of Aurora	12	W	X	X	X		
Windy-Tee	18 mi. NE. of Isabella		1	L		X	X	
Wayside								
TOTALS						674	127	



SOURCE: U. S. DEPARTMENT OF AGRICULTURE, FORESTRY SERVICE.

## THE BOUNDARY WATERS CANOE AREA, SUPERIOR NATIONAL FOREST ("BWCA")

Gross area 1,034,793 acres of which the Forest Service owns 736,656 acres. Of the gross area, 162,819 acres in water area in meandered lakes. (All acreages based on June 30, 1964.)

The Boundary Waters Canoe Area and Canada's Quetico-Superior Provincial Park, together form an international outdoor vacation mecca providing what is known as the "best canoeing in the nation." This unique area extends for nearly 200 miles along the eastern Minnesota-Canadian border. (See map on preceding page.)

This part of the Superior National Forest has been set aside to perpetuate its primitive character and provide opportunities for wilderness canoe travel. Here, hundreds of lakes and many interconnecting rivers once provided the route of the voyageur. First the home of Indians, it was once the disputed highway of rival fur empires.

Its importance as a wilderness area was recognized as early as 1842 when Daniel Webster, then U. S. Secretary of State, and Lord Ashburton of Great Britain, were cosigners of a treaty that since that date has provided Canadians and Americans free use of these waterways.

Not until the end of the 19th century did iron mining, lumbering, waterpower developments, roads, airplanes, summer resorts, and summer homes enter the wilderness character of the area. From the early 1920's, mixed land ownership was a major obstacle in establishing this as a wilderness area.

An important piece of legislation was passed in 1930 called the Shipstead-Newton-Nolan Law whereby Congress directed "that the principle of conserving the natural beauty of shorelines for recreational use shall apply to all Federal lands which border any boundary lake or stream contiguous to this area, or any other lake or stream within this area which is now or eventually to be in general use for boat or canoe travel . . ."

In response to public demand, the U. S. and Canada agreed to provide successive zones of use from the wilderness core outward to the more accessible fringe of the area as shown on the preceding map. In the heart of the canoe country, is a "no-cut" zone of 362,000 acres wherein no timber cutting is permitted on federally owned lands. The B.W.C.A., roughly one million acres, is "roadless" so far as federal lands are concerned and shorelines closed to logging.

In the late 1940's, it became apparent that interior resorts and summer homes must be acquired if its primitive character was to be preserved. Interested groups and individuals pressed for enactment of the Thye-Blatnik Bill which became Public Law in 1948. This Act authorized and directed the Forest Service to acquire lands and develop properties within an area covering about two-thirds of the B.W.C.A. In 1956, the Act was amended to include the remaining one-third of the area.

Further aid came when an order was issued in 1949 by President Truman establishing air-space reservations over the B.W.C.A. This order restricts flights below 4,000 feet except in emergencies. The U. S. Government has begun a campaign to acquire the remaining private lands and resorts.

Contrary to public understanding, the B.W.C.A. is not a true wilderness—it is considered a semi-wilderness. A true wilderness area is one where the earth and its community of life are untouched by man, where man himself is a visitor—mechanical transportation and timber harvesting are not permitted. Timber harvesting is permitted on part of the B.W.C.A. and some motorized equipment can be used.

Before inclusion as a National Forest, more than 100,000 acres were logged over. No reserve strips were left, no regeneration measures were taken and no safeguards such as now are being used, were practiced. By 1969, logging and regeneration will be completed on 71,000 acres. These lands will be returned to wild conditions. Presently about 5,000 acres are harvested each year.

The major issue at the present time concerns the timber management practices and associated developments within the Boundary Waters Canoe Area. Last May a citizens' committee was appointed by Secretary of Agriculture, Orville Freeman, to study the entire management problem. The committee submitted detailed recommendations. Recently, it was announced that the Forest Service has been directed to comply with a number of them.

One recommendation advocated the increase in the land area in which timber cutting is prohibited. The Forest Service is now taking steps to add some 150,000 acres to the no-cut zone by February, 1966; this will double the existing no-cut area. Within the next few years, another 100,000 acres in the canoe area and 22,000 acres outside it will be added. This will bring the no-cut area to a total of more than 600,000 acres.

Wilderness of the Boundary Waters Canoe Area holds a fascination for many. Just to know that it is there is most satisfying for it is part of our heritage. We have looked to the north, to our "Canoe Country" and its waterways with a deep sense of pride. Its character is unique in the world. Its lure is the relaxation of cool lakes fringed with conifers and dotted with islands, the excitement of fast water, the sound of wind whispering through the tree tops, the wild call of the loon, the fragrance of the earth and vegetation. These are elements of personal satisfaction found when living in contact with it, and cherished in future reminiscing. Protected by law, and guarded by servants of the people, it should be held in trust for future generations.

Its intrinsic, esthetic and real value has been recognized and laws enacted to safeguard this wild domain. More and more individuals turn to the north to refresh their spirits and add lustre to their lives. Canoeing is the fastest growing recreation in the Boundary Waters Canoe Area. Such people, in search of a wilderness experience, point the way to a sound and profitable future for the area.

#### CHIPPEWA NATIONAL FOREST - 1,313,787 GROSS ACRES

The Chippewa National Forest echoes with place names of the Chippewa Indians who inhabited the region before the coming of white man. Lake Winnibigoshish, Kabetogama, Waboose Bay and Minisogama depict the passage of the Dakotas and the Chippewas who drove them to the plains. Tobique and Lac-a-Roy recall the voyageurs from whom the woods and waterways were won by the British.

Following the Civil War, a new breed of Americans encroached upon this wilderness and names like Burnt Shanty, Jack the Horse, Drumbeater Lake and Plughat Point emerged. Today, its heritage belongs to the people of the Nation through its establishment as a National Forest in 1908.

The Forest was created by an Act of Congress from lands ceded to the Government by an early treaty with the Chippewa Indians. Forest management under multiple use principles began at an early date. From its inception, timber from the Chippewa has been cut in commercial sales as marked or designated for silvicultural management. Special land use permits for summer residences and other purposes were issued in 1909. The first plantation was established near Cass Lake in 1913. Recreation, water and wildlife were also considered by the early planners. The first recreation management plan was prepared in 1918. By 1930 National Forest lands had been mapped and inventoried for sustained yield management. Development and use of the Forest's resources has constantly been intensified.

The 642,301 acres of National Forest land are situated within the gross boundary of the Chippewa which stretches from below the towns of Remer and Walker on the south, almost to Big Fork, 60 miles to the north. From Cass Lake on the west it extends on both sides of the Mississippi 55 miles to the east.

The Forest varies from beautiful stands of red or Norway pine to spruce, balsam, mixed hardwoods, marsh and marshy swamps. This mixture of Forest types with its lakes and streams makes the Chippewa one of the North Star State's principal tourist attractions.

Recreation on the Chippewa is a fast growing use. In 1964 over 700,000 visitors came to enjoy the recreational opportunities on National Forest lands.

There are 600 family units on 37 National Forest camp and picnic grounds. These, together with other public use sites such as swimming or boating sites, have a capacity of 6000 persons at one time. Resorts and organization camps operating on National Forest land by permit accommodate another 1000.

Of over 1200 lakes and 150 streams within the Chippewa, 500 lakes and 18 streams provide a wide choice of fishing waters as well as a place for pleasure boating, canoeing and swimming. Their scenic shorelines provide a place for developed recreation sites. Forest roads and trails provide an opportunity for the hiker, photographer, nature lover, and sightseer to enjoy the outdoors.

CHIPPEWA NATIONAL FOREST

RECREATION SITE	LOCATION	FACILITIES				ACTIVITIES			
		C	P	DW	S	F	B	O	
Ball Club Roadside	On US-2, 9 mi. E. of Bena on left, or ½ mi. W. of Ball Club on right		6	W					
Bena Roadside	On US-2 at Jct. FH-8 (CO-9) ½ mi. E. of Bena on left		3	W					
Benjamin Lake	From Blackduck village, ½ mi. SW. on ST-71, turn left on FH-3 (CO-39) go 5½ mi. S. to picnic ground on right		8	W	X	X	X		
Birches	From Bena village, 1½ mi. E. on US-2, turn left on FH-8 (CO-9), go 5½ mi. NE., turn left on FH-2163, go 2¾ mi. NW. to Lake Winnibigoshish		10	W	X	X	X		
Caribou Lake	22 mi. N. of Grand Rapids on ST-38 on right	2	1	W		X			
Clubhouse Lake	From Marcell village ½ mi. N. on ST-38, turn right on FH-2181 (CO-45), go 3 mi. E. Keep to left at jct., go 1¼ mi. NE., turn right on FR-3758, go ¾ mi. E., ¾ mi. NE. to campground	51		W	X	X	X		
Deer Lake	From jct. US-2 W. of Deer River go 19 mi. NW. on ST-46, turn left on FR-2198 (CO-33) go 3 mi. SW., turn left on FR-3153, go ¼ mi. S. to Cut Foot Sioux Lake	50	2	W	X	X	X		
East Seelye Bay	From jct. US-2 W. of Deer River, go 19 mi. NW. on ST-46, turn left on FH-2198 (CO-33), go 2¼ mi. to Cut Foot Sioux Lake on left	13	6	W	X	X	X	I	
Knutson Dam	From Cass Lake, jct. US-2-371, go E. 6 mi., turn left on FH-3 (CO-10), go 5½ mi. N., turn left on FR-2176, go ¾ mi. to Dam	6		W		X			
Lake 13	From Cass Lake junction US-2-371 go 6 mi. on 371, turn left on CO-144, go 2¼ mi. E. to jct. 2136, continue E. and SE. 1 mi. to lake	3		W		X	X		
Lake Windigo	North Central Star Island in Cass Lake. Accessible by ½ mi. trail N. from Star Island Campground, which can be reached by boat from Cass Lake village or Norway Beach boat access		2	L		X			
Mabel Lake	From Remer village to W. on ST-34, 14¼ mi., turn right on FR-2104, go ½ mi. N. to lake	4	5	W	X	X			
Middle Pigeon	From jct. US-2 W. of Deer River go NW. 23 mi. on ST-46, turn left on FR-2196, go 3 mi., turn left to lake	3		W		X	X		
Mosomo Point	From jct. US-2 W. of Deer River go NW. 17½ mi. on ST-46, turn left on 2190 into campground	24	12	W		X	X		
North Star	On ST-38, 3½ mi. S. of Marcell on right. 26½ mi. N. of Grand Rapids on left	30		P		X	X		
North Twin Lake	From Blackduck village, ½ mi. SW. on ST-71, turn left on FH-3 (CO-39), go 8¾ mi. S., turn right on FR-2212 (CO-22), go 2 mi. W., turn left, go 1 mi. S. and W. FR-2215 to lake on right		2	L	X	X			
Noma Lake	From jct. US-2 W. of Deer River, go NW. 19½ mi. on ST-46, turn right on FR-2226 (CO-34-4), go 13 mi. N., turn right on FH-26 (CO-29), go E. 6 mi. to Wirt, turn left on FR-2223 (CO-31) go 1½ mi. N. to lake on right		8	W	X	X			
Norway Beach	From jct. US-2-371 in Cass Lake, go E. 4¼ mi., turn left on FR-2171, go ½ mi. N., follow signs	74	28	P	X	X	X	I	
Ojibway	From jct. US-2-371 in Cass Lake, go E. 3½ mi., turn right on FR-2137, go ½ mi. S. to lake on right	40	6	P	X	X	X	I	
Plug Hat	From jct. US-2 W. of Deer River go NW. on ST-46, 11½ mi., turn left on FH-8 (CO-9), go W. 1½ mi., turn right on FR-2160, go ¾ mi. N. and W. to Lake Winnibigoshish	16	4	W	X	X	X		
Richard's Townsite	From Bena village go W. 2¼ mi. on US-2, turn right on FR-2167, go NW. ½ mi., turn right, go 2 mi. NE. to Lake Winnibigoshish on FR-2074	5		W	X	X			
Shingobee Winter Sports Area	From jct. US-371 in Walker, follow ST-34, 6 mi. S. and W. to site on left			W				WS	
Shogren Dam	From jct. US-2 W. of Deer River go NW. 19½ mi. on ST-46, turn right on FR-2226 (CO-34), go 11 mi. N., turn right on FR-2428, go 1 mi. E., cross river, turn right on FR-2225, go ½ mi. S. to river		4	L		X	X		
Six Mile Lake	From Bena village to E. 1½ mi. on US-2, turn right on FR-2127 go 3½ mi. SE. to lake on right	3		W	X	X			
South Pike Bay	From jct. US-2-371 in Cass Lake, go S. 3 mi. on 371, turn left on FR-2137 (CO-146), go 2 mi. E. and SE., turn left on FR-2137A, go ½ mi. N. to lake	21		W	X	X	X		
Star Island	South shore of Island accessible by boat from Cass Lake village or Norway Beach boat access	3		W	X	X		T	
Stony Point	From jct. US-371, ST-34, 4 mi. S. of Walker, go 2 mi. E. on ST-34, turn left on FR-2121 (CO-13), go 4 mi. N., turn right on FR-3797, go 3 mi. NE. to Leech Lake	37	2	P	X	X	X		

CHIPPEWA NATIONAL FOREST (Cont'd)

RECREATION SITE	LOCATION	FACILITIES				ACTIVITIES		
		C	P	DW	S	F	B	O
<b>Tamarack Point</b>	From Bena village, 1½ mi. E. on US-2, turn left on FH-8 (CO-9), go 5¼ mi. NE., turn left on FR-2163, go 3½ mi. N. and E. to Lake Winnibigoshish	35		W	X	X	X	I
<b>371 Roadside</b>	On US-371, 6 mi. S. of Walker on right		2	L				
<b>Third River</b>	From jct. US-2 W. of Deer River go 20 mi. NW. on ST-46, turn left on FR-2171, go 10½ mi. W. to Third River bridge		2	R		X	X	
<b>Walker Bay</b>	From jct. US-371, ST-34, 4 mi. S. of Walker, go 2 mi. E. on ST-34, turn left on FR-2121 (CO-13), go 7½ mi. N. and W. to Onigum village turn right on FR-3761, go 1¼ mi. NW. to Walker Bay	3	2	W		X		
<b>Webster Lake</b>	From Blackduck village, ½ mi. SW. on ST-71, turn left on FH-3 (CO-39), go 10 mi. S. turn left on FR-2206, go 1½ mi. E., turn left on FR-2208, go 1½ mi. N. to lake on left	13	3	W	X	X		
<b>West Seelye Bay</b>	From jct. US-2 W. of Deer River, go 19 mi. NW. on ST-46, turn left on FR-2198 (CO-33), go 3 mi. SW. turn left on FR-3153 go ¼ mi. S. to Cut Foot Sioux Lake on left	22		W	X	X	X	
<b>Winnie</b>	Closed 1965 From jct. US-2-371 in Cass Lake go 6 mi. E. on US-2, turn left, go 2½ mi. N. on FH-3 (CO-10), turn right on FR-2171, go 7 mi. NE., turn right on FR-2168, go 3½ mi. SE. to Lake Winnibigoshish	4		W	X	X	X	
<b>Williams Narrows</b>	From jct. US-2 W. of Deer River go 15½ mi. NW. on ST-46, turn left on FR-2157, go 2 mi. W. and NW. to Cut Foot Sioux Lake	17	3	W	X	X	X	
<b>TOTALS</b>		<b>479</b>	<b>121</b>					

Key: C—camping, P—picnicking, DW—drinking water, S—swimming, F—fishing, B—boating, O—other.

FORESTS – STATE – CLASS III, 2,918,566 ACRES, CLASS V, 706 ACRES; TOTAL, 2,919,272 ACRES, 54 AREAS.

In Minnesota there are 54 state forests. These forests represent a great reservoir of recreational potential not fully appreciated by many citizens. Forests provide unsurpassed public hunting, primitive camping areas, picnic areas, wooded trails for hiking and nature study, berry picking, fishing, canoeing routes and natural scenery of great aesthetic value.

As of June 30, 1964, there were more than 2,919,272 acres designated as state forest land under the administration of the Division of Forestry. The Division also administers the sustained yield timber sales program of some 2,000,000 additional acres of land under the jurisdiction of the Department of Conservation, the University of Minnesota and the Highway Department.

The pattern of ownership in the state forests is an intermingling of state land with federal, tax forfeited and private lands. Land adjustment between the public ownership is desired. The land exchange program between the public ownership is desired. The land exchange program between the U. S. Forest Service, private land-owners and the Division of Forestry, Department of Conservation, will consolidate state ownership in the state forests. The problem of tax forfeited land within the forests remains to be resolved.

Presently, there are 23 campgrounds maintained by the Department of Conservation within state forests. These are primitive campgrounds designed to satisfy the needs of those seeking the peaceful, quiet solitude of the forests. Forest campgrounds are relatively small, seldom exceeding 30 campsites. Facilities are generally limited to tent sites, fireplaces, tables, garbage cans, well water and outdoor comfort stations. Electricity and running water are not provided.

In 1889, the state legislature authorized the establishment of state forests, or forest reserves as they were called at that time. The first state forest was established that same year and named Pillsbury Forest. In subsequent years, new forests were established and existing forests enlarged. The forests are scattered throughout the northern two-thirds of Minnesota and along the Mississippi River to the Iowa border.

Before 1894, the rapid disappearance of the forests by the axe and fire created little concern. The lumber industry provided employment, cheap building material, and capital for the development of other business activities such as milling, banking and railroads. Furthermore, it was commonly believed that more land was needed for agriculture, and that forests must be removed to permit necessary agricultural development. Burning was often considered the most economical method of clearing land for agriculture uses.

The great Hinckley forest fire catastrophe of September, 1894, took the lives of 418 humans and resulted in the first action by the state legislature. At that time, the state auditor was appointed as forest commissioner with authority to appoint the first chief fire warden. Laws were passed for the preservation of the forests and the prevention and suppression of forest fires.

Following additional disastrous fires during which the town of Chisholm was destroyed in 1908, and Baudette and Spooner reduced to ashes in 1910, the legislature again enacted laws which marked the beginning of the Minnesota Forest Service. Another frightful forest disaster occurred in 1918, when fire destroyed the towns of Cloquet and Moose Lake as well as dozens of smaller villages. This tragic event further emphasized the need for additional fire protection efforts and resulted in the enactment of the burning permit law designed to eliminate the indiscriminate starting of fires.

As years have passed, the public has become increasingly aware of the need for intelligent management of forests to include not only fire protection, but the application of scientific forestry knowledge based on sound research to provide continued regeneration of forests for recreation, aesthetic and timber production needs.

Today, Division of Forestry responsibilities cover a wide range of multiple use land management activities on private as well as state lands to meet present and future public needs.

In retrospect, it appears that the early emphasis placed on fire protection and forest management by forestry pioneers is of great importance to all citizens at this time. Without the rather inauspicious beginning, and continued forestry progress later, we would not have the great multiple use opportunities available today. The task of rebuilding Minnesota's forest land to provide maximum public benefits is not completed, but the vastly improved condition of forests today promises an even brighter future.

(Responsibilities concerning state funds are established by statute and by delegation from the Commissioner of Conservation to the Division of Forestry, Department of Conservation. Laws of 1963, Chapter 332, states in part that state forests are established "For growing, managing and harvesting timber and other forest crops and for establishment and development of recreational areas and for protection of watershed areas and the preservation and development of rare and distinctive species of flora and fauna native to such areas . . . .")



# STATE FORESTS IN MINNESOTA

June 30, 1965 \*\*\*

State Forest**	State Land Under Forestry Jurisdiction	Total Land Area	Location
Badoura	5,041	15,922	Southeastern Hubbard Co. town of Badoura on north boundary.
Battleground	9,311	12,868	Cass Co., on east side of Leech Lake. Bounded by Leech Lake and Big Boy River on west and south. Near Federal Dam.
Bear Island	24,904	144,321	Eastern St. Louis and northwestern Lake Cos.
Beltrami Island*	499,521	699,752	West central Lake of the Woods, east central Roseau and northwestern Beltrami counties.
Big Fork	45,437	124,270	North central Itasca Co.
Birch Lakes	437	637	Extreme north side of Stearns County.
Blackduck	40,638	123,756	Northern Beltrami Co., and Itasca
Bowstring	118,574	414,090	Southern Itasca and northern Cass Cos.
Buena Vista	18,366	105,885	Central Beltrami Co. immediately south of Blackduck State Forest.
Burntside	25,771	62,782	Northeastern St. Louis County.
Chengwatana	12,959	17,049	Pine County.
Cloquet Valley*	36,784	317,178	Southeastern St. Louis County.
Crow Wing*	3,370	30,338	Crow Wing County.
D.A.R.	360	640	Pine Co. Hwy. 23
Emily	640	640	Southeastern Cass Co.
Finland*	96,583	308,648	Eastern Lake County and West Cook
Fond du Lac	40,934	59,705	St. Louis and Carlton Counties.
Foot Hills	15,168	41,324	Western side of Cass Co.
General Andrews	5,148	7,460	Northern part of Pine Co.
George Washington*	92,593	306,708	Northern Itasca Co.
Golden Anniversary	260	644	S. E. Itasca County.
Grand Portage	32,732	98,701	Cook County.
Hill River	75,600	113,930	North central Aitkin Co.
Huntersville	640	640	Northeastern Wadena Co.
Insula Lake	484	484	North central Lake Co.
Kabetogama*	168,268	697,363	Northern St. Louis Co. and Koochiching.
Koochiching	223,590	352,584	Koochiching County.
Lake Isabella	66	66	North central Lake Co.
Lake Jeanette	1,354	10,725	Northeastern St. Louis Co.
Land O'Lakes*	4,050	10,984	East side of Cass Co.
Lyons	560	627	Eastern Wadena Co. approximately 18 miles southwest of Wadena.
Minn. Memorial Hardwood	5,434	1,920,019	In parts of Dakota, Goodhue, Wabasha, Winona, Houston, Fillmore and Olmsted Cos.
Mississippi Headwaters	8,578	43,021	Beltrami, Clearwater and Hubbard Counties.
Nemadji	90,061	94,827	Carlton and Pine Cos.
Northwest Angle	12,404	79,169	Northern Lake of the Woods Co. most northerly part of continental U.S.A. outside of Alaska.
Pat Bayle	41,401	170,891	West central Cook Co.
Paul Bunyan	58,540	101,963	Northern Hubbard Co.
Pillsbury	7,324	13,408	Southern Cass Co.
Pine Island	638,389	878,039	Koochiching Co.
Red Lake*	59,458	65,712	Eastern Beltrami Co.
Remer	2,440	12,774	Eastern Cook County.
Rum River	16,910	33,180	Northwestern Mille Lacs County and Kanabec.
St. Croix	25,865	42,105	Pine County.
Sand Dunes*	3,837	10,805	Sherburne Co.
Savanna	133,659	218,451	Aitkin and St. Louis Counties.

State Forest**	State Land Under Forestry Jurisdiction	Total Land Area	Location
Smokey Bear	12,037	12,238	North central Koochiching County
Smoky Hills	7,072	21,527	Eastern Becker Co.
Solana	58,130	68,181	Southeastern Aitkin Co.
Sturgeon River	52,799	142,948	West central St. Louis County
Two Inlets	4,336	23,818	Northeastern Becker Co.
Wealthwood	7,425	14,053	Aitkin County
Welsh Lake	6,104	14,998	Northwestern Cass Co.
White Earth	28,756	113,338	Becker, Clearwater and Mahnomon Cos.
Whiteface River	2,480	4,480	Southern St. Louis Co.
Administrative and Scattered***	1,816	1,816	
<b>TOTALS</b>	<b>2,885,318</b>	<b>8,152,482</b>	
Additional Acquired Lands	33,954	33,954	
<b>GRAND TOTAL</b>	<b>2,919,272</b>	<b>8,186,436</b>	

\* See campground list as follows

\*\* Hunting is allowed at all state forests, except where there is a game refuge. Logging roads provide excellent hiking. Berry picking, nature study, photography – many activities are enjoyed in Minnesota State Forests. Fishing is possible at most. There are 189 hunter's cabin sites for lease on state forest land. These sites are approximately 100 feet square. Approximately 50 to 70 percent are now leased. In addition, there are 1,200 lakeshore homesites about 90 percent of which are leased.

\*\*\* Administrative and scattered forest lands are those state lands outside the present state forest boundaries.



## STATE FOREST CAMPGROUNDS

June 30, 1964

State Forest	Campground	Location	Units*	Facilities			
				T	DW	S	BL
Beltrami Island	Bemis Hill	Roseau County southeast of Warroad	4	x	x		
	Blueberry Hill	Lake of the Woods County, State Hwy. 11, 4 miles west of Williams	12	x	x		
	Faunce	Western Lake of the Woods County, south of Williams	2	x	x		
Cloquet Valley	Whiteface River	St. Louis County, north of Duluth	6	x	x		
Crow Wing	Greer Lake	Crow Wing County northeast of Crosby	15	x	x	x	x
	Lougee Lake	Crow Wing County northeast of Brainerd	31	x	x	x	x
Finland	Eckbeck	Lake County north of intersection of U.S. Hwys. 61 and 1	10	x			
	Finland	Lake County near village of Finland on State Hwy. 1	10	x			
Geo. Washington	Bear Lake	Itasca County north of Nashwauk	13	x	x	x	x
	Beatrice Lake	Itasca County north of Hibbing	19	x	x	x	x
	Button Box	Itasca County northwest of Effie	2				
	Larson Lake	Itasca County southeast of Effie	10	x	x		x
	Owen Lake	Itasca County southeast of Bigfork	20	x	x	x	x
Kabetogama	Ash River	St. Louis County, Ash River, near junction of Kabetogama and Namakan River	9	x	x	x	x
	Chief Woodenfrog	St. Louis County, west shore of Kabetogama Lake	38	x	x	x	x
	Gappa's Landing	St. Louis County, the southern shore of Kabetogama Lake	15	x	x	x	x
	**King Williams Narrows	St. Louis County, the narrows between Crane and Sand Point Lakes	10	x	x	x	
	**Trout Lake (Mukooda)	St. Louis County northwest of King Williams Narrows Campground	15	x	x		
	Wakemup Bay	St. Louis County, west end of Lake Vermilion	25	x	x	x	x
Land O' Lakes	Washburn Lake	Cass County northwest of Outing and northeast of Brainerd	2	x	x		
Red Lake	Waskish	Beltrami County on the Tamarac River at Waskish	15	x	x		x
Sand Dunes	Ann Lake	West of Zimmerman in Sherburne County	10	x	x	x	
TOTAL			313				

Key: T-Toilets; DW-drinking water; S-swimming; BL-boat launching

\* 1 unit consists of a tentsite, fireplace and table.

\*\* Accessible by boat only

## FORESTS – STATE (Proposed)

### A PROPOSED MINNESOTA RIVER VALLEY STATE FOREST

The Department of Conservation has completed a preliminary survey of the feasibility of establishing a Minnesota River Valley State Forest along the Minnesota River in southwestern Minnesota as requested by the Minnesota River Development Association. Establishing such a forest would permit watershed protection on well-stocked woodlands of the steep slopes, improvement and preservation of the area's aesthetic values, provide land for camping, hiking and cycle trails, and additional access to the Minnesota River.

Recommended acquisition by the state is estimated at 40,000 acres. Key areas recommended are estimated at eleven percent of the total area, but a more detailed survey could result in changes in this estimate. Preliminary survey work should be expanded into a complete study of estimates of land acquisition, types of trees, location of key sites, definite data regarding local and individual participation and other pertinent data.

Establishing a Minnesota River Valley State Forest need not interfere with establishing state park areas, municipal recreation areas or private recreational areas within the proposed forest boundaries. Although more detailed survey work is needed before this proposal is presented to the legislature, information gathered to date indicates that this proposal would be a desirable and feasible project.

## FORESTS – STATE (Programs)

### INTRODUCTION

State forest lands are constantly changing with the passage of time. Enemies of forest stands including insects, diseases and uncontrolled fires continue to take a toll while nature and man work together in many ways to protect, regenerate and restore forest areas to maximum public usefulness.

The state's programs must be somewhat flexible in order to adjust to changing public needs. The following programs are re-examined at regular intervals and necessary adjustments made.

### FIRE PREVENTION AND SUPPRESSION

Adequate protection of all forest land against fire, insect or disease damage is considered fundamental to all present and future multiple-use developments. Man causes 99 percent of all forest fires. The number of such fires will be reduced by a continued, vigorous fire prevention campaign designed to reach all local people and forest users.

More rapid detection of fires is made possible through aircraft use to supplement the present fire detection system. Additional fire detection towers will be constructed in the Memorial Hardwood Forest Areas. Forest fire law enforcement will be intensified.

### FOREST PEST CONTROL

There is active cooperation between the Department of Conservation, the State Department of Agriculture, the University of Minnesota, the Lake States Forest Experiment Station and private land-owners in controlling insect and disease epidemics. Timber harvesting on state lands is coordinated with pest control activities.

### STATE FOREST PLANNING

Forest land use must be planned so that each tract is put to the use or uses for which it is best suited in the public interest. Such uses include timber production, game production, recreation, watershed protection and erosion control.

Inventory of each forestry district completed June 30, 1965, provides complete information necessary for sound multiple-use management planning. There is close cooperation with the Lake States Forest Experiment Station and other agencies in state forest planning. It is expected that pooling of forest inventory data will result in substantial savings to each land management agency.

The state encourages various land management agencies to obtain new aerial photographs for the various counties at ten-year intervals.

## TIMBER SALES

The sale of mature timber is on a sustained yield management basis, utilizing the best known silvicultural techniques to regenerate forest areas and to promote maximum timber growth while preserving aesthetic values.

Recent timber inventories indicate that far more timber is being produced on state lands than can be harvested under present markets. The sale of aspen, miscellaneous hardwoods, balsam, cedar and tamarack is especially encouraged to promote growth of other more valuable products and to benefit the economy of the state.

Production of trees at the three state forest nurseries is maintained at a level to adequately supply the reforestation and planting stock in quality and quantity sufficient to meet the planting need on both private and public land in Minnesota. Such trees are made available to the public at a cost to encourage reforestation. The nurseries are open to the public for tours by notifying the nursery superintendent. It is expected that these nurseries, now producing 35 million trees yearly, can be expanded to produce approximately 50 million trees annually. The surpluses of certain kinds of forest products in Minnesota make it necessary that various wood-using industries be encouraged to use Minnesota-grown and harvested products.

## FOREST REGENERATION AND DEVELOPMENT

Nonproductive state forest land is planted or seeded at the rate of 10,000 acres per year. Particular emphasis is placed on the planting of tree species best adapted to the sites. Planning for regeneration is often started with the timber sales program to first remove low value trees unsuited to the site on which they are growing.

Work is done on the Big Falls Experimental Forest and elsewhere in cooperation with the Lake States Forest Experiment Station to improve reforestation techniques, especially on swamp lands.

## ROADS AND TRAILS

Forest roads and trails are vital to the multiple uses and protection of state forests. Each year, new roads must be constructed and additional miles of roads reconstructed, in addition to the necessary maintenance of existing roads. Logging roads provide public access to many forest areas for hunting and other recreational uses.

## CONSOLIDATION OF STATE FOREST LANDS

The state land exchange program will be expanded to exchange state lands outside state forest boundaries for private and other public lands within state forest boundaries. This program is of great importance because of the resulting savings in administrative costs. Recently completed long-range exchange plans will be carried out as soon as possible.

Planning for land acquisition will continue in the Memorial Hardwood Forest area in accordance with available funds.

## OTHER COOPERATIVE PROGRAMS

Other programs relating indirectly to state lands in state forests include continued forest management service to private land owners, school and municipal forests, watershed programs, tree farms, and assistance to counties managing tax forfeited land. Technical forestry assistance and advice to private land-owners brings about increased developments, protection and improvement of privately owned forest lands.

Cooperation is received from the University of Minnesota, the Lake States Forest Experiment Station and other agencies in developing new forestry techniques through research.

FORESTS – COUNTY – CLASS III, 949,763 ACRES, 28 AREAS

County memorial forests may be set aside by resolution through county boards from tax forfeited lands which are suitable for forestry purposes. These lands may be dedicated as memorial forests and are open to the public for hunting and fishing. Income from forest products is "dedicated" and may be used only for development and maintenance of the area.

Laws of 1945, Chapter 347, and Minnesota Statutes, Section 459.06, Subdivision 2, provide for these areas. The selection of land for county memorial forests and the plan of management does not require the approval of the state, but donations of lands for these forests do have this requirement.

COUNTY	FOREST	ACREAGE	TOTAL ACREAGE
Aitkin	4-H	65.00	65.00
Anoka		113,369.66	113,369.66
Becker	Two Inlets	7,879.53	
	Wolf Lake	3,680.00	
	Alford King	10,152.91	
	Bad Medicine	10,456.40	
	Clinton Park	139.45	
	Otter Tail	5,680.57	
	Round Lake	6,842.92	
	Sugar Bush	7,309.29	
	Maple Grove	16,099.26	68,240.33
Beltrami	Beltrami County	480.00	480.00
Cass	Cass County	64,095.82	
	Foot Hills	53,891.39	117,987.21
Hubbard	Ray Johnson	140.00	
	Wilcox	4,799.90	
	Smith	5,885.56	10,825.46
Itasca	Dunn Stevens	108,320.00	
	Loucks Danluk	9,320.00	117,640.00
Kanabec	Kanabec County	80.00	80.00
Mahnomen	Mahnomen County	240.00	240.00
St. Louis	Island Lake	264,407.14	
	Arrowhead	19,510.48	
	Fine Lakes	16,313.49	
	Floodwood	93,995.54	
	Pelican Lake	73,679.54	
	Vermilion	35,244.60	
	Whiteface	17,684.22	<u>520,835.01</u>
10 counties	28 forests		949,762.67

August, 1964







## fish and wildlife

### THE MEDICINE HUNT

In the morning she said to her son and Wow-me-be-nais-sa, "Go and hunt, for the Great Spirit has given me some meat." But Wa-me-gon-a-biew objected, as he said the weather was too cold and calm and no moose could be approached so near as to shoot him. "I can make a wind," answered Net-no-kwa, "and though it is now still and cold, a warm wind shall come before night . . ." At night they returned, loaded with flesh of a fat moose, and Waw-me-gon-a-biew with a beaver on his back, as the old woman had seen in her dream.

John Tanner's Narrative of  
his captivity among the Indians - 1830

## WILDLIFE - STATE-WIDE SUPPLY

In Minnesota there are many kinds of wild animals including 330 kinds of birds and 82 kinds of mammals.

In modern game management, emphasis is placed on the relationship between game and its habitat or, in other words, between the animals and the land on which they live. The number of wild animals an area of land can support, its "carrying capacity," varies throughout the year, usually being the lowest in the winter when food and necessary cover are scarce. The "limiting factors" may differ from place to place and season to season, however. In addition to food and cover, some of the potential limiting factors are nesting cover, weather, predators, disease, over-hunting, agricultural practices, forest management practices or a combination of any of these.

As habitat conditions change, the numbers of wild animals may fluctuate accordingly. For example, in the spring, there may be few pheasants on a farm, but under good conditions these birds will produce a good crop of young and by fall the total population may increase threefold over the spring population. If the winter carrying capacity is low, the number of birds surviving to the spring will be low. If the surplus birds, "harvestable surplus," are taken by hunting before they die during the winter, the hunter will have been provided his sport without affecting the next year's pheasant crop.

Modern game management is essentially the business of: (1) maintaining or improving habitat required to produce sustained crops of wild animals; and (2) providing for the removal, usually by hunting, of the harvestable surplus in an orderly and acceptable manner. The maximum population turnover and the greatest use of the land by game comes when the population is of a moderate size or when the animals are not too crowded for food and space. For most game animals, the safe harvestable surplus is about one-third of the fall population.

### BIG GAME

Minnesota has three principal species of big game; white-tailed deer, black bear and moose. There is also a small herd of elk and reports of cougar are occasionally made.

White-tailed Deer - The white-tailed deer, Minnesota's Number One big game animal, ranges throughout the state. Its major range is the forested area in the northern and northeastern sections of Minnesota, an area of over 23,000 square miles. Prior to about 1900, deer were uncommon to this region. However, logging and burning removed much of the mature timber and encouraged succulent new growths of vegetation upon which deer feed. By 1920, deer had become fairly common over much of northeastern Minnesota.

As northern habitat became favorable, agricultural counties in the south became less favorable. Land clearing and unregulated hunting reduced the herd until by 1880 deer had nearly disappeared from the farming country.

With the enactment of game laws, deer began to increase throughout the state until today the summer herd is estimated to be between 500,000 and 800,000. The success enjoyed by the state's big game hunters has, in recent years, averaged about 100,000 deer during the annual nine-day season and in 1964 the harvest was a record 122,000. This was also the record year in big game resident firearm license sales, when the number exceeded 276,000. Deer hunting is of considerable importance to Minnesota's economy. A survey in 1960 revealed Minnesota deer hunters spend approximately \$17,500,000 or about \$75 per hunter per year.



Black Bear – When pioneers first settled what is now Minnesota, they found black bear in the deciduous forests of both the north and south. Now, they exist only in extensive northern forests, its range beginning 75 miles north of the Twin Cities and proceeding to the northern boundary of the state. This is a 20,000 square mile area in the north-eastern one-third of Minnesota.

For many years, bears were considered “varmints,” for food shortages in the wild were sometimes responsible for their appearance in settled areas. It has been estimated there is one bear for every 5 square miles of resident bear range. Their low numbers reflect low breeding potential and lack of protection afforded them. Bears are protected in a large portion of the Arrowhead Country and Cass County, but may be hunted in both areas during the deer season – there are no bag limits. Elsewhere in the state the black bear is unprotected. They may be killed at any time and bought, sold and possessed in any quantity.

Moose – Before extensive lumbering began in the late 1800’s, moose and caribou roamed the coniferous forests which covered much of northern Minnesota. Indians relied on the moose, Minnesota’s largest animal, for food and clothing. During the heyday of lumbering, hired hunters killed many for food in logging camps and later, settlers took them. However, habitat destruction was largely to blame for the dwindling of the herd, but meat hunting and uncontrolled hunting for trophies also contributed.

It was estimated that in 1922, the last year with a moose season, the herd had dwindled to between 1,850 and 3,000 animals. But, as the forest habitat returned to a more mature coniferous stage, the population of this magnificent mammal increased and the range spread. The entire moose range now encompasses about 17,000 square miles including principal range of about 8,800 square miles in the Red Lake area and the Superior National Forest. Minnesota has been censusing moose by aircraft since 1946. Latest aerial surveys (1964) show there are at least 7,000 in the principal range.

This famed Land of the Hunter’s Moon may some declare an extra dividend by providing a limited hunt for this mighty mammal.

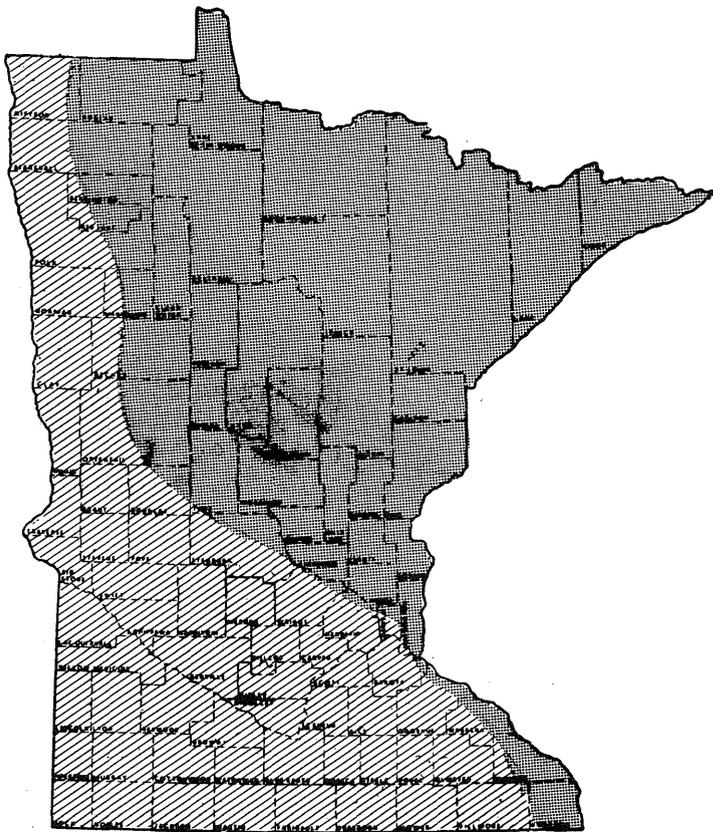
Elk (Wapiti) – Evidence of elk has been found throughout Minnesota. They disappeared from southern Minnesota prior to 1860, but a few lingered in the Lake of the Woods vicinity as late as 1917.

In 1914 and 1915, 56 elk were shipped to Itasca State Park from the Jackson Hole region of Wyoming. In 1935, 27 of them were shipped to an area south of Lake of the Woods and a few transported to the Superior National Forest. The main herd of 27 multiplied and ten years later were estimated to number between 200 and 300. Gradually, the herd became smaller as poaching kept pace with or exceeded reproduction. In recent years, the band has remained at 15 to 30. The fate of elk in Minnesota remains uncertain.

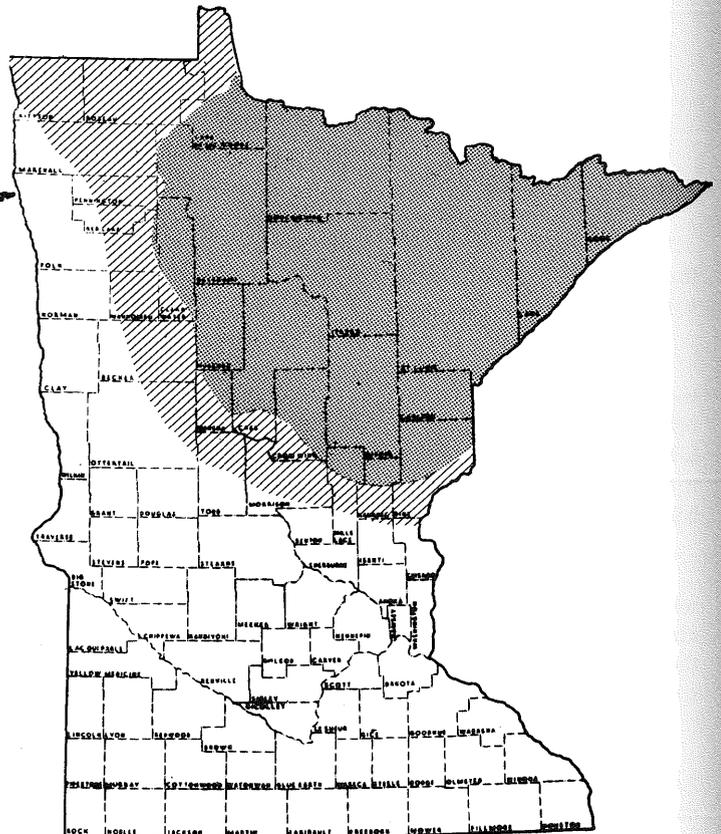
Woodland Caribou — Woodland caribou once ranged over the coniferous forest of northern Minnesota, but settlement and changes in habitat brought them near to extinction by the late 1930's. The last band inhabited the great boggy expanse north of Red Lake. In 1938, ten caribou were transplanted from Saskatchewan to Minnesota's Red Lake Bog in an effort to maintain the herd which had dwindled to three — all cows. No evidence of the herd was noted after 1943. Occasional reports of an individual caribou are still received, but none have been verified.

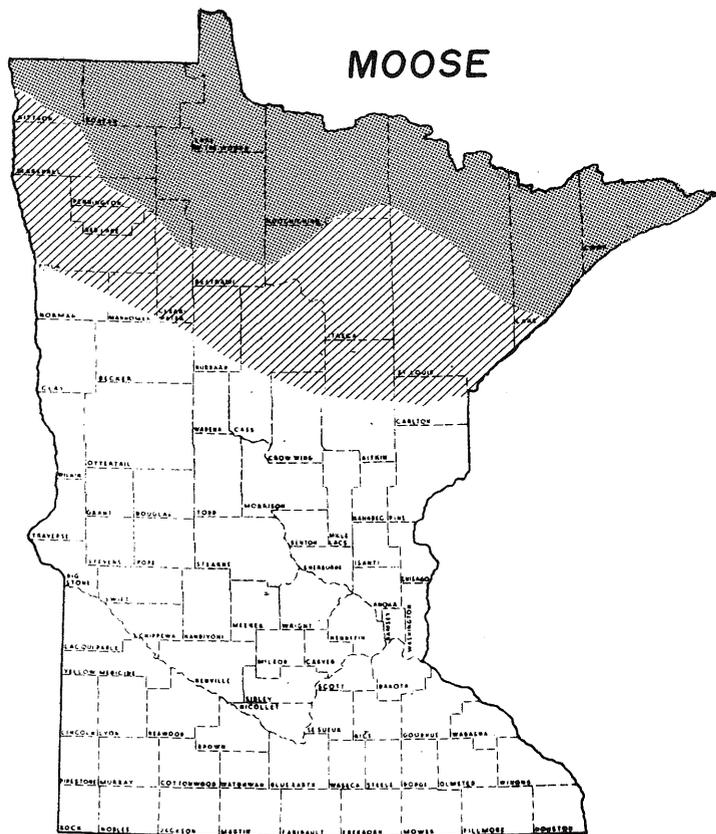
## RANGE MAPS...BIG GAME

DEER

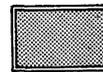


BEAR

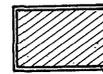




## KEY



COMMON



LESS COMMON

## SMALL GAME

There are many species of small mammals in Minnesota, but of greatest importance to recreation are the furbearers – those trapped for their pelts – and small game animals taken by hunters.

Furbearers – Eighteen species of mammals are providing about 12,000 trappers with about 600,000 animals annually. The total annual fur value is approximately \$1 million to \$1½ million of which the mink, muskrat and beaver make up about 90 percent. In numbers, muskrat pelts are the highest with between 100,000 and a million taken yearly. The number depends on water levels and trapping interest.

In monetary value, mink fur out-ranks all others. Up to a million dollars is received by Minnesota trappers each year for about 50,000 mink pelts. Although mink and muskrat fur are the most important today, beaver fur was ranked first in early trapping days. Beavers were so heavily trapped that they were nearly extinct and it became necessary to import them from Canada in 1901. Today, there are approximately 100,000 of these master engineers in Minnesota. Beavers are again an important fur animal.

Other important furbearers are the skunks, civet cats, weasels, badgers, and raccoons. The fisher, a large member of the weasel family, was once nearly extinct in Minnesota, but is now present in considerable numbers in the northeast. Otters occasionally are seen in northern Minnesota and in the Mississippi River bottom lands. Raccoons are hunted both for sport and trapped for fur and are found in nearly all areas of the state, being least abundant in the coniferous forest areas.

The largest remaining concentration of timber wolves in the United States inhabits the border lakes region of Minnesota. Estimates are that the remaining population does not exceed 400 animals or about one wolf per fourteen square miles of the inhabited area. There is serious concern that they may be exterminated.

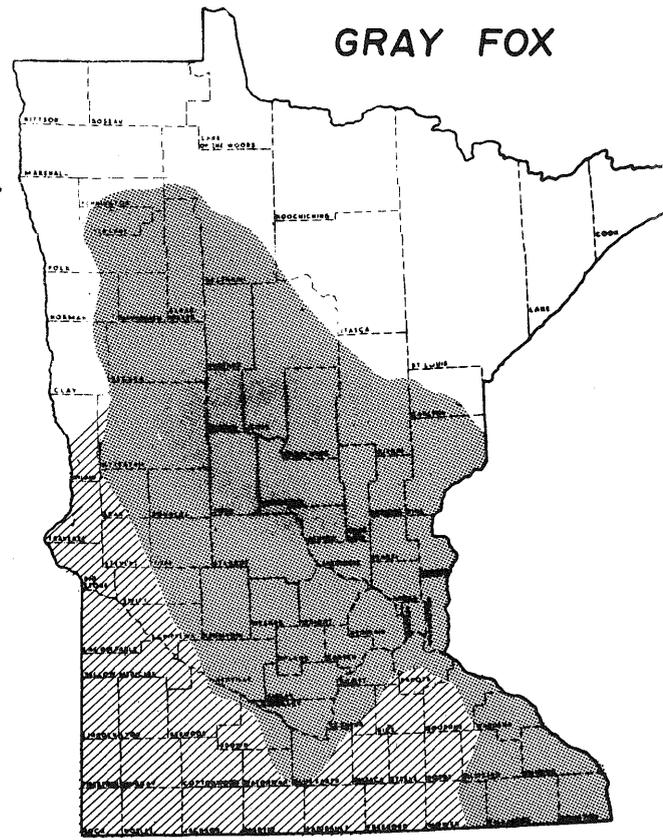
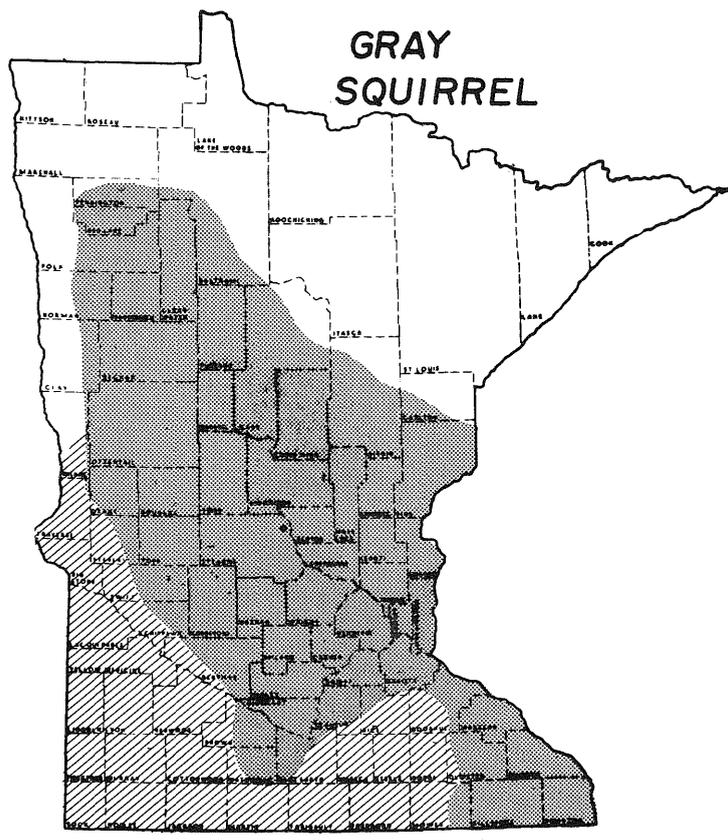
Small Game Animals – Squirrels and rabbits are important small game animals in Minnesota for hunting. Cottontails range throughout the state; jack rabbits are common in the level farming country of southern and western Minnesota; snowshoe or varying hares are common forest animals in the north.

Gray squirrels are common wherever there are hardwood forests. Fox squirrels are most often found in farming areas and towns of southern Minnesota. The scolding conversation of the red squirrel or chickaree is a typical sound of the north woods. They are seen or heard throughout the northern pine and spruce woods.

Gray squirrel, cottontail rabbit, jack rabbit, snowshoe hare, red fox, raccoon, and gray fox, ranked in the order of take by hunting, provide a total of about 900,000 animals to the hunter annually.

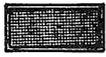
## RANGE MAPS... SMALL GAME MAMMALS

 COMMON       LESS COMMON

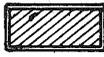


**(RED FOX, MINK, RACCOON AND MUSKRAT  
RANGE THROUGHOUT THE STATE)**

# RANGE MAPS... FURBEARERS

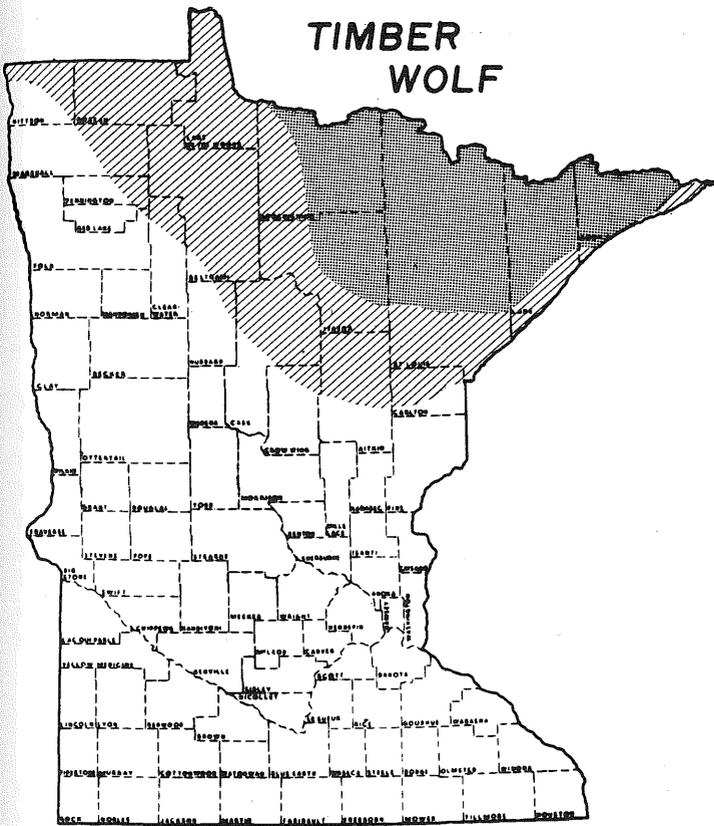


COMMON

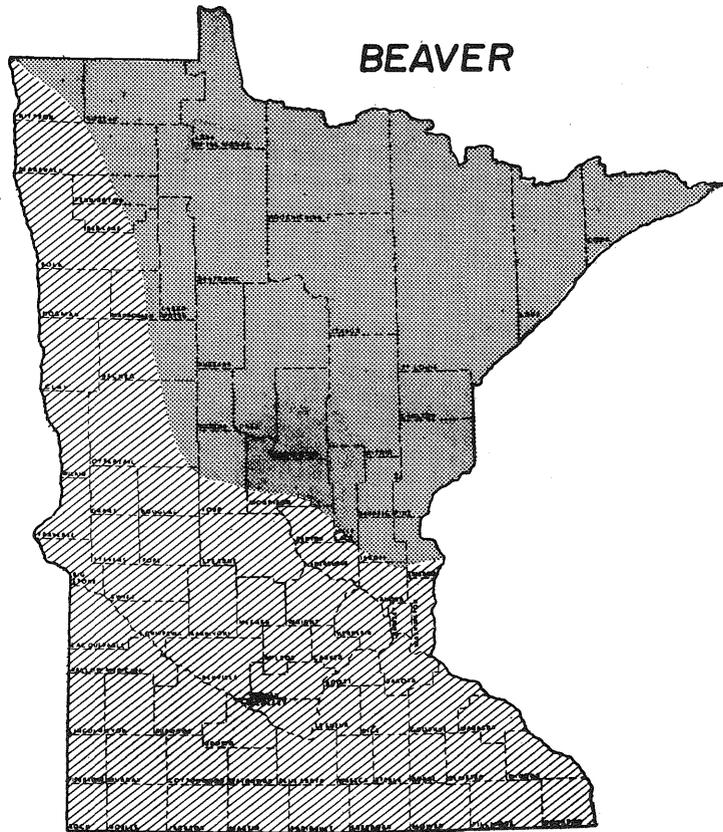


LESS COMMON

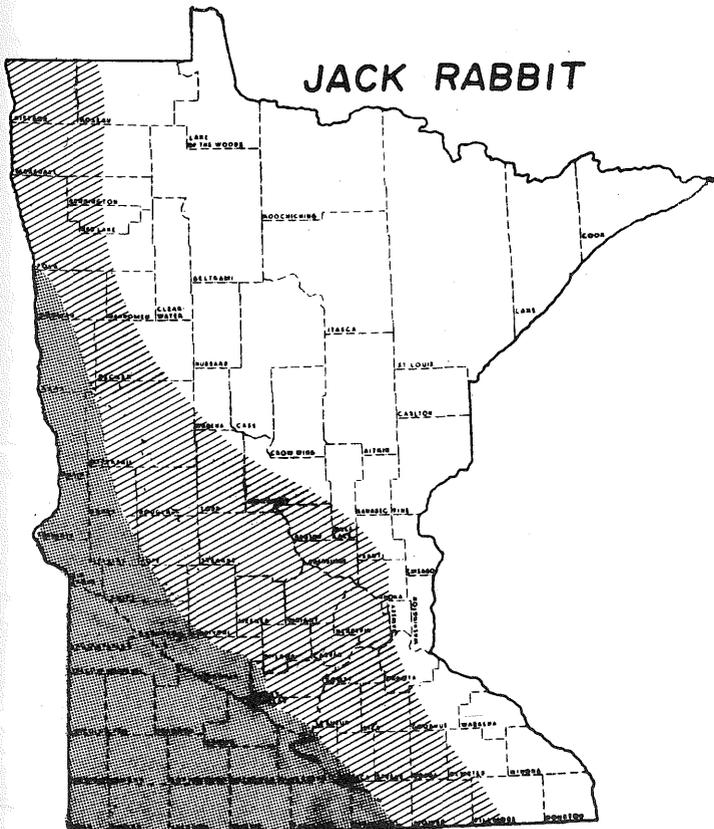
## TIMBER WOLF



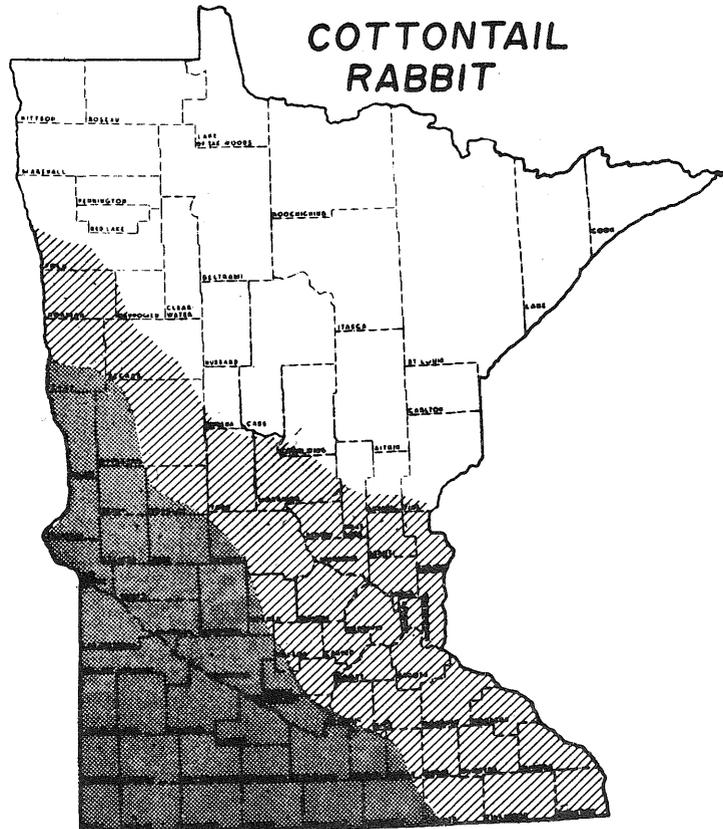
## BEAVER



## JACK RABBIT



## COTTONTAIL RABBIT



## UPLAND GAME

### Pheasants

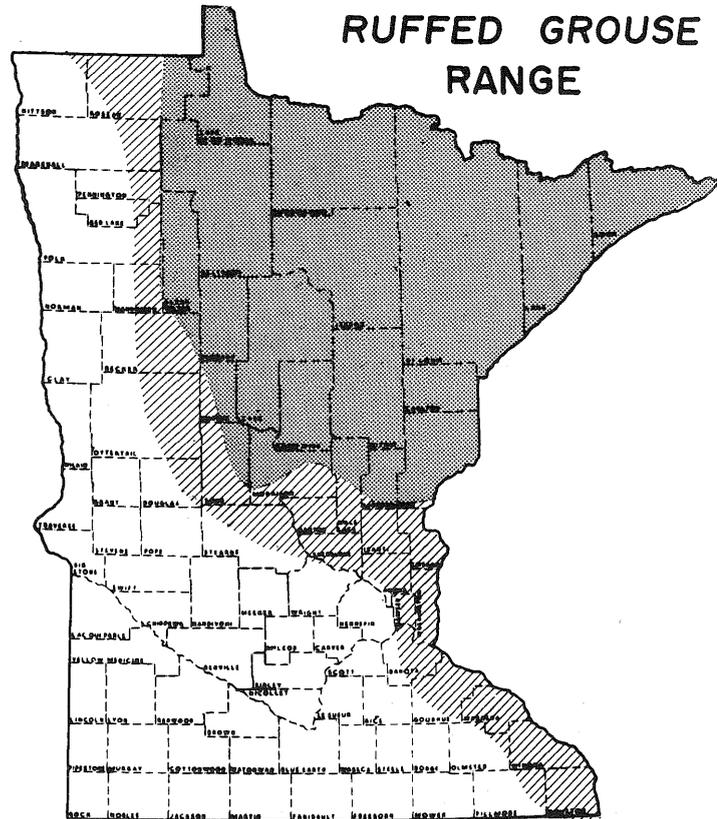
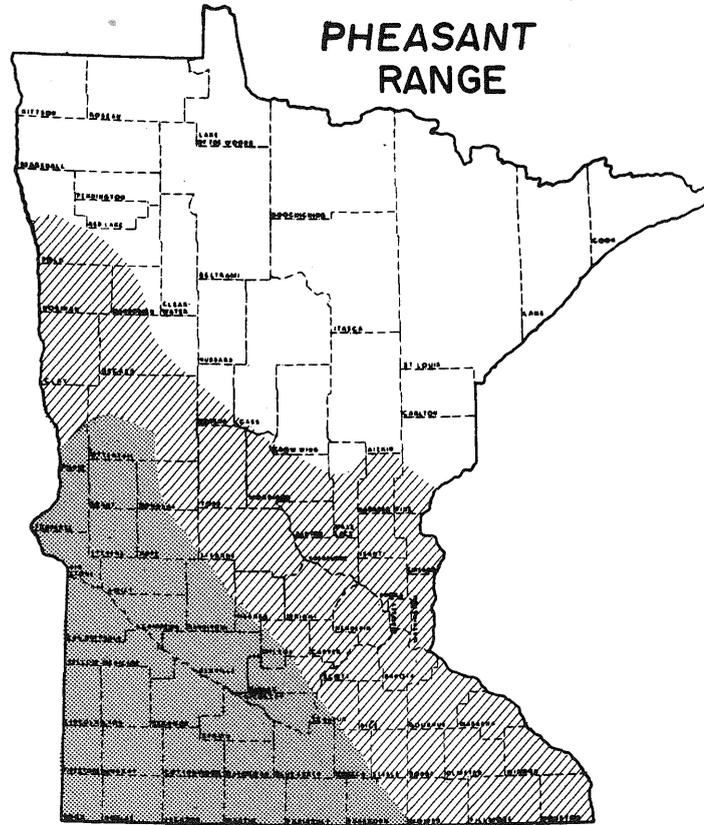
In Minnesota, as elsewhere in the midwest, the ringnecked pheasant is considered king of the upland game birds. Hunting for this magnificent bird is of considerable importance both recreationally and economically. The pheasants were introduced into the state about 1915 and attained shootable numbers by 1922. The first season was in 1924. Populations reached peak densities in the 1930's and early '40's. The peak harvest was 1,749,100 in 1942 by 295,473 hunters. In 1964 more than 300,000 small game hunters bagged about 758,000 ringnecks.

Ideal habitat includes row crops for food supply, small grains and grasslands for nesting cover, and sloughs and shelterbelts for winter cover. Minnesota has about 44,500 square miles of pheasant range — about 55 percent of the total land area. Based on average annual harvest of about 1,000,000 cock pheasants, the take per square mile averages 20 to 25 birds. The pheasant range is largely in the agricultural region of the southern half of Minnesota with highest densities in the south-central, west-central and south-western counties. Pheasants are rare in northern Minnesota.

### Ruffed Grouse

The ruffed grouse or partridge is the Number Two upland game bird in Minnesota in terms of numbers harvested and economic value. Hunters annually bag an average of 450,000 ruffed grouse, but the numbers may vary considerably from year to year. This hardy species is found over a greater area than any other North American, non-migratory game bird. In Minnesota it is widely distributed throughout the deciduous and mixed forests of the north, southeast and in the Mississippi River Valley.

Preferred habitat in northern Minnesota is the second growth hardwood forest with scattered evergreen trees. Ruffed grouse are found also in alder lowlands and open evergreen forests. They seem to be most abundant in forests recovering from fire. Woodland-field edges are frequently used by the birds for feeding. Highest populations occur in the southern half of the northern forest region.



### Sharp-tailed Grouse

Usually, in recent years, about 60,000 "sharpies" have been brought down by hunters. A bird of the transitional zone, between forest and prairie, sharp-tails are not found abundantly over any extensive area except the northern half of north-western Minnesota. The range and numbers of sharp-tailed grouse have been reduced by modern farming, by increased emphasis on reforestation, and by maturing of both deciduous and coniferous forests. Further deterioration may mean continued population decline.

### Spruce Grouse

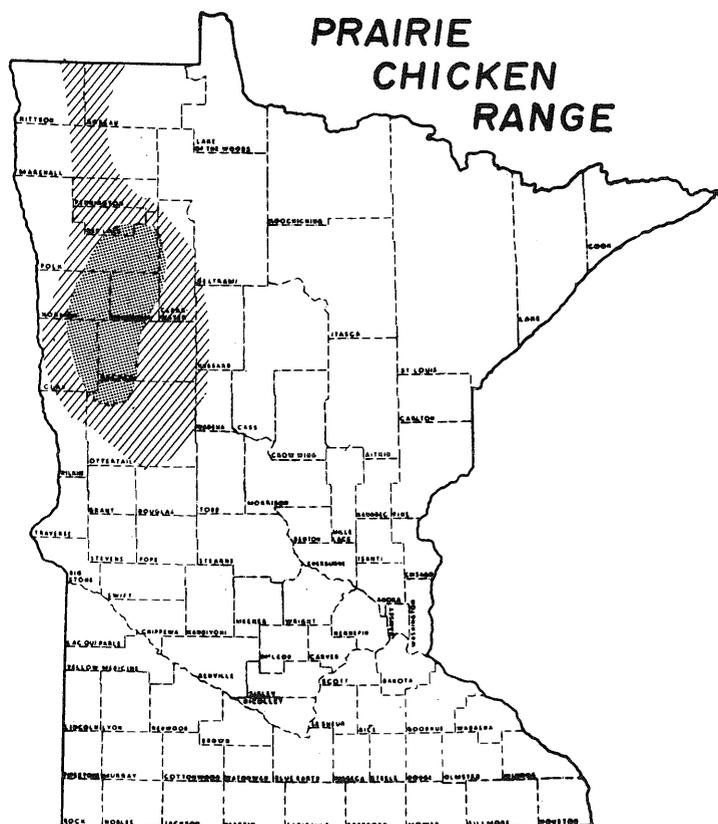
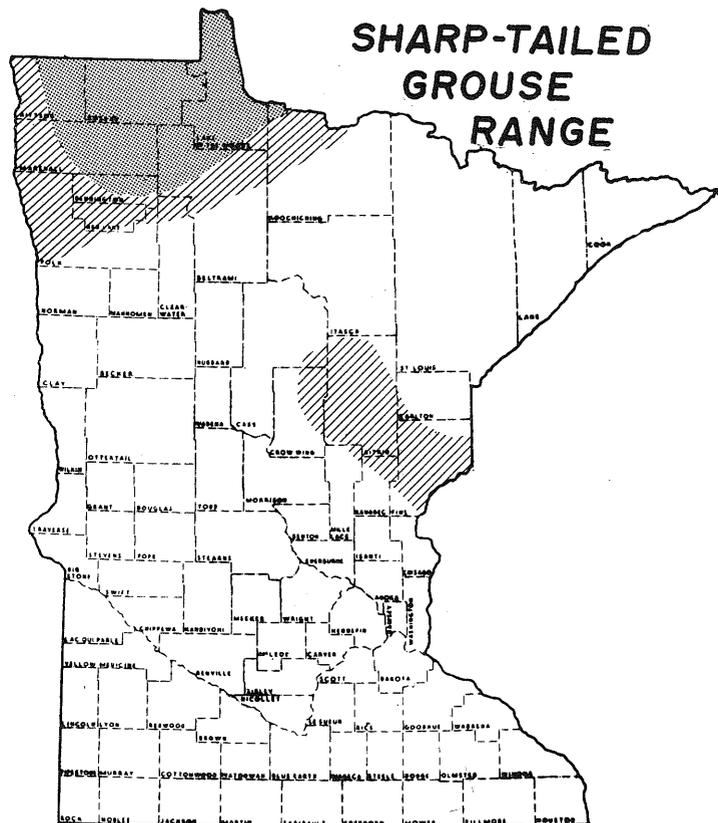
The spruce grouse or spruce hen, as its name suggests, depends upon evergreens especially spruce, balsam fir, and swamp conifers. It is confined to the coniferous forest of northern Minnesota. With the exploitation of virgin pine and spruce forests after the 1880's, this species declined until it seemed on the threshold of extinction in the 1930's. Due to fire protection, reforestation and game law protection, the spruce hen populations have increased considerably.

### Greater Prairie Chicken

During early exploration of Minnesota and until about 1850, the greater prairie chicken or pin-nated grouse was Minnesota's only prairie grouse. As farming became intensive, its prairie nesting cover was plowed. Its range was restricted to western and central prairie counties by 1930. Prairie chickens may become extinct if present land-use trends continue. The hunting season has been closed for many years.

### Other Upland Birds

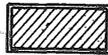
Hungarian partridge are scattered over most of the non-forested region of Minnesota. Hunting seasons usually coincide with the pheasant season. Remnant populations of bobwhite quail occur mostly in southeastern counties and have been protected by a closed season since 1958. Woodcocks are hunted as upland birds. From 1962 to 1963, the number bagged increased by 332 percent; 2,928 were taken in 1962 and 12,649 in 1963. It is likely that hunting lesser species of birds such as the woodcock and jacksnipe, along with small mammals (squirrels and rabbits particularly), will increase if populations of pheasants and grouse decline.



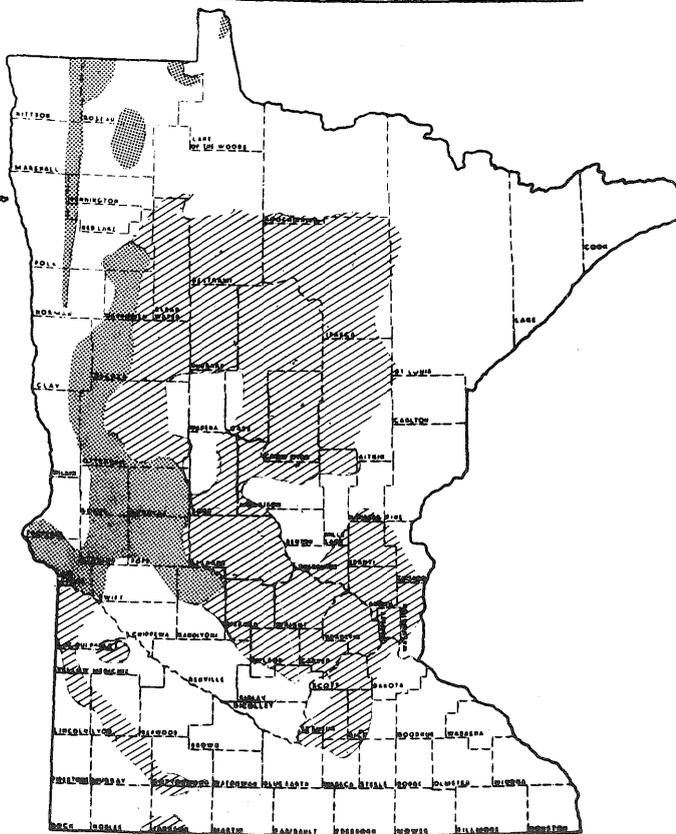
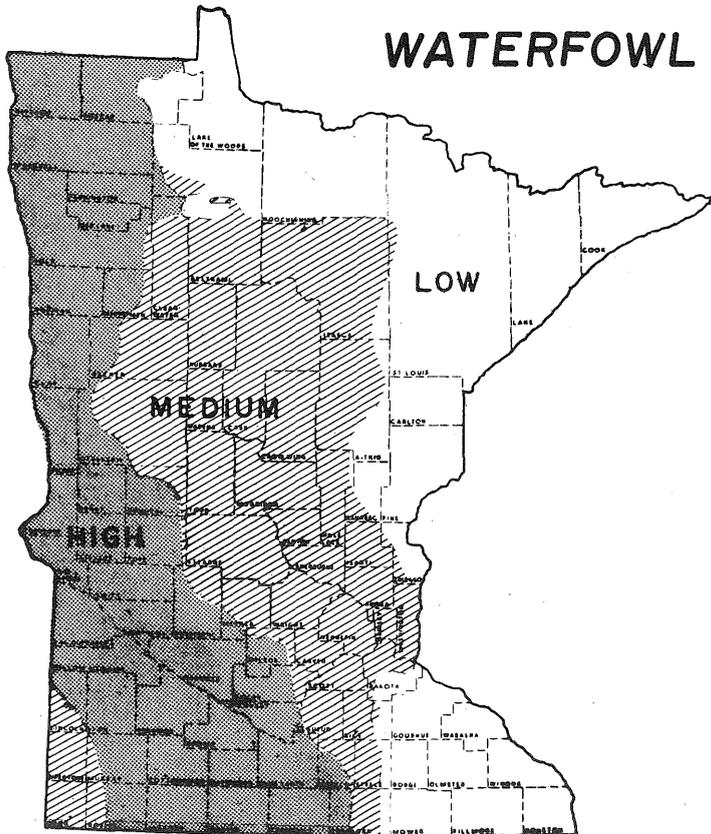
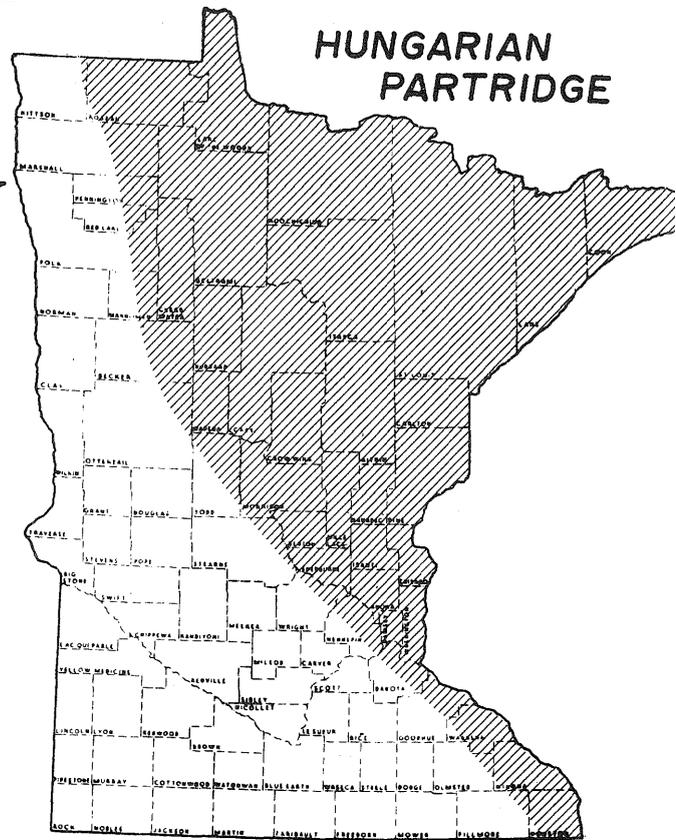
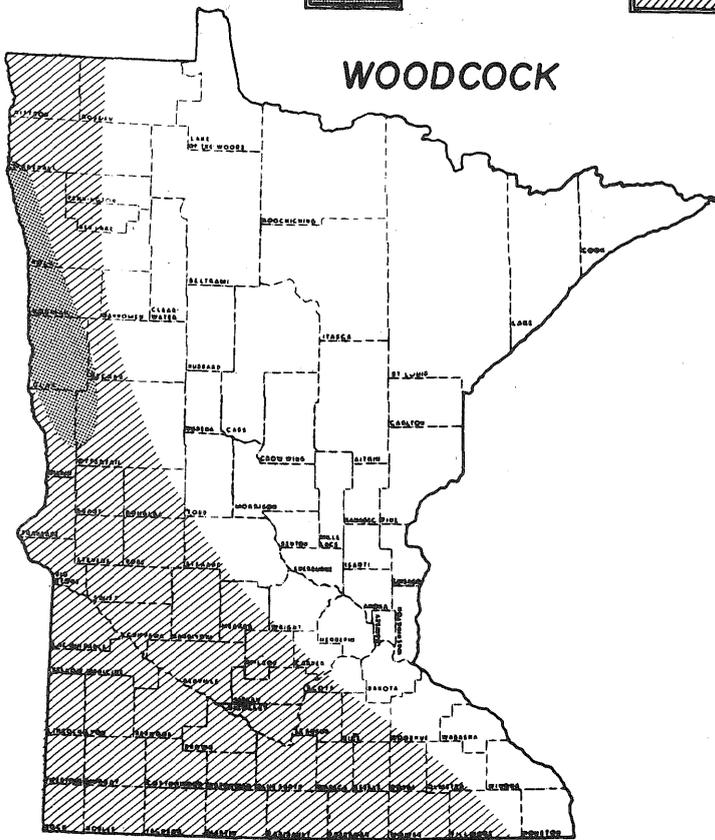
# RANGE MAPS... UPLAND GAME BIRDS



COMMON



LESS COMMON



PROBABLE WATERFOWL PRODUCTION VALUES  
PRIOR TO SETTLEMENT

REGIONS OF PRESENT HIGH, MODERATE  
AND LOW VALUE FOR WATERFOWL PRODUCTION

## WATERFOWL

Twenty-two different species of ducks and mergansers have been recorded in Minnesota. About a dozen can be seen without much difficulty while the others occur only occasionally. Most common are the mallard, blue-winged teal and lesser scaup. Canadian, snow and blue geese move through Minnesota during migration. White-fronted geese are usually seen only on the western edge of the state. Major stop-over points are Roseau Refuge, Thief Lake Refuge, Orwell Dam Reservoir, Lake Traverse and Lac qui Parle Refuge. Annually, Minnesota hunters usually shoot 20,000 to 40,000 geese – Canadas, blues and snows.

Because of the abundance of shallow water suitable for waterfowl, Minnesota is the best duck hunting state in the Mississippi Flyway. Hunters annually harvest around 950,000 waterfowl – plus 30,000 coot. In 1960, slightly over one-tenth of the ducks taken in the nation were from Minnesota. This represents more than one-fourth of the Mississippi Flyway take and is equal to the harvest of the entire Atlantic Flyway.

It has been estimated that once as much as half the continental duck production was reared south of the Canadian border, and that the prairies of Minnesota and the Dakotas contributed about 14 percent of the continental production. Shortly after the Civil War, drainage began and by 1939, most of the wetlands in the southern tier of counties and the Red River Valley had been drained. (See page 214 for an account of wetland drainage. Loss of waterfowl production habitat is shown graphically on the opposite page.)

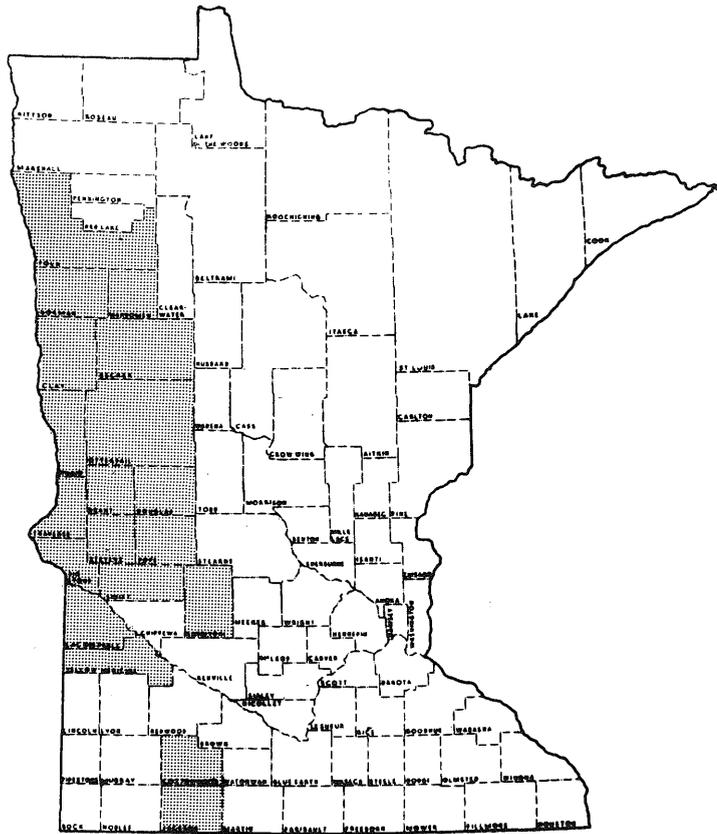
Much of the water in the wooded region is in deep fish lakes with low to moderate production of plant and animal life. However, in dry years, when waterfowl production on the prairies is low, this woodland habitat remains moderately productive. The value of this region to waterfowl increases with declining water levels. These woodland water areas are less likely to be drained than those on fertile, prairie farm lands.

# WILDLIFE MANAGEMENT AREAS - FEDERAL - CLASS III, 212,543 ACRES IN FOUR MAJOR AREAS AND NUMEROUS WATERFOWL PRODUCTION AREAS

DEPARTMENT OF THE INTERIOR, BUREAU OF SPORT FISHERIES AND WILDLIFE

There are four Federal Wildlife Refuges in Minnesota administered by the U. S. Department of the Interior, Fish and Wildlife Service. These four areas occupy a total of 132,862 acres, of which 7,689 acres are meandered water areas. They are used for waterfowl production and, in part, for hunting.

In 1961, the Fish and Wildlife Service began a program of small wetland acquisition in Minnesota. The program is applicable to wetlands of either the deep marsh or slightly deeper open water types in 19 of the "prairie pothole" counties. Goals proposed were 99,167 acres to be acquired by fee purchase and about 148,147 acres to be protected mainly by permanent easements prohibiting drainage, burning and filling of wetlands. It is probable that these goals will be adjusted to meet changing needs and the availability of critical areas.



**THE NINETEEN MINNESOTA COUNTIES IN WHICH  
THE U. S. FISH AND WILDLIFE SERVICE IS  
PURCHASING AND OBTAINING EASEMENTS ON  
WATERFOWL PRODUCTION AREAS.**

In order to identify marshes suitable for purchase under its program, the Fish and Wildlife Service conducted a study of wetlands in the 19 counties. This study showed 3,947 marshes were suitable for purchase in 359 townships. The plan was to limit purchase to no more than four or five good waterfowl brood marshes in each of the townships. The purchase goal of about 99,167 acres would be achieved by the purchase of 1,237 tracts. This program is aimed acquisition of key wildlife areas that would likely be lost if not protected, and will leave considerable acreages in private ownership.

Areas acquired by fee purchase in the U.S.F.W.S. small wetlands program all have public access. They are open to public hunting except during emergency or critical conditions which may require temporary closure. The areas are identified by signs reading "Waterfowl Production Area - Open to Public Hunting." Both waterfowl and upland game use the areas and they are managed for both uses.

As of June 30, 1964, the Fish and Wildlife Service had acquired, in fee, waterfowl production areas totaling 5,456 acres. There were 3,276 additional acres protected by easements in the 19 counties discussed above.

The total land area controlled by the Fish and Wildlife Service in Minnesota is shown below:

FISH AND WILDLIFE SERVICE - LAND AREA IN ACRES AS OF JUNE 30, 1964 -

MIGRATORY BIRD REFUGES	JUNE 30, 1964		PLANNED ADDITIONAL		Total
	Acquired	Leased	Acquire	Lease	
Agassiz	60,612		1,161		61,773
Rice Lake	12,695		2,210		14,905
Tamarac	34,285		375		34,660
Upper Mississippi	17,581	*15,421			33,002
St. Francis			31,795		31,795
Little Sioux			8,200		8,200
WATERFOWL PRODUCTION AREAS	5,456	3,276	93,711	144,871	247,314
COORDINATION AREAS					
Land Utilization Project (Leased to State of Minnesota)	81,700				81,700
Pipestone Wildlife Mgmt. Area (Leased to State of Minnesota)	110				110
FISH HATCHERIES					
New London Hatchery	104				104
Total	212,543	18,697	137,452	144,871	513,563

\*Owned by Army Corps of Engineers, administered by the Fish and Wildlife Service

Source: Annual Report Fish and Wildlife Service, M.O.R.R.C. Report 11.

WILDLIFE MANAGEMENT AREAS - STATE - CLASS III, 283,710 ACRES (PURCHASED), 534 AREAS

DEPARTMENT OF CONSERVATION, DIVISION OF GAME AND FISH

As of December 31, 1964, there were 534 Wildlife Management Areas (most of these are wetland areas) totaling 865,592 acres under the jurisdiction of the Division of Game and Fish. These areas are distributed throughout the state, but are concentrated in the better upland game and waterfowl ranges.

Nine of the Wildlife Management Areas are permanently staffed by resident game management personnel. The largest Wildlife Management Area is the Red Lake Unit which comprises about 488,509 acres of which 81,700 acres are under license from the U. S. Fish and Wildlife Service. The remainder of this area is under control of the Department of Conservation for game management purposes.



A breakdown of the Wildlife Management Area land owned or controlled by the Division of Game and Fish, Department of Conservation, December 31, 1964, is shown below.

Types of Units	Number	Acres Purchased	Under U.S. License	Other Lands*	Total Land Managed
Major staffed areas	9	162,150	82,037	443,629	687,816
Non-staffed areas	525	121,560	7,199	49,017	177,776
Total	534	283,710	89,236	492,646	865,592

Of the acreage shown above, 81,700 acres in the Red Lake Wildlife Management Area are under a 50-year lease from the U. S. Fish and Wildlife Service. (The Department of Conservation has requested that these lands be turned over to the state in fee title.) The Department of Defense, Corps of Engineers, has also licensed to the state about 4,200 acres in the Gores Pool 3 Wildlife Management Areas, 1,958 acres in the Orwell Wildlife Management Area, 124 acres in the Lac qui Parle Wildlife Management Area and scattered sites in the Upper Mississippi Headwaters.

The following is a by-county summary of the state-owned or controlled wildlife management areas open to public hunting. Hunting is permitted on all Wildlife Management Areas.

WILDLIFE MANAGEMENT AREAS, DIVISION OF GAME & FISH

12-31-64

County	Number of Areas	Acres Purchased by Game & Fish	Other Lands Managed Acres*	Total Owned & Managed Acres
Aitkin	6	9,042	12,593	21,635
Anoka	1	14,224		14,224
Becker	15	4,032	78	4,110
Beltrami	7	1,103	184,179	185,282
Benton	4	603		603
Big Stone	11	1,981	6,232	8,213
Blue Earth	6	710		710
Brown	3	723	230	953
Carlton	none			
Carver	1	134		134
Cass	6	2,111	9,572	11,683
Chippewa	7	2,912	5,265	8,177
Chisago	1	8,676		8,676
Clay	17	4,678		4,678
Clearwater	7	2,716	40	2,756
Cook	none			
Cottonwood	10	3,277		3,277
Crow Wing	3	1,973		1,973
Dakota	1	824	300	1,124
Dodge	4	80		80
Douglas	18	2,725		2,725
Faribault	3	1,358		1,358
Fillmore	none			
Freeborn	2	107		107
Goodhue	1	363	3,943	4,306
Grant	11	1,949	91	2,040
Hennepin	1	50		50
Houston	none			
Hubbard	4	552		552
Isanti	7	3,114	133	3,247
Itasca	none			
Jackson	16	1,516		1,516

\*Legislative transfers, conservation land and lands under cooperative agreement with other divisions within the Department of Conservation.

County	Number of Areas	Acres Purchased by Game & Fish	Other Lands Managed Acres*	Total Owned & Managed Acres
Kanabec	5	7,654	640	8,294
Kandiyohi	8	2,031		2,031
Kittson	2	10,660		10,660
Koochiching	none			
Lac qui Parle	19	2,883	9,392	12,275
Lake	none			
Lake of the Woods	3	600	218,430	219,030
Le Sueur	11	1,613		1,613
Lincoln	25	2,949		2,949
Lyon	27	4,643		4,643
McLeod	5	1,071		1,071
Mahnomen	10	4,676	4,228	8,904
Marshall	3	20,249	34,301	54,550
Martin	3	431		431
Meeker	5	714		714
Mille Lacs	3	31,381	977	32,358
Morrison	5	956		956
Mower	3	222		222
Murray	26	3,904		3,904
Nicollet	1	22		22
Nobles	7	496		496
Norman	10	3,208		3,208
Olmsted	4	1,918		1,918
Otter Tail	16	4,993	1,958	6,951
Pennington	2	240		240
Pine	5	1,302		1,302
Pipestone	6	961	121	1,082
Polk	21	4,361		4,361
Pope	6	994		994
Ramsey	none			
Red Lake	2	187		187
Redwood	11	1,514		1,514
Renville	1	40		40
Rice	3	150		150
Rock	none			
Roseau	2	53,011	85,953	138,964
St. Louis	none			
Scott	4	486		486
Sherburne	3	932		932
Sibley	2	185		185
Stearns	4	769		769
Steele	4	485		485
Stevens	15	1,233		1,233
Swift	8	2,559	2,334	4,893
Todd	13	2,702		2,702
Traverse	none		878	878
Wabasha	4	2,505		2,505
Wadena	2	582		582
Waseca	5	1,473		1,473
Washington	1	25		25
Watonwan	6	472	18	490
Wilkin	4	3,504		3,504

\*Legislative transfers, conservation land and lands under cooperative agreement with other divisions within the Department of Conservation.

County	Number of Areas	Acres Purchased by Game & Fish	Other Lands Managed Acres*	Total Owned & Managed Acres
Winona	1	20,096		20,096
Wright	8	1,710		1,710
Yellow Medicine	17	2,423		2,423
Total	534	283,710	581,881	865,592

\*Legislative transfers, conservation land and lands under cooperative agreement with other divisions within the Department of Conservation.

## WILDLIFE - STATE (PROGRAMS)

### GAME MANAGEMENT

The following are important general management activities carried out by the Department of Conservation, Division of Game and Fish.

Management of State-owned and Controlled Wildlife Areas and Public Shooting Grounds - Management includes providing wildlife food patches by means of agricultural share crop leases with farmers or by other means. It also includes construction of waterfowl impoundments, access roads, brushing, fencing and posting of about 17,000 rods of Wildlife Management Area boundary lines and enforcing game laws on areas where game and fish personnel are stationed. In law enforcement there is close cooperation between game wardens and game management personnel.

Hunting and Trapping Season Regulations - For the fullest utilization of game by hunters and trappers, Game and Fish personnel carry out game population surveys, both aerial and ground, to determine the most liberal hunting regulations which can be allowed, consistent with good management. To supplement this information, hunter bag checks are carried out and data tabulated to determine hunter success.

Coordination of State Game Management Activities - The Department of Conservation coordinates state game management activities with other agencies by meeting with and assisting in preparation of wildlife management plans of federal agencies including the Corps of Engineers, U. S. Fish and Wildlife Service, Forest Service, Soil Conservation Service and the Agricultural Stabilization and Conservation Service. The Department, through its Division of Game and Fish, cooperates with other state agencies including the Department of Agriculture, Highway Department, Soil and Water Conservation Districts, various counties and cooperates with the University of Minnesota in wildlife projects.

Game Habitat Improvement - Various methods are used to promote game habitat improvement on privately owned lands. This is done with permission of the land owners and in many cases is applied indirectly through agricultural and forestry practices encouraged under other programs.

Establishing Resident Goose Flocks - The state game program includes maintaining captive goose flocks at Thief Lake, Roseau and Lac qui Parle Wildlife Management Areas in an effort to establish future resident Canada goose populations. Private goose flocks are also being established in several areas of the state.

Information and Education - Public educational work is carried out by using wild animal displays set up at the State Fair, news releases, participation in television and radio programs as well as by attending numerous meetings with sportsmen's groups, civic organizations, etc. A current Game Management Policy is in force and is in the hands of all game and fish personnel. The interested public is also furnished copies.

Game Farm Operations - The state game program includes limited game farm operations for the production of day-old pheasant chicks for sportsmen to raise, and for experimental research on game birds. A limited number of wild Canada geese also are produced.

Road Construction - About 50 miles of roads and trails are constructed annually as a cooperative forestry-game program to provide hunter access to remote forested areas.

Surveys and Evaluation of Public Lands – Surveys and evaluations of lands under control of the Department of Conservation will be done, 1965-1967, to determine if the lands should be released for sale to the public or retained for wildlife habitat and other conservation purposes. These lands will be evaluated and classified by game managers to establish their value for wildlife and public hunting.

Small Watershed Program – Work involves evaluation and assisting in the federal Public Law 566 Program. This may involve about 48 different watersheds, from 1965 to 1967. More time will be spent in keeping pace with the planning, acquisition, and development work on small watershed projects under Public Law 566.

#### ACQUISITION AND DEVELOPMENT OF WILDLIFE LANDS –



Marshes or "wetlands" abound with wildlife, are top waterfowl production areas and valuable to recreation when placed under management.

Drainage of potholes and marshes in Minnesota has been going on at a rapid rate since the end of World War II with no sign of abatement. As an example of this situation, one county in southwestern Minnesota has over 90 new, legal drainage ditches which have eliminated 1,100 marshes. New ditches in this county are pending.

Another county has 109 legal ditches most of which were constructed since 1950. Plans for another ditch system call for 221 miles of open ditches and tile mains. When these plans materialize, it will mean 575 marshes totaling 6,460 acres, will have been drained. Draining soggy lands is a necessity in agricultural practices, but when draining surface waters, public values are involved.

The total loss of wetlands due to drainage is not recorded nor is there accurate data available as to the total acreage of the original wetlands. We do know, however, that in many counties the prairie-type wetlands have been

eliminated. Agricultural practices are such in the western and southern farming areas that the wetlands and associated meadows are becoming rare. From 1943 to 1954, it is estimated that 350,000 potholes were drained.

According to Robert W. Burwell, Department of the Interior; and Lawson G. Sugden, Canadian Wildlife Service,<sup>1</sup> between 1945 and 1950, nearly three potholes per square mile were drained in a 15,803 square mile area in west-central Minnesota. In 1950, the area had 14.2 potholes per square mile; in five years over 16 percent of the water areas were drained. Some 64,000 potholes whose total surface area was 188,000 acres, were destroyed in Minnesota and the Dakotas in 1949 and 1950 alone. But this represents only drainage done with federal subsidy payments; many other areas were drained without payments and are not recorded.

In 89 Minnesota, and North and South Dakota counties, federal assistance was given for the drainage of about 72,000 individual potholes from 1953 to 1961. During this eight year period, more than 79,000 acres of waterfowl habitat were eliminated through subsidizing drainage of an average of 9,885 acres annually. The average size of the wetlands was 1.1 acres. Fifty-eight percent were small wetlands that usually dried up in late spring, but were used by ducks for courtship and nesting; 39 percent were bigger wetlands capable of holding water longer; the rest were deep marshes where ducks nest and rear broods.

In Cerro Gordo Township, Lac qui Parle County, the 1,688 acres of potholes at the end of 1954 were reduced to 627 acres by 1962. Drainage had eliminated 62 percent in seven years.

According to the 1960 Agricultural Stabilization and Conservation Service report for Minnesota, 141,908 acres were drained by permanent open drainage systems to dispose of excess water. On 2,886 farms in 74 counties, this assistance cost the government \$575,850. Assistance of \$638,906 was provided for tile drainage of 26,747 acres on 2,464 farms in 50 counties. Undoubtedly, a great deal of waterfowl habitat was lost in the total drainage of 168,655 acres.

Besides the direct effect of drainage on waterfowl, indirect effects are also serious. Networks of drainage ditches empty into many tributaries of the Minnesota River. The increased rate of runoff causes silt to move into streamside marshes. Many places that once were marshes are filled with sediment and are now covered with noxious weeds and dense stands of willows.

Sportsmen, legislators and conservation organizations have recognized the urgency of acquiring wetlands and in 1957 they agreed to place a dollar surcharge on small game hunting licenses to help speed acquisition of these priceless areas. Thus began the "Save Minnesota Wetlands Program." This program helped obtain a \$400,000 appropriation from the state's general revenue to be reimbursed from cigarette tax money for wildlife land acquisition under the 1963 Natural Resources Act.

With the inclusion of other state and federally owned lands under lease and license to the state, about 865,000 acres of land are now managed by the state specifically for wildlife production and public hunting. There are state Wildlife Management Areas (mostly wetlands) in 78 of the 87 counties.

Priority on state Wildlife Management Area acquisition has been centered on southern and western Minnesota where drainage has been the heaviest. By December 31, 1964, in a span of 12 years, 177,776 acres of small wetlands had been acquired through purchase, license, or other custodial control. The present wetlands are included in 534 Wildlife Management Areas, acquired by December 31, 1964, (as of July 1, 1965, there were 575 areas). Most of the cost of acquisition has come from sportsmen, but cigarette smokers contribute about one-third of the funds through the penny-per-pack tax on cigarettes for the Natural Resources Act.

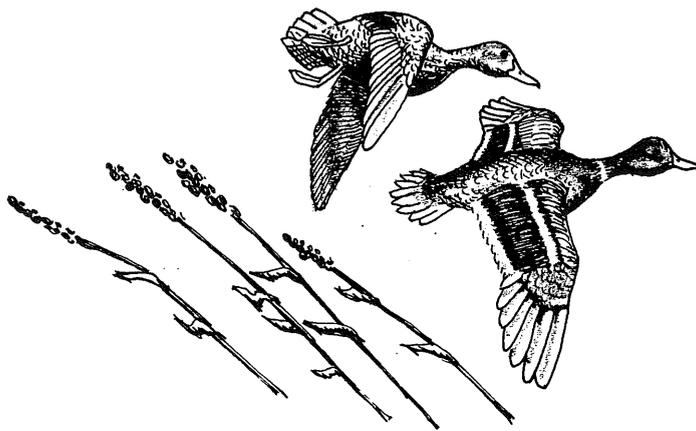
At this time, emphasis is on the acquisition phase of the program. However, essential development work is also being carried out. Project boundaries are fenced where necessary and posted with "Wildlife Management Area" signs; public access is provided; wildlife food and cover are planted to supplement natural habitat. Farmers living near the projects are given agricultural leases where upland is available. The state's share of the crop is left standing for winter feed for wildlife. Good food and cover are found in close proximity to wetland areas and provide wildlife with ideal habitat.

<sup>1</sup> Waterfowl Tomorrow, page 138, U. S. Fish and Wildlife Service

About 60,000 acres of marsh lands have been created or improved on the large state units by constructing dikes, dams and water control structures. For example, 12,000 acres of shallow marsh were created on the Roseau Wildlife Management Area by constructing 24 miles of dike. Waterfowl impoundments have been constructed as part of forest-game projects in northeastern Minnesota and other parts of the state.

The marshes abound with wildlife, they are top waterfowl production areas and provide feeding and resting areas. The excellent protective cover on the areas make them doubly important for pheasants. Some also serve as spawning grounds for fish. In the northwestern part of the state, prairie chickens and sharp-tailed grouse frequent the wetlands. Deer, song birds, shore birds, aquatic furbearers, and even moose find wetlands habitat to their liking. The hunter, fisherman, scientist, photographer, ecologist, bird watcher and just plain nature lover – all find recreation on Minnesota's wetlands.

Minnesota can point to its pioneering "Save Minnesota's Wetlands" program as a blue chip investment in an age when a place to hunt is at a premium and when recreational areas are vanishing before the dragline and bulldozer.



## FISH – STATE-WIDE SUPPLY

The fish crop of lakes and streams is one of Minnesota's most important natural assets. It is a remarkable resource and one that, with proper management, can be expected to provide recreation for millions of people each year.

About 30 kinds of sport fish species plus many commercial and other species of fish are found in Minnesota's lakes and streams. Altogether, there are 164 different kinds of fish in Minnesota.

There are four major types of game fish lakes, each characterized by a particular society of fishes.

Lake trout lakes, most of which are in the northeast, are deep, rock-shored, clear and cold. They are well suited to trout and associated fishes such as tullibee. These lakes provide quality fishing but the total yield of trout to the angler is quite low.

The walleye lakes are typically large (often over 5,000 acres in size), have extensive shoal areas of sand and gravel and wide expanses of water usually less than 50 feet deep. Here the walleye is often associated with northern pike and sometimes with muskellunge. The big lakes of the Mississippi headwaters are of this type. Soft-water walleye lakes are mostly of the northeast and hard-water walleye lakes are mostly of central and northern Minnesota.

The bass-panfish lakes are usually smaller than the typical walleye lakes and have weedy bays and shorelines well suited to nest-spawning bass, sunfishes and crappies. They are typically hard, (high in carbonates) fertile water and are especially common in the north-central and west-central parts of the state. Northern pike also are abundant in these lakes and walleyes are found in some. (Bass-panfish-walleye lakes are inter-grades between hard-water walleye lakes and bass-panfish lakes.)

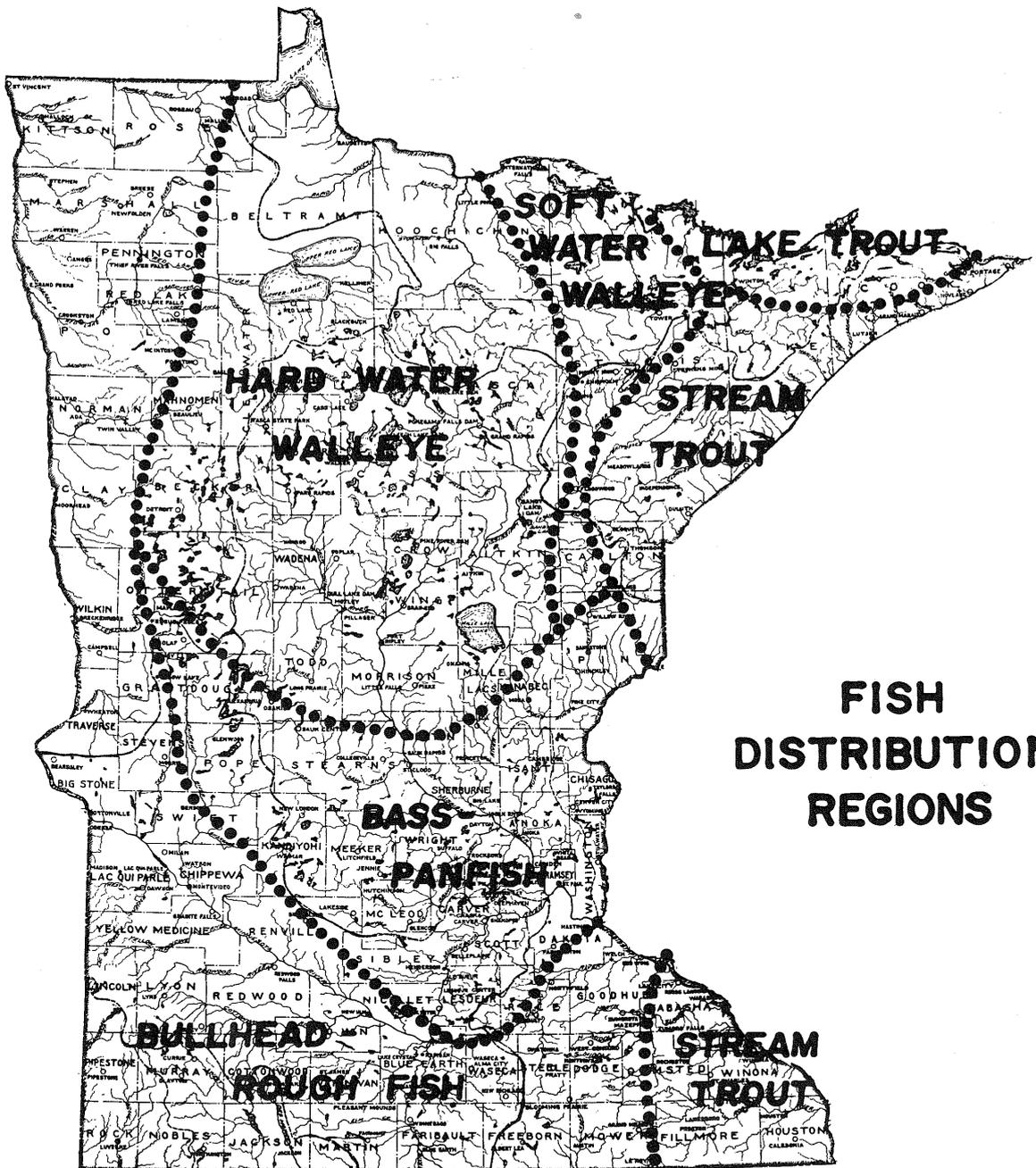
The fourth type, rough fish-panfish or bullhead-rough fish lakes, covers the many shallower lakes, especially in southern and western Minnesota that supply much bullhead and crappie fishing and thousands of shallow, weedy waters that are used by breeding and migrating waterfowl.

Then there are some small lakes in the north from which unwanted kinds of fishes have been removed and which have been stocked with rainbow trout. There are also the shallow waters, often of considerable size, on which Minnesota's wild rice crop is raised.

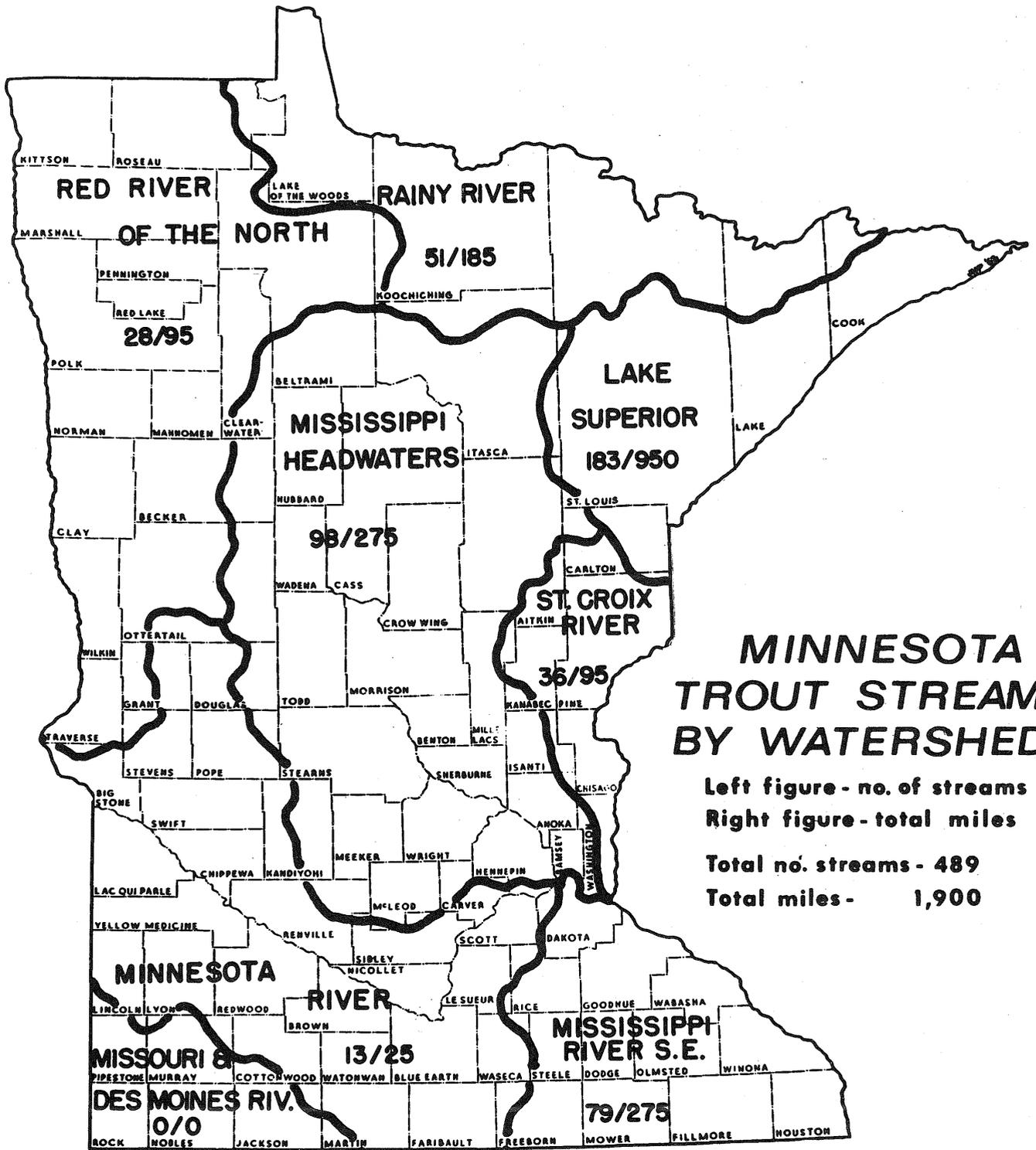
Of the total water area in Minnesota, there are at least two million acres of fishing water in our deeper and larger inland lakes. There are about 3,000 good fishing lakes larger than 40 acres plus many smaller and shallower waters that supply some fishing. In addition, there is about the same amount of water, 1.9 million acres in our border lakes and streams. This includes Minnesota's portion of Lake Superior. The total area of fishing water is about equal to the combined area of the states of Connecticut and Rhode Island. In addition, there are at least 15,000 miles of streams of which 1,900 miles are trout waters.

Lakes differ greatly with some more productive than others. Information from censused lakes scattered throughout the state show an average yearly catch of about 32 fish, or 16 pounds per acre of surface water. Lake trout lakes in the northeast have the lowest yield, about 2 pounds per acre per year. Walleye lakes average about 11 pounds, of which 4 pounds are walleyes. The smaller northern pike, bass and panfish lakes yield an average annual catch of 27 pounds. The shallow, fertile lakes in our "corn country" yield about 38 pounds. Some Minnesota lakes have annually yielded as much as 75 pounds of sport fish per acre.

Fishing is one of the main attractions for Minnesota's 300 million dollar tourist industry. According to a recent poll, fishermen in Minnesota spend about 100 million dollars a year to catch their fish, and of this, 30 million dollars is "new" money brought in by summer guests and left at resorts, gasoline stations, stores and other places of business.



**FISH  
DISTRIBUTION  
REGIONS**



# MINNESOTA TROUT STREAMS BY WATERSHEDS

Left figure - no. of streams

Right figure - total miles

Total no. streams - 489

Total miles - 1,900



### Fish Management

Through modern technology aided by research we can substantially increase the harvest of fish - if we are willing to make the investment. This investment must be made not only in increasing the harvestable surplus of our fish, but in providing the space and the opportunity needed for high quality outdoor recreation.

The Department of Conservation has the responsibility of carrying on a state-wide fish management program in accordance with law, departmental policies and available funds. The objective of the fish management program is to provide the maximum number of satisfactory sport fishing hours

Modern fish management is based on factual information regarding fish waters. The functions of fish management are improvement of the lake or stream environment, regulation of the catch by laws and their enforcement, encouragement of natural reproduction of game fish, control and adjustment of fish populations, adequate utilization of the fish present, and proper use of hatchery produced fish.

The U. S. Forest Service, Department of Agriculture, has funds allotted for both fish and wildlife habitat work. It is the obligation of the Department of Conservation to provide plans and recommendations for such projects.

Good cooperation is received from the U. S. Fish and Wildlife Service in connection with fish distribution from the Service and the rescue and transfer of northern pike from federal areas. With a few additions to the staff, the Department will be able to do more advanced planning for projects undertaken through the various Federal-Aid Programs.

One of the most important investments to make for the future of fishing in Minnesota is in the acquisition, preservation and improvement of natural fish spawning and rearing areas in or adjacent to lakes and streams. Most urgent is the acquisition and protection of marsh type shoreline property now being drained, dredged or filled.

The fish management program includes the following:

Lake Reclamation - Lakes are reclaimed by the use of toxicants. As of January, 1965, 88 small trout lakes had been reclaimed by chemical use and are now managed as trout lakes. This program has been extended to a few warm water fish lakes.

Fish Habitat Acquisition Program – The fish habitat acquisition program consists mostly of purchasing marshland areas adjacent to important fishing lakes. Some are developed for maximum spawning and rearing of northern pike by constructing small water level control structures, channels, and dikes while others are preserved in their natural state. There is an increasing demand for low marsh areas tributary to fishing lakes to be developed into boat harbors and cabin sites.

Other types of acquisition include sites for the construction of permanent carp trapping areas and access to large waterfowl and wild rice lakes for carrying on northern pike rescue and transfer. Such lakes are generally very productive of northern pike, but are, in many cases, in danger of winterkill.

Fish Habitat Improvement – To improve the fish environment, projects in pollution and soil erosion control, maintenance and control of water levels and installation of engineering structures in lake outlets and stream beds are carried out where advisable. Protection and development of natural spawning areas is also practiced. Fencing shorelines and stream banks, tree and soil binding vegetation plantings along banks and shorelines, and control of undesirable aquatic vegetation are also important phases of environment improvement

Other practices which have more limited or experimental application include dredging and deepening marginal fish lakes, installation of artificial fish shelters, and construction of barriers to fish movement such as filter barriers on trout lakes and carp barriers on streams.

Fish Rescue Operation – Fish rescue operations on lakes subject to winterkill are becoming increasingly important, particularly for northern pike. In 1963, over 2,500,000 northerns were rescued and transplanted to better lakes. These fish totaled around 350,000 pounds.

Rough Fish Removal – Rough fish removal operations by state crews and by private individuals operating under contracts and permits result in the yearly removal of around ten million pounds of rough fish.

Stocking – Fish stocking is an important tool in fish management. Annual distribution, including fry, fingerlings, yearlings and adults of all game fish species from hatcheries, rearing ponds and rescue operations averages over 200 million fish weighing over 400,000 pounds. Fishing ponds near centers of heavily populated areas receive surplus bullheads and panfish from other waters.

Permits for Changing Lake Beds – Much time is spent by the fish management personnel in investigating requests to change lake bottoms by dredging, filling or both. Many such requests must be denied in order to preserve natural spawning and rearing ponds.

Walleye Spawning Areas – A new technique in fish habitat improvement is development of spawning areas for walleyes in selected lakes which lack good bottom material for egg incubation. A foot-deep layer of coarse gravel (about baseball size) is put in selected areas of lakes where natural reproduction is inadequate.

Licensed Commercial Fishing – The licensed commercial fisheries on Lake of the Woods, Rainy Lake, Lake Namakan, Lake Superior and the Mississippi and St. Croix rivers take about seven million pounds of fish valued at \$375,000 annually. The commercial fishery operations at Redby on Lower Red Lake from 1962 to 1963 alone took 2,250,000 pounds of fish. This fishery is operated by the Red Lake Fisheries Association as a cooperative venture of the Red Lake Chippewa Indian Tribe.

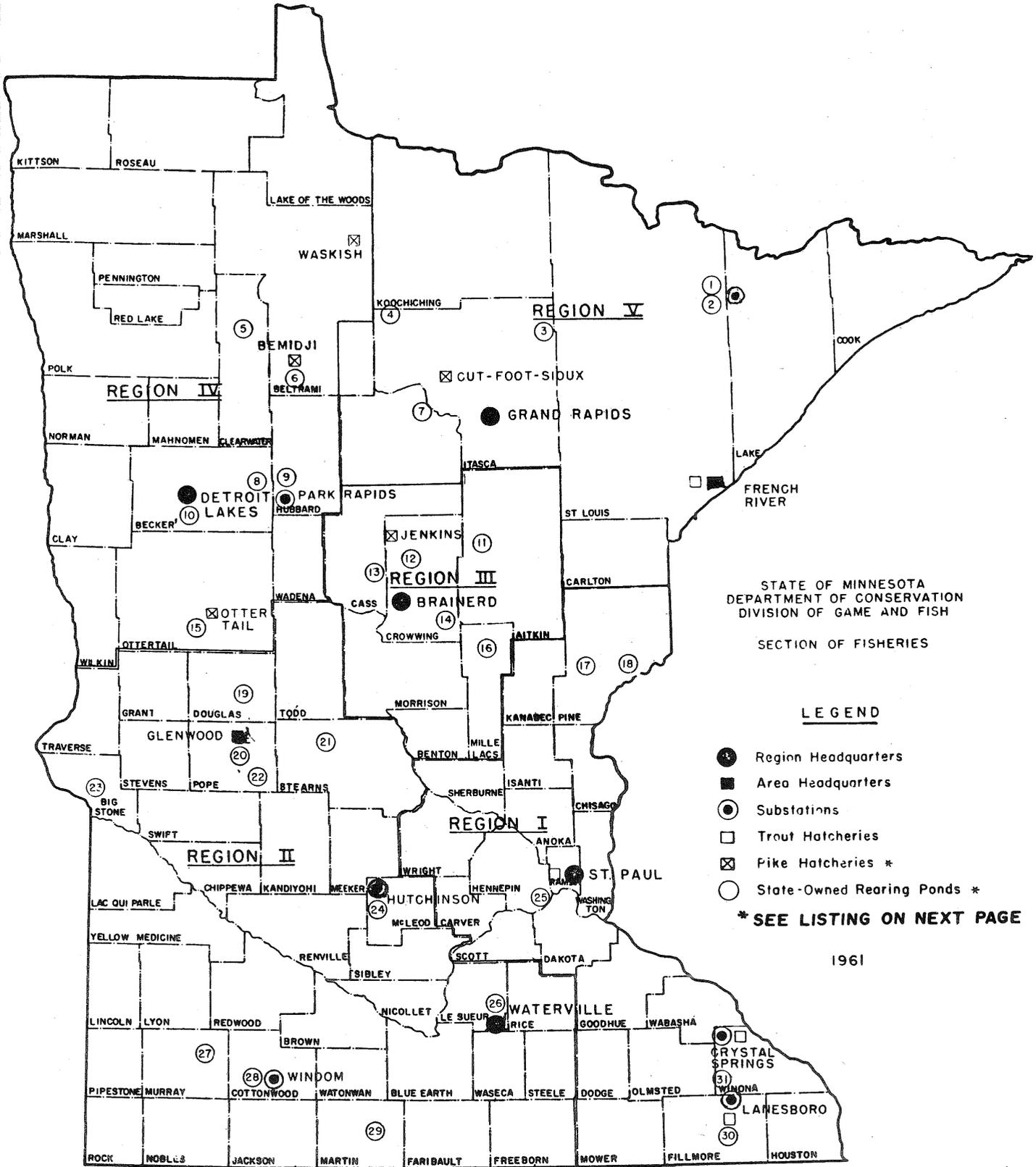
Northern Pike Spawning Areas – Management of northern pike spawning areas at tributaries or in shallow areas adjacent to lakes is an important aspect of the fishery program. Northern pike management includes installation of water level control structures, pumping units, and channel improvement projects. These areas are stocked with brood fish rescued from winterkill lakes. About 100 such areas are managed each year. Some wild rice and waterfowl lakes are also managed for northern production. For example, over 700,000 sub-adult northerns were produced in this manner during two years and transported to lakes in need of northern pike.

In addition, 70 cooperative, privately owned areas are managed. Up to 1964, 41 northern pike spawning areas had been acquired and another 59 are in various stages of acquisition. (See following list of spawning areas.)

## NORTHERN PIKE SPAWNING AREAS

County	Spawning Area	Acres
Aitkin	Mille Lacs Lake	356
Anoka	Ham Lake	20
	George Lake	12
Becker	Buffalo Lake	14
Carver	Bavaria Lake	7
Cass	Woman Lake	120
Clay	Silver Lake	53
Crow Wing	Edward Lake	34
	Nokay Lake	32
	White Sand Lake	25
Dakota	Marion Lake	13
	Orcnard Lake	11
Douglas	Le Homme Dieu Lake	40
	Maple Lake	7
Itasca	Sand Lake	6
Kanabec	Knife Lake	10
Kandiyohi	Diamond Lake	15
	Green Lake	71
Le Sueur	Francis Lake	37
	Tetonka Lake	26
Martin	Fox Lake	34
Morrison	Fish Trap Lake #1	25
	Fish Trap Lake #2	15
Otter Tail	Lida Lake	3
Pine	Cross Lake	16
Rice	Cedar Lake	17
	Dudley-Kelley	7
Waseca	Clear Lake	17
Washington	Forest Lake	370
Wright	Beebe Lake	7
	Buffalo Lake	14
	Swart Watts Slough	165
	Waverly Lake	14
Otter Tail	Eagle Lake	6
Aitkin	Spirit Lake	13
Hubbard	Big Stony Lake	61
	Grace Lake	4
Itasca	Pokegama Lake	34
Crow Wing	Lower Hay Lake	36
Morrison	Pierz Fish Lake	49
Anoka	Linwood Lake	49
Total		1,865

# STATE FISHERIES FACILITIES



STATE OF MINNESOTA  
DEPARTMENT OF CONSERVATION  
DIVISION OF GAME AND FISH  
SECTION OF FISHERIES

### LEGEND

- Region Headquarters
  - Area Headquarters
  - ⊙ Substations
  - ◻ Trout Hatcheries
  - ⊠ Pike Hatcheries \*
  - State-Owned Rearing Ponds \*
- \* SEE LISTING ON NEXT PAGE**

1961

## STATE-OWNED REARING PONDS

1. Wolf Lake Pond near Ely (2 ponds)
2. Shagawa Pond near Ely
3. Sturgeon Pond near Side Lake
4. Island Lake Pond near Northome
5. Clearwater Pond near Clearbrook
6. Bemidji Ponds near Bemidji (2 ponds)
7. Winnibigoshish Ponds near Deer River (4 ponds)
8. Straight Lake Ponds near Osage (2 ponds)
9. Park Rapids Station Ponds (2 ponds)
10. Buck's Mill Pond near Detroit Lakes
11. Nicholson Pond near Aitkin
12. Mission Pond near Merrifield
13. Agate Pond near Nisswa
14. Garrison Pond near Garrison
15. Otter Tail Pond near Battle Lake
16. Cove Bay Pond near Wahkon
17. Hinckley Ponds at Hinckley (3 ponds)
18. St. Croix Ponds near Hinckley (2 ponds)
19. Blair Pond near Alexandria
20. Glenwood Area Headquarters Pond
21. Melrose Pond at Melrose
22. Sedan Ponds near Sedan (2 ponds)
23. Big Stone Pond near Ortonville
24. Hutchinson Pond at Hutchinson
25. Izaak Walton League Ponds near Minneapolis (4 ponds)
26. Waterville Headquarters Ponds (4 ponds)
27. Shetek Ponds near Currie (2 ponds)
28. Warren Lake and Pond near Windom (2 ponds)
29. Kiestler Pond near Fairmont
30. Lanesboro Trout Station
31. Crystal Springs Trout Station near Altura

## PIKE HATCHERIES (SEASONAL) IN ADDITION TO HEADQUARTERS AND SUBSTATIONS

Bemidji  
Cut-Foot-Sioux

Jenkins  
Otter Tail

Waskish

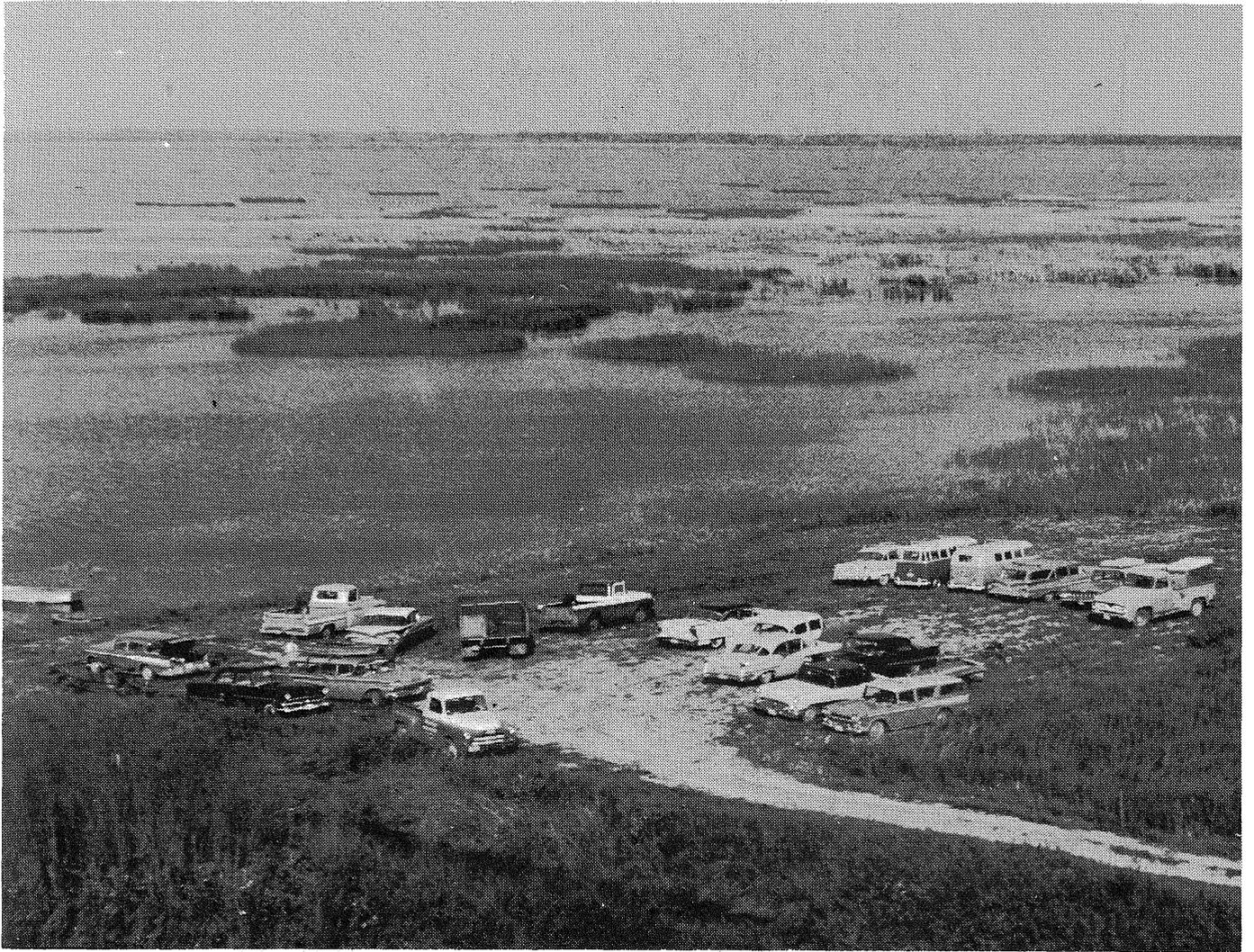
## FINANCING STATE GAME AND FISH ACTIVITIES

Financing the game and fish program in Minnesota has historically been based on the willingness of hunters and fishermen to "pay their own way" through the purchase of hunting and fishing licenses. In recent years, approximately 1,300,000 fishermen, 350,000 small game hunters and 250,000 big game hunters have provided most of the support to the perpetuation of fishing and hunting which is considered a \$150,000,000 annual business in Minnesota.

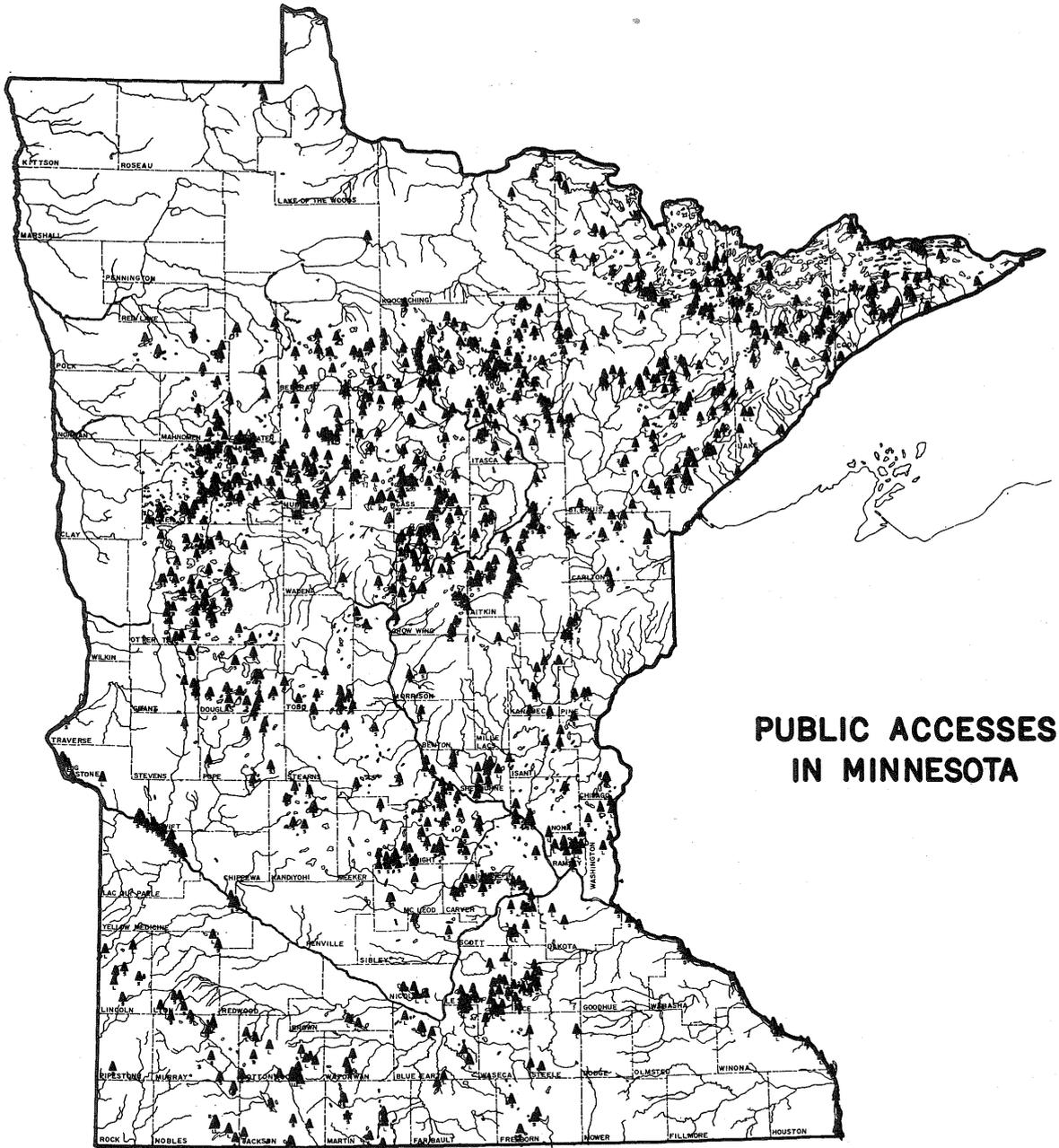
The Game and Fish Division's operational money is derived from three main categories: 1. license fees - 76 percent; 2. miscellaneous sources - 12 percent (this includes rents, leases, permits and gasoline tax earmarked for public access); and 3. federal aid programs - 12 percent (primarily the Pittman-Robertson ((game)) and Dingell-Johnson ((fisheries)) programs whereby money is made available from federal excise taxes collected on sporting arm ammunition and fishing tackle).

Other short-term federal programs such as the Accelerated Public Works Program (APW) have supplemented the state funds in annual amounts of approximately \$270,000. The Natural Resources and Boat and Water Safety programs have provided lesser amounts for certain types of game and fish projects.

# public access



## Public Hunting Access



**ACCESS SITE SUMMARY**

<u>Administering Agency</u>	<u>No. of Sites</u>
State: Department of Conservation	469
Department of Highways	62
Total State	<u>531</u>
Federal	138
County	213
Township	33
Municipal	58
Other	6
Total	<u>979</u>

Source: "Public Access to Minnesota Lakes and Streams, May, 1964," compiled by the Department of Conservation, Division of Game and Fish.

## PUBLIC ACCESS

(Public access here refers to access to public water – lake or stream.)

Administration and ownership of the state's access sites is vested in the Department of Conservation through the Division of Game and Fish, Forestry, Lands and Minerals, and Parks; the State Department of Highways; the U.S. Forest Service; U.S. Corps of Engineers; U.S. Fish and Wildlife Service; and the counties, municipalities and townships of the state.

### ACCESS – FEDERAL

#### U. S. FISH AND WILDLIFE SERVICE

Accesses under the jurisdiction of the U. S. Fish and Wildlife Service are primarily to refuge areas. There are some public hunting grounds on which access to water is provided.

#### U. S. FOREST SERVICE

The U. S. Forest Service provides public access sites on the Superior and Chippewa National Forests. The Forest Service generally uses the term "disperse use" for public accesses on federal property as at these areas provisions are made for a wide range of outdoor recreation activities. Here the public is afforded access to a body of water for outdoor recreational activities including hunting, fishing, pleasure boating, camping, picnicking, hiking and sightseeing. In the Superior National Forest, for example, boat access sites are provided at camping and picnicking areas. According to the U. S. Forest Service, a boating access is a site developed to provide the services necessary for boating. It may include docks, loading ramps, parking, boat rental and boat service, as well as the related sanitation and safety facilities.

Boat access sites at both the Chippewa and Superior National Forests provide a passable road, parking space, boat launching (some with ramps), one or two pit latrines and rubbish cans. Regular maintenance is carried out by the Forest Service.

#### U. S. CORPS OF ENGINEERS

The Corps provides recreational opportunities at its water resource development projects. Recreation is given broad consideration in project planning.

Access areas of the Corps are open to public use, generally without charge, for boating, swimming, fishing and other recreational purposes. Public use areas are located conveniently to access roads and usually have parking areas, overlooks, picnic tables, fireplaces, campgrounds, sanitary facilities, drinking water, boat launching ramps and boat docks.

Picnic locations are selected and developed for both family picnicking and organized groups. Camp sites are available at some projects for youth groups traveling under sponsorship. Organized camps vary in size from 50 to 300 camper capacity. Camps are developed by cooperating governmental agencies or youth organizations.

### PUBLIC ACCESS – STATE

#### DEPARTMENT OF CONSERVATION

As of June 30, 1964, the Department of Conservation had developed 469 free public access sites affording boat launching and parking areas. There are also 213 undeveloped sites.

Division of Game and Fish – The administration of state-owned public access in Minnesota is primarily the responsibility of the Division of Game and Fish. The Division is mainly responsible for providing access to waters on which the public has the right to hunt and fish. The principal purpose of Game and Fish accesses is to provide avenues of ingress and egress, a boat launching site and a car-trailer parking area. The public access acquisition and development program is carried on by the Warden Service within the Division of Game and Fish. There are Game Wardens located in almost every county of the state.

An active access acquisition program began in 1947 under the Public Access Statute. Through this Statute, public access funds were provided from game and fish licenses. In 1961 this source was discontinued, but monies from unrefunded excise taxes on gasoline used in motor boats were made available by legislative action.

The unrefunded tax paid on gasoline for motor boat purposes is paid into the state treasury. From this tax, 33 1/3 percent goes to the Department of Conservation for the acquisition, improvement and development of public parks adjacent to lakes and rivers as may be authorized and directed by the legislature; 33 1/3 percent (about \$145,000) annually) is credited to the Game and Fish fund to be used to defray the cost and expense of the acquisition, improvement, development and maintenance of sites for public access to public waters and for lake improvement; and the remaining 33 1/3 percent is credited to the Boat and Water Safety account.

Written agreements between the Department of Conservation and political subdivisions or local organizations are entered into for development, maintenance and policing to the greatest extent possible.

Public access may be provided to waters to which the public has a right to hunt and fish provided this authority does not include lakes completely surrounded by lands owned or maintained for the purpose of conducting an educational or religious institution; or to lakes which are unmeandered; or contain less than 150 acres within the meander lines. In cases where public access is desirable and unobtainable by gift or purchase, authority to condemn is possible only if the lakes contain 200 or more acres within the meander lines. In addition, an access site cannot be larger than five acres. Current statutes require approval by the Executive Council consisting of the Governor, State Auditor, State Treasurer, Attorney General and the Secretary of State, when the acquisition cost of a public access exceeds \$1,000. Under present laws, fish stocking is permitted only on lakes or streams with free public access and use.

The program to acquire and develop public access sites to meandered lakes and rivers for hunting, fishing and general recreational use follows the policies discussed below:

Not less than 75 percent of the money available is expended for acquisition costs and not more than 25 percent for development and general overhead.

Public access sites are designed to meet these objectives:

1. Adequate road from the nearest highway or public road to the boat launching and car-trailer parking area.
2. Adequate boat launching area.
3. Adequate car-boat trailer parking area.

Other Department of Conservation Access Sites – The Division of Forestry maintains public boat launchings at nearly all of its 26 campgrounds which are on lakes. Since these are primitive campgrounds, the boat landings are designed primarily for small boats. Some though, will accommodate larger boats as well.

Other lakes are made accessible by the many miles of Division of Forestry roads and trails. These lakes may not have a standard boat landing, but it is possible to launch small boats or canoes.

Boat launching sites maintained and administered by the Division of Parks are provided in conjunction with camping, picnicking, swimming, hiking and other state park facilities. They are available to the public upon payment of the regular park entrance or user fee. There are approximately 22 boat access sites within state parks.

In addition to the above, the Division of Lands and Minerals has developed approximately 70 public access sites. These sites will in all cases accommodate small boats and canoes. In most instances, the access is of such nature that larger boats can be accommodated.

#### DEPARTMENT OF HIGHWAYS

Highway Department access sites provide access to water, but do not necessarily involve access for launching boats. They may also provide scenic views, picnicking facilities, etc. The Highway Department has developed and maintained about 62 access areas, 60 of which provide boat launching.

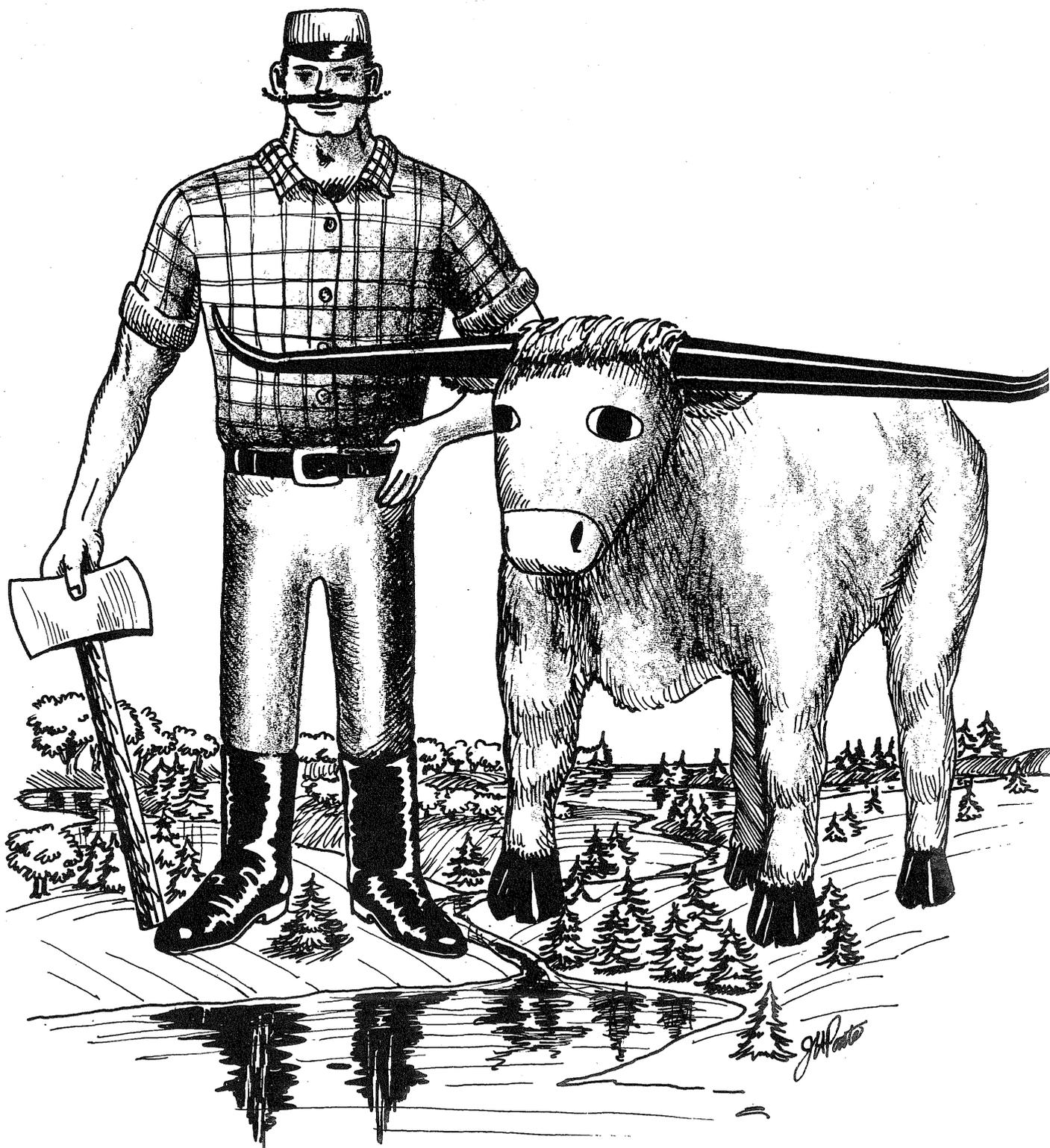
## PUBLIC ACCESS - COUNTY

Under M. S. Chapter 378, county access sites may be developed, improved and maintained as recreational areas. As of June 30, 1964, there were approximately 213 access sites under county jurisdiction. Counties may acquire, develop and maintain access through assistance provided by the County Road and Bridge Fund, the state Natural Resources Act and the federal Land and Water Conservation Fund Act.

## PUBLIC ACCESS - MUNICIPALITIES AND TOWNSHIPS

Municipalities and townships often provide access sites, but the extent of this development is not known at this time. According to the Division of Game and Fish inventory records, there are 85 water access sites maintained by municipalities and townships.

# private enterprise



A plan for Minnesota would not be complete without a tribute to Paul Bunyan and his faithful companion, Babe the Big Blue Ox. Through the years, Paul and Babe have become the symbol and legend of Minnesota. Each year, tourists contribute thousands of dollars to the state through the sale of replicas, hats, and other trinkets depicting the famous legend of Paul Bunyan. Mighty Paul and Babe are commemorated by life-sized statues in Bemidji and Brainerd.

Private individuals and groups throughout the state are engaged in various enterprises attracting and catering to lovers of outdoor recreation. As stated earlier in this report, private operations furnish a wide variety of recreation, ranging from golf and country clubs near cities and villages to remote lakeside cabin resorts. It is not within the scope of this preliminary plan to list all private recreation areas. However, wherever possible, listings and review of these opportunities are included.

A vacationer seldom finds all the recreation he needs in one spot. Joint use of both public and private land often aids in the success of a private operation. Urban residents are willing to pay for the privilege of enjoying high quality outdoor activities provided on private land. Private enterprise brings new dollars to the community – to auto service stations, restaurants, gift and craft shops and many others. It can also create new appreciation between city and country people.

For many years, private recreation sites were almost the only type available to tourists and vacationists. The State Department of Health and municipal planning and zoning have had a pronounced effect in keeping high the standards of these developments.

## RECREATION MARKET

The recreation seeker provides an attractive market for all businesses in the community. Vacationers have the same needs for dry cleaning, laundry services, clothing, theatres, motion pictures, sporting events and other everyday services, merchandise and facilities as the permanent resident.

The tourist-vacation industry in Minnesota is estimated by M.O.R.R.C. to be a \$350 million dollar stimulus to the state's economy. The business community as a whole fosters and supports tourist and visitor promotion.

Minnesota's penetration into the recreation market has not been as strong as that of other states in the Upper Midwest. An appropriate action program can increase tourism in the state and provide more opportunities for economic growth and new jobs. The recreation market is and will be a growing one which Minnesota should actively pursue. There will be shifts in the market due to changes in socio-economic conditions, industrial policies on paid vacations and transportation improvements.

## QUASI-PUBLIC GROUPS

Youth organizations such as the YMCA, YWCA, Boy Scouts, Girl Scouts, Campfire Girls, religious youth organizations, 4-H Clubs and similar groups operate numerous camps in Minnesota. Business and professional clubs, such as the Kiwanis, Lions and Rotary frequently are instrumental in enabling children to attend camps who would otherwise be unable to do so. All such activities contribute richly to the lives of Minnesotans. The following list was obtained from the State Board of Health. There are approximately 190 private camps, religious or church and organizational camps in Minnesota.

CHILDREN'S CAMPS LICENSED WITH THE STATE BOARD OF HEALTH - JUNE 30, 1964

PRIVATE CAMPS -

<u>County</u>	<u>Name</u>	<u>Location</u>	<u>Total Attendance</u>
Anoka	Valmar Dance Camp	Typo Lake	26
Beltrami	Chippewa for Boys	N.W. shore Cass Lake	50
Big Stone	Circle K Ranch	Long Tom Lake	20
Cass	Birchwood for Girls	N. shore Steam Boat Lake	80
	Danworthy	S. shore Long Lake	1,085
	Hillaway	S. shore Ten Mile Lake	150
	Holiday	Between Baby and Man Lakes	265
Crow Wing	Arrowhead for Boys	N.E. shore Lake Placid	120
	Don Hall North Country Baseball Camp	N.E. shore Mitchell Lake	75
	Foley	Whitefish Lake	329
	Lake Hubert for Girls	S. shore Lake Hubert	350
	Lincoln for Boys	W. shore Lake Hubert	335
Dodge	TK Bar B Boys Ranch	Sections 31, 32, Ripley Twp.	25
Hennepin	Vincent	Enchanted Island, Lake, Minnesota	65
Hubbard	Braemar	E. shore Long Lake	62
	Island Lake Camp for Girls	E. shore Island Lake	83
	Kamadji	S. shore Wolf Lake	160
	Mohegomi	N. shore Steam Boat Lake	105
	Nob Hill for Boys	W. shore Potato Lake	85
	Thunderbird	W. shore Lake Plantagenette	250
Itasca	Marmac Camps	N. shore Blue Water Lake	100
	Mishawaka for Boys	N. shore Lake Pokegama	195
	Mishawaka for Girls	N. shore Lake Pokegama	70
	Sherwood Forest Camp	N. shore Deer Lake	105
Koochiching	Koochiching	Grassy Island, Rainy Lake	176
Lake	Buckskin	N.E. shore McDougal Lake	60
	Ge-go-dau	S. shore Lake Gegoka	55
	Outward Bound	Kawishiwi River, T 62 N, R 11 W	225
	Timber Lake	Stoney River, T 60 N, R 10 W	50
	Voyageur	N.W. shore Farm Lake	70
Otter Tail	Aquilla	W. shore Star Lake	60
St. Louis	Easton	S.W. shore Little Long Lake	95
	Northland	N. Arm Burntside Lake	125
Wright	Minaki	S. shore Lake Sylvia	88
	Owanka	S. shore Lake Sylvia	78
Total			5,272

RELIGIOUS OR CHURCH GROUPS -

Aitkin	Big Sandy Conference Grounds	N.E. shore Big Sandy Lake	632
	Catholic Youth Camps	Indian Point, Big Sandy Lake	1,000
	Covenant Pines Bible Camp	S. shore Round Lake	1,085
	Tikvah	N. shore Long Lake	200
Anoka	Ajawah	N.E. shore Linwood Lake	370
	Catholic Order of Foresters Camp	E. bank Rum River	486
Becker	Moments of Meditation Retreat	Sec. 8, Lake Park Twp.	300
	White Earth Lutheran	N. shore White Earth Lake	442
Beltrami	Blackduck Lutheran Bible Camp	N.E. shore Blackduck Lake	400
	Cass Lake Episcopal Camp	Allen's Bay, Cass Lake	579
	Mid Northern Baptist Bible Camp	E. shore Upper Red Lake	60
	Minnie-Wah-Kan	E. shore Lake Andrusia	925
	Mo-Kow-Um Christian Missionary Alliance Camp for Indians	½ mi. S. Lake Andrusia	

RELIGIOUS OR CHURCH GROUPS -- Continued

<u>County</u>	<u>Name</u>	<u>Location</u>	<u>Total Attendance</u>
	Oak Hills	S. shore Lake Marquette	642
	Unistar Family Conference Center	Star Island, Cass Lake	327
Big Stone	Big Stone Camp for Christ	Big Stone Lake	150
Blue Earth	Stony Point Bible Camp	N. shore Loon Lake	1,850
Carlton	Coyenant Park Bible Camp	S. shore Park Lake	555
Cass	Big Timber Camp	N. shore Webb Lake	55
	Jim	Hardy Lake	962
	Luther Dell	S. shore Boy Lake	925
Chisago	United Lutheran Camp of Minnesota	E. shore Green Lake	670
Cook	Cathedral of the Pines	W. shore Caribou Lake	1,545
	Mink Lake Camp	N. shore Mink Lake	231
Crow Wing	Bay Lake Camp	Sisabagama Island, Bay Lake	825
	Clearwater Presbyterian	E. shore Clearwater Lake	778
	Jeanette Holm Knutson	Big Trout & Whitefish Lakes	360
	North Star	N. shore Rice Lake	426
	Star Lake Methodist Camp	Star Lake	500
	Trout Lake Camp	S.W. shore Big Trout Lake	2,782
Douglas	Lake Geneva Bible Camp	W. shore Lake Geneva	4,000
	Luther Crest Bible Camp	W. shore Lake Carlos	1,680
	Mount Carmel Bible Camp	W. shore Lake Carlos	1,150
	Pilgrim Point	E. shore Lake Ida	1,887
Faribault	Minn. Regular Baptist Camp	S. shore Bass Lake	1,220
Goodhue	Glengarda	Villa Maria Academy	189
	Old Frontenac Point Methodist Campus	Lake Pepin	2,462
Hennepin	Kingswood	Little Long Lake	3,384
	Westminster Heights	N. shore Reilly Lake	816
Hubbard	Baptist Bible Camp	N. shore Lake Plantagenette	160
	Bethany Bible Camp	S. shore Grace Lake	340
	Northern Pines Assembly Gardens	E. shore Fishhook Lake	1,522
	Pine Haven Christian Assembly	S.W. shore Long Lake	620
Itasca	Itasca Gospel Ranch	Beauty Lake	310
	Hiawatha	N. shore Deer Lake	500
	Lael	Lower Hanson Lake	193
	Mount Tabor Bible Camp	La Croix Lake	40
Kandiyohi	Decision Hills Methodist Camp	S.E. shore Lake George	750
	Green Lake Lutheran Bible Camp	S. shore Green Lake	3,520
	Shores of St. Andrew	N.E. shore Andrew Lake	1,800
Kittson	Baptist Bible Camp	Percy Township	297
	Galilee Lutheran Bible Camp	N. shore Lake Bronson	210
Lake of the Woods	Lake of the Woods Bible Camp	Rainy River	591
	Lake Trails Base Camp	Oak Island, Lake of the Woods	217
Marshall	Covenant Bible Camp	Village of Warren	325
Mille Lacs	American Lutheran Memorial Camp	S. shore Shakopee Lake	2,010
	Galloway Memorial Youth Camp	S. shore Mille Lacs Lake	50
Morrison	Indian Head	Squaw Point Resort, Sullivan Lake	98
	Lebanon	N. shore Cedar Lake	736
	Shamaineau	N. shore Lake Shamaineau	1,134
Murray	Shetek Baptist Camp	S. shore Lake Shetek	1,150
	Shetek Lutheran Camp	W. shore Lake Shetek	1,952
Otter Tail	Episcopal Holiday House	E. shore Pelican Lake	310
	Joy	W. shore Star Lake	410
	Lutheran Brethren Bible Camp	E. shore Lake Spitzer	1,050
	Lutheran Island Camp	W. shore East Battle Lake	1,896
	Young Life's Castaway Club	Pelican Lake	100

RELIGIOUS OR CHURCH GROUPS -- Continued

<u>County</u>	<u>Name</u>	<u>Location</u>	<u>Total Attendance</u>
Pine	Grindstone Lake Bible Camp	S. shore Grindstone Lake	350
	Nathanael	Wilbur Lake	320
Ramsey	Gospel Hill Camp	N. shore Snail Lake	1,600
St. Louis	Francis E. House	E. shore Lake George	500
	George E. Sigel	E. shore Lake Esquagama	454
	Lake Vermilion Lutheran Bible Camp	S. shore Wakemup Bay	550
	Story Book Lodge Christian Camp	Cedar Island Lake	230
Scott	Prior Lake Bible Camp	S. shore Prior Lake	100
Stearns	Lake Koronis Assembly Grounds	N. shore Lake Koronis	4,000
Todd	Lake Beauty Bible Camp	W. shore Lake Beauty	175
Wadena	Emmaus	Morgan Lake	1,320
Washington	Kiwanis	St. Croix River, May Twp.	576
Winona	Luther Haven Bible Camp	Mississippi River, Richmond Twp.	4,850
Wright	Clearwater	N.E. shore Clearwater Lake	1,800
	Koinonia	N.W. shore Lake Sylvia	100
	Westerberg Presbyterian Church Camp	E. shore Waverly Lake	91
Total			76,157

ORGANIZATION CAMPS

Aitkin	Kamp Kitchi Kahniss	N. shore Mille Lacs Lake	240
	McDonald Youth Camp	N. shore Lake Waukenabo	100
Anoka	Bar None Ranch	S. shore Morris Lake	55
Becker	Cormorant	N. shore Big Cormorant Lake	680
	Many Point	Many Point Lake	4,859
	Shawondasee	South Bay, Long Lake	692
	Wabaunaquat	S.W. shore White Earth Lake	582
Beltrami	Cassaway	E. shore Cass Lake	578
Carlton	Arrowhead Music Camp	E. shore Little Hanging Horn Lake	700
	Wanakiwin	W. shore Big Hanging Horn Lake	436
Carver	Katherine Parsons	W. shore Oak Lake	241
	Manakiki	N.W. shore Lake Waconia	327
	Rolling Acres	E. shore Schultz Lake	215
	Tanadoona	E. shore Lake Minnewashta	1,053
Cass	Trelipe	W. shore Upper Trelipe Lake	238
	Voyageur Boy Scout Camp	N.W. shore Lake Washburn	28
	YMCA Camp Olson	N.W. shore Little Boy Lake	339
Chisago	Cheewin	E. shore Green Lake	600
	Ojikea	E. shore Green Lake	771
Clearwater	Hiawatha	Sec. 24, T 150 N, R 36 W	132
Cook	Menogyn	N. shore West Bearskin Lake	533
	Elk's Youth Camp	S. shore Pelican Lake	392
	Legionville	S. shore North Long Lake	1,759
	Vanasek	Lake Whipple	451
Crow Wing	Plymouth Youth Center Wilderness Canoe Base	E. shore Seagull Lake	640
	Moraine	N. shore Albert Lea Lake	421
Freeborn	Hok-Si-La	Lake Pepin	1,613
	Pepinoak	Lake Pepin	66
Hennepin	Elizabeth Lyman Lodge	Lake Minnetonka	457
	Iduhapi	N.E. shore Lake Independence	767
Hubbard	Wilderness	Bad Axe Lake	1,503
Itasca	Bluewater Campfire Girls Camp	W. shore Bluewater Lake	190
	Flaming Pine	N. shore Mirror Lake	200

ORGANIZATION CAMPS - Continued

<u>County</u>	<u>Name</u>	<u>Location</u>	<u>Total Attendance</u>
Itasca (Cont.)	Mekahga	S. shore Lake Pokegama	190
	Plymouth Youth Center Frontier Farm	Sec. 32, T 62 N, R 25 W	50
	Ruby Lake	N.E. shore Ruby Lake	310
Kandiyohi Lake	Nest Lake Girl Scout Camp	S.E. shore Nest Lake	414
	Charles L. Sommer's Wilderness Canoe Base Camp	E. shore Moose Lake	3,223
Le Sueur	Fish Lake Girl Scout Camp	Fish Lake	50
	Patterson	S. shore Lake Washington	718
Mower	Lansing Camp	Udolpho Township	45
Murray	Shetek Boy Scout Camp	E. shore Lake Shetek	582
Nicollet	Norseland	Swenson Lake	442
Olmsted	Edith Mayo	Sec. 5, Rochester Twp.	301
Otter Tail	Trowbridge	N. shore Lake Trowbridge	500
	Watson	E. shore Pelican Lake	51
Pine	Lake Superior Council Scout Reservation	Lake Jamar	443
	Miller	W. shore Sturgeon Lake	550
	Voyageur	E. shore Clear Lake	95
Polk	Polk County Farmer's Union Park	W. shore Lake Sarah	1,025
Ramsey	Salvation Army Fresh Air Camp	Minneapolis, N. shore Silver Lake	2,692
	Salvation Army Fresh Air Camp	St. Paul, N. shore Silver Lake	2,000
Rice	Muskoday	Union Lake	75
St. Louis	Co-op-a-gan	N. shore Perch Lake	195
	Ee-kah-bee	S.E. shore Rock Lake	124
	Fanny Bailey Olcott	S.W. shore Half Moon Lake	291
	Joseph Austin	E. shore Long Lake	230
	St. Louis County 4-H Camp	E. shore Lake Esquagama	648
	Warren	N. shore Half Moon Lake	367
	Wichmgen	N. shore Island Lake	480
	Widjiwagan	N. Arm Burntside Lake	404
	Sherburne	Sherburne County 4-H Camp	Sand Dunes State Forest
Stearns	Wells	N. shore Lake Mitchell	343
	National T.T.T.	E. shore Rice Lake	209
	Suima	Lake Warner	236
Steele	Piper Hill	Section 9, Medford Twp.'	138
Washington	Good Templar Park	Big Marine Lake	42
	Lakamage	N.E. shore Big Marine Lake	525
	Owendigo	S. shore Carver Lake	569
Wright	Courage	E. shore Cedar Lake	625
	Greenwood	W. shore Lake Charlotte	408
	Minnesota Association of Retarded Children's Camp	N. shore Clearwater Lake	150
Total			42,123

## PRIVATE TOURIST CAMPS

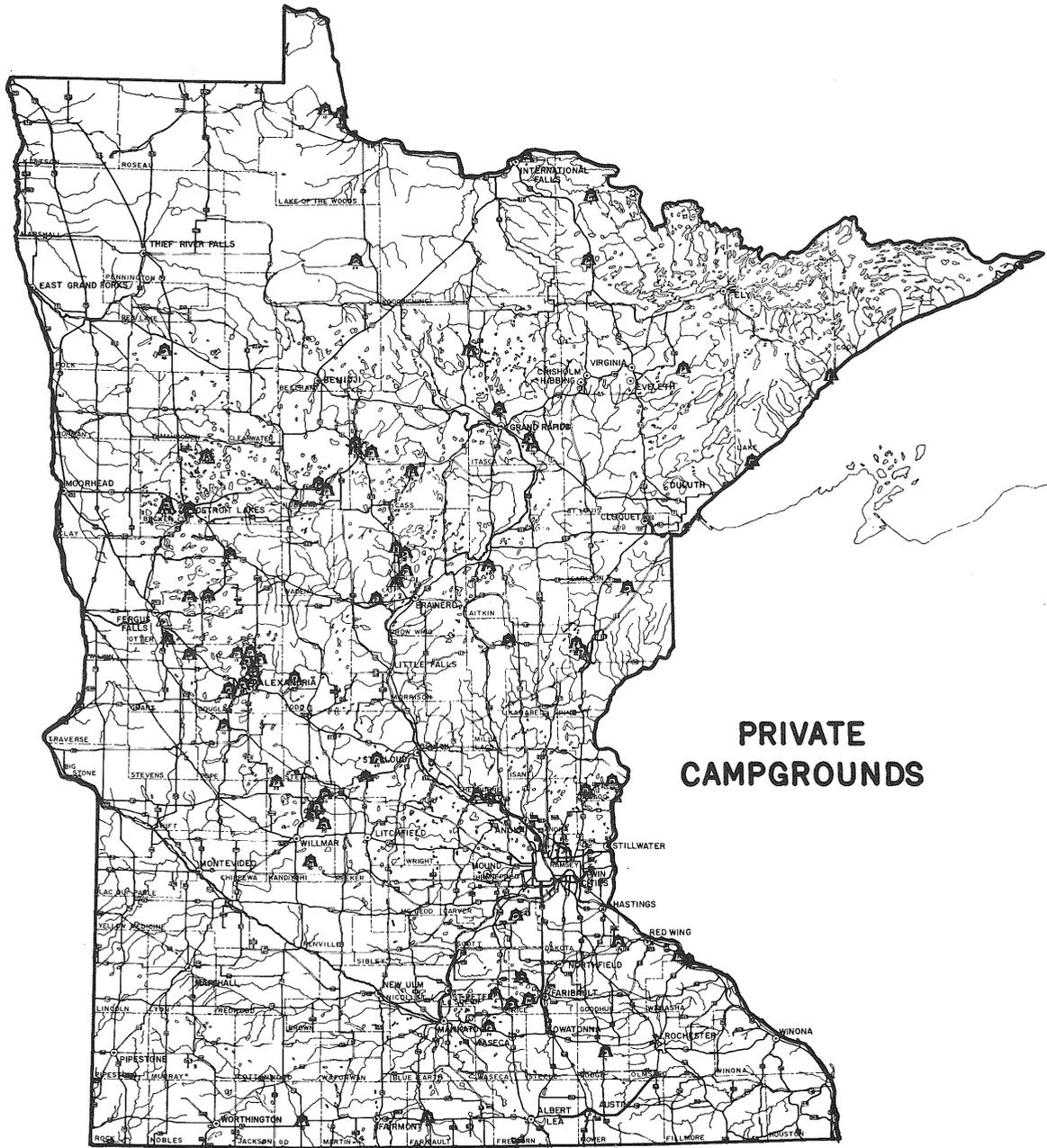
Development of private campgrounds or tourist camps plays an important role in the state-wide picture by supplying additional areas to meet the camping demands and supplementing state campgrounds. There were 77 private tourist camps registered with the State Board of Health on April 8, 1965. In addition, there are a number of resorts not included on the following private campground list where private campgrounds are part of the facilities.

A tourist camp consists of an area used on a daily, nightly or weekly basis for the accommodation of tents, expandable camp trailers, travel trailers under 19 feet in length and converted buses or trucks. Every person, organization, county or municipality establishing or having control of a tourist camp must register the camp(s) annually with the State Board of Health on or before April 1st. There are numerous provisions and requirements which must meet the standards established by the Board. For example, each camp must be located on an adequate area, have satisfactory water supply, sanitary and refuse disposal facilities. No tourist camp can be constructed or any system of plumbing, sewage system, water supply or swimming pool installed or altered until plans have been submitted and approved by the Board of Health.

Scenic and nature areas at tourist camps attract both campers and non-campers. Quality of landscape is especially important to these areas. Special attractions such as forests, historic sites, hiking or nature trails, horseback riding, boating or canoeing, fishing streams, wildlife areas and interesting plant and animal life contribute to the success of a private tourist campground.

The main requirement for overnight campgrounds is a convenient location on a well-traveled tourist highway, usually within a day's drive or 300 miles of a major population center. Except for areas restricted to overnight camping, the area should be several acres in size unless it is adjacent to usable public land.

Private campgrounds are proving to be increasingly popular. They serve travelers stopping overnight en route. Vacationers, most often families, seek private campgrounds as quiet places to camp for several days.



**PRIVATE  
CAMPGROUNDS**

JUNE 30, 1964

PRIVATE TOURIST CAMPS REGISTERED WITH STATE BOARD OF HEALTH - As of April 8, 1965

County/Campground	Acreage	Tent Sites	Trailer Sites	Cabins	Cabin Capacity	Body of Water Locality
Aitkin						
Red Indian	5	20	0	0	0	Seth or Four Lake
Becker						
Cummings	10	50	0	2	8	Strawberry Lake
American Legion	1	10	46	0	0	
Long Lake	40	25	0	0	0	Long Lake
Tom and Jody	9	14	0	0	0	Long Lake
Beltrami						
Rogers'	5	12	12	6	36	Shotley Brook, Red Lake
Cass						
Leech Lake	160	75	0	3	6	Leech Lake
Horseshoe Bay	22.8	20	0	9	50	Leech Lake
Pine Cone-Bayview	140	25	0	29	145	Leech Lake, Kabekona
Longville	5	30	0	0	0	Girl Lake
Loon Lake	23	30	0	0	0	Loon Lake
Martins						Leech Lake, Steamboat Bay
Prine's Mardy Lake	7	4	5	5	25	Hardy Lake
Chisago						
River Bend	50	12	26	0	0	Sunrise River
Pappy Indianhead	13.5	50	20	0	0	St. Croix River
Crow Wing						
Marina	10	40	0	1	4	Gull & Love Lakes
Sourdough	5	10	10	2	10	Hubert Lake
Hargey's Wheel and Canvas	20	26	0	0	0	Upper Cullen Lake
Burl Hurry	17	4	2	9	45	Upper Hay Lake
Dodge						
Deer Haven	10	15	0	0	0	Zumbro River
Douglas						
Campers Cove	3	20	10	0	0	LeHomme Dieu
Darling Ranch	10	70	4	13	80	Atikwa Lake
Hagstrom's	30	10	0	3	18	Lobster Lake
Birchwood	40	45	10	0	0	Miltona Lake
Ideal Beach	6	10	0	14	30	Miltona Lake
Lucky Acres	48	20	15	8	50	Miltona & Spring Lakes
Lake Carlos	.75	4	8	1	6	Lake Carlos
Tamarac Bay	3	10	0	0	0	Miltona Lake
Sunset Bay	11.5	6	0	yes		Mary Lake
Ideal Beach	7	10	3	15	30	Miltona Lake
Cozy Nook	15	10	7	8	32	Ida Lake
Lazy U	3	9	0	0	0	Ida Lake
Faribault						
Blue Earth	2	0	10	0	0	Intersection US 16 & 169
Goodhue						
Earl & Dorothy's	7	10	12	0	0	Lake Pepin
Hidden Valley	150	150	25	0	0	Cannon River
Lake Pepin	14.7	20	0	0	0	U.S. 63 and 61
Grant						
Shady Lawn	1-1/3	2	2	4	8	Pelican Lake
Hubbard						
Camper's Paradise	50	80	0	3	6	Belle Taine
Gun Haven	10	8	0	0	0	Island Lake
Greece Lake	1.5	14	14	0	0	7 mi. E. Bemidji
Montgomery's						Midge Lake

County/Campground	Acreage	Tent Sites	Trailer Sites	Cabins	Cabin Capacity	Body of Water Locality
Itasca						
Yellow Lake	10	15	0	0	0	Shallow Lake
Keil	50	4	0	0	0	Little Too Much Lake
Gallup's	3	4	6	8	40	Sand Lake
Prairie Lake	30	15	0	0	0	Prairie Lake
Jackson						
Camp Ink-pa-Duta	9	30	0	0	0	Clear & Des Moines Lakes
Kandiyohi						
Jordan's	5	20	0	1	6	Long Lake
Boom's	2/3	10	0	0	0	Green Lake
Contour Acres	320	20	0	0	0	"a small stream"
Cedar Camp	6.5	10	0	0	0	Henderson Lake
Koochiching						
Lakeview	2	10	0	6	20	Rainy Lake
Lake						
Manitou Falls	40	10	0	2	8	Lake Superior
Burlington Bay	3	52	8	0	0	Lake Superior
Lake of the Woods						
Randall's	8	10	12	10	62	Lake of the Woods
Wheeler's Point	3	10	0	10	40	Lake of the Woods & Rainy River
Le Sueur						
Coral Cabin	N.A.	6	0	0	0	Sakataha Lake
Campground	5	10	4	0	0	Sofra Lake
Mille Lacs						
Lyback's	92	10	0	0	0	Lake Mille Lacs
Otter Tail						
Olson's	4	10	0	2	4	Swan Lake
Ottertail Lake	20	40	6	0	0	5 mi. N. Battle Lake
Ten Mile Lake	24	5	7	15	86	Ten Mile Lake
Bjornstad's	2	5	0	0	0	
Riverside	4	6	0	0	0	Near Ottertail River
	360	10	20	0	0	Rush Lake
Pine						
Underhill's	3.5	20	4	1	8	Grindstone Lake
Timber View	40	50	0	0	0	Near Grindstone Lake
Oak Lake	71	5	4	2	4	Oak Lake
Polk						
Lake Sarah	100	20	6	0	0	Lake Sarah
Pope						
Camp Eden	40	10	0	0	0	Crooked & Round Lakes
Rice						
Brennan's	2	10	0	1	4	General Shields Lake
Doels Dock	18	+	30	9	38	Cannon Lake
St. Louis						
Fishermen's Point	32	34	0	0	0	Whitewater Lake
Sunset	3	12	24	11	44	Ash River
Pine Acres	10	6	20	11	50	Pelican Lake
Scott						
Sunset Beach	31	10	21	0	0	Spring Lake
Sherburne						
Shore Acres	10	20	0	7	42	Big Lake
Camp on the Miss.	60	40	0	0	0	Mississippi River
Stearns						
Lakeview	2	8	16	13	85	Horseshoe Lake
El Rancho	1,208	100	0	0	0	Long Lake

County/Campground	Acreage	Tent Sites	Trailer Sites	Cabins	Cabin Capacity	Body of Water Locality
Todd						
Northshore	25	10	0	0	0	Lake Osakis
Waseca						
Wallskog's	7	25	0	2	8	St. Olaf Lake
Total	3,619	1,682	429	246	1,138	

#### PRIVATE FORESTS

Private forest companies in northern Minnesota have embarked on "good neighbor" projects aimed at getting more out of their forests than lumber and pulpwood. These large, non-governmental landowners are fully using the resources under their control by providing campsites, picnicking facilities and other recreational attributes.

To determine recreational development at private forests, letters were sent by the Department of Conservation to private forest companies. In addition to areas described below, the St. Regis Paper Company owns 11,500 acres of forest land in northern Minnesota including 300 acres devoted to recreational uses near Little Rock and Sartell, Minnesota.

Blandin Paper Company – Grand Rapids, Minnesota. Total timber acreage, 48,993. Recreation areas –

Gunn Park – 57 acres – Itasca County

9 acres developed to tree planting – cooperation with University of Minnesota

10 acres – two ball diamonds, horseshoe court, shuffleboard, picnicking, fireplaces, playground equipment, sanitary facilities, drinking water, boat launching.

15 acres – demonstration conifer plantations

Ball Bluff Roadside – 3 acres – Aitkin County – picnic tables and fireplaces.

Lake Access – Itasca County – undeveloped

Raddison Lake Access – Itasca County – undeveloped

Scrapper Lake Access – Itasca County – fishing

Cook Lake Access – Itasca County – fishing

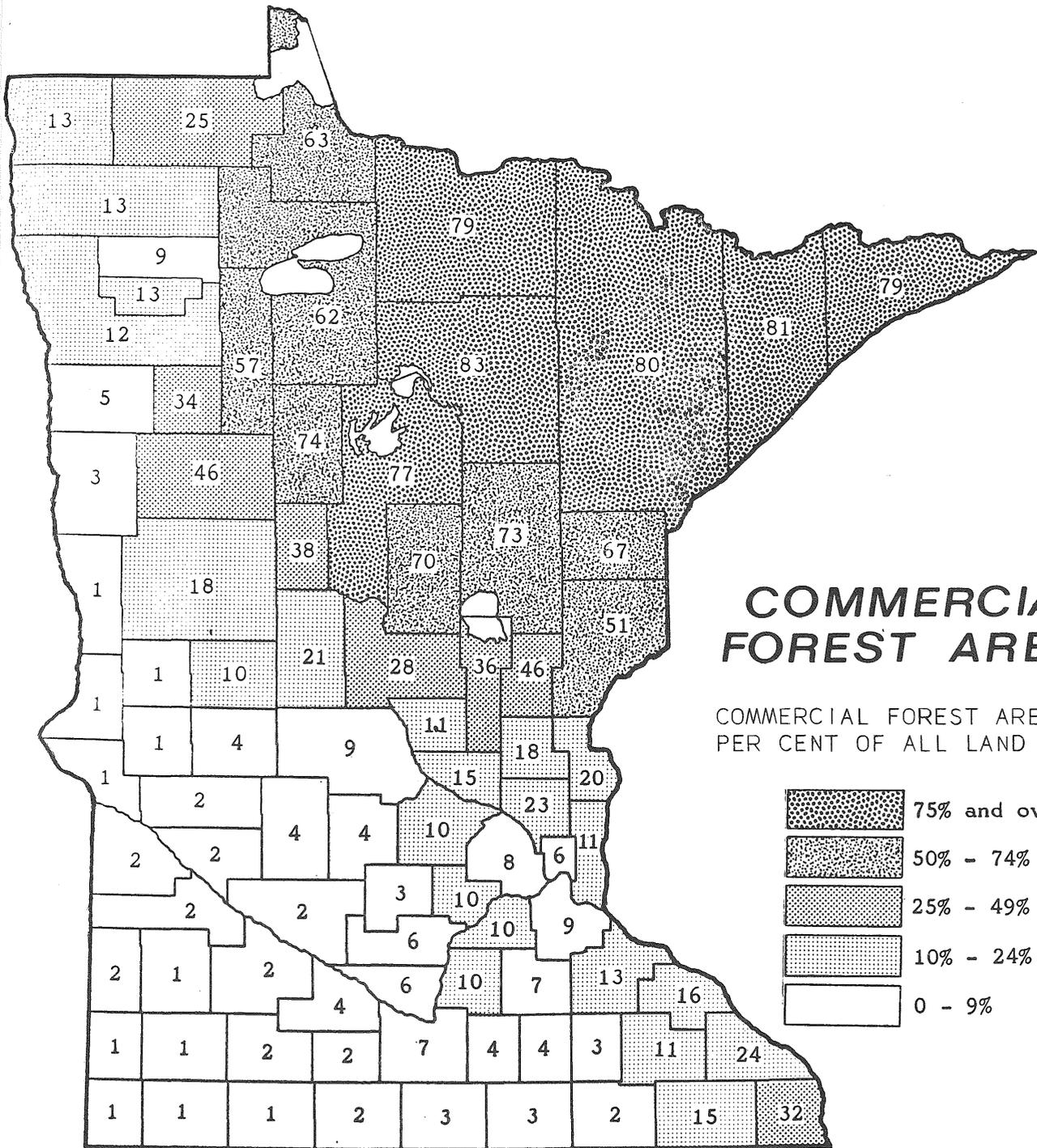
Twin Lake Access – Itasca County – undeveloped

Northwest Paper Company – Cloquet, Minnesota. Total timber acreage, 220,000 principally scattered tracts in northeastern and northcentral Minnesota.

Some lands are the results of land transfers dating back to the sawmill era. This company owns very little property for recreational purposes, but is inevitably involved because of its size, location and the condition of its holdings. No land is closed to recreational purposes except small areas where active logging is conducted. Individual groups are not given exclusive use of any lands by lease. Most of the lands are under provisions of the Tree Growth Tax Law requiring private forest lands to be available to the public for recreational use.

Lands of this company are heavily used by hunters. Although not managed for wildlife purposes, the timberland is conducive to deer, partridge, and moose production. The lands contain 200 miles of primary, all-weather roads and many more miles of secondary roads giving hunters, fishermen, berry pickers and trappers good access.

Occasionally, portions of land have developed into choice recreation areas receiving heavy public use. In these instances the property is often sold or donated for public use. Pine Valley was donated to the City of Cloquet for a city park and for ski purposes; a canoe landing on the Crow Wing River was donated to the Crow Wing Trail Organization for development; 240 acres on Long Lake were donated to the Boy Scouts for camping purposes; 40 acres were sold to the Brainerd Golf Club. Negotiations are underway with a large resort for use or sale of company property.



SOURCE: U.S. FOREST SERVICE

The company has exchanged over 15,000 acres of prime recreation land with the Federal Government in the Boundary Waters Canoe Area and another 3,600 acres in this area are being considered.

No shoreline has been developed for recreational purposes, but some beaches, including Skunk, Cedar, Poplar, White Iron, Bass, Winchester, Elbow and Hegman lakes, receive heavy public use. Roadside parking, picnic and fire-place facilities have been developed at Lake George and Sturgeon River.

Boise-Cascade Paper Company – International Falls, Minnesota. Total timber acreage, 300,000. In 1964, the Minnesota and Ontario Paper Company merged with Boise-Cascade. The major recreational uses listed below are under a Multiple Use Forest Management Plan.

#### Maintained Campgrounds –

Bass Lake – Itasca County – Tent and trailer camping, drinking water, sanitary facilities, picnic tables and fireplaces are provided. In 1964, the 35 campsites provided 1,415 camper days according to registration records. This does not include the estimated 200 local people and another estimated 150 who did not register. The Bass Lake Campground has been open to public use for the past 30 years. The campground is constructed and maintained for public use with the request that campers keep the area clean.

Big Fork River Access – Koochiching County – Boat ramp provided, other facilities will be provided at a later date.

Approximately 50 hunting campsite leases are issued each year at 810 sites. This does not entitle leases to exclusive hunting privileges. Timberlands are open for hunting and fishing access without restriction except where logging operations are in progress.

Over 200 miles of main roads are maintained and operated by company loggers and are open to public use except in periods of extreme fire hazard and extreme wet weather. Seldom has it been necessary to impose restrictions.

To preserve the scenic beauty along main highways and lakeshores along company land, uncut strips are left. Some cutting of dead, down and overmature trees is done to maintain these areas in the best conditions.

Forty-three summer homesites have been plotted for sale; 15 sites have been sold. A second area has been plotted for this purpose.

A comprehensive recreational survey of all company timberlands and surrounding inter-mingled water areas is being carried out. Additional policies will be adopted to further enhance recreational usage.

Kimberly-Clark of Minnesota, Inc. – Two Harbors, Minnesota. Total timber acreage, 113,161. Land owned by Kimberly-Clark is in Cook, Lake, St. Louis and Koochiching counties.

At the writing of this report, there were no specified recreational facilities operated by this company. The lands are open to the public for hunting, fishing and general recreational use subject to restrictions on road use during periods of high fire hazards, or when roads can be damaged by use as spring break-up. Areas are posted for logging operations during the hunting season.

#### PRIVATE HISTORIC SITES

Private groups or individuals have been active in preserving major historic sites in Minnesota. Notable among these are Old Mendota, preserved by the Daughters of the American Revolution, and Fort Saint Charles, preserved by the Fourth Degree, Knights of Columbus. Another example of a successful endeavor by a private group was the restoration of the Kelley Homestead by the National Grange. This property has been presented to the Historical Society which now maintains and administers the site. Presently, there are 36 private historic sites. (See Historic and Archaeological Sites for a private site listing.) No attempt has been made to identify museums owned by private interests or local communities.

A number of private organizations have been formed specifically for active promotion of a state park or a historic site. Examples are the Fort Snelling State Park Association, the Frontenac State Park Association, the

Fort Ridgely Memorial Association, Sinclair Lewis Foundation, Tower Development Association, the Upper Sioux Agency Association, Savanna Portage State Park Association, and the Crow Wing State Park Association. Patriotic, fraternal and other similar organizations provide private support of historic sites.

## PRIVATE GOLF COURSES

There were 198 golf courses in the State of Minnesota, June 30, 1964. Forty-four of these are privately owned (country clubs), 80 are under private ownership, but open to the public by admission, and 22 are under municipal ownership. The remainder are divided between semi-private and resort ownership. Fifty-three of the 196 courses are 18-holes with an average length of 6,170 yards; the nine-hole courses average 2,790 yards. Thirty-four of the 18-hole courses are located in the Minneapolis–St. Paul area. Golf is an important factor in attracting business to resorts. Some large resort owners are adding courses to their establishments.



JUNE 30, 1964

## MINNESOTA GOLF COURSES

City or Town	Club	County	Holes	Yardage	Par	Code
Albany	Albany	Stearns	9	3300	36	DF
Albert Lea	Albert Lea Country Club	Freeborn	9	3200	35	P
Albert Lea	Green Lea Golf Club	Freeborn	9	3145	36	DF
Alexandria	Alexandria Golf Club	Douglas	18	6375	72	DF
Alexandria	Darling Ranch Resort	Douglas	9	1130	27	DF
Annandale	Clearwater Country Club	Wright	9	1760	31	DF
Anoka	Greenhaven Municipal Golf Course	Anoka	18	6034	71	DF
Austin	Austin Country Club	Mower	18	6545	72	P
Austin	Ramsey Public Golf Club	Mower	18	5769	71	DF
Battle Lake	Balmoral	Ottertail	9	2972	36	DF
Belle Plaine	Belle Plaine Country Club	Scott	9	3008	36	DF
Bemidji	Town & Country Club	Beltrami	18	6245	72	DF
Benson	Benson	Swift	9			DF
Blackduck	Blackduck	Beltrami	9			DF
Blue Earth	Riverside	Faribault	9			DF
Brainerd	Brainerd Golf & Country Club	Crow Wing	9	2984	35	DF
Brainerd	Grandview Lodge (Gull Lake)	Crow Wing	9	1347	28	DF
Brainerd	Madden Pine Beach Inn	Crow Wing	18	5934	72	DF
Brainerd	Madden Pine Beach Inn	Crow Wing	9	1341	28	DF
Breckenridge	Bois de Sioux	Wilkin	18	6520	72	DF
Buffalo	Buffalo Heights	Wright	9	3358	36	DF
Cambridge	Cambridge Country Club	Isanti	9	2767	35	DF
Canby	Canby	Yellow Medicine	9	3240	36	DF
Cannon Falls	Cannon Country Club, Inc.	Goodhue	9	3125	35	DF
Cass Lake	Cass Lake	Cass	9		36	DF
Cloquet	Cloquet Golf Club	Carlton	9	3200	36	P
Cokato	Cokato Town & Country Club	Wright	9	3279	36	DF
Crookston	Minakwa	Polk	9	2948	36	DF
Dawson	Veterans	Lac Qui Parle	9	2802	35	DF
Deerwood	Cuyuna Country Club	Crow Wing	9	3155	37	DF
Deerwood	Ruttger's Golf Course	Crow Wing	9	2800	32	DF
Detroit Lakes	Detroit Country Club	Becker	18	6009	71	DF
Duluth	Duluth Auto Club Golf Course	St. Louis	9	2000		P
Duluth	Enger Park Municipal Golf Course	St. Louis	18	6090	72	DF
Duluth	Grandview Golf & Country Club	St. Louis	9	2742	36	DF
Duluth	Lester Park Golf Course	St. Louis	18	6382	72	DF
Duluth	Northland Country Club	St. Louis	18	6688	72	P
Duluth	Ridgeview Country Club	St. Louis	18	6170	70	P
Elk River	Elk River Country Club	Sherburne	9	2871	36	DF
Ely	Shagawa	St. Louis	9	2319	34	DF
Erskine	Win-E-Mac	Polk	9			DF
Eveleth	Eveleth	St. Louis	9			DF
Fairfax	Fort Ridgely	Renville	9	2735	35	DF
Fairmont	Interlaken	Martin	9	3200	37	P
Fairmont	Lakeview	Martin	9	3045	36	DF
Faribault	Faribault Country Club	Rice	9	3235	36	DF
Faribault	Shattuck Golf Course	Rice	9	3075	36	DF
Fergus Falls	Pebble Lake Municipal Golf Course	Ottertail	18	6360	72	DF
Forest Lake	Forest Hills Golf Course	Washington	9	3047	36	DF
Forest Lake	Forest Lake Country Club	Washington	9	2816	36	DF
Garrison	Y Golf Course	Crow Wing	9	1287	28	DF
Gilbert	Eschquagama	St. Louis	9			DF
Glencoe	Glencoe Country Club	McLeod	9	2829	35	DF
Glenwood	Minnewaska	Pope	9	3142	36	DF
Grand Rapids	Otis Lodge Golf Course	Itasca	9	2283	33	DF

GOLF COURSES - Continued

City or Town	Club	County	Holes	Yardage	Par	Code
Grand Rapids	Pokegema Country Club	Itasca	9	3081	35	DF
Granite Falls	Granite Falls	Yellow Medicine	9	3550	36	DF
Hastings	Hastings Country Club	Dakota	9	2934	35	P
Hawley	Hawley	Clay	9	2550	34	DF
Hibbing	Hibbing Municipal Golf Course	St. Louis	9	2631	34	DF
Hibbing	Mesaba Country Club	St. Louis	9	3220	37	P
Hoffman	Red Rock	Grant	9	2870	36	DF
Hutchinson	Crow River Country Club	McLeod	9	3156	35	P
International Falls	Falls Country Club	Koochiching	9	3000	35	DF
Isanti	Bar L Ranch Golf Course	Isanti	9	2915	36	DF
Jackson	Jackson	Jackson	9	2772	35	DF
Kasson	Zumbro Valley Recreation Center	Dodge	9	2849	36	DF
Karlstad	Karlstad	Kittson	9	3390	33	DF
Kenyon	Kenyon Golf Club	Goodhue	9	2715	34	DF
La Crescent	Pine Creek	Houston	9	2746	35	DF
Lake City	Lake City Country Club	Wabasha	9	3000	36	DF
Le Sueur	Le Sueur Golf Club	Le Sueur	9	3173	36	P
Litchfield	Litchfield Golf Club	Meeker	9	3155	36	DF
Little Falls	Little Falls Municipal Golf Course	Morrison	9	3045	35	DF
Long Prairie	Long Prairie	Todd	9	3400	36	DF
Luverne	Luverne	Rock	9			DF
Madison	Madison	Lac Qui Parle	9	2800	34	DF
Mahnomen	Mahnomen Country Club	Mahnomen	18	6195	72	DF
Mankato	Mankato Country Club	Blue Earth	18	6195	72	P
Mankato	Minneopa Golf Club	Blue Earth	9	2737	34	DF
Marshall	Marshall	Lyon	9	3072	36	DF
Milaca	Milaca	Mille Lacs	9	3100	36	DF
MINNEAPOLIS AREA						
Edina	Braemar		18			DF
St. Louis Park	Brookview Country Club		18	6657	72	P
Eden Prairie	Cedar Hill Golf & Ski		9	1223	27	DF
Minneapolis	Columbia Golf Course		18	4623	65	DF
Eden Prairie	Eden Prairie Golf Course		18	6374	72	DF
Edina	Edina Country Club		18	6725	72	P
Hamel	Elm Creek Golf		9	2417	34	DF
Golden Valley	Golden Valley Golf & Country Club		18	6523	73	PF
Minneapolis	Francis A. Gross Golf Course		18	6361	71	DF
Chanhassen	Hazeltine National Golf Club		18	7410	72	P
Bloomington	Hyland Greene		9		27	DF
Hopkins	Interlachen Country Club		18	6951	73	P
Lakeville	Kon Tiki Club		9	3270	37	DF
Minnetonka Beach	Lafayette Club		9	2101	31	P
Mound	Lakeview Golf Course		18	5209	69	DF
Hopkins	Meadowbrook Golf Course		18	6474	72	DF
Medina	Medina Golf Course		9	3245	35	DF
Medina	Medina Golf Course		9	1021	27	DF
Minneapolis	Minikahda Club		18	6526	73	P
St. Louis Park	Minneapolis Golf Club		18	6602	72	P
Bloomington	Minnesota Valley Country Club		18	6555	73	P
Excelsior	Minnetonka Country Club		18	6011	71	P
Bloomington	Normandale Golf Course		9	1545	27	DF
Hopkins	Oak Ridge Country Club		18	6662	70	P
Orono	Orono Golf Course		9	2275	35	DF

GOLF COURSES - Continued

City or Town	Club	County	Holes	Yardage	Par	Code
New Hope	Village Greens		9		28	DF
Plymouth	Hampton		18			DF
Wayzata	Wayzata Country Club		18	6985	72	P
Minneapolis	Theodore Wirth Golf Course		18	5821	69	DF
Minneapolis	Theodore Wirth Golf Course		9		27	DF
Orono	Woodhill Country Club		18	6400	71	P
Montevideo	Montevideo	Chippewa	9	3136	36	DF
Moorhead	Moorhead	Clay	9	3210	37	DF
Moose Lake	Moose Lake Golf Club	Carlton	9	2400	34	DF
Mora	Mora Country Club	Kanabec	9	3067	36	DF
Morris	Pomme de Terre	Stevens	9	2860	36	DF
Nashwauk	Swan Lake	Itasca	9			P
New Prague	New Prague Golf Club	Le Sueur	9	3142	36	DF
New Ulm	New Ulm Country Club	Brown	9	3007	36	DF
Nisswa	Birch Bay Golf Club	Crow Wing	9	2850	35	DF
North Branch	North Branch	Chisago	9	2600	32	DF
Northfield	Northfield Golf Club	Rice	9	3023	35	DF
Ortonville	Ortonville Municipal Golf Course	Big Stone	9	3000	36	DF
Owatonna	Owatonna Country Club	Steele	9	3122	36	DF
Owatonna	Owatonna Country Club	Steele	9			DF
Park Rapids	Park Rapids Golf & Country Club	Hubbard	9	3010	36	DF
Paynesville	Koronis Hills Golf Club	Stearns	9	2852	37	DF
Pierz	Pierz Municipal Golf Course	Morrison	9	3015	36	DF
Pipestone	Pipestone	Pipestone	9	3129	36	DF
Pelican Rapids	Birchwood Country Club	Ottertail	9	2561	35	DF
Pequot Lakes	Breezy Point Estates	Crow Wing	9	2897	35	DF
Pequot Lakes	Breezy Point Estates	Crow Wing	18			DF
Preston	Preston	Fillmore	9	2925	35	DF
Princeton	Rum River Golf Club	Mille Lacs	9	2714	36	DF
Proctor	Duluth, Missabe, Iron Range Railway Employees' Assn. Golf Course	St. Louis	9	2291	35	P
Red Wing	Red Wing Country Club	Goodhue	9	2760	35	DF
Redwood Falls	Redwood Falls Golf Club	Redwood	9	3000	35	DF
Rochester	Rochester Golf & Country Club	Olmsted	18	6420	71	P
Rochester	Soldiers Field Municipal Golf Course	Olmsted	18	5872	71	DF
Rushford	Ferndale	Fillmore	9	3450	36	DF
St. Charles	Clearwater State Park	Winona	9	2872	36	DF
St. Cloud	St. Cloud Country Club	Sherburne	18	6500	72	P
St. Cloud	Wapicada Golf Course	Stearns	9	3180	36	DF
St. James	Watonwan Country Club	Watonwan	9	2551	34	DF
<b>ST. PAUL AREA</b>						
North St. Paul	Castle Greens Country Club		9	1425	27	DF
St. Paul	Como Park Golf Course		18	5568	69	DF
Fort Snelling	Fort Snelling Golf Club		9	3157	36	P
St. Paul	Gall's Golf Club		18	6519	71	DF
White Bear	Gem Lake		9			DF
St. Paul	Highland Park Golf Course		18	6007	72	DF
North St. Paul	Hillcrest Country Club		18	6301	72	P
St. Paul	Keller Golf Course		18	6567	72	DF
Mendota	Lost Spur Golf Club		9	2357	33	P
St. Paul	Maplewood Golf Center		9	1349	27	DF
West St. Paul	Mendakota Country Club		18	6265	72	P

GOLF COURSES - Continued

City or Town	Club	County	Holes	Yardage	Par	Code
West St. Paul	Mendota Heights Golf Course		9	1277	27	DF
Roseville	Midland Hills Country Club		18	6550	72	P
North Oaks	North Oaks Golf Club		18	6475	71	P
St. Paul	Phalen Park Golf Course		18	4812	65	DF
St. Paul	Ramsey County Golf Course		12	4052	49	DF
Roseville	Roseville Golf Course		9	1433	27	DF
West St. Paul	Somerset Country Club		18	6611	71	P
West St. Paul	Southview Country Club		18	6250	69	P
St. Paul	Town & Country Club		18	6163	72	P
Roseville	University of Minnesota Golf Course		18	6314	71	P
Roseville	University of Minnesota Golf Course		9	1303	27	P
White Bear	White Bear Yacht Club		18	6575	72	P
St. Peter	Shoreland Country Club	Nicollet	9	2505	33	DF
Sandstone	Sandstone Municipal Golf Course	Pine	9	2159	33	DF
Sauk Centre	Sauk Centre Country Club	Stearns	9	3232	37	DF
Sherburn	Fox Lake	Martin	9		34	DF
Silver Bay	Silver Bay Country Club	Lake	9	3239	36	P
Sleepy Eye	Sleepy Eye	Brown	9	3085	36	DF
Springfield	Springfield	Brown	9	3020	36	P
Staples	Staples	Todd	9	2975	36	DF
Stephen	Riverside	Marshall	9	3262	34	DF
Stillwater	Stillwater Country Club	Washington	18	6730	72	P
Thief River Falls	Thief River Falls	Pennington	9			DF
Two Harbors	Lakeview Municipal Golf Course	Lake	9	3150	36	DF
Tyler	Tyler	Lincoln	9	3150	36	DF
Virginia	Virginia Municipal Golf Course	St. Louis	18	6242	70	DF
Waconia	Island View Country Club	Carver	9	3496	37	DF
Wadena	Wadena	Wadena	9	3165	36	DF
Walker	Tianna Country Club	Cass	9	2955	36	DF
Warren	Riverside Country Club	Marshall	9	2780	35	DF
Waseca	Lakeside Golf Club	Waseca	9	2885	36	DF
Watertown	Crow Greens Public Golf Course	Carver	9	2616	34	DF
Willmar	Willmar	Kandiyohi	9	3100	36	DF
Windom	Windom	Cottonwood	9	2840	36	DF
Winona	Westfield Golf Club	Winona	9	2855	35	DF
Winona	Winona Country Club	Winona	9	3111	35	DF
Winthrop	Winthrop Country Club	Sibley	9	2980	36	DF
Worthington	Worthington Country Club	Nobles	9	3500	36	DF
Zumbrota	Zumbrota Golf Club	Goodhue	9	2615	34	DF
Greenbush	Greenbush	Roseau	9			
Roseau	Roseau	Roseau	9			
Warroad	Warroad	Roseau	9			

CODE: DF - Daily Fee      P - Private

## PRIVATE PICNIC AND SPORTS AREAS

At this time, the number and location of private picnic and sports areas is not known as no inventory has been made. However, these areas are known to be quite popular and usually charge 25 cents to one dollar per car. They are usually within an hour's drive of a city or group of towns with a population of 50,000 or more. A combination of day-use recreation facilities is often offered. Opportunities here include a club house for banquets and regular food service. A small lake for swimming, fishing and boating is often offered in conjunction with picnicking and sports such as volleyball, tennis and horseshoe pitching.

## PRIVATE VACATION FARMS AND RANCHES

Many city people are discovering refreshing vacations at Minnesota's vacation farms or ranches. An example is the Big Stone Farm for children which charges \$25 per week. According to an inventory by the Soil Conservation Service, in 1964 there were seven vacation farms. One is planned north of the Twin Cities and proposes year around recreation including ice skating, bridle paths, fox hunting, picnic and sports areas, etc.

The appeal of farm vacations rests on release from the confinements of city life and the opportunity to return to the great open spaces. The mystery and fascination that farming holds for most modern city bred Americans holds great potential for this type of development. Parents appreciate the opportunity for their children to experience country life.

An indication of the recreational facilities offered by farmers is given by Farmers' Home Administration, reporting seven loans for farm recreation as of May, 1964. The Minnesota Agricultural Extension Service is undertaking a detailed survey of farm recreational areas and facilities.

## PRIVATE HORSEBACK RIDING STABLES

There are some 100 riding academies or clubs in Minnesota, mostly at resorts throughout the state in conjunction with fishing, swimming and other outdoor activities. There are several riding academies around the Twin Cities.

The largest share of horseback riding is done by horse owners. There are about 160,000 riding horses in the state owned by some 42,000 persons. Minnesota ranks as the third largest horse owning state in the country.

## SKI RESORTS

In Minnesota there are 36 known ski areas shown on the following map, June 30, 1964. This list was compiled by the Department of Conservation. All are under private ownership. Ski resorts can be more than a place to ski. They can offer other types of recreation such as tobogganing and skating, and a chance to relax for a weekend. The following information was adapted from the survey conducted by the Bureau of Business Development - Economic Research of the University of Minnesota, State Department of Business Development and the Federal Reserve Bank of Minneapolis described on page 119.

### Facilities at Ski Resorts (Number of resorts with facilities)

<u>Skiing Facilities</u>	<u>Minnesota</u>	<u>Upper Michigan</u>	<u>N. W. Wisconsin</u>
Ski School	18	7	14
Ski Patrol	16	9	13
Ski Shop	11	6	13
Equipment Rental	18	7	14
Equipment Repair	8	7	10
Ski Jumps	10	3	2

### Ski Lifts

<u>Type of Lift</u>	<u>Minnesota</u>	<u>Upper Michigan</u>	<u>N. W. Wisconsin</u>
Rope	75	30	62
J-Bar	2		
T-Bar	4	6	8
Poma	3		
Chair	2	2	
Total Number of Lifts -	86	38	72

The predominant tow facility is the rope tow. All the rope tows listed are not regularly used as ski lifts. Some substitute in case of T-Bar or chair lift failure. Others serve as feeders to larger lifts. Rope tows are also used to handle unusually large crowds.

### Non-Skiing Facilities

Chalet	24	9	14
Overnight Accommodations	4	2	3
Canteen	19	11	11
Restaurant	7	4	8
Swimming Pool	1		1
Toboggan Slide	5	1	2
Ice Skating	5		4
Sleigh Rides	3	1	3

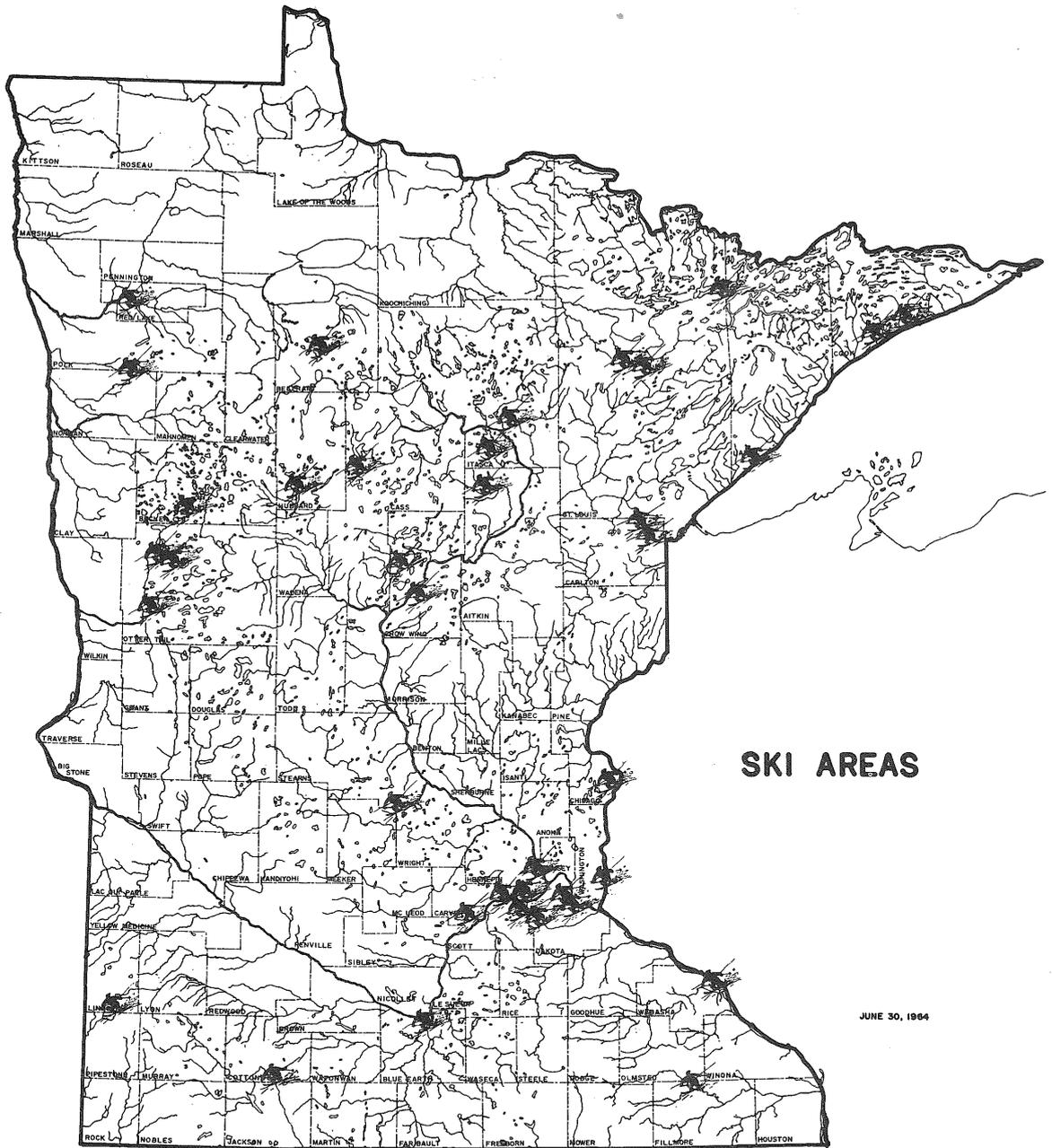
A ski resort can also offer its facilities in the spring, summer and fall seasons particularly if there is scenic quality which adds to the tourist potential. Minnesota has 19 ski resorts with off-season operations.

### The Number and Average Length of Ski Trails\*

	<u>Minnesota</u>	<u>Upper Michigan</u>	<u>Northern Wisconsin</u>
Novice	(11)	(7)	(5)
Number of trails	22	19	12
Average length of trail in ft.	1,184	974	1,471
Intermediate			
Number of trails	35	25	20
Average length of trail in ft.	1,125	1,260	790
Expert			
Number of trails	35	10	16
Average length of trail in ft.	951	1,770	1,119

\*Parenthesized number indicates number of resorts that comprise the statistics in the above table.

Steepness is the main criterion by which a slope is classified. A steep narrow hill descended at high speed is more expert than a long hill, wide enough for regular turning to retard a skier's speed. Therefore, those classed as expert slopes were shorter than the intermediate slopes as seen in the above table. The average expert slope in Minnesota is shorter than both the novice and intermediate.



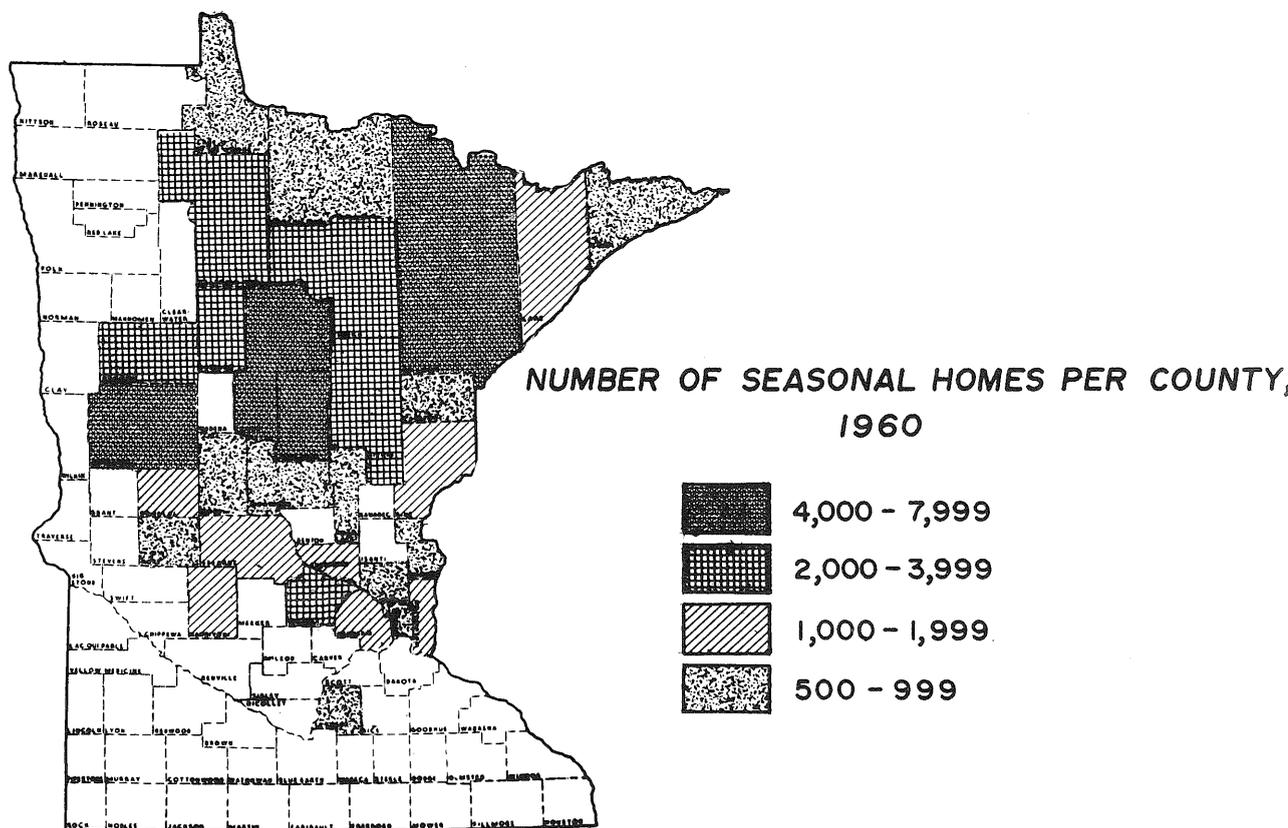
MINNESOTA SKI HILLS

Name and Location	Lifts	Slopes	Long Run	Vert. Drop	Rental	Distance from Mpls. St. Paul	Other Facilities
<b>AITKIN COUNTY</b> Quadna Mt. SW of Hill City	3	14	2800'	325'	Yes	150	Chalet, shop, lunches, lodge sauna & pool etc.
<b>BECKER COUNTY</b> Detroit Mt., Detroit Lakes	4	10	1250'	200'	Yes	200	Chalet, shop, lunches
<b>BELTRAMI COUNTY</b> Buena Vista, North of Bemidji	4	10	1500'	225'	Yes	227	Chalet, shop, lunches
<b>BLUE EARTH COUNTY</b> Skihaven, Mankato	2	2	1500'	300'	Tobog. Only	80	Chalet, snack bar, jumps, tobog. chutes
<b>CARLTON COUNTY</b> Pine Valley, Cloquet	2	2	600'	100'	Yes	150	Modern chalet, 3 jumps
<b>CARVER COUNTY</b> Allen's Thrill Hill, Cologne (Chaska)	1	3	600'	150'	No	28	Toboggan slide
<b>CASS COUNTY</b> Shingobee Ski Area, Walker	1	5	1500'	150'	No	200	Chalet, lunches
<b>CHISAGO COUNTY</b> Val Croix, Taylors Falls	7	11	5000'	258'	Yes	60	Chalet, shop, lunches
<b>COOK COUNTY</b> Lutsen, Lutsen Sawtooth Mt., Grand Marais	4	16	5200'	630'	Yes	250	Chalet, shop, swimming pool, skating
<b>CROW WING COUNTY</b> Breezy Point Estates, Pequot Lakes	2	Open	2000'	220'	Yes	140	Chalet, shop, lunches sauna
French Rapids, Brainerd	3	11	800'	120'	No	130	Chalet, 2 jumps, lunches
<b>DAKOTA COUNTY</b> Buck Hill, So. Minneapolis Norski Hill, St. Paul	8 2	14 13	3000' 1500'	309' 165'	Yes Yes	11 8	Chalet, shop, lunches Chalet, shop, lunches jump
Pine Bend, So. St. Paul	4	8	2000'	258'	Yes	12	Chalet, shop, lunches
<b>HENNEPIN COUNTY</b> Cedar Hills, Eden Prairie Moon Valley, Shakopee Mount Normandale, Minneapolis Theodore Wirth, Minneapolis	6 4 4 3	12 Open Open 10	1000' 2000' 2000' 1000'	150' 200' 200' 125'	Yes Yes Yes Yes	18 14 5 0	Chalet, shop, lunches Chalet, shop, lunches Chalet, shop, lunches Chalet, shop, lunches
<b>HUBBARD COUNTY</b> Val Chatel, No. of Park Rapids	5	10	2500'	275'	Yes	205	Chalet, shop, steak house, jump, ice skating
<b>ITASCA COUNTY</b> Mt. Itasca Ski Area, Coleraine Sugar Hills, SW of Grand Rapids	2 11	4 22	1800' 7000'	275' 400'	Yes Yes	190 175	Chalet, shop, lunches, jump Chalet, shop, lunches, swimming pool
<b>LAKE COUNTY</b> Timberland, 3 mi. NW Red Lake Falls Voyageur Skiway, Two Harbors	4	7	1200'	110'	Yes	295	Chalet, shop, lunches
<b>LINCOLN COUNTY</b> Benton Valley, Lake Benton	1	1	1000'	150'	Yes	200	
<b>OTTERTAIL COUNTY</b> Hallaway Hill, 10 mi. E. of Pelican Rapids Old Smokey in Fergus Falls Skidahlen, E. of Pelican Rapids	4 2 1	7 1 4	1800' 480' 2000'	200' 110' 186'	Yes No Yes	210 180 210	Chalet, shop, lunches, jump Warming house only Warming house only

SKI HILLS - Continued

Name and Location	Lifts	Slopes	Long Run	Vert Drop	Rental	Distance from Mpls. St. Paul	Other Facilities
<b>ROCK COUNTY</b>							
Ski Devil, Fertile	4	6	700'	150'	Yes	275	Chalet, shop, lunches
<b>STEARNS COUNTY</b>							
Powder Ridge, Kimball Prairie	5	6	1800'	210'	Yes	55	Chalet, shop, lunches
<b>ST. LOUIS COUNTY</b>							
Giants Ridge, Aurora-Biwabik	5	11	3000'	440'	Yes	210	Chalet, shop, lunches
Hidden Valley Ski Hill, Ely	3	5	1800'	145'	Yes	241	Chalet, jump, tobog. run
Lookout Mt., Virginia	8	15	3400'	302'	Yes	198	Chalet, shop, lunches
Mont du Lac, Duluth	5	13	2300'	310'	Yes	142	Chalet, shop, lunches
<b>WASHINGTON COUNTY</b>							
Afton Alps, Afton	6	8	1900'	270'	Yes	13-23	Chalet, shop, skating, lunches
<b>WABASHA COUNTY</b>							
Little Squaw Valley, Wabasha	2	1	1200'	300'	Yes	90	Chalet, jump, lunches, tobog. run

COMMERCIAL LODGINGS AND SEASONAL HOMES



FROM: Projected Urban Growth in the Upper Midwest : 1960-1975 Upper Midwest Economic Study 8

## COMMERCIAL LODGINGS AND SEASONAL HOMES

The following information was adapted from M.O.R.R.C. Report 4. There are 4,891 commercial lodging places in Minnesota, 3,077 of which are resorts, 907 motels, and 610 hotels. Others range from canoe outfitters to vacation farms.

There is a tremendous concentration of summer homes and resorts on a few lakes. For instance, 59 percent of Minnesota's resorts are on 154 lakes, 77 percent on 307 lakes, 83 percent on 384 lakes, 88 percent on 460 lakes; 56 percent of Minnesota's summer homes are on 144 lakes, 74 percent on 285 lakes, 91 percent on 576 lakes and 97 percent on 863 lakes.

In April, 1964, a survey to determine who comes to Minnesota's commercial lodgings on vacation and the facilities they prefer was conducted by the North Star Research and Development Institute of Minneapolis, an independent, nonprofit contract research organization. The region studied is bounded by Bemidji, Brainerd, Grand Rapids, Park Rapids and Walker.

The North Star Study found that in the 1963-1964 tourist season, ten percent of the vacationing families in the 500-mile sample area had incomes of \$15,000 or more. Thirty-three percent were in the \$7,000 to \$9,000 bracket. Of the families with incomes in the \$5,000 to \$6,999 group, 29 percent vacationed in Minnesota.

Of the families living in Minneapolis, St. Paul and Mankato, Minnesota; Aurora, Illinois; and Des Moines, Iowa, with incomes of over \$10,000, 16 percent preferred to stay in cabins or housekeeping cabins; 64 percent in motels; 14 percent in hotels and 13 percent in campsites. Of the families making less than \$10,000 nearly twice as many or 27 percent liked to stay in cabins or housekeeping cabins; 51 percent in motels; 6 percent in hotels; and 13 percent in campsites.

Ninety-one percent of the people in the above \$10,000 bracket stated that excellent food was the most important factor in choosing a recreation resort. Sixty-seven percent of the people in the below \$10,000 bracket indicated that food was the most important factor. Next came swimming facilities and third boats.

### MINNESOTA RESORTS, HOTELS AND MOTELS November, 1964 Board of Health

<u>County</u>	<u>Number of Hotels</u>	<u>Number of Motels</u>	<u>Number of Resorts</u>
Aitkin	3	9	137
Anoka	4	14	1
Becker	5	19	129
Beltrami	13	19	148
Benton		3	3
Big Stone	4	5	5
Blue Earth	7	9	6
Brown	5	6	1
Carlton	12	8	11
Carver	2	1	2
Cass	9	19	422
Chippewa	3	6	1
Chisago	4	7	18
Clay	6		
Clearwater	2	5	6
Cook	4	30	88
Cottonwood	4	5	
Crow Wing	8	23	386
Dakota	9	8	2
Dodge	2	1	
Douglas	5	15	160
Faribault	7	8	
Fillmore	7	12	1

<u>County</u>	<u>Number of Hotels</u>	<u>Number of Motels</u>	<u>Number of Resorts</u>
Freeborn	4	9	
Goodhue	8	8	3
Grant	4	2	5
Hennepin	84	67	21
Houston	4	7	
Hubbard	3	17	212
Isanti	2	2	4
Itasca	13	16	260
Jackson	2	2	
Kanabec	2	2	13
Kandiyohi	5	9	45
Kittson	6	6	
Koochiching	12	15	54
Lac qui Parle	3	3	
Lake	3	33	40
Lake of the Woods	1	3	31
Le Sueur	6	4	27
Lincoln	1	3	2
Lyon	4	5	
Mc Leod	2	5	
Mahnomen	2	3	23
Marshall	5	1	1
Martin	6	10	5
Meeker	2	6	13
Mille Lacs	4	6	62
Morrison	4	9	30
Mower	7	7	
Murray	1	3	2
Nicollet	5	4	1
Nobles	3	8	1
Norman	2	3	
Olmsted	33	43	2
Otter Tail	10	19	226
Pennington	5	3	
Pine	5	6	19
Pipestone	2	4	3
Polk	10	18	6
Pope	4	3	33
Ramsey	35	26	3
Red Lake	2		
Redwood	4	2	
Renville	8	5	
Rice	8	10	12
Rock	2	3	
Roseau	4	6	1
St. Louis	73	108	229
Scott	3	8	4
Sherburne		7	5
Sibley	1	5	
Stearns	14	21	65
Steele	3	5	
Stevens	2	3	
Swift	3	3	
Todd	3	4	16
Traverse	2	2	5
Wabasha	3	10	4

<u>County</u>	<u>Number of Hotels</u>	<u>Number of Motels</u>	<u>Number of Resorts</u>
Wadena	1	7	10
Waseca	2	3	2
Washington	3	15	10
Watonwan	3	3	
Wilkin	4	2	
Winona	13	15	1
Wright	6	6	38
Yellow Medicine	4	6	1
Final Total	<u>610</u>	<u>907</u>	<u>3,077</u>

#### PRIVATE NATURAL AREAS (NATURE PRESERVES)

The only official or established natural areas are three 80-acre tracts owned and administered by the Minnesota Chapter of the Nature Conservancy, Inc. Members of the Minnesota Chapter have contributed to their acquisition through membership dues. Areas are purchased by the Nature Conservancy for preservation and research. A few private individuals and corporations have set aside lands as natural areas for scientific and educational purposes. Some are used by schools and other groups for education and research. Some Northern States Power lands have been set aside as natural areas along the St. Croix. (See Natural Areas for a review of tracts owned by the Nature Conservancy.)

#### PRIVATE FISHING AREAS

Some private fishing is provided in southern Minnesota, particularly for Iowa bullhead fishermen. Private operators usually own land adjoining public water – lake, river, bay – and can offer access privileges for a fee. Facilities which attract visitors include fishing platforms and fish cleaning tables, picnic tables, snackbars, and counters for sale of equipment and supplies. Add the sale or rental of boats, motors, tackle and bait and the private operator has a sizable business.

In 1964, the Department of Conservation issued 108 private fish hatchery licenses. Of this number, 19 were for raising trout only and 19 additional licenses were for trout sales.

#### PRIVATE HUNTING AREAS

Although wild game belongs to the state, a charge may be made by the landowner for the privilege of entering private property to hunt. In response to growing demand, more and more landowners are marketing the hunting privilege.

Among the possibilities for offering other services are room and board, hunting supplies and equipment, rental of vehicles, saddle and pack animals, camping equipment, hunting and retrieving dogs, and guide services. Since hunting is carried on for only a few weeks in the fall, land is devoted primarily to crop production, grazing or forestry in the off-season. This enterprise is sometimes combined with fishing so the same facilities can be used for a greater part of the year.

Where land holdings are small and upland game is the crop, owners sometimes combine their properties into a single hunting area and lease it to a group of hunters. Or, they sell permits by the day to individual hunters. On lands posted by owners as held for wildlife hunting, hunters can get exclusive rights to use the area by contacting the landowner. The landowners are usually paid either in cash or by a share of the hunt.

For shooting migratory waterfowl, some landowners have provided shooting sites near large bodies of water either on the land or adjacent to it. The operator may improve wetlands or flood fields to make them attractive to waterfowl. He may construct pits and blinds or lease land to individuals or groups who install them.

Two hundred acres or more of good quality habitat is needed for farm game and 1,000 or more for deer or other big game. Control over the harvest of game is accomplished through regular seasons and bag limits regulating the sale of hunting privileges by private landowners.

Sometimes sporting clubs select a tract of land suitable for good hunting and lease or buy the property exclusively for club member use.

## PRIVATE SHOOTING PRESERVES

A private shooting preserve differs from a private hunting area in that the operation depends on pen-raised birds. Shooting preserves offer guaranteed shooting of pen-raised birds released in superior habitat. The season for hunting on licensed preserves usually is much longer than for wild game.

The shooting preserve is usually the primary business of the operator with farming a supporting activity to raise food for the penned game and to provide cover when the birds are released. The game is purchased from a commercial raiser or raised on the area upon the purchase of a game breeder's license. Birds that escape the hunters serve to stock adjacent grounds.

Shooting preserves are licensed by the Department of Conservation. Officials must be consulted regarding legal requirements of operating a preserve. The 12 licensed shooting preserves in Minnesota, as of 1964, are listed below by the nearest town and/or name of the area:

Anoka, Fosston, Marsh Lake Farms at Chaska, Cedar, Granite Falls Game Farm at Granite Falls, Little Falls, \*St. Paul, Howard Lake, Hastings, Wild Wings of Oneka at Stillwater and \*\*Continental Machines, Inc. at Savage.

\*This preserve in 1964 was open to the public. All others by membership.

\*\*This preserve is operated for the employees of a private company.

## FEDERAL PROGRAMS OF ASSISTANCE TO PRIVATE OPERATORS

Private land comprises three-fourths of the land area of the nation and constitutes a great potential for needed recreation areas. Many federal programs are focused on the development of conversion of private land for recreation. Cost-sharing programs can be found in the "ACP Handbook for 1963 (Minnesota), U.S. Dept. of Agriculture - Agricultural Stabilization and Conservation Service."

## SOIL CONSERVATION SERVICE, U.S. DEPARTMENT OF AGRICULTURE

The S.C.S. provides the technical assistance to landowners and operators to plan and install income-producing recreation enterprises. These services are made available from the soil and water conservation districts in each county and other local sponsoring groups.

Public Law 566 - Under Public Law 566, 83rd Congress, the federal government will provide technical assistance and share in the cost of constructing soil and water conservation projects. Such projects may be designed to permit use for recreational purposes. The projects may involve group effort under a watershed project chartered as a watershed district under laws of Minnesota for governmental function.

The following are the Public Law 566 and pilot watershed projects authorized for construction:

<u>Project</u>	<u>County</u>	<u>Acres</u>
Bear Valley	Goodhue, Wabasha	29,440
Cooks Valley	Wabasha	15,938
Coon Creek	Anoka	60,160
Crane Creek	Steele, Waseca	66,713
Crooked Creek	Houston	44,599
Hawk Creek (Pilot)	Chippewa, Kandiyohi, Renville	321,536
Joe River	Kittson	54,959
Lakes Okabena-Ocheda	Nobles	45,826
Middle Fork Two Rivers	Kittson	57,532
North Branch Two Rivers	Kittson, Roseau	234,223
Zippel	Lake of the Woods	51,964

The following are completed projects:

<u>Project</u>	<u>County</u>	<u>Acres</u>
East River (Pilot)	Fillmore	24,000
Mud Creek (Pilot)	Kandiyohi, Swift	56,128
Rush-Pine	Fillmore, Houston	88,050
Shakopee Creek (Pilot)	Chippewa, Kandiyohi, Swift	204,416

The Secretary of Agriculture is authorized under Section 6 of Public Law 566 in cooperation with other federal agencies and with states and local agencies, to make investigations and surveys of watersheds for the development of a "type IV" River basin study. A Type IV Study gives full consideration to watershed protection, flood prevention, agricultural water management, including drainage, irrigation and rural water supply. It also gives consideration to non-agricultural water management including recreation, fish and wildlife, municipal and industrial water supply and water quality control.

Public Law 566 participation is limited to areas of 250,000 acres or less. A Type IV Study would be of significance to recreational development programs in the tributary watersheds of the major rivers. The Study would supplement the Type I and II studies now in process on the Mississippi and Missouri Rivers. Such a study or studies are in need in localized areas of the state. One Type IV Study is now in process on the Big Sioux - Rock Rivers basins of southwestern Minnesota.

#### FEDERAL EXTENSION SERVICE

The Federal Extension Service works through the State Extension Services which are part of the Land Grant University System. The Service provides educational assistance and advice to farmers and landowners regarding the development of income-producing recreation on privately owned and other non-federal lands.

State Extension Service in each county provides guidance to landowners in converting cropland to recreational uses, assistance to farmers establishing and operating vacation farms, and assistance to tourist enterprises and others

#### FARMERS HOME ADMINISTRATION

Loans to Individuals - The Farmers Home Administration may make loans to individual farmers who are unable to get needed credit elsewhere for development of income-producing outdoor recreation enterprises. Owner-operators may borrow up to \$60,000 for such purposes as land acquisition, construction of fish ponds, development of hunting preserves, construction of cabins, picnic and camping areas and other facilities for outdoor recreation.

Loans to Associations - Loans may be up to \$500,000 and insured loans up to \$1 million to nonprofit associations serving or benefiting farmers and other rural persons in making land use changes including the development of recreation facilities. These loans are available to farmers' associations and small town residents or communities of 2,500 or less.

Watershed Loans - Watershed loans and advances, including funds for developing recreation facilities, may be made to finance the local share of costs of improvements to watershed projects approved by the S.C.S. In addition, loan funds may be used to finance recreation developments in or adjacent to reservoirs, lakes, natural streams or shorelines including minimum basic facilities needed for public health and safety, access and use.

Rural Renewal - Rural renewal loans and technical assistance are available on a limited basis to local public agencies located in designated areas where family incomes are abnormally low. Some grant funds are available to local public agencies for planning, surveys, feasibility and engineering studies or similar planning activities essential to preparing the entire plan or individual projects. This plan will include the development of the recreation potential of the area.

#### AGRICULTURAL STABILIZATION AND CONSERVATION SERVICE, U. S. DEPARTMENT OF AGRICULTURE

Agricultural Conservation Program - The Agricultural Conservation Program assists farmers to install permanent vegetative cover, trees and shrubs, water impoundments and other needed conservation measures on privately owned agricultural lands. The program includes practices specifically for the benefit of wildlife, and the regular

practices which provide wildlife habitat and feed as well as the construction of dams or ponds for fish.

State-wide, there were 3,239,731 acres of farm cropland diverted from crop production in 1964, under the three Surplus Crop Programs. In the 1965 program emphasis was given to the application of wildlife habitat practices as a conservation use on diverted land. The large acreages of diverted land are located in the major pheasant producing areas of the state. Further efforts to increase the area of diverted lands for wildlife habitat appear justified.

Cropland Conversion Program – The Department of Agriculture can enter into long-term agreements with farmers to convert land regularly used for the production of crops to recreation projects.

#### Rural Electrification Administration

Consumers of REA-financed electric and telephone systems and others interested in starting or expanding either a commercial or nonprofit rural recreation enterprise may obtain specialized technical and credit-financing assistance from the REA.

#### FOREST SERVICE, U. S. DEPARTMENT OF AGRICULTURE

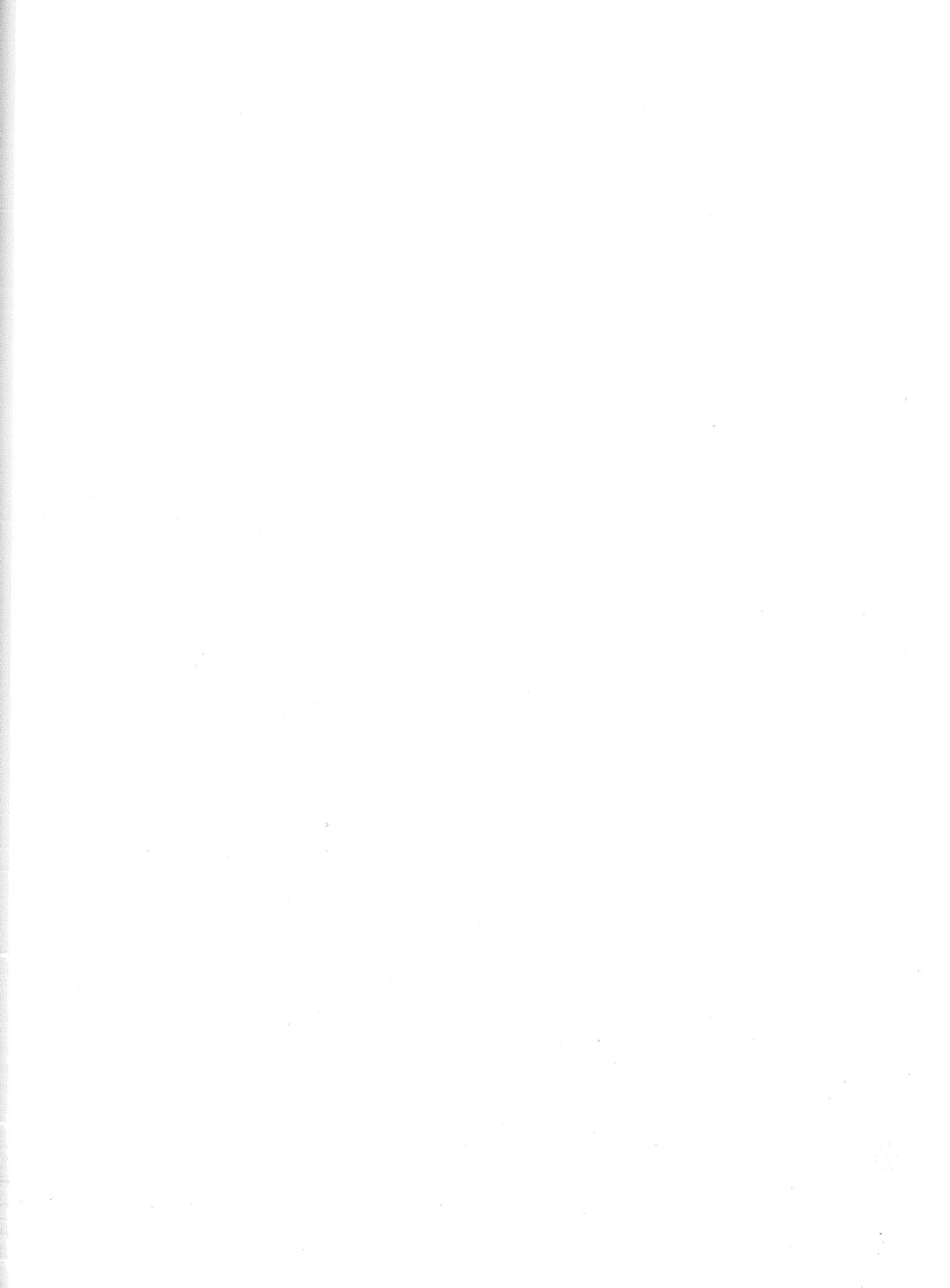
The Forest Service works closely with the Division of Forestry, Department of Conservation, in urging multiple use, including recreation development of private woodlands, particularly on the small forest holdings. The objectives are to:

1. Provide and improve the recreation opportunity through a better understanding of the recreationist's needs and desires.
2. Maintain and protect forest recreation sites from damage or destruction from heavy use.
3. Evaluate economic opportunities and impacts of forest recreation enterprise and complexes.
4. Coordinate forest recreation use with other demands on forest resources.

#### RESEARCH

Farmer Cooperative Service, U.S. Department of Agriculture – This service assembles, analyzes and disseminates economic information on farmer-owned recreational cooperatives. It conducts studies of the economic, legal, financial, social and other phases of recreation cooperatives and confers and advises committees and groups of producers on organizational and operating problems.

Economic Research Service, U.S. Department of Agriculture – This service carries out research on the following activities: 1. recreation as a source of accelerated economic activity in low-income areas within the farm and within the context of community development; 2. recreation as a source of employment for rural people in low-income areas; 3. recreation as a land use, including broad inventories of recreation use of land and water and appraisals of recreation as an economic employment of land and water resources; 4. recreation as a part of river basin and watershed development programs; and 5. the legal institutional aspects of recreation use of land and water, including the nature and distribution of rights of these resources and their organization and use by individuals and groups.





# natural areas

"We must make a massive effort to save the countryside . . . as a green legacy for tomorrow . . ." (Lyndon B. Johnson, State of the Union Message, Washington, D.C., January 4, 1965.)

Thus far we have discussed areas owned by either public or private agencies of groups, many of which provide activities involving considerable development. There is still another group which must be considered in the total recreation picture of Minnesota — the natural areas. These are areas where there is also considerable development, but of a different type — that provided solely by Mother Nature. Yet by the very essence of their natural development, they offer a wide variety of activities and enjoyment, whether it be bird watching, flower identification, rock hunting, photography, research or simply relaxing in an undisturbed environment. Minnesota is a mecca for geologic study and rock hunting, her waterfalls, small tributaries, wild rice and wild flowers, natural springs and bridges, wild rivers, caves and many other natural attractions offer many possibilities "as they are."

Protection of many outstanding natural areas must have a coordinated effort. Many agencies, public and private, are now and will be contributing to the setting aside of these areas.

Acquisition of natural areas is an essential part of the preservation program of federal and state governments. They are generally too small and too fragile to serve the usual objective of large-scale public recreation, but by their mere presence, these areas bring enjoyment to our people. In their purely natural state, they offer recreation values whether the enjoyment involves hobbies, study, photography, research or pure relaxation. There is no measuring stick for evaluating the deep spiritual values derived from contact with an environment managed only by nature.

## ESTABLISHED NATURAL AREAS

A questionnaire inventory by M.O.R.R.C. shows 15 established natural areas. The list is as follows:

<u>County</u>	<u>No. of Sites</u>	<u>Total Acres</u>	<u>Ownership</u>
Aitkin	2	260	Federal
Anoka	1	1,020 (partial)	University of Minn.
*Anoka	1	80	Nature Conservancy
Carver	1	74	Watertown Schools
Cass	1	1,176	Federal
Clearwater	1	2,000	State
*Houston	1	80	Nature Conservancy
Isanti	1	2,000 (partial)	University of Minn.
Itasca	1	640	Federal
Koochiching	1	22,430	State
Lake	1	640	Federal
Mahnomen	1	250	State
*Polk	1	80	Nature Conservancy
St. Louis	1	973	Federal
		<hr/> 31,703	

\*Privately owned by the Minnesota Chapter of the Nature Conservancy, Inc., Washington, D.C.

## ADMINISTRATION OF NATURAL AREAS

Administration and ownership of natural areas is in the hands of separate agencies, both public and private. (The only areas with official designation as nature preserves are those owned and administered by the Nature Conservancy.) The U.S. Forest Service has under its jurisdiction, or in cooperation with the state and other public agencies, several natural areas approved by the Society of American Foresters.

A tract dedicated for study purposes is the 250-acre Waubun Prairie Research Area. This area lies within a Conservation Department Wetland acquisition in Mahnomen County. Seventeen known sites are preserved as educa-

cational sites used chiefly by high schools. But, only one, the Watertown High School Nature Center in Carver County is actually owned by a school and dedicated to teaching purposes. There are possibly more than the 17 stated above, but no complete inventory is available. These areas are regularly used by schools. Both the Academy of Science and the Nature Conservancy have played major roles in preserving natural conditions in Minnesota.

Minnesota Academy of Science – The Academy, a semi-state organization of scientists, science teachers and interested laymen, has actively cooperated with the University of Minnesota in bringing about the establishment of the Cedar Creek Natural History Area, the first major natural area for study and research. The Academy aids the educational program of Minnesota schools through the Minnesota Junior Academy of Science, the Visiting Scientist program and others.

Nature Conservancy, Inc. – Many are unaware of this independent organization whose primary function is to acquire and preserve the natural landscape. Nature Conservancy is a national organization dedicated to saving America's heritage of wild nature. In the nation, as of 1965, 68 natural areas in 20 states had been acquired through this organization ranging in size from one to 9,750 acres. The Minnesota Chapter was formed in 1958 and is now composed of 110 members. Areas the Conservancy is primarily concerned with are the remaining small, natural areas. Sometimes areas acquired through the Nature Conservancy are donated to the federal or state governments.

The Conservancy owns three 80-acre tracts to be held in perpetuity as living museums, as representative bits of the original country-side. They are not intended for recreation except to stimulate the eye and mind to reflect interest in the beauty of the natural landscape, its plants and animals.

Caledonia Oaks Natural Area – This is a fine woodland in the hills of Houston County in the southeastern corner of Minnesota near Caledonia. In 1965, there were 30 additional acres planned for this area.

Helen Allison Savannah Natural Area – This is a savannah grassland with scattered oaks on the rolling dunes of northern Anoka County, bordering the Cedar Creek Natural History Area, 30 miles north of Minneapolis near Bethel. This rolling, sandy prairie is made up of ancient sand dunes and old burr oaks. It is one of the few remaining unplowed, ungrazed prairies.

Malmberg Prairie Natural Area – This natural, tall grass prairie is near Crookston in Polk County on the flat floor of glacial Lake Agassiz in the heart of the sugar beet farmland.

As well as having aesthetic values, these areas have a teaching function. They serve as untreated examples for comparison with adjacent landscapes that have been sprayed, drained, cultivated, logged or otherwise altered by man.

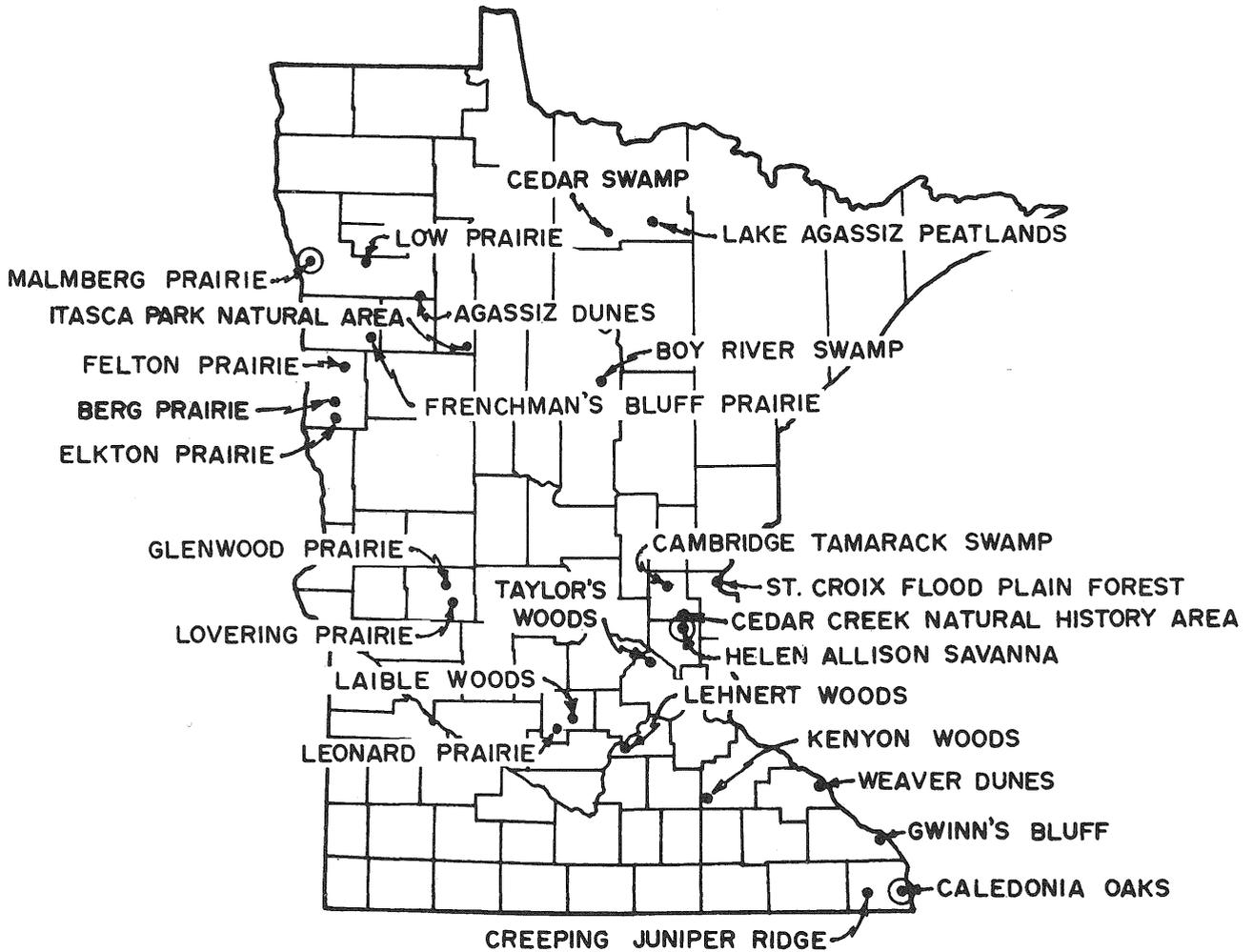
In order to attain the objective of the Nature Conservancy, the following three categories of land-use are adhered to in order to preserve their natural values:

1. Visits for aesthetic enjoyment by members and responsible groups – Members, their friends and prospective members are encouraged to visit the areas. They are asked to report to the Nature Conservancy to avoid schedule confliction and to tally attendance. Official Conservancy tours may be scheduled periodically. Public groups under approved Conservancy leadership may be given access permits.
2. Education – Accredited educational groups under approved leadership or responsible individuals may be given access permits to Nature Conservancy areas by writing to the Museum of Natural History, University of Minnesota.
3. Research – Application for conducting research must be approved by the Nature Conservancy. Research may be permitted by qualified persons who understand and agree to abide by the restrictions.

## POTENTIAL NATURAL AREAS

No adequate inventory is available of the numerous known sites which should be identified as natural areas. An inventory, August, 1964, compiled by the Academy of Science and the Nature Conservancy, shows a total of 26 potential areas; 21 on public lands, federal, state, county and five on privately owned lands.

# Natural Areas Identified by the Nature Conservancy, Inc.



⊙.....OWNED BY THE NATURE CONSERVANCY, INC.



JUNE 30, 1964

In addition to those mentioned, there are about 188 other sites recognized in M.O.R.R.C. Staff Report No. 2 that have been suggested as worthy of preservation. The list was accumulated chiefly through exploration by members of the Botany Department, University of Minnesota. Investigation is needed to determine the full extent of potential nature preserves.

Classification by size of the suggested potential sites reveals the following: (This list includes both established and potential natural areas).

44 Counties with less than 1,000 acres  
 8 Counties with 1,000 to 2,000 acres  
 7 Counties with 2,000 to 5,000 acres  
 3 Counties with 5,000 to 10,000 acres  
 5 Counties with over 10,000 acres

## water resources

### INVENTORY OF MINNESOTA'S LAKES, AUGUST, 1965

Due to the immense expanse of water within the state, it is impossible to list all the water resources in this report. The following summary of lake basins in Minnesota is part of an inventory of Minnesota lake basins carried out by the Division of Waters, Department of Conservation. This summary includes all basins of ten acres or more, including ponds and reservoirs which are located within Minnesota and along its boundaries with adjoining states and Canada. In cases where a lake occurs in more than one county, the acreage is split and a portion accredited to each county in which it lies. The totals show that there are 12,034 lake basins which contain water under normal climatological conditions and which can be classified as lakes. Many of the 3,258 basins listed as partly or completely dry do not contain sufficient water to be classified as lakes.

This compilation includes all lake basins which were meandered during the original United States Government Land Office Survey and all other basins of ten acres or more, which have banks that are discernible on aerial photographs. Lake areas were obtained by planimetry of aerial photographs, except for a few reservoir areas obtained from records of the United States Corps of Engineers.

Summary of lakes of 10 acres or more, excluding Lake Superior:

County	Number of Lakes Listed in County	Number of Lakes Partly or Completely Dry	Lake Area in County Acres	Total County Area Acres	Percentage of County Lakes of 10 Acres or More in Area
1. Aitkin	213	14	113,929	1,272,960	8.9
2. Anoka	143	57	16,168	283,520	5.7
3. Becker	662	72	94,578	914,560	10.3
4. Beltrami	346	14	345,965	1,955,200	17.7
5. Benton	15	4	2,067	260,480	0.8
6. Big Stone	195	27	25,448	334,080	7.6
7. Blue Earth	133	103	19,319	481,920	4.0
8. Brown	99	79	9,951	395,520	2.5
9. Carlton	74	11	9,142	559,360	1.6
10. Carver	128	73	20,290	239,360	8.5
11. Cass	514	36	258,217	1,523,200	17.0
12. Chippewa	79	44	9,158	374,400	2.4
13. Chisago	91	9	15,764	284,160	5.5
14. Clay	107	3	4,650	673,280	0.7
15. Clearwater	164	17	40,829	659,200	6.2
16. Cook	812	0	101,152	990,720	10.2
17. Cottonwood	60	31	9,154	412,800	2.2
18. Crow Wing	416	15	101,769	731,520	13.9
19. Dakota	83	8	10,255	376,320	2.7
20. Dodge	12	11	1,716	278,400	0.6
21. Douglas	375	59	65,519	462,720	14.2

County	Number of Lakes Listed in County	Number of Lakes Partly or Completely Dry	Lake Area in County Acres	Total County Area Acres	Percentage of County Lakes of 10 Acres or More in Area
22. Faribault	91	78	12,240	459,520	2.7
23. Fillmore	2	2	112	549,760	0.1
24. Freeborn	49	27	20,852	549,520	4.5
25. Goodhue	23	2	16,375	493,440	3.3
26. Grant	307	89	24,582	367,360	6.7
27. Hennepin	200	39	36,814	389,760	9.4
28. Houston	15	1	12,545	364,800	3.4
29. Hubbard	313	18	48,318	637,440	7.6
30. Isanti	145	38	12,164	288,640	4.2
31. Itasca	945	19	183,768	1,856,000	8.8
32. Jackson	84	50	17,042	458,880	3.7
33. Kanabec	41	8	4,837	339,200	1.4
34. Kandiyohi	361	167	61,637	551,680	11.2
35. Kittson	5	0	829	719,360	0.1
36. Koochiching	24	1	32,003	2,030,720	1.6
37. Lac qui Parle	229	175	16,770	496,000	3.4
38. Lake	817	0	118,038	1,472,640	8.0
39. Lake of the Woods	5	0	407,647	1,147,520	35.5
40. LeSueur	128	75	22,172	298,880	7.4
41. Lincoln	110	76	14,958	346,240	4.3
42. Lyon	99	53	9,261	458,240	2.0
43. McLeod	117	80	17,092	321,920	5.3
44. Mahnommen	264	17	19,110	375,680	5.1
45. Marshall	7	1	32,015	1,152,000	2.8
46. Martin	149	62	19,218	465,280	4.1
47. Meeker	208	91	34,633	409,600	8.5
48. Mille Lacs	19	2	73,609	432,000	17.0
49. Morrison	140	9	15,204	740,480	2.0
50. Mower	4	0	143	449,920	0.1
51. Murray	100	62	17,634	461,400	3.8
52. Nicollet	51	32	17,014	293,760	5.8
53. Nobles	44	36	7,222	460,160	1.6
54. Norman	18	2	415	566,400	0.1
55. Olmsted	5	0	776	419,840	0.2
56. Otter Tail	1,048	87	173,851	1,416,320	12.3
57. Pennington	1	0	35	398,080	0.1
58. Pine	142	3	11,596	913,280	1.3
59. Pipestone	1	0	80	296,960	0.1
60. Polk	332	15	18,242	1,297,920	1.4
61. Pope	216	16	34,731	459,520	7.6
62. Ramsey	83	21	10,871	109,440	9.9
63. Red Lake	2	0	68	276,480	0.1
64. Redwood	133	120	7,206	559,360	1.3
65. Renville	144	118	10,592	628,480	1.7
66. Rice	65	34	13,448	327,040	4.1
67. Rock	2	0	29	310,400	0.1
68. Roseau	3	2	6,924	1,073,280	0.1
69. St. Louis	939	7	337,632	4,295,040	7.9
70. Scott	144	92	15,407	232,960	6.6
71. Sherburne	168	34	11,443	286,080	4.0
72. Sibley	101	68	16,062	377,600	4.2
73. Stearns	294	62	34,345	292,160	3.9
74. Steele	37	32	5,488	273,280	0.2
75. Stevens	313	152	19,394	366,720	5.3
76. Swift	169	84	12,393	478,720	2.6
77. Todd	215	29	27,901	627,200	4.4
78. Traverse	68	2	9,991	371,840	0.3
79. Wabasha	6	1	15,377	342,400	4.4

County	Number of Lakes Listed in County	Number of Lakes Partly or Completely Dry	Lake Area in County Acres	Total County Area Acres	Percentage of County Lakes of 10 Acres or More in Area
80. Wadena	39	28	3,802	346,240	1.1
81. Waseca	95	76	11,743	272,000	4.3
82. Washington	168	6	20,605	268,160	7.7
83. Watonwan	61	23	5,166	279,680	0.2
84. Wilkin	25	4	675	481,280	0.1
85. Winona	13	1	9,878	404,480	0.2
86. Wright	298	66	44,384	458,240	9.8
87. Yellow Medicine	126	75	7,274	485,120	0.1
Total	15,291	3,257	3,499,172	53,803,520	

#### INVENTORY OF EXISTING DAMS

A recent publication of the Department of Conservation, Division of Waters, Bulletin 1, "Power Development of Minnesota," lists 564 sites at which power dams have at one time or another existed. Power from these dams was used to operate sawmills, flour or grist mills, or to produce electric power. Many have been completely destroyed or are now in ruins. There are probably about 100 still in existence and of these many are no longer used for their original purpose. Some have been taken over and maintained by cities, villages and counties. The trend today is toward further abandonment of hydroelectric power plants.

The Division of Waters also has an inventory of 236 abandoned logging dams. Some of these may possess actual or potential recreational value.

#### MISSISSIPPI RIVER RESERVOIRS

About 1,100 air miles north of the Gulf of Mexico a small stream flows out of the upper end of Lake Itasca in north central Minnesota and twists and turns 2,350 miles to a rendezvous with the Gulf of Mexico. From the Iowa border to its source at Itasca State Park, the Mississippi River flows through 692.4 miles of Minnesota.

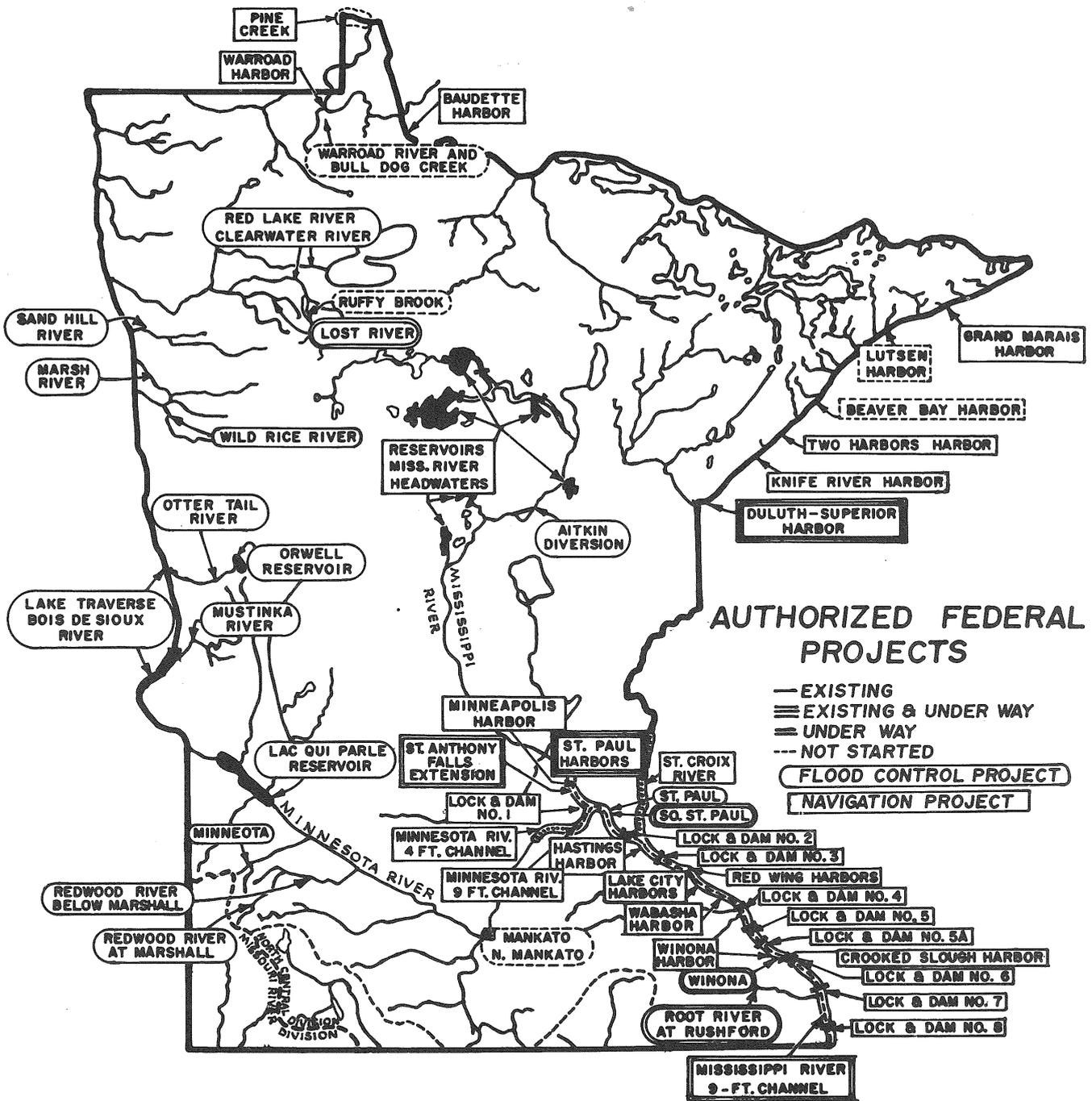
After years of surveying and analyzing the headwaters of the Mississippi River watershed, the U.S. Corps of Engineers designed, constructed and put into operation six dams on the Mississippi River headwaters. These were put into operation to retard the Mississippi during periods of heavy flow and to release its waters when needed during times of low flow. The first dam was put into operation in 1884, the last in 1912. While there have been modifications and improvements of the original system, the dams and reservoirs remain today much as they were when constructed 80 years ago.

Each of the six Mississippi River Headwaters Reservoirs is an individual part of a unified system. When first constructed, their operation was centered around navigation and the needs of Minneapolis and St. Paul. In the mid 20th Century, attention was focused upon the headwaters region itself where control of the river has become a vital prerequisite for flood protection, recreation and industry in the watershed area. The Corps works closely with other federal and state governmental agencies in programs of fish and wildlife conservation.

In 1962, an estimated 2,849,000 guests visited the reservoirs on the Mississippi headwaters. Engineers have installed boat launching ramps and sanitary facilities at Leech and Sandy Lakes. More are planned for the future.

The Headwaters Watershed serves many purposes; navigation, flood control, power for industry, recreation, wild rice growing, water supply, fish and wildlife conservation and pollution abatement. Therefore, management of the system must remain as flexible and responsive as possible to meet the needs of all concerned.

An Upper Mississippi River Reservoir study is near completion.



## WILD RIVER PROPOSAL

A large portion of an ancient "highway" skirting the doorsteps of St. Paul and Minneapolis may become one of the state's major playgrounds within a few years.

About 112 miles of the St. Croix and Namekagon rivers in Minnesota and Wisconsin above Taylors Falls are being studied for possible inclusion in the federal government's proposed wild river recreational program, sponsored by the Bureau of Outdoor Recreation, Department of the Interior.

The idea behind the wild river project is to find river areas throughout the country which could be kept in a primitive state. The Wild River Proposal is now being considered by Congress (August, 1965). Present thinking is that federal-state cooperation in gaining control of the entire length of the wild river area through purchase and easements will be the most likely approach. The St. Croix-Namekagon rivers have been proposed as a scenic waterway in a bill introduced by Senators Mondale (Minnesota) and Nelson (Wisconsin).

It is the only one being considered by the present Congress from a seven-state region - Minnesota, Iowa, Missouri, Illinois, Indiana, Michigan and Ohio.

Qualifications are that the rivers are natural or undeveloped and that they possess some recreational value. The St. Croix-Namekagon proposal has these things in its favor: (1) It is relatively undeveloped. The majority of land north of Taylor Falls on both sides is either owned by Northern States Power Company (approximately 65 percent) or is state and county controlled. (2) The St. Croix is free-flowing from a few miles west of Gordon, Wisconsin, to Taylors Falls, Minnesota. (3) It is near a major metropolitan area. (4) It abounds in game fish, wildlife and has a wide variety of plant life. (5) It possesses historical importance.

Other primary considerations which speak well for the area are that the water is clean and unpolluted; it is suitable for both canoeists or hikers.

The St. Croix River joins the Mississippi at Point Douglas, Minnesota, and travels 165 miles from its source in Upper Lake St. Croix at Solon Springs, Wisconsin. It drains a watershed of 7,650 square miles. Forty-six percent or 3,507 square miles of the watershed lies in Minnesota.

The lower reaches of the river contain relatively slow flowing, placid waters, jutting sandbars, many channels, backwaters and tree-lined sloughs. Upstream, the character of the river gradually changes and narrow valleys, turbulent water and boulder-strewn rapids are encountered. Farms interspersed with second growth forests mixed with conifers and hardwoods have permitted the development of good game population. Hunting pressure is heavy.

Today, one of the primary usages of the river is recreation, mainly fishing, boating and canoeing.

## PROGRAMS FOR PROTECTION AND IMPROVEMENT OF WATER RESOURCES

Projects Affecting Public Waters - Lakes and streams are continually subject to physical changes due not only to the forces of nature (floods, erosion, siltation), but to the works of man. Continual effort is required to reduce or eliminate the damage resulting from natural forces and to control and regulate improvement.

Development of lakeshore property for homes and recreational use brings an increased demand for shoreline protection, dredging and fill, construction of docks, boat houses and beaches. Outlet for ditches and tile lines from agricultural land drainage projects often calls for lowering lake levels at least to prevent high stages. Water is taken from lakes and streams for cooling, washing and other industrial purposes.

Activities such as shoreline development, drainage and appropriation of water may be either beneficial or detrimental to the lake or stream. Under Minnesota law, any alterations to the beds of public waters, lake outlets or the appropriation of surface water or ground water for other than domestic use can only be done by permit, issued by the Commissioner of Conservation. Opportunity is thus provided for careful review of any proposed project for possible adverse effects on recreational or other public uses.

Protection Against Sedimentation – The recreational potential of many of our lakes and streams has been reduced, or in some cases eliminated by the deposition of sediment on the beds.

Soil conservation practices, applied on the farm, are effective in reducing the amount of silt washed into streams. Careful design of drainage systems, with special attention to preventing high velocities which will scour the ditch banks, is also helpful. The banks of streams flowing through erodible soils can be protected from severe erosion by the construction of revetments, wing dams and other structures. Protection of our lakes and streams from further deterioration requires increased attention to all of these matters.

Protection Against Pollution – The sources of harmful substances which enter our streams and lakes and make them less desirable for other uses are certain to grow with increasing population and industry. The use of streams for the dilution, transportation and ultimate disposal of wastes appears, for the present, to be inevitable. No other method of disposing of large volumes of liquid wastes has yet been found.

Minnesota's pollution problem is not serious in comparison with the more populous and highly industrialized areas of some other states. But we have problems which are not found to the same degree in other states. A large number of food processing plants discharge obnoxious organic wastes. Pulp and paper mills discharge both chemical and fiber wastes. The mining of taconite produces large volumes of inorganic sediment.

Minnesota's laws have recently been improved to provide the state, through the Water Pollution Control Commission, with more authority to enforce the prevention of pollution. Constant vigilance will be required to prevent our streams and lakes from becoming unfit for recreational and other beneficial purposes.

Lake Levels – The complaint most often received concerning the condition of lakes has to do with extremely high or extremely low water levels. Although water levels fluctuate constantly, recreational interests are generally best served when such fluctuations occur within a narrow range. This happens when there is a reasonable balance between water supply consisting of precipitation on the lake, inflow from the watershed and inflow from ground water, and water losses consisting of surface outflow, evaporation, transportation and seepage into the ground. When this balance is upset through changes in the environment, unsatisfactory water levels may result.

In some cases corrective measures can be taken to restore this balance, but not without careful study and thorough understanding of all the environmental factors affecting the lake. Some of the means for accomplishing this purpose follow:

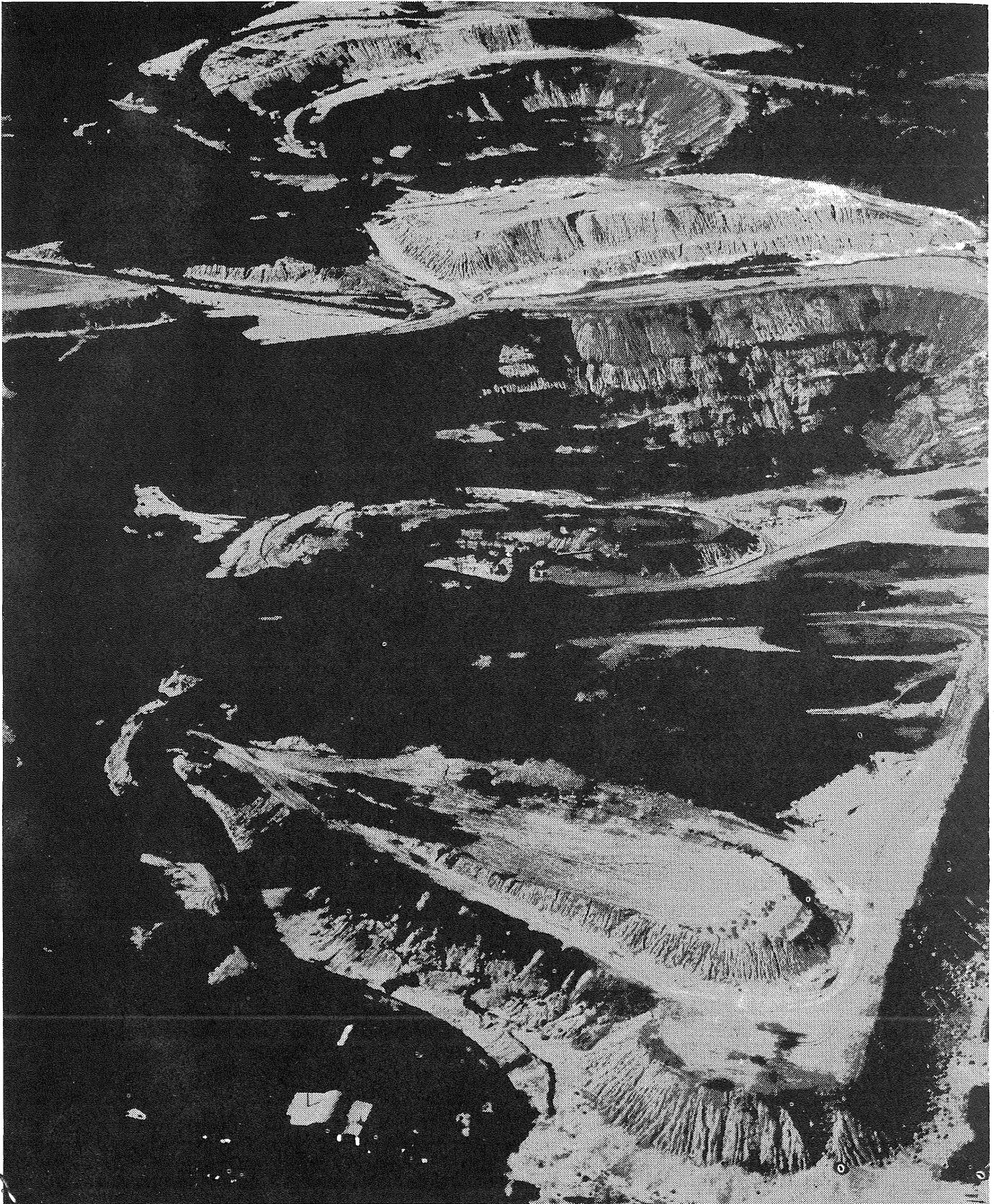
1. Improvement of lake outlets – increasing outflow capacity by channel improvement or installation of larger culverts and bridges is carried out in many cases.
2. Reduction of other water losses – seepage losses may be reduced by sealing the lake bottom; some experimental work has been done in the use of chemicals to reduce evaporation losses.
3. Increased water supply – in some cases this may be made available to a lake by diversion of water from other lakes or streams.

## DREDGING LAKES

The gradual filling of lakes and reservoirs by the deposition of sediment is a natural process which affects all lakes. Where this process has been accelerated because of changing land use, it has become a serious problem. Additional sediment is washed in from land disturbed by cultivation or the works of man. Increased fertility of water, derived from waste disposal, increases vegetal growth. As the lake becomes shallow the growth of emergent vegetation is further increased. Many lakes have thus been damaged or destroyed for most recreational use, and their scenic value impaired.

The Department of Conservation receives many requests for dredging lakes or for financial assistance in dredging, but has neither funds nor statutory authority to engage in such activities. The high cost of dredging, because of the very large volume of material which must be removed in order to produce beneficial effects, has usually discouraged cities and counties from engaging in this work. Disposal of the dredged material is also a problem. Where reclamation of low lying land by filling is possible, a portion of the cost of dredging can be borne by the land owners. Because of the large investment in equipment required, the unit cost can be reduced where a number of lakes are to be dredged so the dredges can be used over a period of years.





The Mesabi Iron Range, according to Chippewa legends is named after Missabe, a giant of immense size that was entombed in the hills, the various hills representing different members of his body.

# land

One-fourth or more than 12.5 million of Minnesota's 51.2 million acres are publicly owned. Of the public ownership, 26 percent is federal, 43 percent is state and 31 percent is administered by county and local governments. The following is a listing of governmental agencies and the acreage administered by them as of June 30, 1964.

## Public Land Ownership – June 30, 1964

	<u>Total Acres</u>
Federal	
Bureau of Indian Affairs	28,698
Bureau of Land Management	40,698
Corps of Army Engineers	247,539
U.S. Forest Service	2,770,352
Park Service	598
Fish and Wildlife Service	212,543
Other Federal	6,273
Sub Total	3,322,747
State	
Division of Forestry	2,919,272
Division of Game and Fish	351,693
Division of Lands and Minerals	1,675,487
Division of State Parks	116,991
Other State	287,080
Sub Total	5,350,523
County Administered	
Tax Forfeited	2,755,997
County and School Forest	1,068,451
Municipal	54,783
Sub Total	3,879,231
 Total	 <u>12,539,455</u>

Source: Minnesota Land Ownership, M.O.R.R.C. Staff Report 3, 1965, and federal, state, county and municipal agencies (Indian Tribal ((Trust)) Land is not included.)

Seventeen counties in the northern part of the state contain 87 percent of the total land controlled by governmental agencies. In comparison, the southern and western parts of the state which are largely devoted to agriculture, have a minimal of public land ownership.

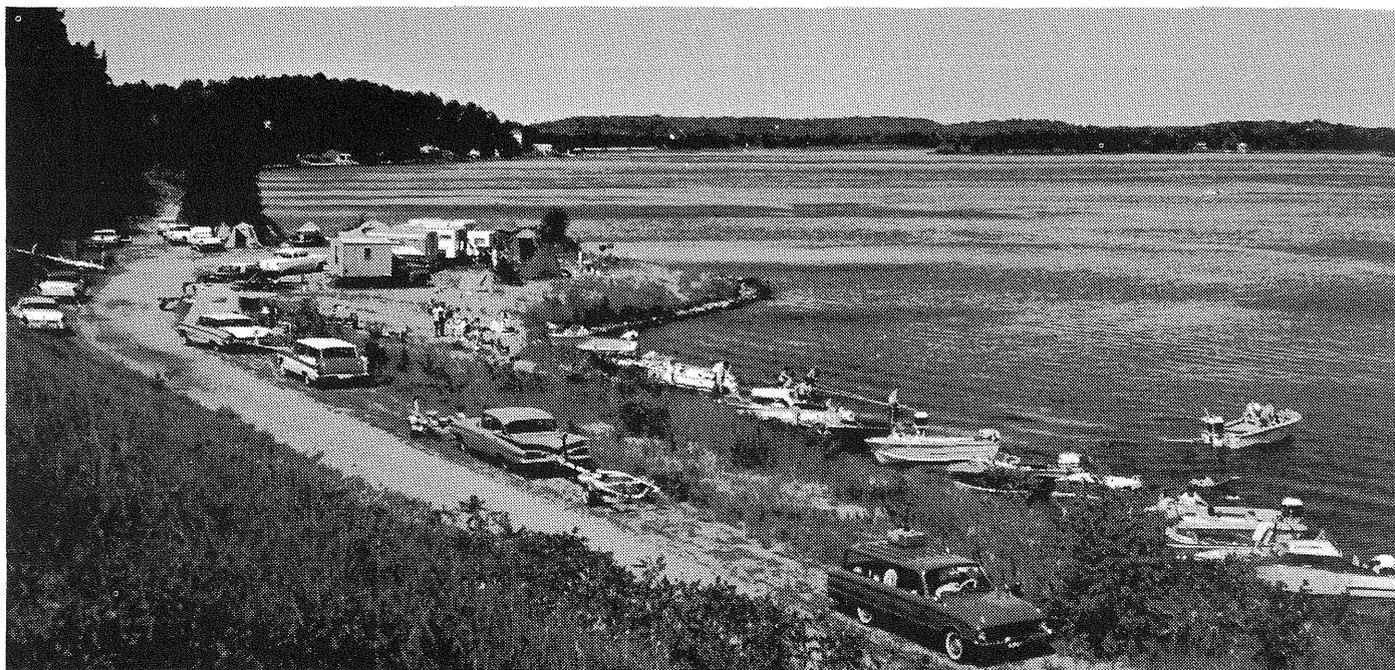
There are over 12½ million acres of publicly owned land in the state. It is of high priority in planning to utilize land now in government ownership to fullest extent possible in providing recreational sites now in need or to meet the future demand. Deviation from this course will be necessary in some sections of the state in order to obtain proper distribution of recreational opportunities in relation to population concentrations.

The land area now in recreational use, the state of developments, and capacity of facilities has been partially determined. The inventory of potential recreation sites has been completed for some of the public ownerships. Only after completion of the demand studies and inventory of existing and potential sites can deficits in area and developments be assessed.



**NEEDS**  
**SECTION**

# NEEDS



The popularity of activities in, on and around the water is mounting rapidly.

Henry Wadsworth Longfellow's famous poem, "Song of Hiawatha" tells of Minnesota's roaring waterfalls that "flashed and gleamed" and of rivers that rushed through "palisades of pine trees." The scenic beauty, sparkling lakes, deep pine woods and abundance of game and fish make this state a vacation wonderland. Campers, hikers and other outdoorsmen can wander through thousands of square miles of wilderness in the rugged northern and northeastern sections -- the opportunities for outdoor enjoyment in Minnesota are innumerable.

Looking at Minnesota in light of what it has to offer, one might ask, what could Minnesota possibly need? If people take advantage of the facilities provided by various groups and agencies, why is there a need for additional areas or even a need for recreational planning?

It is true that Minnesota is full of recreational utopias, but many need to be made more readily accessible and usable. Planned recreation is needed to encourage and direct the best use of our resources. And, of utmost importance, it is needed to make certain we preserve our outstanding areas and natural resources not only for ourselves, but for those to follow as well.

Although it may seem Minnesota is already well provided with protected natural areas and recreational facilities, the fact is that the total number in many cases is inadequate. The chances of adding more decrease as cities expand and as farms, roads and industry use more land. Minnesota has plenty of land. The problem is to make the best use of it so that all the varied needs are adequately met. Minnesota needs and should have under protection, examples of all types of natural habitats as well as opportunities for a wide variety of activities.

What is the overall situation in Minnesota's need for land and water? At present, there are nearly three and a half million people in the state. And the Bureau of Census predicts that, if the present rate of growth continues, there will be over four million by 1975. If the trend continues, the majority will be living in and around the metropolitan areas.

The immediate, urgent recreation needs are to develop existing public areas and to set aside additional land and water for recreation purposes in and around the metropolitan areas, along the federal and state highway systems and in more remote sections of the state. In all cases this involves the preservation of wilderness, natural features and scenery, and the preservation of significant historic sites and buildings.

A wide variety of public recreation areas are needed ranging from wilderness, usually in the remote northern and northeastern regions, to highly developed recreation areas near the densely populated metropolitan area. There is a need to provide all segments of our present and future population with adequate outdoor recreation areas near enough to their homes for frequent day and weekend use, as well as more remote areas for vacation use.

In order to provide suitable recreation for everyone in every season, we cannot overlook groups with special requirements, such as our senior citizens, the handicapped and the underprivileged. Take our senior citizens for example, the estimated population in Minnesota in 1961 of people 65 and older was 358,816 or nine percent of the total. By 1970, there will be 443,669 senior citizens in this age bracket -- an increase of 23.6 percent. We need recreational facilities geared to the requirements of this group -- special tours, or special periods in parks set aside for their use perhaps in autumn or early spring are considerations. We also need recreational facilities geared to the requirements of the handicapped and provisions for the underprivileged.

Areas must be recognized not only for their recreational potential, but also for their natural value and guarded as such. Their future potential requires that we act now to save what we have. Outdoor resources must be conserved outside designated recreation areas through measures of pollution control, zoning, land management and restricted drainage measures to protect our marshes or wetlands. These marshes are not only important for waterfowl perpetuation but also to the hunter, naturalist and others along the entire Mississippi Flyway.

Much about natural communities is of great value to us, but there is much about them we do not understand. As Aldo Leopold said in his book, Round River, "To keep every cog and wheel is the first precaution of intelligent tinkering." Otherwise, "We may endanger our future welfare by destroying what we think at times to be unnecessary."

In summary, one of the greatest needs now is to encourage the best use of our land for the highest social and economic advantage of its residents. Recreation is one of the finest and most appropriate uses to which land can be placed. Conservation of Minnesota's widely varying resources and preservation of the remaining scenic, historic and scientific attractions is both necessary and essential. To accomplish this, we must plan now before the opportunity is lost.

## URBAN NEEDS

(The following three paragraphs were quoted from "Metropolitan Parks -- An Initial Investigation, Metropolitan Planning Commission, 1961.")

Metropolitan park efforts should be accelerated. A comprehensive park program should strive to balance efforts and facilities at the local, metropolitan and state level. Local parks provide convenient recreational facilities on small sites; state parks are developed on large sites of outstanding scenic, recreational, or historic value. Metropolitan parks bridge the gap. Since metropolitan parks had no sponsor until recently, they require added effort to raise them to the level of state and municipal facilities. County or state development appears to hold the most promise at this time.

A major program of land acquisition and reservation is urgently needed. Properties which are desperately needed to satisfy current recreation demands or which are in immediate danger of being lost to other urban uses should be acquired to the extent funds permit. Through recreation procedures other potential sites should be stabilized until funds are available for acquisition.

An aroused citizenry -- the missing ingredient. A measure of current metropolitan park needs exists; legal tools are available; and a variety of organizational approaches may be applied. While present knowledge is not as precise as it should be to identify all sites required by 1980, it is more than adequate to launch the first stage of an effective program of park development. The MPC is working on a comprehensive plan for the Area which will include an explicit statement of park needs. In addition, the MPC is working with interested governmental and civic groups who desire to pursue this program further.

# need by activity

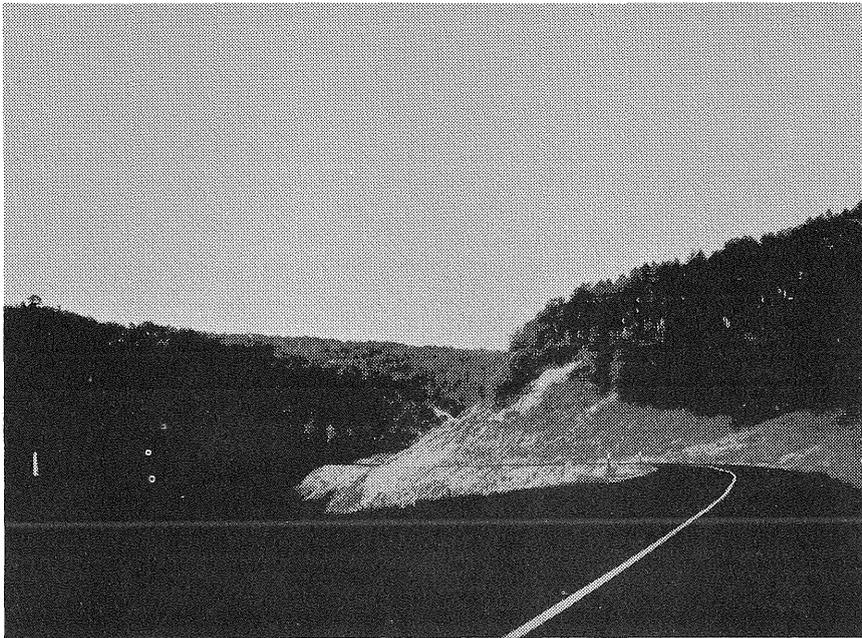
## PLEASURE DRIVING AND SIGHTSEEING

FURTHER STEPS ARE NEEDED TO COPE WITH THE RISING NUMBER OF PERSONS ENGAGED IN THE NATION'S NUMBER ONE ACTIVITY -- DRIVING FOR PLEASURE SIGHTSEEING. THE STATE DEPARTMENT OF HIGHWAYS IN COOPERATION WITH OTHER FEDERAL, STATE AND LOCAL AGENCIES HAS DETERMINED THAT A MINIMUM OF 1,722 MILES OF SCENIC ROADS AND PARKWAYS IS NEEDED.

ZONING CONTROL IS NEEDED TO PROTECT THE SCENIC REACHES AND TO PROVIDE BLENDING OF CONSTRUCTION AND LANDSCAPE. Taking the North Shore Drive as an example, industrial, commercial and residential developments have consumed over one-third of the shoreline.

TO PROTECT AND SUPPLY EXISTING FEATURES, EXPANSION OF EXISTING PUBLIC AREAS ALONG SCENIC ROUTES IS NEEDED. Again, using the North Shore as an example, many of the prime scenic and scientific features in back of the shoreline are protected by state ownership, but additional shore frontage would enhance the overall enjoyment. Expansion of public holdings around scenic features is needed to provide buffers against conflicting uses and to furnish space for developing additional camping and picnicking areas, trails, scenic overlooks and other areas. The need exists for a uniform system of marking and a public information program including welcome stations and information centers.

Decisions on routes depend upon further studies at both the state and federal levels. Highways as travelways for the outdoor recreation seeker must be considered at the federal, state and local levels. Now and in the future with more and more people out for a drive, it becomes apparent that highways need to be constructed both for speed and scenic value.



Steps are needed to preserve the beauty of Minnesota's scenic drives.

## PICNICKING

THE SEVEN COUNTY METROPOLITAN AREA AND OTHER SELECTED AREAS WHERE THE DEMAND-SUPPLY RATIO APPEARS SHORT (SEE SUPPLY SECTION) ARE THE AREAS WITH THE GREATEST NEED FOR PICNICKING FACILITIES.

Picnicking pressures during the week vary from area to area. In some areas, picnicking pressure is fairly even throughout the week such as in the northern part of the state. Elsewhere, notably the metropolitan areas, weekend demand is very high and weekday demand comparatively low. A forest region far from large cities can meet the demand for a large number of picnicking visits with comparatively little developed picnicking acreage. But an area in or near a large city needs a relatively large supply of developed picnicking acreage to meet the weekend onslaught.

Acreage needed within each part of the state should be based on the "average peak use" (the median between average weekend use and peak day use). According to statistics prepared by Wisconsin, about 50 picnickers use an acre of picnic grounds per average weekday. To calculate the capacity of the average picnicking acre, the U.S. Forest Service has used a figure of 15 people per acre and a usual turnover rate of 1.6 parties per table per day to figure the average daily capacity for visits. More precise data will be included in the forthcoming report.

CAMPING

CAMPGROUNDS ARE NEEDED WITHIN A ONE TO TWO-HOUR DRIVING RANGE OF METROPOLITAN AREAS IN THE STATE. A SYSTEM OF OVERNIGHT CAMPING AREAS IS NEEDED ALONG MAJOR TRAVEL ROUTES. IT ALSO APPEARS THERE MAY BE NEED FOR ADDITIONAL LONG-TERM CAMPGROUNDS IN SELECTED AREAS OF THE STATE. THESE VARIOUS CAMPGROUNDS MUST BE COORDINATED WITH PRIVATE ENTERPRISE.

Modern camping facilities are supplied by state, county, municipal and private agencies and primitive camping facilities (semi-developed) provided at state parks and forests. This system gives a variety of camping opportunities. There is a need for continuation of this arrangement.

In a recent inventory completed by the Department of Conservation, it was determined that the federal government has facilities for 1,119 camping units (a unit being an individual campsite); the state government has facilities for 2,447 camping units; the counties have facilities for 251 camping units; and cities for an estimated 1,200 camping units, based on a 25 percent questionnaire return. Private campgrounds licensed by the Board of Health have facilities for 2,149 camping units. Altogether, there is a total of 7,166 individual campsites in Minnesota.

The percentage of the total is as follows:

Federal	15.5 percent
State	34 percent
County	3.5 percent
City	17 percent
Private	30 percent

As stated in the Demand Chapter, in 1961, registered camper days in state parks amounted to 342,000, an increase of 534 percent since 1944; August, 1954 to July, 1964, state park camper days increased 550 percent.

As in picnicking, the weekend demand in some areas is much greater in many cases than the supply can accommodate. In remote northern vacation areas, campsites receive relatively steady use throughout the week. In areas close to urban centers, weekend use is high compared with weekday use. In 1953, Whitewater State Park, 20 miles east of Rochester, had approximately 1,200 campers. Eight years later, 1962, the number of registered campers had increased nearly 20 times. Private enterprise must be encouraged and potential areas of public development explored especially around the metropolitan areas to meet the increasing demand.

In order to keep visitors for periods of time there should be plenty of things for them to do. Boat and canoe rental facilities, launching ramps and docks, swimming areas, hiking trails, children's playgrounds and space for games as well as provisions for quiet enjoyment of the outdoors are considerations in family campgrounds. Historic sites, scenic points of interest and other outstanding features of the nearby area need to be promoted for successful family campgrounds. An example of such a development is Fisherman's Point Campground, Hoyt Lakes, Minnesota. This area is being developed by a small Minnesota community and is designed as a family recreation center.

This type of development needs to be incorporated into the plans of private land-owners and public agencies to meet the economic potential of the growing vacation-travel industry.

## NATURE STUDY



THIS PLAN RECOGNIZES THE NEED FOR A COORDINATED EFFORT AMONG RECREATIONAL, EDUCATIONAL AND SCIENTIFIC INTERESTS TO PRESERVE NATURAL AREAS FOR STUDY AND ENJOYMENT. THE NEED IS ALSO RECOGNIZED FOR ADDITIONAL NATURE INTERPRETATION PROGRAMS.

There are increasing numbers who appreciate contact with nature and who enjoy and appreciate the landscape as it was at the time of our forefathers. An example of expanding public interest in learning about our natural environment is the widespread acceptance of the nature interpretation service in state parks. Since its beginning in 1947, this service has grown from one naturalist and one self-guiding trail serving 8,650 park visitors, to five naturalists and 16 self-guiding trails serving 554,589 visitors in 1964. Park officials recognize the need for additional interpretative programs, trails, hikes, evening programs, car caravans, and campfire talks and additional self-guiding trails and museums.

## NATURAL AREAS

The landscape of Minnesota is becoming greatly altered by modern man. Unless special plans are developed to preserve some portions in essentially undisturbed condition, natural values will be destroyed before there is time to appraise them. The present distribution and protection of natural areas should be expanded to meet the scientific and recreational needs.

Major concern thus far has been for larger areas which merit preservation due to their outstanding recreational and natural values. Many small areas just as desirable from a natural standpoint have fallen by the wayside. Many of the smaller areas provide homes for living things that would otherwise be destroyed in the shuffle of civilization. Some of these invaluable relics of our natural terrain should be preserved now. The Academy of Science recommends at least one representative of each habitat type in each county.

A few areas which warrant consideration in the selection of natural areas include the following:

Wild Rice Areas – Wild rice harvesting is not only an important industry in northern Minnesota, but for many people the harvesting is becoming a special type of recreation. In addition, these stands are valuable as waterfowl habitat. We should create wild rice stands and improve existing stands where possible.

Wild Fruits – Many people enjoy picking wild berries, especially blueberries, raspberries, and blackberries. There are many off-site forest areas that could be managed for such wild fruits without a great deal of trouble or expense. The province of Newfoundland has a program whereby certain areas are burned for blueberries and it has resulted in a considerable crop which is excellent.

Wild Flower Seeding Areas – In some states such as California, wild flowers provide considerable public recreation and enjoyment. In South Africa the government has set up wild flower reserves and nurseries. The development of wild flower seeding areas would be of value in Minnesota. We have need for such on the Anoka sand plain on which the wild flowers are rapidly disappearing and in certain bogs and marshes, especially those which contain Minnesota's state flower, the pink and white lady's slippers and other plants that the public seldom sees. Such an area could be set up on a remnant of prairie land in southwestern Minnesota and another in hardwood forest areas. This type of area would require extensive management protection in order to preserve its natural character.

Small River Valleys – Valleys and strips of adjacent uplands should be acquired along certain especially scenic streams. The North Branch Creek and the lower portion of South Branch Creek in Fillmore County are prime examples. These are beautiful small valleys in rocky country and have fine small trout streams originating in caves. There are also fine streams, adjacent lowlands and a series of ponds in the Edina area -- the Izaak Walton bass pond series -- which are in danger of being lost because of urban development. This area is much used by schools.

Banks of Larger Rivers – Wherever possible, the banks of larger rivers should be controlled by acquisition, easement or zoning, especially in agricultural country and developed into wooded areas. These have scenic value and in addition are of value as game habitat and in preventing soil erosion.

#### BICYCLING, HIKING AND HORSEBACK RIDING TRAILS

THE DEMAND FOR THE EXPANSION OF EXISTING TRAILS AND THE ESTABLISHMENT OF NEW TRAILS BECOMES INCREASINGLY NECESSARY. TRAILS IN PARTICULAR SHOULD BE IDENTIFIED IN AND AROUND URBAN AREAS. THERE IS A NEED FOR LONG DISTANCE HIKING OPPORTUNITIES.

The extent to which trails are threatened parallels the threat on general park and other recreation areas-- that of vanishing open space. Therefore, A SYSTEM OF BICYCLING, HIKING, AND HORSEBACK RIDING TRAILS MUST BE PLANNED NOW, BEFORE THE OPPORTUNITY IS LOST.

#### SNOW SKIING AND OTHER WINTER SPORTS

With so much invested in public and private recreation areas, there is a great need for publicity to keep these areas going all year, particularly with the relatively short summer season. The opportunities for winter activity are relatively unexplored and unpublicized. FOR THE STATE TO ASSUME ITS "TOTAL" RECREATION ROLE, IT IS NECESSARY TO DEVELOP ITS POTENTIAL AS THE WINTER-FUN CAPITAL OF THE MIDWEST.

The pressure of the population from the Twin Cities and the popularity of the sport of skiing has resulted in many new ski centers. Some of these are on small hills which often have insufficient snowfall. But their proximity to the metropolitan center and the increasing use of snow-making equipment will probably overcome the handicaps experienced by these establishments. These new ski centers are helping to meet the demand for skiing facilities. PRESENTLY, THE NEEDS OF THE SKIERS CAN BEST BE SUPPLIED BY PRIVATE ENTERPRISE OR BY MUNICIPAL OR COUNTY AGENCIES.

According to the Central United States Ski Association, the Upper Midwest is the fastest growing ski area in the United States. The sale of tow tickets in Minnesota has increased from 17,680 in the 1959-1960 season to 67,222 in the 1963-1964 season. In some sections, weekend travel to ski areas has a pronounced effect on highway travel loads and other facilities associated with skiing. There is great potential at ski resorts and day-use chalets to consider facilities geared to other winter sports for family winter vacations or for family day-use. Special hills for tobogganing, ice skating, sightseeing, sleigh and hay rides are also considerations. (Michigan has several ski resorts providing "toboggan only" hills in addition to their regular ski slopes.)

The Ski Touring Council of New York is urging ski resorts to explore the possibilities of touring trails and to promote their use. While the lift-served trails and slopes will undoubtedly continue to attract the large majority of skiers, there will always be those who enjoy the beauty of the woods and countryside in the winter.

## HUNTING

The sport of hunting depends upon many factors -- social, economic and psychological. Of equal importance, the resource -- wildlife -- must be present in sufficient quantities to justify successful hunting expectations. In other words, "hunnable surpluses" must exist. To have huntable surpluses there must be wildlife habitat.

Upon arrival of white man, Minnesota was inhabited by animals adapted to the habitat modified by wild fire and only slightly by the Indians. With human population increases and the associated development, many changes have occurred -- some beneficial, many detrimental. In any case, man quickly became the major force affecting animal populations. Game management, or the art and science of producing sustained annual crops of wild animals, has become a necessity.

The present approach requires more specific knowledge of game animals and their habitat on which to base better management. Knowledge must be gained through experience and painstaking research in the field and laboratory. **THERE IS AN INCREASING NEED FOR EXPANDED RESEARCH INTO GAME POPULATIONS AND DEVELOPMENT OF IMPROVED CENSUS TECHNIQUES.**

Today, planned development of the habitat so that game animals are favored is one of the principal objectives of game management. **SUCH HABITAT MANAGEMENT MUST FIT INTO A PATTERN OF MULTIPLE LAND USE IN WHICH AGRICULTURAL, FORESTRY AND RECREATIONAL VALUES ARE ALL CONSIDERED.**

As our human population has increased and can be expected to continue to increase along with such associated human developments as homes, schools, highways, airports, and intensified farming, the amount of available habitat for certain species will continue to decrease and will result in a reduction of animal numbers. Certain species of wildlife, particularly waterfowl, have been exhibiting declines due to loss of potential habitat. Reduced bag limits and crowded hunting areas have served to reduce the number of hunters who engage in this recreational activity. **PRESERVATION OF WETLAND HABITAT IS NEEDED TO PRESERVE WILDLIFE AND THE RECREATIONAL ACTIVITIES -- HUNTING, WILDLIFE PHOTOGRAPHY, NATURE STUDY, ETC. -- THAT IT PROVIDES. SUPPORT AT ALL GOVERNMENT LEVELS IS NEEDED.**

Because of its many values, game and the habitat in which it lives must be managed. Game must be provided a place and yet still be kept in its proper place. **SINCE MUCH OF MINNESOTA'S GAME IS RAISED ON PRIVATE LANDS, AN EXPANDED PROGRAM OF ASSISTANCE TO LANDOWNERS IS NEEDED IF GAME POPULATIONS AND THE RECREATION THEY PROVIDE IS TO BE PRESERVED.**

Wild game on both public and private lands and waters is the property of the state in its sovereign capacity and belongs to the people of the state. Because of this public ownership, the Department of Conservation is charged with the management of game and with planning for the perpetuation and wise use of wildlife resources. **EXTENSIVE GAME MANAGEMENT, THE GOAL OF THE DEPARTMENT'S EFFORTS, RECOGNIZES THAT GAME IS USUALLY A SECONDARY CROP ON LANDS WHICH HAVE OTHER PRIMARY USES -- SUCH AS FARMING OR FORESTRY -- AND THAT GAME MUST FIT INTO THE PREVAILING LAND-USE PATTERNS. DELINEATION OF EXISTING GAME AREAS SHOULD BE A PART OF ALL LAND-USE PLANNING.**

Intensive game management can be practiced by the Department on pieces of land that have been acquired primarily for game and even here the intensity of management cannot reach that of private shooting preserves due to monetary considerations. **ACQUISITION, DEVELOPMENT AND INTENSIVE MANAGEMENT OF CERTAIN WILDLIFE HABITAT IS NECESSARY IF A HARVESTABLE SURPLUS OF ANIMALS IS TO EXIST AND IN CERTAIN CASES MAY BE NECESSARY TO THE SURVIVAL OF A SPECIES. IMPORTANT HABITAT AREAS SHOULD BE DELINEATED AND ACQUIRED BEFORE THEY ARE LOST.**

## FISHING

The fish crop of lakes and streams is one of Minnesota's most important natural resources. It is a renewable resource and one that, with proper management, can be expected to provide recreation for all, now and in the future.

At present, fishing provides year-around recreation for more than a million Minnesotans and is a basis for the large vacation and resort industry. Our game and non-game fish crops also provide a considerable supply of protein food -- 40 to 50 million pounds a year. The studies of the contribution of fishing to the state's economy from both recreational and economic standpoints should be continued and increased. As with all resources, conservation or wise use is required and intelligent management a necessity.

The primary goal of fish management is to produce the best fishing for the most people. To reach this goal, each lake and stream must be managed for the species of fish for which it is best suited. IN VIEW OF THE INCREASING PRESSURE BEING PUT ON OUR WATERS BY BOTH FISHERMEN AND OTHER COMPATIBLE AND COMPETING FORMS OF WATER USE, THE NEED FOR MODERN FISH MANAGEMENT IS OBVIOUS.

Modern fish management is based on factual information about fish and water. It stresses maintenance and improvement of the aquatic habitat including pollution control and abatement, soil erosion control, maintenance and control. THERE IS A NEED TO POINT OUT NOT ONLY WHERE CONDITIONS DETRIMENTAL TO THE AQUATIC HABITAT EXIST, BUT TO INVESTIGATE ALL POSSIBLE SOLUTIONS.

The popularity of fishing as a form of recreation depends upon water of a relatively high quality. This, in turn, is dependent on land and water use. THERE IS A NEED TO FURTHER INVENTORY PRIMARY FISHING VALUES, AND WHERE THEY EXIST. THIS INFORMATION SHOULD BE MADE AVAILABLE TO REGULATING AGENCIES CONCERNED WITH LAND AND WATER USE SO THAT THEY MAY DEVELOP PLANS TO PRESERVE THESE VALUES.

Fishing needs are closely tied in with water management needs and the activities of land and water management agencies. The desire to preserve recreational fishing agrees with and is closely allied to the desire to preserve quality water for all users. EFFORTS TO IMPROVE WATER QUALITY AND PREVENT POLLUTION SHOULD BE GIVEN HIGHEST PRIORITY FOR WATER IS ONE OF THE BASIC NECESSITIES OF LIFE, HUMAN OR OTHERWISE.

#### BOATING AND CANOEING

Adequate boating recreation in Minnesota depends on an ample amount of quality water, free of pollution and sedimentation. TO KEEP ITS HIGH QUALITY OF WATER AND TO CAPITALIZE ON MINNESOTA'S POTENTIAL AS A BOATING STATE, THERE MUST BE A CONSTANT EFFORT TO ENCOURAGE A STRONG, WATER-CONSCIOUS PROGRAM.

Aside from a small and dedicated fraternity of boaters who know the secret of recreation on state streams outside of the Arrowhead, the majority of Minnesota rivers are "forgotten rivers". The four rivers designated as canoe route rivers by the 1963 legislature from the standpoint of canoeing and recreational boating potential, are illustrations of just a few of Minnesota's hundreds of "sleeping rivers" ideal, but still dormant water recreation highways. (See page 310 for provisions of this legislative action.)

The Department of Conservation, in a study entitled "River Recreation Program for Minnesota, March, 1965", presented an outline of information needed and suggestions for designation and development of canoe routes in Minnesota. These needs include an identification of canoe waters, access spacing and development, camping facilities, water purity, scenic values, portages, water character, potential use, type of shoreline, land ownership and stream flow. According to the Department, this data would permit the establishment of priorities on canoe route rivers, acquisition and development of accesses along these routes, maintenance and administrative responsibilities, general classification, mapping, uniform signing and promotion.

Unlike most other states, Minnesota has an abundance of water. However, as lake use increases to the point of crowding, evident in the metropolitan complex, and as certain forms of water use create competition and sometimes personal danger, other bodies of water must be sought.

THERE IS A NEED NOT ONLY TO STUDY THE RIVERS AND STREAMS TO DETERMINE WHERE RECREATIONAL OPPORTUNITIES EXIST, BUT TO PUBLICIZE THEIR POTENTIAL AS WELL.

BEFORE MINNESOTA CAN CAPITALIZE ON THE POTENTIAL OF ITS MANY RIVERS, BOATING INFORMATION MUST BE GATHERED AND MADE AVAILABLE TO THE PUBLIC. A few private groups and counties have taken the initiative to publish maps and information about canoeing and boating routes in their regions, but except for the Boundary Waters Canoe Area, the Mississippi River in Aitkin County, the Crow Wing River and the Big Fork River, literature is practically non-existent.

THERE IS A NEED TO PROMOTE SAILING ON LAKES OUTSIDE THE SEVEN COUNTY METROPOLITAN AREA. Most sailing is done on lakes in and around this region. Many northern lakes are ideal for this sport, but remain relatively unused.

THERE IS ALSO A NEED TO GATHER DATA ON PLEASURE BOAT LAUNCHING. The question arises as to whether the public is being provided with adequate launching sites at a nominal fee.

#### SKIN AND SCUBA DIVING

Skin and SCUBA diving are growing activities in Minnesota's waters. For full enjoyment, clear water is essential. Visitors from other states come to Minnesota seeking suitable, good quality water for skin and SCUBA diving. In certain lakes, these activities often are in conflict with boaters, water skiers, and fisherman. FOR OPTIMUM SAFETY AND ENJOYMENT AT LAKES RECEIVING HEAVY SKIN AND SCUBA USE, IT APPEARS ZONING OF CERTAIN PARTS OF THESE LAKES WILL BECOME NECESSARY.

#### SWIMMING

Swimming is the number one water oriented recreational activity in the state. The concentrated use of the swimming beaches in urban areas is contributing to the pollution of the waters, thus creating a health problem. The littering of the beaches and swimming areas with debris is becoming a safety hazard. THERE IS A NEED FOR IMPROVING THE QUALITY OF THE BEACHES AND CONTROLLING THE POLLUTION OF THE WATER.

A need exists for the development of swimming pools IN MUNICIPAL AREAS TO DISPERSE THE USE FROM ALREADY HEAVILY USED NATURAL BEACHES AND TO PROVIDE QUALITY CONTROLLED WATER FOR THE SWIMMERS.

There are also localized deficits in water oriented recreational opportunities. Although the greatest demand for swimming is in the metropolitan areas, there are many communities throughout the state to which swimming facilities are remote. COMMUNITIES WITHOUT CLOSE ACCESS TO SWIMMING AREAS NEED TO DEVELOP MUNICIPAL POOLS IN WHICH WATER PURITY AND AREA QUALITY CAN BE CONTROLLED.

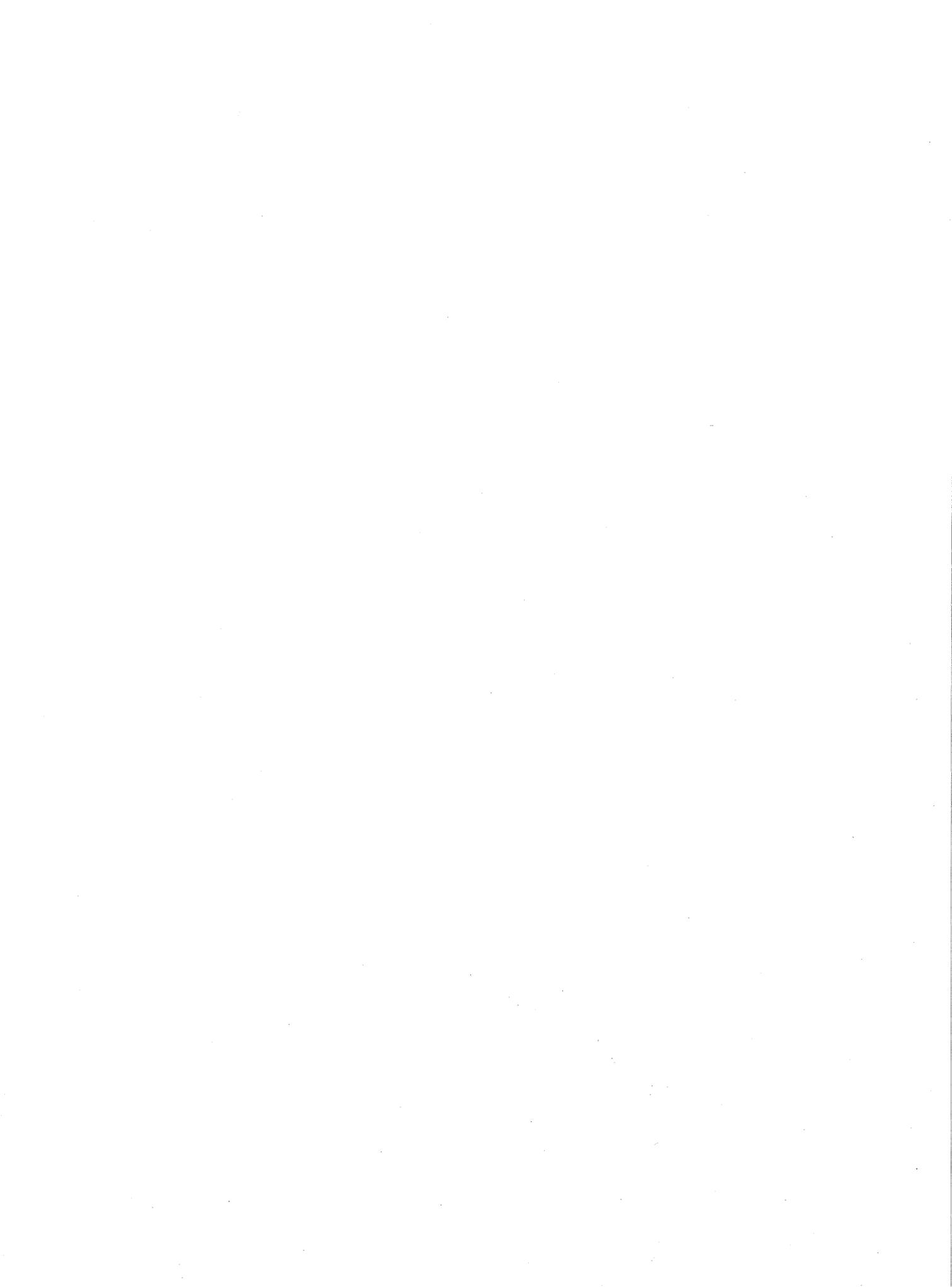
#### WATER SKIING

There is a physical limit to the expansion of water skiing. The greater the use of water resources for other types of water-based activities, the greater the problem of providing opportunity for water skiing.

Surveys by Wisconsin indicate that each boat used for skiing during a 100-day season is used approximately 22 times with an average of 3.2 skiers per boat during the season. Thus, if there are 56,000 boats on Minnesota's water, this represents 180,000 water skiers whose ski visits total approximately 1,200,000. Water skiing pressure is spread evenly through the entire water skiing season, but is concentrated on weekends. (It is estimated that weekend water skiing is more than three times that of weekday skiing.)

According to the Sport Fishing Institute, 40 acres is considered the minimum requirement for satisfaction and safety in water skiing. Using 40 acres as a criterion, 56,000 boats used for water skiing would require more than 2,209,000 acres of water, if used at the same time.

Water skiing, fishing, skiing and SCUBA diving are often considered incompatible (especially among fishermen). One possibility of improving relations between water skiing and fishing fraternities is to limit skiers to specific hours. Several states have successfully established zones for skiers. Such practices may become necessary in certain Minnesota waters in the future.



need by area



## WILDLIFE MANAGEMENT AREAS

ACQUISITION OR GOVERNMENTAL CONTROL OF STATE WILDLIFE MANAGEMENT AREAS (ESSENTIALLY WETLAND PROJECTS) IS AN ESSENTIAL NEED IN OUR RECREATION AND CONSERVATION PROGRAM. Within the next ten years, if the present rate of drainage continues, most of the privately-owned wetlands in western Minnesota will be gone. This could cause a serious decrease in wildlife populations and could mean the end of much of the present excellent hunting dependent on these wetlands.

The Department of Conservation has a large backlog of projects approved for purchase. Wildlife wetlands could be acquired at a greatly accelerated rate if sufficient funds were available. Saving these "wetlands" is a vital program which must be an integral part of planning for management of our natural resources. In terms of the wildlife dollars invested, the acquisition, development and management of wildlife wetlands yields the highest possible dividends in preserving habitat for waterfowl, pheasants and other species of wildlife and in providing public hunting grounds.

RECENT COUNTY BY COUNTY SURVEYS BY GAME MANAGERS INDICATE THAT THERE ARE MORE THAN 670,000 ACRES OF PRIVATELY OWNED WILDLIFE WETLANDS OF THE TYPES NOW BEING PURCHASED. SOME OR ALL OF THESE WILL BE NEEDED TO PRESERVE THE REMAINING HABITAT PARTICULARLY IMPORTANT FOR PRODUCTION OF WATERFOWL AND FOR WINTER AND BROOD COVER FOR PHEASANTS, PRAIRIE GROUSE, SONG BIRDS, AQUATIC FURBEARERS AND DEER. IN SOME CASES, THESE AREAS ALSO SERVE AS FISH SPAWNING GROUNDS.

In addition to the 525 small wetland areas acquired by the end of 1964, the state administers nine major wildlife management areas. These major areas contain a total of 279,426 acres owned or optioned for purchase. THERE IS NEED TO EXPAND THESE MAJOR AREAS BY ABOUT 96,000 ACRES TO ATTAIN THEIR OPTIMUM POTENTIAL IN GAME PRODUCTION AND PUBLIC USE.

THE U. S. FISH AND WILDLIFE SERVICE'S WETLAND ACQUISITION GOAL HAS BEEN ESTABLISHED FOR CERTAIN WESTERN MINNESOTA COUNTIES AT 99,167 ACRES AND AN ADDITIONAL GOAL OF 148,000 ACRES OF LEASED LAND. (These goals are subject to revision to meet changing needs.)

Administration of wetlands both by the state and federal government is the best means of maintaining sufficient waterfowl habitat to meet present and anticipated demands for hunting requiring such areas.

## PUBLIC ACCESS

With the increases foreseen in the recreational usage of Minnesota's lands and waters, CONTINUING EVALUATIONS WILL BE REQUIRED TO DETERMINE WHAT AREAS (LAKES, STREAMS, MARSHES AND LANDS) SHOULD BE PROVIDED WITH PUBLIC ACCESS. ATTENTION WILL HAVE TO BE GIVEN TO DESIGNING ACCESS SITES TO PROVIDE FOR THE TYPE OF USE FOR WHICH AN AREA IS BEST SUITED.

For instance, not all lakes will require the same type of access; some large lakes are suited for vehicular access, whereas others are best suited for the walk-in type or strictly by portage. Some selected lakes should remain without vehicular access.

PRIORITY OF PURCHASE SHOULD BE BASED ON CURRENT AND ANTICIPATED RECREATION NEEDS.. Such studies should be coordinated between the agencies concerned and incorporated into land use plans at all levels. The completion of a state-wide lake inventory has made this phase feasible.

MODIFICATION OF EXISTING LAWS RESTRICTING THE SIZE AND LOCATION OF ACCESSES MAY BE NECESSARY IN ORDER TO MEET CHANGING NEEDS.

THERE IS A NEED FOR INCREASING THE ACCESSIBILITY OF CERTAIN LAND AREAS. Substantial progress has been made in forest roads and trails as well as water access.

Particular care must be exercised to see that the creation of an access does not destroy the very resources it is designed to use. EFFORTS MUST BE DIRECTED TOWARD MAINTAINING THE AESTHETIC CHARACTER OF ROADSIDE AND WATERFRONT ZONES.

Acquisition of land entails certain responsibilities for its maintenance. THERE IS A NEED FOR FUNDING SUFFICIENT TO ASSURE PROPER MAINTENANCE OF ALL PUBLIC ACCESSES.

## WAYSIDE RESTS

THE NEED FOR HIGHWAY WAYSIDE AREAS AT SPECIFIED INTERVALS ALONG THE STATE'S HIGHWAY SYSTEM IS RECOGNIZED. As highways are reconstructed to standards permitting faster and more uninterrupted travel, along with limitations on road shoulder parking or stopping, the wayside rests fulfill a safety need as well as providing a service to the traveler. AS HIGHWAYS ARE CONVERTED INTO FREEWAYS, LIMITING ACCESS, THE NEED FOR SUCH FACILITIES AS REST ROOMS AND WATER SUPPLY IN ADDITION TO THE STANDARD FACILITIES BECOMES APPARENT.

THE NEED FOR OVERNIGHT CAMPING FACILITIES AT PLANNED INTERVALS ALONG HIGHWAYS WHICH ARE PRINCIPAL ROUTES OF ACCESS INTO AND THROUGH THE STATE'S LAKE REGION IS RECOGNIZED. To adequately provide for such facilities, the potential suitable sites should be identified in the process of land use planning. The construction and maintenance of such facilities will be accepted as administrative functions by either local or state governments or both.

## PARKS

### NATIONAL

Pipestone National Monument and Grand Portage National Monument are the only two areas currently administered by the National Park Service. An outstanding area in northern Minnesota which would qualify for National Park status should be given consideration in order to meet the needs for recreational areas in this part of the state and nation.

### STATE

The statutory boundaries in the State Park System presently consist of approximately 175,000 acres. But of this amount, the legal land ownership, as of June 30, 1964, was 116,991 acres of state park land. (On the basis of current legislative appropriations, the acreage will be increased to approximately 131,000 acres.)

Based on National Park Service statistics approved by the Nation-wide O.R.R.R.C. Study, the criterion for state park lands is 45 acres per one thousand citizens. USING THE PRESENT POPULATION OF APPROXIMATELY 3,525,000, A STATE PARK ACREAGE OF 158,625 ACRES IS DESIRABLE AT THIS TIME.

This points to a current NEED OF 41,634 ADDITIONAL ACRES IN THE STATE PARK SYSTEM. IF WE ARE TO LOOK AHEAD TO 1970, WHEN WE WILL HAVE A PROJECTED POPULATION OF APPROXIMATELY 3,754,000, THERE WILL BE A NEED FOR A TOTAL OF 168,930 ACRES OF STATE PARK LAND.

Adequate interpretative services are urgently needed in all parks to aid understanding and appreciation of features protected. Vandalism in parks where hikes and campfire programs are offered has reduced considerably. THERE IS A DEFINITE NEED TO EXPAND AND IMPROVE INTERPRETATIVE (INFORMATION AND EDUCATIONAL) PROGRAMS THROUGH VISITOR CENTERS, NATURALIST PROGRAMS AND AVAILABLE INFORMATIONAL LITERATURE.

Nearly every state park needs additional land acquisition. In some cases, it involves but a few acres. In 1963, state park visits were estimated at over 3,200,000, almost a ten percent increase over the previous year. The attendance has increased on the average of seven percent annually since 1943. At least six million visitations are anticipated by 1971 or about double the present attendance -- an estimated 20 million are expected by the turn of the century. This gives some idea of the impact on parks in the relatively near future.

With only two state parks, Fort Snelling and William O'Brien, within a 30-mile radius of Twin Cities residents, special emphasis should be placed in this area. The Twin Cities have a good system of municipal parks, but are entitled to sufficiently large parks to offer additional opportunities. Interstate Park is 50 miles from the heart of the metropolitan area. Except for Itasca and Gooseberry Falls state parks, its 168 acres are the most heavily used in the state. Regional or county parks should also give particular attention to this need. The Hennepin County System is an excellent example.

The state park system has expanded rapidly, but state parks alone cannot satisfy the skyrocketing demand for enjoying the outdoors. Further development of facilities on existing state and federally owned land throughout the state is needed to supply the indicated demand. All state-owned resource land should be considered in the process of state recreational planning, to increase both capacity and utility. A LAND USE STUDY OF ALL PUBLICLY-OWNED RESOURCE LAND IN THE STATE IS NEEDED AND WOULD PROVIDE AN INVENTORY OF POTENTIAL RECREATION SITES OF ALL TYPES.

## COUNTY

In 1960, Minnesota had only a handful of county parks. Today, 16 of the 87 counties have 67 county park units. These counties have active park programs, but most have limited facilities.

THE COUNTY PARK SYSTEM PRESENTLY HAS AN ACREAGE OF 19,073 ACRES. ACCORDING TO A NUMBER OF AGENCIES, INCLUDING THE NATIONAL PARK SERVICE, AN AVERAGE CRITERION FOR COUNTY AND REGIONAL PARKS IS 15 ACRES PER 1,000 CITIZENS. APPLYING THIS TO MINNESOTA'S 1964 POPULATION, THERE IS A NEED FOR 52,875 ACRES. Applied to the projected population of 1970, it is anticipated there will be a NEED FOR 56,310 ACRES.

These figures do not take into account the increasing demand for outdoor recreation which could easily affect the criteria. Further analysis is needed to determine the acreage needed by individual counties, but the important thing is that the need is recognized.

## MUNICIPAL

Adequate city and municipal data on parks has been lacking. However, it appears that insufficient park areas do exist in selected areas. Where local political subdivision plans justify this need, the state will recommend priorities.

In summary, if there is to be a balanced outdoor recreation program in Minnesota, there must be more parks (public and private), and expansion and development of existing areas to include -- in particular -- access, parking, water supply and sanitation facilities.

## SUMMARY OF PARK NEEDS, STATE, COUNTY AND MUNICIPAL

### PARK PROJECTIONS -- 1965 to 1970

Population	<u>1964</u> 3,525,000	<u>1970</u> 3,754,000
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### PARK LAND NEEDS -- total acres

Municipal 10A per M	35,250	37,540
County 15A per M	52,875	56,310
State 45A per M	158,625	168,930

### PARK LAND INVENTORY

	<u>6/30/64</u>	
Municipal	22,463*	
County	19,073	
State	116,991	

### PARK LAND NEEDS -- ADDITIONAL

Municipal	12,787*	2,290*
County	33,802	3,435
State	41,634	10,205

\* Incomplete inventory data

## HISTORIC SITES

ADDITIONAL MAJOR HISTORIC SITES NEED PRESERVATION. PRESENT SITES, INCLUDING MUSEUMS, NEED EXPANSION AND INTERPRETATION. AN ADEQUATE, UNIFORM MARKING SYSTEM IS ALSO NEEDED.

Minnesota's program of preserving and marking historic sites needs to be intensified. Tourists as well as the state's own people should be informed about the rich heritage of Minnesota. Historic sites and historical markers are needed and can be some of the most effective means of tourist promotion.

Historic sites offer an enriching opportunity to better understand our heritage. Some can be developed to provide a broad range of activities as well as serving their historic site function. For example, Fort Snelling State Park provides naturalist services and hiking trails and, in the near future, will be developed to provide an even broader range of activities.

Historic sites strengthen the state's appeal to tourists. The traveling public has found that such sites add purpose to their vacations. They enhance the sightseeing activity, ranked by O.R.R.R.C. as the fifth most frequent recreational pursuit. Historic sites are among the points of interest visited the most often by those out for a pleasure drive.

Comprehensive studies are needed to determine the total historic site visitation in Minnesota. Four sites demonstrate the pulling power of the Minnesota heritage; more than 1,000,000 persons visit the source of the Mississippi River at Itasca State Park annually; 250,000 visitors come to the Pipestone Monument each year; Old Fort Snelling receives 125,000 visitors each year; and the new Mille Lacs Indian Museum is host to over 100,000 visitors annually.

## FORESTS

THE GREATEST RECREATIONAL FOREST NEEDS ARE TO FURTHER INVESTIGATE THE POSSIBILITIES OF NEW FOREST LAND AND TO ESTABLISH AND DEVELOP FOREST RECREATIONAL POTENTIAL, PARTICULARLY PRIMITIVE CAMPGROUNDS, HIKING TRAILS, CYCLE AND HORSEBACK TRAILS, ACCESSES, CANOE ROUTES AND PICNICKING FACILITIES.

In acquiring new lands, particular emphasis should be given to the Minnesota Memorial Hardwood State Forest and the establishment of a Minnesota River Valley State Forest. Both these forests are in close proximity to the metropolitan area and would help fill the recreational needs of this heavily populated area, while at the same time help preserve our remaining forest land.

The recreational potential of our forested land must be developed to the fullest extent compatible with public needs and available funds. To develop recreational facilities, there must be close cooperation between state, federal and local agencies.

In the last ten years, new problems have developed in the Boundary Waters Canoe Area of the Superior National Forest -- those concerning increasing public use. The vast numbers of people new to forest vacations pose new threats to the area. It is one of the most heavily used primitive recreation areas in the entire National Forest System. Based on a 1959 report by the Outdoor Recreation Resources Review Commission (O.R.R.R.C.), looking to the year 2000, an eight-fold increase in man days is projected. This forecast means a staggering two million visitor days. The annual number of visits has increased from around 50,000 in 1953 to 230,000 in 1963.

Foresters have studied campsite deterioration in the Boundary Waters Canoe Area and have found considerable vegetative loss from recreational use. To preserve this superb wild area and still give visitors the wilderness experience they desire, steps are needed to cope with increased visitation.

**ACTION**  
**SECTION**

# ACTION



# planning

The objective in state-wide outdoor recreation planning is to utilize recreational resources to the best advantage for present and future generations. In so doing, consideration must be given to preservation, protection and enhancement of natural beauty throughout the entire process. These objectives must constantly be considered when striving to develop a recreational system in which outdoor opportunities will be available for everyone in every season.

Planning must provide for development adequate to meet the immediate and projected needs, guarding against duplicating or unnecessary facilities or projects. Of importance is the assessment of the responsibility of the private segment in the development programs. Such private enterprises should be encouraged, if considered to be feasible and having a reasonable assurance of success. Good planning will eliminate the fear of competition from publicly developed accommodations.

Thus far we have discussed demand, supply and need factors. What are some of the solutions to expedite and implement the outdoor recreation needs?

1. The state and local governments must place particular emphasis on acquiring open space areas in and around urban areas. In 1960, 62 percent of Minnesota's population was urban. Even near population centers, land and water suitable for most outdoor recreation is in surprisingly good supply. But action must be taken now while the opportunity exists. We must provide all segments of our population with adequate areas near enough to their homes for frequent day and weekend use. (We must also consider suitable areas in more remote areas for vacation use.)
2. Action must be taken to preserve Minnesota's wetland resources. Nearly all major activities will eventually be affected by the continued drainage of these valuable resources particularly hunting, fishing, sightseeing and nature study.
3. Minnesota consists of 12½ million acres of public ownership. The use of these existing public lands must be expanded and/or developed.
4. Facilities for driving for pleasure, swimming, picnicking, camping, fishing, hunting, boating and other popular activities must be provided. Hiking, bicycle and horseback trails, scenic drives, canoeing and boating routes, wayside rests, parks, wildlife management areas, forests, historic sites access areas and others are all necessary to meet the needs, both tangible and intangible.

Recommendations presented here aim to stimulate intelligent discussions rather than to dictate action. It is up to us now to see that Minnesota's great heritage is preserved and the state's recreational resources are utilized to the best advantage of this and future generations. To do this requires ACTION

# implementation

What are the financial means for meeting the needs? A number of programs, both state and federal, have given Minnesota the management and financial tools necessary to carry out a balanced program.

## FEDERAL

701 Program – Housing Act of 1954, Section 701, as amended - - Financial assistance is provided to state and local governments in solving planning problems in metropolitan and other urban areas.

Open-Space and Urban Beautification and Improvement Program – The Housing Act of 1961 (P.L. 87-70) Title VII, as amended, provides for grants-in-aid to local governmental agencies for the acquisition and development of land to be used as permanent open-space land in an urban area. (The term local governmental agencies applies to a state, or a regional, metropolitan, municipal, county or other public body established by state or local law or by interstate pact or agreement.)

Land and Water Conservation Fund Act of 1965, P.L. 88-576 (78 Stat. 897) -- This program creates a fund from which Congress may appropriate money to provide urgently needed public outdoor recreation areas and facilities. Such funds may be used for planning, acquisition and development of public land and water areas. States and certain federal agencies are eligible to receive such money. States may allocate portions of the money they receive to their political subdivisions and to other non-federal public agencies. In Minnesota, this amounts to 50 percent of the state's allocation.

Public Law 566 – Under P.L. 566, 83rd Congress, the federal government will provide technical assistance and share in the cost of constructing soil and water conservation projects. Such projects may be designed to permit use for recreational purposes.

STATE

Omnibus Natural Resources and Recreation Act of 1963 – Laws of 1963, Chapter 790 -- The act appropriates funds for use by certain state agencies in land acquisition and development of recreational resources.

Omnibus Natural Resource Act of 1965, Laws of 1965, Chapter 810 -- The act appropriates funds for use of state agencies in study, planning, land acquisition and development of natural resources. It authorizes grants-in-aid to counties and municipalities to facilitate planning, land acquisition and development of natural resource land and facilities for recreational purposes including, but not limited to, historic sites, archaeology, public access, parks, scenic easements, campgrounds, wildlife areas, county and school forests, and water impoundments.

The state appropriation is to be used to supplement federal funds available to local units of government from Section 701 of the Housing Act of 1954, as amended; Title VII of the Housing Act of 1961, as amended; the Land and Water Conservation Fund Act of 1965; and federal funds available for recreation to public agencies for watershed districts, soil conservation districts and related purposes. No project under this act is eligible for state funds unless it is identified as a part of a state-wide, county or regional recreation plan submitted to the state planning agency for review and approval as to priorities given.

The following is a recapitulation of the appropriations under the 1965 Resources Act.

Breakdown of Natural Resource Fund Appropriations - 1965 - H.F. No. 2206

	Appro. to Governor and LAC	Appro. to Dept. of Admin.	Appro. to Dept. of Conservation	Appro. to U of M	M.O.R.R.C.	Historical Society	Business Develop	Dept. of Taxation
State Parks - to be transferred		150,000						
Commission					100,000			
State Park Acquisition		964,445						
Wet Lands		400,000						
State Park Development			946,450					
Hydrologic Studies			150,000					
Equipment Purchases			100,000					
Hardwood Forest Study			25,000					
Professional Services			184,000					
Red River Study			70,000					
Tree Planting			200,000					
Spawning Area Acquisition			300,000					
River Studies			50,000					
Park Feasibility Study			75,000					
Forest Roads			300,000					
Paleontologist Study				14,000				
Prehistoric Archaeology				58,000				
Aquatic Nuisance				30,000				
Historic Archaeology						21,500		
Historic Sites						235,704		
Fort Snelling						200,000		
Contingency - Land Acq.	250,000							
" - Hardwood Forest	75,000							
" - Local Share								
Federal Proj.	1,000,000							
Topographic Mapping		940,000						
Land Acquisition - Expense								
Hardwood Forest		100,000						
Special Mapping & Soil Surveys		200,000						
Land Purchase - Hardwood Forest		200,000						
Iron Range Planning Study							16,100	
Planning Assistance to Counties							250,000	
Administrative Costs for 1 and 2							25,000	
Regional Promotional Folders							25,000	
Printing Folders on Minnesota Resources							25,000	
Collection of Cigarette Taxes								51,000
Flandrau Dam Repairs	59,000							

SUMMARY

Governor & LAC	\$ 1,384,000
Administration	2,954,445
Conservation	2,400,450
U of M	102,000
M.O.R.R.C.	100,000
Historical Society	457,204
Business Development	341,100
Department of Taxation	51,000
<b>Total</b>	<b>\$ 7,790,199</b>

# information and education

Plans and programs calling for the expenditure of public funds cannot develop beyond the planning stage without public support. This support can be obtained only through an effective information and education program. Knowledge of recreational needs by the people of Minnesota is essential before endorsement of an accelerated recreation program can be expected. There must be good communication between the people of Minnesota and state, federal, county and municipal personnel responsible for carrying out the various programs.

Additional information must not only be disseminated to Minnesota's adult population, but also to tomorrow's citizens. Proof that young people are anxious to learn about the outdoors is evidenced by the highly successful youth firearms safety training program sponsored by the Division of Game and Fish, Department of Conservation.

With the many related state and federal programs being carried out, and requiring coordination, personnel will be called upon to attend meetings and conferences, especially during the planning phase of long-range natural resources programs. Exchange of information between public agencies is essential.

**AN ACTIVE PUBLIC RELATIONS PROGRAM, INCLUDING TOURIST PROMOTION, MUST BE CONTINUED AND EXPANDED TO THE EXTENT THAT TIME AND MONEY WILL PERMIT TO PROVIDE WELCOME STATIONS, INFORMATION CENTERS, INTERPRETATIVE CENTERS, INFORMATIONAL LITERATURE, NATURAL AND HISTORIC INTERPRETATION, MEETINGS, TALKS, TELEVISION PROGRAMS, RADIO PROGRAMS, NEWSPAPER FEATURE ARTICLES AND NEWS RELEASES.**

# fish and wildlife

Fish and wildlife are renewable resources that are influenced by both man and nature. The exact amount of land and water necessary for fish and wildlife purposes in the future is only partly predictable; nor can we foresee or control the phenomena of nature that cause unexpected increases or decreases in fish and wildlife populations. In many cases, we cannot control the effects of man's activity on the environment. Man's willingness to leave suitable outdoor environment will determine the extent to which recreation dependent upon these resources will be available for future use and enjoyment.

## ADDITIONAL WILDLIFE LAND

The prairie-wetland ecological association of the southwestern and western parts of Minnesota is essential to waterfowl production and provides important habitat for a variety of other wildlife species. These areas also have recreational values when acquired and placed under management.

To meet the inevitable demand for wildlife habitat in face of agricultural expansion by drainage, and to provide adequate hunting opportunities, **THE RATE OF PRESERVATION OF THESE LAND AND WATER AREAS MUST BE ACCELERATED IN THE NEXT TEN YEARS (1965-1975).** After 1975, the wetland acquisition program is expected to continue at a somewhat slower pace since most of the prime areas will have been acquired or drained.

1. The Department of Conservation from a recent county by county survey reported about 670,000 acres of prime wetlands remain. **EVERY EFFORT SHOULD BE MADE TO ACQUIRE AS MUCH OF THIS AS POSSIBLE BEFORE IT IS LOST.** (Priority A.)

2. **THE POSSIBILITIES OF USING MORE OF THE DIVERTED CROPLAND ACREAGE AS WILDLIFE HABITAT SHOULD BE EXPLORED AND PRESENTATIONS OF PROPOSALS MADE TO THE STATE AGRICULTURAL STABILIZATION AND CONSERVATION COMMITTEE FOR CONSIDERATION IN FUTURE PROGRAMS.** (Priority A.)

3. **A STUDY OF POSSIBILITIES FOR PAYMENT TO FARMLAND OWNERS WHO CHOOSE TO MAINTAIN AND DEVELOP WILDLIFE HABITAT SHOULD BE MADE IN COLLABORATION WITH THE U.S. DEPARTMENT OF AGRICULTURE.** (Priority A.)

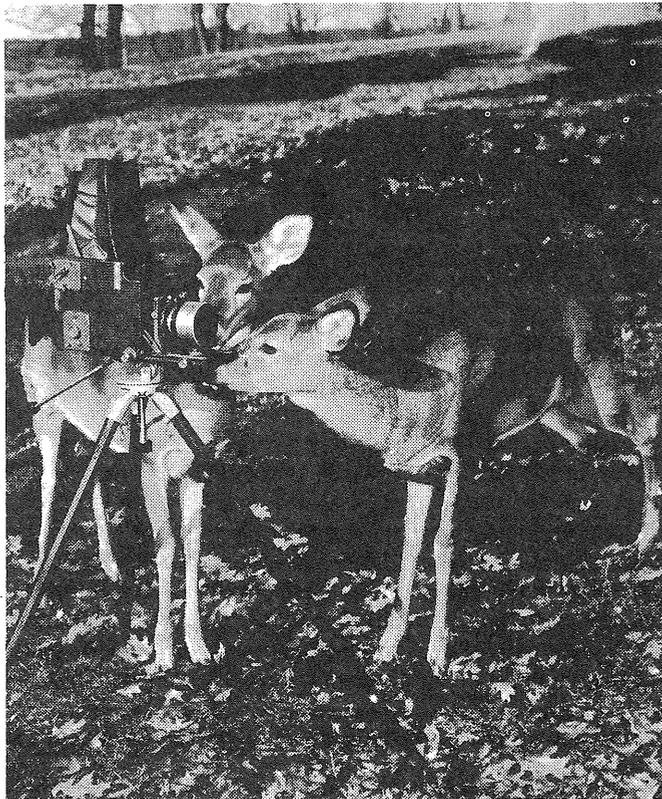
4. **ALTHOUGH ACQUISITION AND LEASING OF WILDLIFE HABITAT IS THE PRIME RESPONSIBILITY OF THE STATE, COUNTIES SHOULD BE ENCOURAGED TO ACQUIRE OR LEASE AND DEVELOP WETLAND AND WILDLIFE AREAS UNDER GRANTS-IN-AID AS PROVIDED FOR IN THE 1965 OMNIBUS NATURAL RESOURCES ACT.** (Priority A.)

5. MORE INTENSIVE STUDIES SHOULD BE MADE OF THE WILDLIFE MANAGEMENT NEEDS ON OVER 11 MILLION ACRES OF PUBLICLY OWNED LAND OUTSIDE WILDLIFE MANAGEMENT AREAS. A project program should be developed with estimates of cost to make suitable areas of this public domain more productive in game (Priority A.)

6. THE LEGISLATURE SHOULD BE APPRISED OF LAND ACQUISITION AND DEVELOPMENT NEEDS AS DISCLOSED BY THE STUDIES AND ACTIONS AS RECOMMENDED. (Priority A.)

#### WILDLIFE LAND DEVELOPMENT

FUNDS SHOULD BE PROVIDED UNDER THE NATURAL RESOURCES PROGRAM FOR WILDLIFE LAND DEVELOPMENT AND HABITAT IMPROVEMENT. Wildlife management on public and private land must keep pace with the increasing demands for hunting of all species. (Priority A.)



## WATER IMPOUNDMENTS

Construction of water impoundments is an important activity. Examples of outstanding impoundments constructed on Forestry Division lands are Kettle Lake, Grayling Marsh, Moose-Willow, Big Rice Lake, Mud-Goose Lake, Morph Meadows and small impoundments on the Red Lake Wildlife Management Area. Outstanding impoundments on Game and Fish Division lands are the Sunrise addition of Carlos Avery, Thief Lake, Lac Qui Parle, Roseau, Talcot Lake, Hubble Pond, Orwell Reservoir, and Whitewater Wildlife Management Areas.

MANY SIMILAR SITES ARE WAITING ONLY FOR THE FUNDS NECESSARY TO DEVELOP THEM INTO WILD-LIFE AREAS. (Priority A.)

## RARE AND ENDANGERED SPECIES OF FISH AND WILDLIFE

CLOSE COOPERATION SHOULD BE MAINTAINED WITH OTHER AGENCIES TO ASSURE THAT PROPER STEPS ARE TAKEN IN MINNESOTA TO PROTECT RARE AND ENDANGERED SPECIES. (Priority A.)

## NATURE STUDY

Wildlife is sought by growing numbers of nature hobbyists, sightseers, photographers, scientists and school classes. These people and the wildlife they seek will require consideration in management of wildlife resources.

Many persons when driving in Minnesota need guidance in understanding what they are seeing. Large signs pointing out pheasant country, deer country or other features would be useful. South Dakota has attractive signs of this type as does Montana. Although the signs are mostly historical, they are large and can be easily seen from the highway.

MANY OF THE STATE-OWNED AREAS COULD BE DEVELOPED TO PROVIDE IMPROVED ACCESS AND FACILITIES FOR PERSONS DESIRING TO SEE WILDLIFE. POSSIBILITIES INCLUDE ROADS AND WALK-IN TRAILS THROUGH AREAS WHERE CERTAIN SPECIES OF WILDLIFE ABOUND, SPECIAL ACCESS TO MARSH AREAS AND THE CONSTRUCTION OF VIEWING TOWERS. (Priority A.)

## FISH

The basic objective of fish management in Minnesota is the preservation, fostering and development of sport-fish populations that will supply sustained satisfactory sport fishing both as to numbers of fish and quality of fish. Because of the great amount of suitable water -- about 5000 fish lakes aggregating about 2 million acres, plus 1.9 million acres of border waters -- representing a great variety of aquatic habitats, present and future fish management in Minnesota is a very large and complicated job with many aspects. It is a job that must take into account the increasing demand for sport fishing both for public recreation and as a basis of the resort industry, land-use practices that are often influenced by other agencies, public recreational preferences, and other uses of public waters.

Some important aspects of fish management that merit special consideration in the future are:

1. Completion of inventory and mapping of Minnesota's lakes and streams to provide information that will serve as a basis for sound management of all our lakes and streams. This should be done on a watershed basis.
2. Protection and development (where necessary) of major natural fish spawning areas both in and adjacent to fish-producing waters. Preservation of northern pike spawning areas in Minnesota is especially critical because many of these are being eliminated by shoreline development. SPAWNING AREAS SHOULD BE PROTECTED BY ACQUISITION, EASEMENT OR OTHER MEASURES. (Priority A.) Trout and walleye spawning areas should be developed and bass spawning areas protected as needed.
3. Multiple use of shallow lakes as fish spawning areas, especially for northern pike. Northern pike rank first in poundage of fish taken by Minnesota sport fishermen. Because of the heavy fishing pressure on this species, the

expansion of the present program for multiple use of shallow lakes -- such as wild rice and waterfowl lakes -- in which pike are raised to yearling size is essential. ON SUCH LAKES, PERMANENT WATER-LEVEL CONTROL AND TRAPPING STRUCTURES SHOULD BE INSTALLED SO THE FISH CAN BE EASILY RESCUED IN WINTER FOR STOCKING WHERE THEY ARE NEEDED. (Priority A.)

4. Development and maintenance of constructed fish rearing facilities as needed, especially for walleyes, muskellunge, and trout. Artificial propagation of fish in Minnesota is confined mostly to walleye and trout for stocking of waters in which natural reproduction is inadequate. Many of the hatching facilities are old and inadequate and many walleye rearing ponds need renovation. NEW PONDS AND HATCHERIES SHOULD BE CONSTRUCTED AS NEEDED. (Priority A.)

5. Fish population control -- In addition to removal of rough fishes by the older methods of netting and trapping it is now possible to greatly improve game fishing by REMOVAL OF UNWANTED FISHES WITH TOXICANTS AND THEN STOCKING WITH GAME FISHES. (Priority A.) THIS HAS BEEN DONE ON ABOUT 100 MINNESOTA LAKES AND THIS PROGRAM SHOULD BE EXPANDED. It is likely that chemicals which are toxic only to certain species will be available in the near future.

IT IS ESSENTIAL THAT THE PRESENT PROGRAM OF INSTALLING FISH BARRIERS TO PREVENT MIGRATION OF UNDESIRABLE FISHES, SUCH AS CARP, BE EXPANDED AND THESE BARRIERS BE INSTALLED AS PART OF OVER-ALL WATERSHED MANAGEMENT PROGRAMS. (Priority A.)

6. Preservation and protection of aquatic and shoreline habitat affecting fish and fishing. THERE IS URGENT NEED FOR EXPANDING THE PROGRAM FOR PRESERVATION OF STRIPS OF LAND ALONG MAJOR RIVERS AND TROUT STREAMS BOTH TO PRESERVE THE STREAMS AND THEIR WATER QUALITY AND FOR RECREATIONAL USES. SUCH LANDS SHOULD BE PURCHASED OR PROTECTED BY EASEMENTS. (Priority A.) When protected, improvements benefiting fish and fishing can be made.

SITES OF THE MORE IMPORTANT SPRINGS IN THE STATE SHOULD BE PURCHASED AND PROTECTED TO ASSURE A CONSTANT SUPPLY OF COOL WATER FOR STREAMS.

Strict control of alteration of shorelines and beds of lakes and streams should be continued and enforced. DESTRUCTION AND CONTROL OF GROWTH OF WATER PLANTS AND ALGAE SHOULD BE STRICTLY REGULATED, TAKING INTO ACCOUNT THE VALUE OF SUCH PLANTS TO FISH AND WILDLIFE. (Priority A.)

7. Preservation of the quantity and quality of surface waters. PUBLIC WATERS THAT PRODUCE FISH AND WHICH PROVIDE THE PUBLIC WITH FISHING MUST BE PROTECTED FROM ARTIFICIAL DRAINAGE, POLLUTION, SILTATION CAUSED BY IMPROPER LAND USE, AND EXCESSIVE WITHDRAWAL OF WATER FOR IRRIGATION. PERMANENT SILLS SHOULD BE PUT IN AT THE OUTLET OF LAKES WHEREVER POSSIBLE SO THAT PRESENT LEVELS ARE RETAINED. Stream and lake banks should be stabilized, stream straightening should take into account fisheries values, and pollution causing unfavorable conditions or unwanted artificial fertilization should be reduced or eliminated. Much of the work on preservation of water quantity and quality will require inter-agency planning and co-operation of state, federal and local agencies.

## public access

Under present (1965) state law, public access sites can only be acquired on meandered lakes containing at least 150 acres. Inventory by county shows that 2,419 meandered lakes qualify for such access. (Some lakes may require more than one access depending on the need). There are at least 2,700 additional lakes between 40 and 150 acres plus several non-meandered lakes over 150 acres to which public access acquisition should be considered. Under present law, the state cannot acquire access on these lakes; therefore, consideration must be directed by other governmental agencies. At the present time, access is provided on about 1,100 lakes leaving over 4,000 lakes over 40 acres with no public access.

ACQUISITION GUIDELINES SHOULD BE KEPT AS GENERAL AS POSSIBLE TO PROVIDE THE PROGRAM WITH FLEXIBILITY. Priorities should fall into the following three categories:

1. LAKES WHERE ACCESS IS NEEDED TO PROVIDE FOR FISH MANAGEMENT. Much time, money and effort has been expended by the Department of Conservation in obtaining data to establish which lakes are the best suited for fish management purposes and the program should be geared to utilizing these efforts. (Priority A.)

2. LAKES CLOSE TO THE METROPOLITAN AREA. This type of acquisition is expensive and, if action is not taken in the near future, will be out of reach. (As money becomes available, more emphasis should be given to this category.) (Priority A.)

3. LAKES IN THE CONCENTRATED LAKE REGION. Past operations have fallen into this group and will continue to do so due to public utilization. Increased mobility enables people to seek recreation in areas where the greatest number of lakes are available. (Priority A.)

In addition to the programs providing lake and stream access, approximately 1,250 miles of access roads have been constructed in forested areas to make unharvested deer and grouse ranges available to the hunters and to facilitate the harvest of timber. This in turn improves deer ranges. Thus, land access serves a three-fold purpose. UTILIZATION ROADS ON PUBLIC LANDS COULD BE CONSTRUCTED BY MULTI-PURPOSE STANDARDS AND PROVIDE RECREATIONAL ACCESS WHERE NEEDED. (Priority A.)

## parks

### A VOYAGEURS NATIONAL PARK

THE CREATION OF A VOYAGEURS NATIONAL PARK IN THE KABETOGAMA AREA OF NORTHERN MINNESOTA. (Priority A.)

The proposed Voyageurs National Park would be a water resource park, with visitor use and the development of facilities geared to the optimum use of the historic waterways involved. Travel beyond the access roads would be limited to water and trails, using all types of boats from canoes and sailboats to inboards and over-the-snow equipment in the winter. In addition to boating and hiking, visitors would enjoy fishing, picnicking, camping, photography, nature study and historic interpretation. The National Park Service plan does not provide for additional motels, lodges, cabins, and related services within the proposed park. These developments can be provided adequately outside the boundaries.

The recommended boundary at the Kabetogama resort area has been placed along the shoreline to exclude the resorts and private cabins. Existing facilities at Kettle Falls would remain. The communities close to the area should be able to provide additional visitor facilities.

An Act of Congress is required to establish a National Park.

### STATE PARKS

From a land use study, an evaluation of the suitability of the natural features for various recreation uses can be made. Also, priorities can be established for preservation of special interest areas such as historical, archeological and natural history sites as potential parks. The anticipated change in land use which will alter or even destroy the park features in high priority for preservation, along with projections in future park use, are the factors which will govern the present and future programs. This will affect both expansion of existing parks or parks to be established in the future.

To provide recreational opportunities and facilities adequate to accommodate an expected six million visitor use days by 1970, the Department of Conservation has set a goal of approximately 169,000 acres in state parks by 1970. Based on the criterion of 45 acres in state parks per thousand of state population, the 1964 area needed was 158,625 acres. By 1970, this need will be 168,930 acres. (The June 30, 1964, park area was 116,991 acres or 41,634 acres short of this goal. By June 30, 1965, there were 122,597 acres in acquired park land.)

THE LEGISLATIVE AUTHORIZATION FOR FISCAL YEARS '66 AND '67 PROVIDES FUNDS FOR THE ACQUISITION OF 6,493 ACRES. THE LEGISLATURE ALSO RECOMMENDED THE TRANSFER OF 744 ACRES OF PARK LANDS TO MUNICIPALITIES AND COUNTIES. THE INDICATED REALIZATION BY JUNE 30, 1967, IS 131,985 ACRES LESS THAN THE AREA IN PROPOSED TRANSFERS OR A NET AREA OF 131,241 ACRES. THEREFORE, TO REACH THE 1970 OBJECTIVE, 37,689 ACRES NEED TO BE ADDED TO THE STATE PARK SYSTEM DURING THE FISCAL YEARS '68, '69, AND '70. (Priority A.)

Additions to Approved Parks – THE IMMEDIATE ACTION IS TO ACQUIRE 9,388 ACRES IN EXISTING PARKS AS AUTHORIZED BY THE 1965 SESSION OF THE LEGISLATURE. Future plans and recommendations will consider acquisition of an additional 21,490 acres within the statutory boundaries of 35 existing parks. (Priority A.)

The action program for additions to existing parks is summarized in the following table:

**ADDITIONS TO EXISTING PARKS  
AUTHORIZED AND PROPOSED  
FIVE-YEAR PROGRAM ENDING 6-30-70**

Name of Park	Authorized FY '64 & '65 <sup>1</sup>		Authorized FY '66 & '67		Planned Future Additions	
	Est. Acres	Approp.	Est. Acres	Approp.	Est. Acres	Est. Cost
Banning	150	13,400	580	16,000	1,966	67,000
Bear Head Lake	80	1,800	749	45,000	80	15,300
Beaver Creek Valley	40	2,600	150	10,500	437	25,500
Big Stone Lake	—	—	200	44,000	407	89,500
Blue Mounds	100	15,900	140	23,000	795	131,000
Camden	300	35,000	320	50,000	640	108,000
Carley	—	—	—	—	45	2,000
Chas. Lindbergh	—	—	80	14,000	—	—
Crow Wing	—	—	200	7,800	518	62,200
Father Hennepin	40	21,300	52	30,000	—	—
Forestville	400	49,000	—	—	940	95,000
Fort Ridgely	100	31,500	—	—	—	—
Fort Snelling	—	—	200	200,000	1,500	1,500,000
Frontenac	—	—	272	25,000	100	35,000
Glacial Lake	—	—	80	7,500	—	—
Grand Mound	285	32,700	—	—	—	—
Helmer Myre	25	10,400	66	50,000	517	300,000
Itasca	—	—	—	—	200	17,000
Interstate	1	9,300	—	—	—	—
John A. Latsch	450	11,500	—	—	—	—
Judge C. R. Magney	—	—	200	5,000	—	—
Lake Carlos	—	—	—	—	4	26,000
Lake Louise	20	3,800	135	35,040	371	104,960
Lake Maria	25	2,500	—	—	430	38,500
Lake Shetek	—	—	240	55,500	400	91,500
Little Elbow	360	9,600	—	—	—	—
Maplewood	—	—	700	75,000	3,800	85,000
Mille Lacs Kathio	—	—	360	15,900	2,423	67,600
Minneopa	—	—	—	—	1,100	165,000
Nerstrand Woods	—	—	—	—	717	221,000
O. L. Kipp	329 <sup>2</sup>	64,500 <sup>2</sup>	480	96,000	520	229,000
Pine Tree	—	—	—	—	146	50,000
Rice Lake	120	12,975	200	35,000	250	44,000
St. Croix	100	2,500	540	15,000	1,980	55,000
Sakatah Lakes	—	—	80	50,000	40	25,000
Sibley	—	—	49	1,705	—	—
Traverse des Sioux	—	—	240	15,000	630	122,000
Upper Sioux Agency	—	—	—	—	320	32,000
Whitewater	—	—	150	30,000	210	42,000
Grand Total	2,925	333,200	6,463	951,945	21,486	1,846,060

<sup>1</sup>Balance of '63-'65 appropriations not obligated by 6/30/65 reapportioned for '65-'67 Biennium.

<sup>2</sup>Federal Highway Funds requested.

Proposed Transfers to Counties or Municipalities – Several state parks qualify more properly as city or county parks and are better adapted to local administration. The Governor is authorized under Laws of 1965, chapter 810 to initiate such transfers, counties or municipalities agreeing.

The state parks which fall in this category are:

	Statutory Area (acres)	Acquired Area (acres)
Monson Lake	199	199
Oronoco	105	105
Pine Tree	225	31
Pomme de Terre	364	364
Sleepy Eye Lake	32	5
Toqua Lakes	46	40
	<u>971</u>	<u>744</u>

THE COUNTIES CONCERNED OR OTHER LOCAL UNITS OF GOVERNMENT WILL BE ENCOURAGED TO ASSUME ADMINISTRATIVE RESPONSIBILITY FOR THESE PARKS. In some instances, additional land lying adjacent to the park should be acquired before it becomes unavailable or unsuitable for park purposes.

Proposed New Parks – IN A CURRENT STUDY BY THE DEPARTMENT OF CONSERVATION, 31 AREAS ARE BEING CONSIDERED FOR INCLUSION IN THE STATE PARK SYSTEM. A detailed study to establish the feasibility of the proposed Carver, Hayes Lake, Red Lake and St. Cloud vicinity parks is authorized, and will be completed for consideration by the 1967 session of the legislature. The following are the proposed areas which are subject to study to determine feasibility for park purposes.

Areas With Considerable Private Ownership, Subject to Development (Priority A.)

Park	County	Recommended Total Acreage	Initial Acquisition	Estimated Cost
Pelican Lake	St. Louis	2,000	2,000	200,000
**Carver	Carver	14,000	14,000	2,000,000
Sunrise	Chisago	3,500	3,500	150,000
Hayes Lake	Roseau	1,800	486*	20,000
Red Lake	Beltrami	2,400	370*	50,000
Lake Hanska	Brown	1,000	200	50,000
Birch Lake	Stearns & Todd	1,000		
St. Cloud Vicinity	Stearns	9,600	1,000	250,000
Stockton Creek	Winona	6,000	2,000	120,000
	Total	<u>41,800</u>	<u>23,556</u>	<u>2,840,000</u>

\*Balance of recommended land is in state ownership.

\*\*These areas have been called to the attention of the Division since the National Park Study.

There are also a number of other areas qualifying for consideration as State Parks. Each of these areas would be a minimum of 1,000 acres. Field inventory and planning are required before the final acreage is determined.

Recommended by the National Park Service, but land status and availability is in question at the present time – (Priority D.)

Northwest Angle – Lake of the Woods County  
 Reilley Lake – Itasca County  
 White Pines – Long Lake – Isanti County

Additional areas containing a considerable amount of private ownership and subject to development – (Priority B.)

Black Bay – Status depends on the proposed “Voyageurs National Park”  
 Split Rock – Split Rock Lighthouse area and vicinity  
 Lake Francis – Wright and Meeker Counties  
 Lynden Township Lakes – Stearns County  
 Union Lake – Polk County  
 Linwood Lake – Anoka County

Areas primarily in public ownership at the present time – (Priority D.)

Grassy Bay – St. Louis County  
 Norwegian Bay – St. Louis County  
 Pigeon Point Indian Memorial Park – Cook County  
 Horseshoe Bay – Cook County  
 Dyers Lake – Cook County  
 Manitou Rocks – Lake County  
 Thistledeew – Button Box – Larson – Bass Lake – Itasca County  
 Wabana Lake – Itasca County  
 Island Lake – Becker County  
 Big Portage Lake – Cass County  
 Pillager Hills – Long Lake – Cass County  
 Greer Lake – Crow Wing County  
 Washburn Lake – Cass County

State Park Land Acquisition Program Summary – TO COMPLETE A DESIRED FIVE YEAR OBJECTIVE OF 168,930 ACRES, THE DEPARTMENT OF CONSERVATION WILL SUBMIT FOR LEGISLATIVE ACTION, PLANS FOR THE ACQUISITION OF APPROXIMATELY 38,000 ACRES. PART WILL BE WITHIN EXISTING PARKS. THE BALANCE IS IN PROPOSED NEW PARKS. – (Priority A.)

State Park–Acquisition Program 1966-70

	<u>Acres</u>
Acquired land area, 6/30/64	116,991
Acquired land area, 6/30/65	122,597
Authorized by reappropriation from FY '64 and '65 but not obligated by 6/30/65	2,925
Authorized by appropriation FY '66 and '67	6,463
	<hr/>
Total authorization for biennium	9,388
Indicated realization in acquired land 6/30/67	131,985
Less areas in 6 parks proposed for transfer	744
Indicated net area 6/30/67	131,241
6/30/70 Goal	168,930
Less indicated net 6/30/67	131,240
	<hr/>
Deficit for acquisition FY's '68, '69, and '70	37,690
Acquisition Program FY's '68, '69, and '70	37,690
Area proposed for further acquisition in existing parks.	21,490
Balance proposed for acquisition in new parks and boundary expansion of existing parks.	16,200

STATE PARK DEVELOPMENT

Adhering to the basic objectives and justifications of Minnesota State Parks, individual parks should be developed in the philosophy of greatest use with the least possible damage to physical values. The occupancy areas

will be so situated that they will not encroach on or interfere with the preservation of the basic natural, historic and other primary values of the park.

New and existing parks may be developed to include campgrounds, picnic areas, bridle and bicycle trails, and swimming facilities but not necessarily all of these facilities in each park. Roads, parking areas, water supply, sanitary facilities and interpretative services are essential and will be included in all development programs.

To accomplish the development objective for state parks, a ten year program (1967-1977) for capital improvements has been presented to the Building Commission of the state legislature. The estimated cost of the proposed development program for the existing parks and such new parks as may be established by 1975 is \$16,068,500.

The five year state park development plan provides for expenditure for capital improvements, appropriated and estimated funds as follows: (Priority A.)

<u>FY '66</u>	<u>FY '67</u>	<u>FY '68</u>	<u>FY '69</u>	<u>FY '70</u>
675,725	675,725	1,628,000	1,628,000	1,630,000

#### PARK ROADS

Access roads to parks should lead from the nearest trunk highway when this is possible. Park access roads or highways passing through parks should have clearing widths and the cutting and filling adjusted to retain the scenic and aesthetic values.

A STUDY SHOULD BE MADE TO DETERMINE THE FEASIBILITY OF PROVIDING STATE AID TO THE COUNTIES FOR ROADS WHICH PROVIDE ACCESS TO PARKS COMPATIBLE WITH STATE PARK STANDARDS. (Priority A.)

#### LANDING STRIPS NEAR MAJOR PARKS

CLOSE COORDINATION IS RECOMMENDED BETWEEN VARIOUS PARK AGENCIES AND THE DEPARTMENT OF AERONAUTICS TO ESTABLISH LANDING STRIPS NEAR SELECTED PARKS. The Department of Aeronautics cannot spend money on land acquisition, but is permitted to spend up to \$25,000 per landing strip for development. Such landing strips are recommended to cope with the increasing use of non-commercial aircraft for recreation travel to main activities. (Priority A.)

Interpretative Program – Adequate interpretative services are urgently needed in all state parks to aid understanding and appreciation of the features protected. THE INTERPRETATIVE PROGRAM SHOULD BE EXPANDED IN THE FIELDS OF GEOLOGY, ARCHAEOLOGY, HISTORY AND BIOLOGY. (Priority A.)

Interpretative services must be expanded and managed by a qualified staff employee on a full-time basis. THE DEPARTMENT OF CONSERVATION RECOMMENDS THE SEASONAL PARK NATURALISTS PROGRAM BE EXPANDED TO 12 ADDITIONAL PARKS AND INTERPRETATIVE CENTERS AND LITERATURE MADE AVAILABLE THROUGHOUT THE SYSTEM BY 1970. (Priority A.)



Adequate interpretative services should be available in all parks.

## COUNTY PARK PROGRAM

Returns from a survey of county recreation areas indicates there are presently 19,073 acres available, much of which is undeveloped. The present need based on 15 acres per 1,000 population is 52,875 acres. The need by 1970 will be 56,310 acres. Therefore, we find a present shortage of 33,800 acres of recreational lands with a further shortage of 3,435 acres by 1970. To provide needed park areas, PLANNING AND PROGRAM PROMOTION TO ESTABLISH AND DEVELOP COUNTY OR MULTI-COUNTY PARK SYSTEMS IS RECOMMENDED.

Counties must be aware of these needs. THE ALLOCATION OF LAND AND WATER FUNDS WILL BE CONSIDERED FOR ACCOMPLISHING THESE OBJECTIVES. (Priority A.)

## MUNICIPAL PARKS PROGRAM

The partial returns from a survey of municipalities to determine park acreage, reported 22,463 acres in park use. The actual area may be between 25,000 and 30,000 acres. The present need based on ten acres per thousand population is 35,250 acres. The estimated need by 1970 is 37,540. The greater share of the deficit exists in larger municipalities, particularly in the Twin City Metropolitan area.

TO FULFILL THE NEEDS, THE ALLOCATION OF LAND AND WATER FUNDS WILL BE DIRECTED TOWARD ACQUISITION AND DEVELOPMENT WITHIN MUNICIPALITIES WHERE NEEDS EXIST OR TOWARD THE COUNTY AND/OR ADJACENT COUNTIES CAPABLE OF MEETING THE DEMAND. (Priority A.)

## historic sites

In recent years, Minnesotans have exhibited a deeper appreciation of their heritage than ever before. This increased appreciation is accompanied by a greater concern for the preservation, record and interpretation of the state's history.

Demands from all parts of the state will more than likely intensify rather than diminish in the future. The following actions were adopted through a ten-year plan prepared by the Minnesota Historical Society and outline areas requiring increased financial support during the next decade:

A DETAILED STUDY AND ACTION IS RECOMMENDED TO PRESERVE AND DEVELOP ONE OR MORE OUTSTANDING HISTORIC VILLAGES REMAINING IN MINNESOTA. (Priority A.)

THE HISTORICAL MARKER PROGRAM SHOULD BE EXPANDED BY FEDERAL, STATE AND LOCAL AGENCIES. Historical markers can be one of the most effective means of tourist promotion. Such a program would further the opportunities to inform tourists as well as our state citizens about the rich heritage of Minnesota. (Priority A.)

ADDITIONAL FUNDS ARE NECESSARY FOR THE FOLLOWING AREAS: To expand the Mille Lacs Indian Museum; to secure an adequate publication budget from private sources (the goal is \$100,000); to increase the Society's present small endowment of \$25,000 to a higher level; to develop the Oliver H. Kelley Farm near Elk River as needed; to develop Governor Ramsey's House into a major historic site. (Priority A.)

DEVELOPMENT OF A PROGRAM TO ADEQUATELY PRESERVE AND INTERPRET MINNESOTA'S MAJOR HISTORIC SITES. This would be accomplished by the collaboration of state and private funds. Many historic sites of great significance are in serious trouble and will be erased, if action is not taken to save them. These sites include the Lower Sioux Agency near Morton, the birthplaces of the state's two most famous authors - Sinclair Lewis at Sauk Centre and F. Scott Fitzgerald at St. Paul, and Minnesota's only remaining covered bridge, near Zumbrota, in Goodhue County. (Priority A.)

# scenic roads and parkways

AGENCIES SHOULD WORK CLOSELY WITH THE MINNESOTA DEPARTMENT OF HIGHWAYS IN ESTABLISHING A STATE-WIDE PROGRAM OF SCENIC ROADS AND PARKWAYS COMPATIBLE WITH THE NATION-WIDE PROGRAM. (See page 161 for definition of scenic roads and parkways.) (Priority A.)

The proposal for scenic roads and parkways, as shown on the following map, was prepared by the State Highway Department in cooperation with the Conservation Department and the Historical Society. Following submission to Governor Karl F. Rolvaag, it was submitted to the U. S. Bureau of Public Roads for consideration in a national scenic road and parkway study. The Highway Department estimated the cost in the neighborhood of \$85 million. The following information was adapted from this study.

In the words of Minnesota's Governor, Karl F. Rolvaag, "Minnesota welcomes this proposal which gives real promise of enhancing our recreational assets and potential."

From the wealth of scenic and recreational attractions of Minnesota, it was difficult to limit the mileage of scenic roads and parkways. But by careful selection, 18 routes were chosen; total mileage 1,722. This consists of 1,654 miles of rural routes and 68 miles of urban routes. These routes should be considered as a minimum of the state's scenic roads and parkways.

Because of the short time provided for the study, it was not possible to contact representatives from all the counties and cities. Therefore, some scenic roadways may have been overlooked that should be included. ANOTHER STUDY SHOULD BE MADE WHEN SUFFICIENT TIME CAN BE ALLOWED TO STUDY ALL ROUTES IN DETAIL.

The majority of the routes are over existing highways. In the limited time available, a thorough evaluation of the entire length of each route was not made. It is possible that scattered short sections of some routes would offer greater scenic and recreational experiences, if the alignment were shifted slightly.

In addition to its consideration in this study, a portion of the St. Croix has also been included for consideration in a National Wild River Program. If highway segments adjacent to this river cannot be developed in a manner compatible with the wild river status, those parts should be eliminated as part of the scenic road program. (It is possible that both the Scenic Road and Wild River objectives can be compatible.) Any Minnesota route which may receive consideration as a National Parkway will not be affected by the state Scenic Roads and Parkways Program.

As well as providing scenic driving pleasure, the study is designed to provide facilities such as scenic overlooks, picnic areas, rest stops, campsites, historic, cultural or recreational sites, boat launching facilities and trails in sufficient quantity to accommodate the increasing numbers of users. The Minnesota Study has located existing complementary facilities along these highways. The approximate locations for additional future facilities were also determined.

The following agencies were consulted in selecting the routes:

- Minnesota Department of Conservation
- Minnesota Historical Society
- United States Forest Service
- City of Minneapolis - Engineering Department and Park Commission
- City of St. Paul - Engineering Department and Planning Board
- City of Duluth - Engineering Department
- City of Bloomington - Engineering Department
- Hennepin County - Park Reserve District

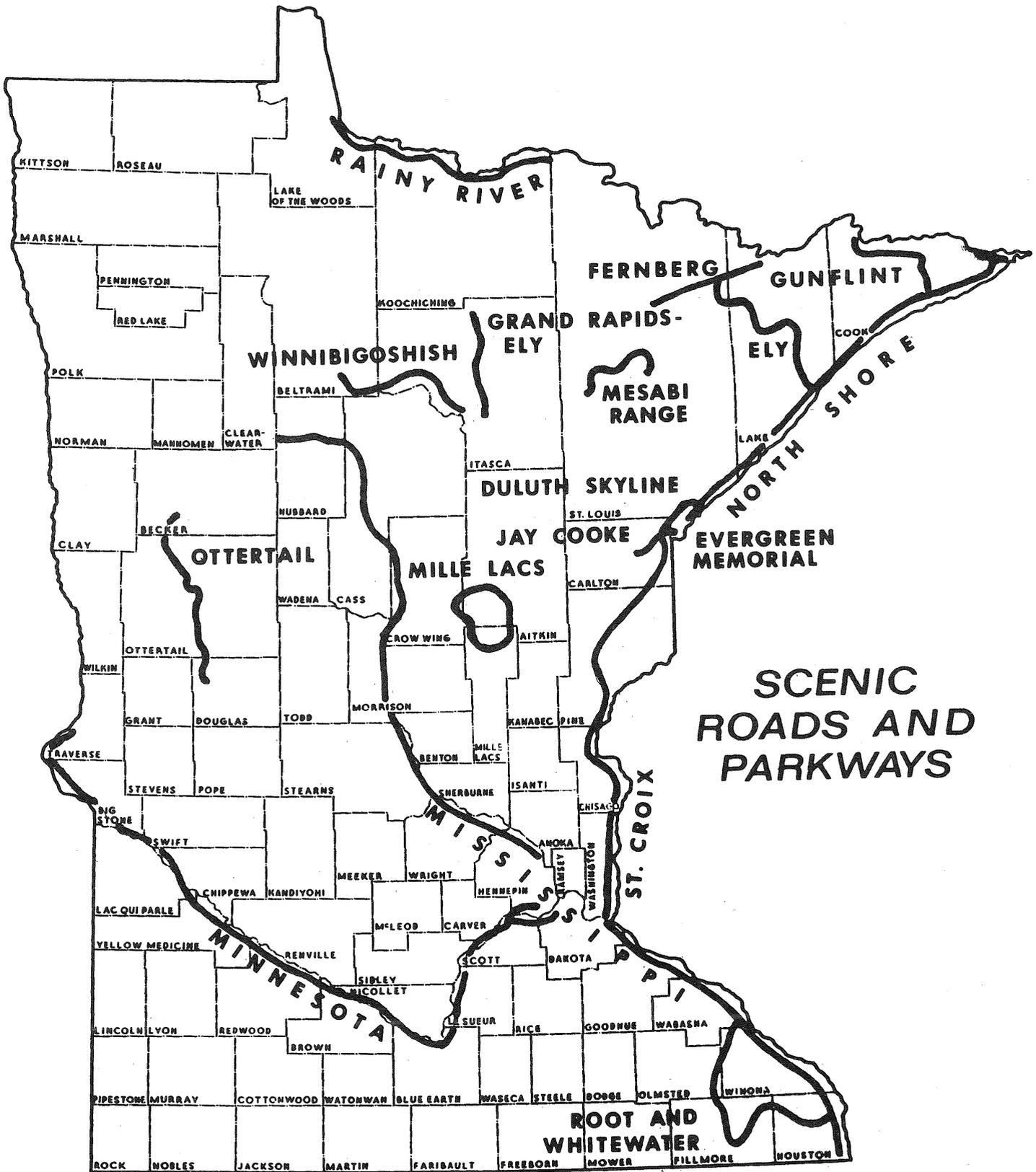
The priorities for the routes were established by giving primary emphasis to public demand and quality of the route. The proposed routes are listed in the order of their priority:

**SCENIC ROAD AND PARKWAY STUDY**  
**PRIORITY OF ROUTES**

<u>Name of Route</u>	<u>Route No.</u>	<u>Length in Miles</u>			<u>Priority Number</u>
		<u>Scenic Road</u>	<u>Parkway*</u>	<u>Total</u>	
North Shore Drive	4	20	134	154	1
Minnesota River Scenic Road	11	249	65	314	2
Mississippi River Scenic Drive	1-1 to 1-5	141	—	141	3
Mississippi River Scenic Drive	1-6 to 1-11	221	—	221	4
Metropolitan Scenic Drive	18	8	31	39	5
St. Croix Valley Scenic Drive	2	73	46	119	6
Root & Whitewater River Drive	14	103	—	103	7
Mille Lacs Lake Circle	10	60	—	60	8
Duluth Skyline Drive	13	29	—	29	9
Jay Cooke Scenic Road	12	12	—	12	10
Evergreen Memorial Drive	3	40	—	49	11
Rainy River Scenic Drive	15	95	—	95	12
Otter Tail Lake Drive	9	88	—	88	13
Lake Winnibigoshish Drive	16	61	—	61	14
Mesabi Range Drive	17	26	—	26	15
Grand Rapids Effie Scenic Drive	8	47	—	47	16
Ely Scenic Drive	6	88	—	88	17
Gunflint Trail	5	56	—	56	18
Fernberg Road	7	20	—	20	19
Totals		1,446	276	1,722	

\*All roads are scenic roads but on parkways commercial vehicles are prohibited.

Although not part of the parkway program, SEEDING OR PLANTING SELECTED SECTIONS OF THE ROAD-SIDE TO NATIVE FLOWERING PLANTS WOULD GREATLY ENHANCE THEIR BEAUTY. Several kinds of plants are both beneficial as soil binders at road cuts and are attractive as flowers. We refer especially to the bird's-foot trefoil lotus (*Lotus corniculatus*) and European vetch (*Vicia cracca*). (Priority A.)



In order to preserve the scenic qualities of these roads, IT IS NECESSARY TO HAVE CONTROL OF THE LAND ALONG THE CORRIDOR THROUGH WHICH THE SCENIC ROAD OR PARKWAY PASSES. Section 319, Title 21, U. S. Highway Code, Minnesota, authorizes the state to use up to three percent of the ABC (Primary, Secondary and Urban Road Improvement) Funds for purchase of scenic easement. Counties and municipalities within the state have the authority to control all lands by zoning. (Priority A.)

IF A SCENIC ROAD AND PARKWAY PROGRAM IS ESTABLISHED, IT WOULD BE NECESSARY FOR THE STATE AND LOCAL GOVERNMENTAL UNITS TO HAVE ADDITIONAL AUTHORITY FOR LAND USE CONTROL BY ENACTING LAWS FOR THIS PURPOSE. It would be desirable to have irrevocable corridor control through permanent scenic easements. This is necessary because the nature of zoning makes corridor control possible only in isolated locations. In this study, it was assumed that all corridor control would be obtained by scenic easements obtained for one-sixth of the acquisition cost. (Priority A.)

COMPLEMENTARY FACILITIES SHOULD BE WITHIN NATIONAL STANDARDS IN ORDER FOR THE TOURISTS TO KNOW WHAT MINIMUM FACILITIES THEY WILL FIND. (Priority A.)

UNIFORM SIGNS SHOULD BE USED FOR IDENTIFYING FACILITIES. These signs should be distinctive from a distance to inform the traveling public of the exact location of each facility. A SET OF GEOMETRIC STANDARDS SHOULD BE DEVELOPED FOR USE ON SCENIC ROADS AND PARKWAYS. This type of road diverts the driver's attention and necessitates the construction of wide driving lanes and shoulders even on routes with low traffic. (Priority A.)

COMMERCIAL VEHICLES SHOULD BE PROHIBITED ON PARKWAYS, except those necessary for service to developments adjacent to the parkway. The commercial vehicles would be required to gain access and egress from the parkway at the closest connection to the development being served.

Conclusion - Because of the attention the program would receive, the routes included would receive high concentrations of recreational public use which would increase public demand for developing the recreation areas along the routes. Along with public demand would come public support for financing the cost of these developments. The concentration of the recreationist along these routes would give private enterprise the impetus to provide campgrounds, swimming beaches, boats, ski lifts and numerous other recreational facilities.

## canoeing and boating routes

Minnesota has many rivers and streams ideal for canoeing and other types of boating, but, as stated in the "Need Section," most are lying dormant and forgotten by all but the dedicated few who know the secret of the fine recreation they offer. A SYSTEM OF APPROXIMATELY 2,544 MILES OF RIVERS AND STREAMS IS PROPOSED FOR STUDY AS POSSIBLE CANOEING AND RECREATION BOATING RIVERS AND DESIGNATED AS SUCH. (In this section these routes are popularly referred to as "Canoe Route Rivers.")

The resulting benefits, both in pleasure from using the facilities and the economic boost to the areas along the routes will soon outweigh the investment by both public and private agencies. Rivers and streams announced as canoe route rivers with established accesses and overnight camping areas will see a steady influx of canoes, flat-boats and other water-oriented structures to their shores.

Legislation - Four rivers, the St. Croix, Littlefork, Big Fork and the Minnesota were designated by the 1963 Minnesota Legislature as official canoe route rivers under Chapter 386. By this law, the Commissioner of Conservation has the authority to mark these routes and to enter into agreement with agencies and private landowners along the routes for development of campsites. Although there were no funds appropriated, it was a start. Further legislation, M.S. Section 97.48, gives the Commissioner of Conservation the authority to establish public access to rivers and streams.

Action was again taken by the 1965 legislature when \$50,000 was appropriated to the Department of Conservation for a River Study as part of the Natural Resources Act. This will be a study of rivers and streams with outstanding recreational potential and scenic qualities. The U. S. Geological Survey will assist in making detailed analyses of rivers selected by the Department of Conservation and will be concerned with technical mapping and inventory. The Department of Conservation will employ consultants to study the recreation use of rivers and streams, responsibilities of various units of government and private enterprise, land ownership, recommendations for acquisition, development, maintenance, zoning and possible grants-in-aid. The study will determine navigability, attractiveness, recreational potential, season of use, safety and other factors.

RECOMMENDATION FOR NEEDED LEGISLATION SHOULD BE DEFERRED UNTIL COMPLETION OF THE RIVERS STUDY.

Major Rivers – The following rivers have been selected by the Department of Conservation for study. Priorities have been assigned, but are subject to revision. (See following map, page 313).

1. Existing Canoe Route Rivers* (Priority A.) Designated by 1963 Legislature	<u>Miles</u>	2. Proposed Canoe Route Rivers** (Priority B)	<u>Miles</u>	3. Potential Canoe Route Rivers*** (Priority C)	<u>Miles</u>
St. Croix	130	Blue Earth	48	Basswood	21
Big Fork	90	Cannon	54	Brule	36
Littlefork	69	Crow Wing	63	Cloquet	60
Minnesota	210	Des Moines	87	Cottonwood	93
	<hr/>	Kettle	54	Crow	138
Total	499	Mississippi	268	Otter Tail	30
		Root	126	Pigeon	33
		Rum	60	Pine	16
		Snake	54	Rainy	84
		Willow	48	Vermillion (Dakota Co.)	24
		Zumbro	78	Red Lake	108
		Total	<hr/>	Red River of the North	195
			940	Redwood	63
				St. Louis	78
				Savanna	12
				Vermilion (St. Louis)	18
				Wild Rice	96
				Total	<hr/>
Grand Total – 2,544 Miles					1,105

\*Top priority is given to these rivers that were given legal canoe route designation by the 1963 Minnesota legislature.

\*\*A Number Two priority has been given to these rivers for which active interest has already been shown by local groups and information gathered on various segments. Further investigation will be made by the present Rivers Study.

\*\*\*These outstanding rivers should be given detailed study at a later date.

Wild Rivers – AS PART OF THE STUDY, CONSIDERATION SHOULD BE GIVEN TO RIVERS WITH EXCEPTIONAL SCENIC QUALITIES, BUT DO NOT NECESSARILY POSSESS HIGH BOATABILITY VALUES. The Big Fork, Brule, Pigeon, St. Croix and Cloquet Rivers are fine examples. Portions of these rivers can be designated for boating while other sections can be designated strictly for their wild, scenic qualities and preserved as such.

Considerable interest has been expressed by both Minnesota and Ontario officials to designate the Pigeon River along the Minnesota-Canadian border as an "International Wild River." Cooperation would be given from both Minnesota and Ontario to preserve this superb border river and establish the necessary facilities for its enjoyment. The same possibilities exist for the Rainy River also along the Minnesota-Canadian border. As stated earlier in this report, the St. Croix is being considered for National Wild River status. IF THE FEDERAL GOVERNMENT DOES NOT SEE FIT TO GIVE THE ST. CROIX NATIONAL RIVER STATUS, THE STATE SHOULD TAKE QUICK ACTION TO PRESERVE THIS RIVER. (Priority A.)

Acquisition and Development – STANDARDS SHOULD BE DEVELOPED FOR DESIGNATING RIVERS AND STREAMS AS CANOE ROUTE RIVERS AND WILD RIVERS. A DEVELOPMENT PROGRAM SHOULD BE COORDINATED WITH FEDERAL, STATE AND LOCAL GOVERNMENTAL AGENCIES AS WELL AS THE PRIVATE SECTOR. (Priority A.)

Detailed information should be gathered on existing boating services in towns along the routes, access and launching sites, campgrounds, portages and hiking trails. Campground development should be limited and of the wilderness type. Campsites should be developed on the basis of the time required to travel portions of the river, usually 15 to 20 miles apart or subsequently between.

Key parks along the rivers should have access to the rivers where feasible. In many cases, access should be established by the state, county or municipal parks. Limited overnight stops should be provided for boaters only.

Detailed zoning should be determined along routes or correlated with flood plains.

STATE FUNDS SHOULD BE APPROPRIATED EACH BIENNIUM FOR THE NEXT TEN YEARS TO ASSIST IN THE DEVELOPMENT OF THE DESIGNATED RIVERS AND STREAMS. (Priority A.)

Publicity – As stated earlier, people do not realize the potential of our rivers and streams or where various types of canoeing and boating are feasible. ONE WAY TO MEET THE NEED FOR INFORMATION IS THROUGH A CENTRALIZED, COORDINATED “CLEARING HOUSE” POSSIBLY WITHIN THE STATE GOVERNMENT WHERE INFORMATION WOULD BE MADE READILY AVAILABLE TO THE PUBLIC. Points of interest including history, wildlife and plant life along the routes, available services including guides and other data should be gathered and made available to make the trip more interesting and enjoyable. Navigational charts should also be made available to the public.

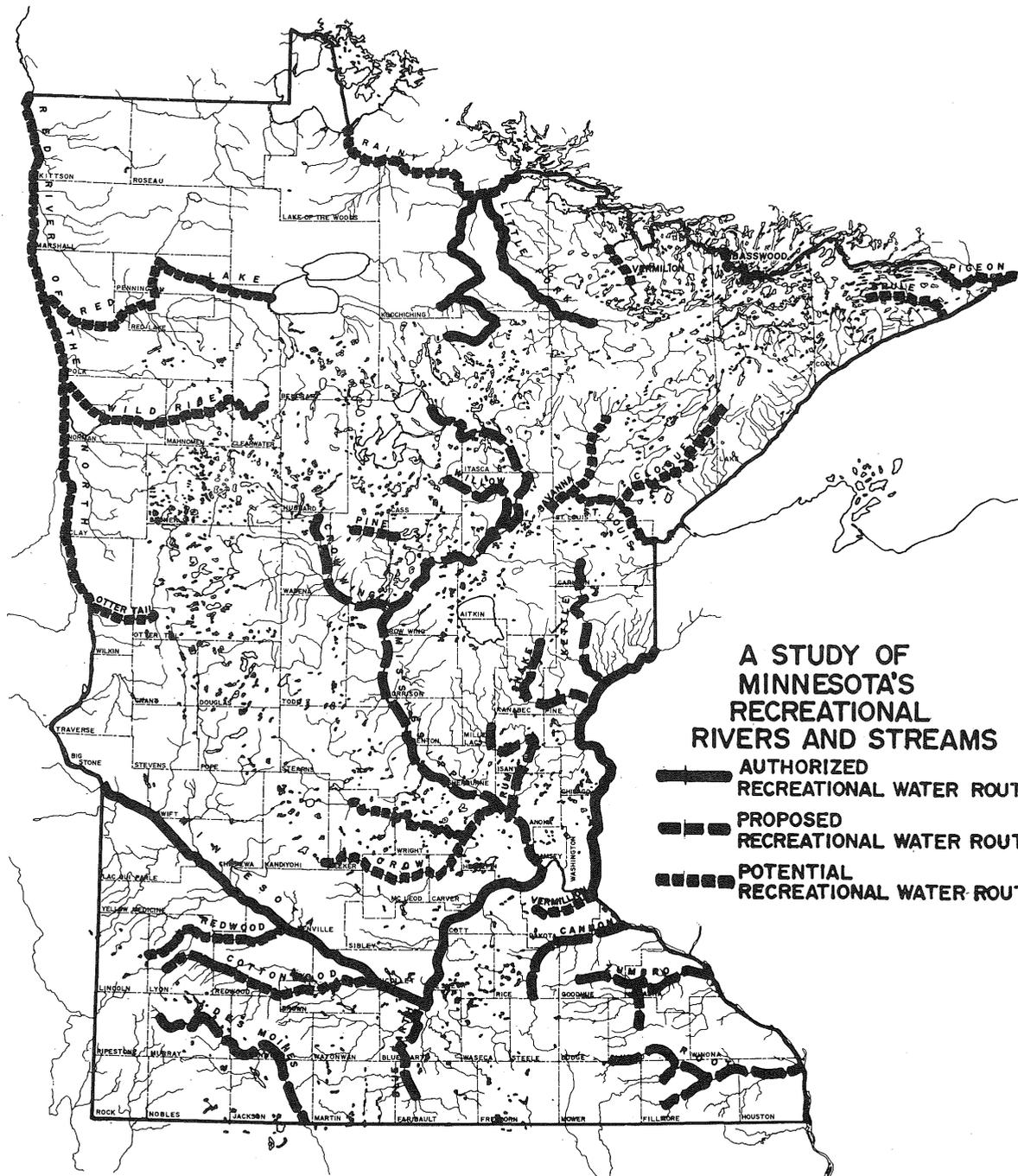
At certain seasons, parts or all of many rivers are not suitable for recreational water travel due to fluctuating water levels. Through a central clearing house, navigational data would be available through the regular news media. Included in regular news releases would be gaging station readings taken throughout the state and coordinated by this agency such as the way ski reports are now presented. The preparation of a navigational booklet is imperative for major canoeing and boating routes.

Participation – LOCAL UNITS OF GOVERNMENT SHOULD MAINTAIN ROUTES OF REGIONAL IMPORTANCE. The role of the federal government is that of maintaining and interpreting routes of nation-wide importance within or adjacent to federally owned lands. (Priority A.)

The state should assume the role of the coordinator in determining the classification of rivers, acquisition necessary and the type of development and standards essential to a well-balanced river program in Minnesota.

Summary – Since lakes are handy, available and suited to almost all situations, they are of primary importance in the recreation picture in Minnesota. As lake use increases particularly around the urban areas and as certain forms of water use create competition, other bodies of water must be sought. Smaller boats, and particularly canoes, can easily travel on relatively shallow water and are safer on more sheltered bodies of water, such as rivers and streams.

With passage of the Minnesota Natural Resources Act of 1963, the creation of Authorized Canoe Routes in the same session, coupled with increased action by state and federal agencies, and private individuals and groups, new attention is focusing on the rivers and streams in Minnesota.



# bicycling, hiking and horseback riding trails

The need and opportunity exist now to develop a system of trails – bicycling, horseback riding and hiking alike. A trails system should be developed in such a manner that almost everyone in our state would live within an hour, or less, of some part of the trails system. A few outstanding trail possibilities are listed below:

Height of Land Trail – THE HEIGHT OF LAND TRAIL PROPOSAL APPEARS FEASIBLE AND IS RECOMMENDED FOR FURTHER CONSIDERATION. The trail would follow the divide of three watersheds, the Superior-Mississippi, the Superior-Hudson Bay and Hudson Bay-Mississippi. The total length involves 735 miles of hiking over rugged topography of northern Minnesota. Requirements for its establishment include access to lands (much of the land is already in state and federal forest areas), and a well-planned publicity program. Since the proposed trail runs through much state and federally owned property (40 percent or approximately 295 miles), development could start here.

## TOTAL MILES OF HEIGHT OF LAND TRAIL

<u>Ownership</u>	<u>Miles</u>	<u>Percentage</u>
Outside forest areas	440	60
National Forests	175	24
State forests	120	16
Total	735	100

A number of small trails can be extended as feeders to the major trail. There are many access points from the main roads already in existence. There are also a number of wayside recreation areas, parks, forests, lookout towers, and other points of interest within hiking distance of the main trail. If the trail were extended along the international Pigeon River flowage, the Grand Portage Indian Reservation and Grand Portage National Monument would be included. (Priority A.)

Minnesota River Valley Hiking, Bicycling and Horseback Trails – A preliminary report was prepared for the Minnesota Legislative Interim Commission on the Minnesota River. One of the actions this report proposed was for the establishment of hiking, biking and bridle trails along this river. (Priority B.)

Trails of all types could tie together scenic views, historic sites, parks, forests and other interesting areas along the river. Trails could be a part of the proposed Minnesota River Scenic Road or the proposed Minnesota River Valley State Forest. Along certain stretches of the river and possibly its whole 332 mile length, special trails should be provided for biking. The most logical spot may be on the parkway backslopes. Hiking trails could be the same as the bike trails except where a steep climb might take the hiker to a special historic spot, a cool spring or an ideal camping spot. In many cases, an easement is all that is needed.

Bridle trails take a different type of surface than bicycling or hiking and would require a separate right-of-way. Bridle trails may tie in well with “dude” ranches and vacation farms that are opening in rural areas.

North Shore Parkway Hiking Trail – ALONG THE NORTH SHORE WITH ITS POLLEN-FREE ATMOSPHERE AND UNIQUE FEATURES, WOULD BE AN IDEAL PLACE FOR A SYSTEM OF TRAILS WHETHER THEY BE HIKING, BICYCLING, BRIDLE OR A COMBINATION. Nearly the entire shore has numerous lava flows interspersed with dikes and sills of igneous rocks. Away from the shore, the land slopes steeply to a high divide rising in places over 2,000 feet.

The State of Minnesota administers thirteen state park areas and two state forests along the route from Duluth to the Canadian border. Publicly-owned shoreline amounts to 19 miles, roughly ten percent of Minnesota’s mainland and islands of Lake Superior shoreline. There are numerous picnic, camp and rest areas along the entire route and other points of interest. THERE IS A GREAT POTENTIAL FOR DEVELOPING A SYSTEM OF TRAILS ALONG THE ENTIRE NORTH SHORE IN CONJUNCTION WITH EXISTING TRAILS. (Priority A.)

Trail Types – THERE SHOULD BE A WIDE VARIETY OF TRAILS – long trails requiring campsites, short trails within easy access of urban centers and trails in or skirting urban areas. The Grand Portage of the St. Louis River and the Red River Trail are good examples of historic trails important in the settling of Minnesota. Trails designed with the motorist in mind should also be considered. These would give Minnesota a new dimension in pleasure driving.

Ski resorts should consider the development and promotion of touring trails. Thought is being given to the possibility of cross-country skiing in parks. Some suggestions for action are as follows (these were adapted from a report from the Ski Touring Council of New York): Possible routes should be scouted and point-to-point trips determined to utilize existing foot trails, unplowed roads or fields; trails should be plainly marked above high snow level; existing shelters in parks could be winterized and stocked with firewood for cross-country skiers.

VARIOUS RAILROAD RIGHT-OF-WAYS ARE BEING ABANDONED FROM TIME TO TIME. MANY ARE IDEAL FOR TRAIL PURPOSES AND WOULD REQUIRE LITTLE DEVELOPMENT. Consideration should be given to the possibilities of acquiring these right-of-ways for trail purposes. (Priority A.)

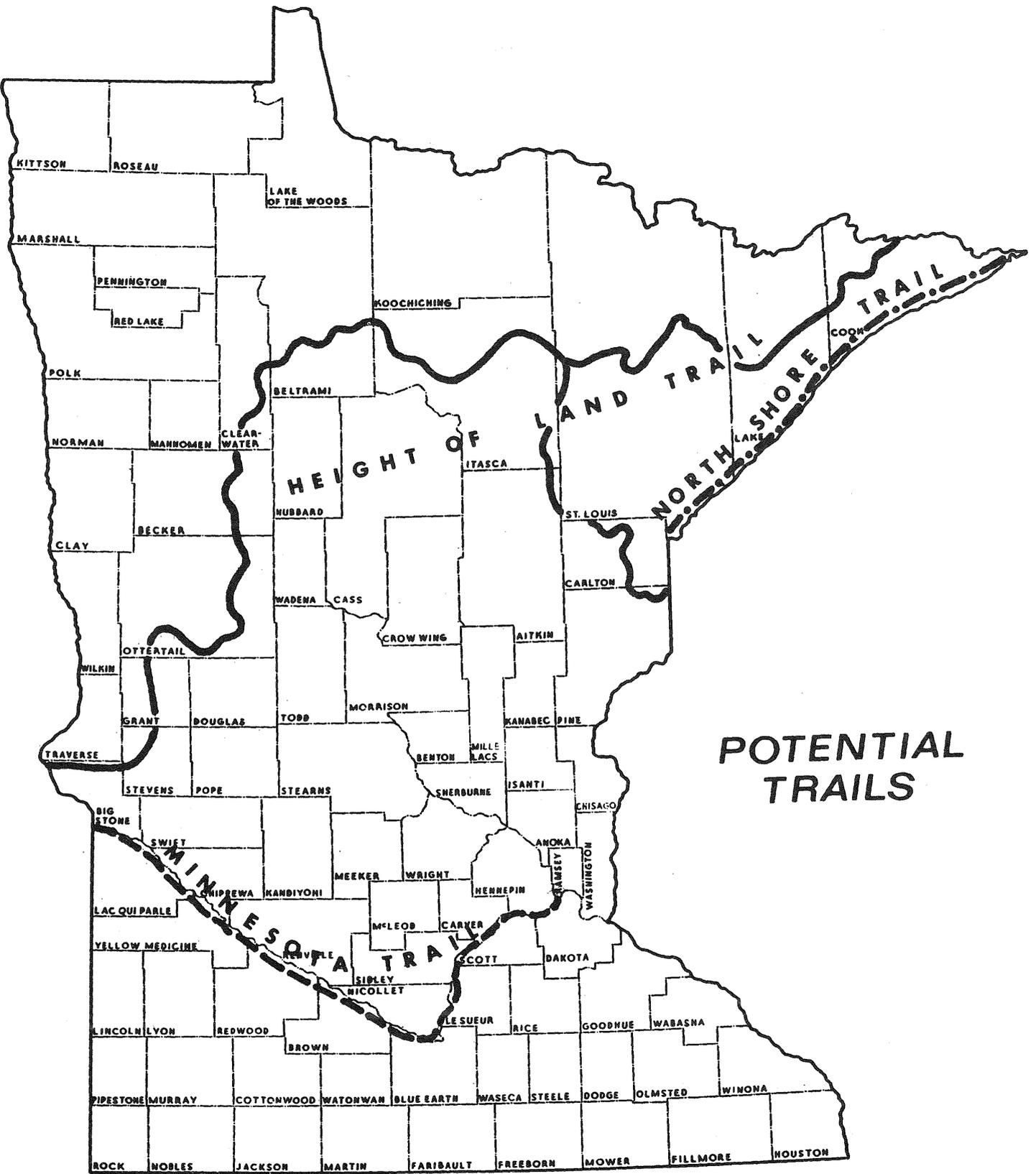
Publicity – IT IS NECESSARY THAT THE TRAILS BE WELL-KNOWN AND MARKED. Brochures, pamphlets and maps should be available. (Priority A.)

Participation – The role of private groups in providing trails would involve providing or helping to gain legislative support for laws and appropriations for establishing and developing trails. With proper coordination, many private groups could be used to develop and maintain the trails in much the same way the Appalachian Trail is presently maintained.

The role of the state and local governments in providing trails would be in the expansion of existing trails and establishing and developing new ones such as along the scenic roads described in the "Scenic Roads and Parkways" section. The state is also a logical unit of government to coordinate trail developments. It is also the logical unit to provide standards of development and a uniform system of marking. The state's role should involve the development and carrying out of publicity programs. Trails of state-wide significance should be constructed and maintained by the state with federal assistance where feasible.

Local units of government could construct and maintain trails of local importance. Crow Wing County, for example, is sponsoring a horseback riding trail to be constructed and maintained by that county. (Priority A.)

The role of the federal government in providing trails would be the expansion of trails within their areas and cooperating with other agencies in establishing long trails extending over federal, state, local subdivision and private areas. The Height of Land Trail could be of nation-wide importance and may logically be part of the federal responsibility.



**POTENTIAL TRAILS**

# wayside rest areas

THE WAYSIDE REST PROGRAM SHOULD BE EXPANDED THROUGHOUT THE STATE IN ORDER TO REACH THE DESIRED INTERVAL DISTRIBUTION OF A WAYSIDE REST EVERY 35 TO 50 MILES.

The Highway Department is presently making a preliminary study of needed expansion and development of highway waysides. During the summer of 1965, with the aid of National Youth Corps personnel, construction of new areas and improvements of existing areas have been made.

THERE IS A NEED FOR FURTHER STUDY OF WAYSIDE OR OVERNIGHT CAMPING AREAS ON THE ENTIRE STATE HIGHWAY SYSTEM. (Priority A.)

# forests

The 19,047,400 acres of forest land in Minnesota share heavily in the total use by outdoor recreationists in many areas of activity. The camper, hiker, hunter, fisherman and nature lover alike visit the solitude of the state's public and private forest land. From these forest lands will come much of the area to support the recreational demand by 1975 and the year 2000.

Over 6,750,000 acres of the state's 12,500,000 acres of publicly-owned lands are in designated federal, state and county administered forests and 2,750,000 acres are tax forfeited land outside of county forests. The remainder is under the jurisdiction of several state and federal agencies.

To meet the immediate and future demands, we need to know our existing and potential supply of useful recreational land. As the demand for recreational land increases, more forest land will be diverted from its primary purpose of wood production to fill this need. A well-coordinated land use plan will supply this information.

THE IMMEDIATE OBJECTIVE IS TO COMPLETE THE LAND USE INVENTORY ON FOREST LANDS WHICH ARE NOT NOW COVERED BY A LAND USE PLAN. (Priority A.)

LAND USE INVENTORIES, STUDIES AND PLANNING WILL FOLLOW GUIDELINES, CRITERIA, DEFINITIONS AND STANDARDS JOINTLY DEVELOPED BY THE AGENCIES HAVING JURISDICTIONAL CONTROL OF THE FOREST LAND. THE STATE PLANNING AGENCY AND THE DEPARTMENT OF CONSERVATION WILL COORDINATE THE DEVELOPMENT OF THESE GUIDELINES. (Priority A.)

THE COUNTIES IN THEIR PROCESS OF PLANNING SHOULD INCLUDE LAND USE PLANNING ON PRIVATELY OWNED FOREST LAND, USING THE STATE GUIDELINES. (Priority A.)

There is an immediate need for land use information in the following areas. These areas should receive high priority:

1. INVENTORY OF PUBLICLY-OWNED WATERFRONT LAND TO DETERMINE THE AREA OF SHORELINE HAVING ACCESS OR DEVELOPMENT POTENTIAL. (Priority A.)

2. THE EXISTING AND POTENTIAL USE OF WOODLAND TRAILS FOR HIKING AND HORSEBACK RIDING. (Priority A.)

3. DETERMINE THE POTENTIAL DEVELOPMENTAL SITES WHICH ARE INDICATED FOR FUTURE NEED, BUT ARE NOW NOT SUITED FOR THIS PURPOSE BECAUSE OF THE CONDITION OF VEGETATIVE COVER. THE AGENCY WITH JURISDICTION WILL BE URGED TO CONDITION THESE SITES BY REFORESTATION AND STAND IMPROVEMENT CUTTING SO THAT THE SITES WILL BE READY FOR USE WHEN NEEDED. (Priority B.)

4. DETERMINE THE CONDITION OF WATERFRONT AND ROADSIDE ZONES AND DEVELOP STANDARDS FOR DEFINING LIMITS AND REGULATION OF USE TO ENHANCE THE AESTHETIC VALUES IN THE ZONES. (Priority A.)

5. COMPLETE THE AUTHORIZED STUDY OF THE MEMORIAL HARDWOOD FOREST AREA AND CORRELATE THE PROJECT WITH THE RECREATIONAL NEEDS IN THE SOUTHEASTERN MINNESOTA COUNTIES. (Priority A.)

6. THE DEPARTMENT OF CONSERVATION AND THE MINNESOTA RIVER COUNTIES PREPARING LAND USE PLANS, SHOULD IMPLEMENT A COORDINATED STUDY TO ESTABLISH NEED. JUSTIFY THE PROPOSED MINNESOTA RIVER VALLEY STATE FOREST AND DETERMINE ITS EXTENT. (Priority A.)

7. DETERMINE THE PRIORITIES IN TERMS OF DESIRED AND POTENTIAL MAXIMUM USE OF THE PUBLICLY-OWNED FOREST LAND UNDER MULTIPLE USE PRINCIPLES. In general, forest land must be made productive in wood to supply the state's growing industrial needs. On the other hand, where needed aesthetic and recreational values are present, such uses will become primary, and timber utilization a secondary use, permitted under such controls as will enhance the aesthetic and recreational use in the long run. (Priority B.)

NATIONAL FORESTS

The land use and recreational development plans for the Chippewa and Superior National Forests are complete and are periodically revised to meet changing conditions. These plans are available at the Supervisor's Office or the several Ranger District Offices of the two forests.

Boundary Waters Canoe Area - Superior National Forest - To help remedy the campsite deterioration and vegetative losses resulting from recreational use in the Boundary Waters Canoe Area, CAMPSITES WHICH HAVE DETERIORATED SEVERELY SHOULD BE REMOVED FROM USE TEMPORARILY ALLOWING NATURAL PROCESSES TO RECOVER THE LOSS. Much should be done in getting more information to canoeists on proper use of this delicate area. The most heavily used sites are at the entrance to the canoe country. WILDERNESS VISITORS SHOULD BE DISPERSED TO LESS USED AREAS.

CONTINUED RESEARCH IS NEEDED ORIENTED PARTICULARLY TO LONG-TERM REQUIREMENTS OF DEVELOPING AND MAINTAINING A PRIMITIVE TYPE ENVIRONMENT AND TO WOOD USE TECHNOLOGY. A stepped-up comprehensive, coordinated approach including efforts of the Forest Service, U.S. Department of Agriculture, the University of Minnesota and privately endowed Wilderness Research Foundations would be helpful. (Priority A.)

STATE FORESTS

The 54 State Forests have land use and recreational development plans. These are available at the Division of Forestry Office or at the several regional and area offices.

State forest recreational development plans for the five-year period (1965-1970) will be taken from the Division ten-year development plans which are as follows:

New Campgrounds - The selection of areas for campgrounds will receive careful attention to avoid unnecessary competition with private camping businesses, and to prevent duplication of facilities provided by other public agencies: 50% (Priority A) 50% (Priority B)

THE FIVE-YEAR PROGRAM OBJECTIVE IS TO CONSTRUCT ONE-HALF OF THE UNITS IN THE FOLLOWING LIST OF PLANNED NEW UNITS:

<u>County</u>	<u>Name</u>	<u>Number of Units</u>	<u>Forest</u>
Aitkin	Big Sandy Lake	30	Savanna
Aitkin	Hay Lake	20	Savanna
Aitkin	Willow River	50	Hill River
Carlton	Nickerson	25	Nemadji
Cass	Birch Lake	20	Foot Hills
Cass	Pine Mountain Lake	20	Foot Hills

<u>County</u>	<u>Name</u>	<u>Number of Units</u>	<u>Forest</u>
Cass	Long Lake	50	Pillsbury
Cass	Rock Lake	30	Pillsbury
Cass	Ten Mile Lake	20	Foot Hills
Cook	McFarland Lake	30	Grand Portage
Crow Wing	Black Bear Lake	50	Crow Wing
Crow Wing	Mississippi River	50	Crow Wing
Hubbard	Waboose Lake	50	Paul Bunyan
Hubbard	West Crooked Lake	20	Paul Bunyan
Itasca	Lost Lake	25	Geo. Washington
Itasca	Long Lake	25	Big Fork
Koochiching	Gronwolt Landing (Big Fork River Sec. 16-65-26)	5	Koochiching
Koochiching	Johnson's Landing (Big Fork River Sec. 28-65-26)	5	Koochiching
Koochiching	Sturgeon River Landing (Jct. Sturgeon Rvr. & Big Fork River Sec. 29-155-25)	5	Pine Island
Lake	Eckbeck	30	Finland
Lake	Finland	30	Finland
Lake of the Woods	Blueberry Hill	10	Beltrami Island
Pine	Chengwatana	30	Chengwatana
St. Louis	Bear Island Lake	30	Bear Island
St. Louis	Birch Lake	30	Bear Island
St. Louis	Cotton	30	Presently not in forest, but near Cloquet Valley
St. Louis	Sullivan Bay	30	Kabetogama
S. E. Minnesota	12 sites Minnesota Hardwood Forest to be determined	240	Minnesota Memorial Hardwood

Expansion of Present Campgrounds – IT IS RECOMMENDED THAT NINE OF THE PRESENT STATE FOREST CAMPGROUNDS BE EXPANDED OR IMPROVED BY 1967. (Priority A.) The proposed forest campgrounds slated for expansion are listed below, cut-off date June 30, 1964: (Priority A.)

<u>County</u>	<u>Name of Campground</u>	<u>Existing Units</u>	<u>Units to be Added</u>	<u>Forest</u>
Cass	Washburn Lake	3	10	Land O'Lakes
Crow Wing	Greer Lake	15	30	Crow Wing
Crow Wing	Lougee Lake	31	50	Crow Wing
Hubbard	Bass Lake	0	10	Paul Bunyan
Hubbard	Gulch Lake	0	4	Paul Bunyan
Hubbard	Mantrap Lake	0	20	Paul Bunyan
Roseau	Bemis Hill	4	15	Beltrami Island
St. Louis	Wakemup Bay	19	20	Kabetogama
St. Louis	Woodenfrog	31	40	Kabetogama

# natural areas

As stated earlier, major concern thus far has been for larger areas which merit preservation due to their outstanding recreational and natural value. Many small areas just as desirable from a natural standpoint have fallen by the wayside. These areas provide a home for many living things that would otherwise be destroyed in the shuffle of civilization.

Recognizing the need for a coordinated program for the preservation of natural areas, the following recommendations are made:

THE JURISDICTION AND RESPONSIBILITY OF VARIOUS AGENCIES INVOLVED IN A SYSTEM OF NATURAL AREAS SHOULD BE DETERMINED. VARIOUS AGENCIES SHOULD BE CONSTANTLY ALERT TO THE PRESENCE OF NATURAL AREAS WHEN PLANNING LAND USE. (Priority A.)

THE PROBLEMS OF FINANCING AND ADMINISTERING A SYSTEM OF NATURAL AREAS SHOULD BE CONSIDERED AND A DECISION REACHED AS TO THE AGENCY OR AGENCIES RESPONSIBLE. (Priority A.)

Through inventory data gathered by the Academy of Science of potential nature preserves, the Academy has recommended a total of 220,132 acres, including prairies, prairie-marsh associations, mature hardwood types and other scientific and primeval areas. Of this acreage, 59,849 acres are within federal areas, 18,125 acres on state land, 1,218 acres are on county owned land and 187 acres owned and administered by municipalities and schools. THERE ARE 41,113 ACRES OF POTENTIAL NATURE PRESERVES ON PRIVATE LAND WHICH SHOULD BE CONSIDERED IN THE TOTAL PROGRAM. (Priority A.)

# water resources

In addition to basic domestic and industrial importance, the water resources of the state are of primary recreational significance. The resource has been the subject of many studies and projects over the years. Today, state and federal legislation has taken a renewed and expanded interest in water conservation and management.

The Natural Resource Acts of 1963 and 1965 have authorized considerable money for study and control of water influences. The Federal Government under several Flood Control Acts, Rivers and Harbors Acts, the Watershed Protection and Flood Prevention Act of 1964 (Public Law 566), and the recent Land and Water Conservation Act of 1965 (Public Law 88-578) has authorized a wide range of studies and financing of projects. Proposed projects and action programs of recreational significance are discussed below:

## HYDROLOGIC RESEARCH

RESEARCH AND EXPERIMENTATION IN CERTAIN PHASES OF HYDROLOGY, RELATED SPECIFICALLY TO CONDITIONS FOUND IN MINNESOTA ARE RECOMMENDED. The most urgent problem requiring this approach is that of ground water recharge, or the replenishment of water in aquifers by injection wells or other means. Some preliminary investigations of this problem have been made in the Twin Cities area where the depletion of ground water resources is most critical. (Priority A.)

## RIVER CONTROL

Studies – Currently the Mississippi, Minnesota, Big Sioux, Root, Rock and Red rivers are under study for flood control purposes by the U. S. Corps of Engineers. Under consideration for flood control study are the St. Croix, White-water, Snake, St. Louis and Cannon rivers. Initiation of such studies is dependent on allocation of funds. Future emphasis should also include the tributary streams under Public Law 566 studies. (Priority A.)

IT IS RECOMMENDED THAT FURTHER STUDY BE MADE OF THE POSSIBILITY OF CREATING MULTIPLE-PURPOSE RESERVOIRS BY CONSTRUCTING DAMS ON CERTAIN RIVERS. This area has not been thoroughly explored. Such reservoirs may provide new recreational areas in connection with state, county or municipal parks. Reservoirs also assure adequate water supply for municipalities and provide augmented stream flow in times

of drought. Proposals for such projects have been made from time to time, but estimates of cost have been higher than could be borne by local interests alone. The increased demand for water-based recreational areas justifies re-examination of these projects for economic feasibility. (Priority A.)

It has been proposed that dams to create reservoirs be constructed on the Minnesota River and some of its tributaries. Such projects will not only aid in flood control, but also provide recreational water areas where they are not now available. (Priority B.)

Projects for regulation of streams by reservoirs on tributaries where suitable sites are located is suggested. This would assure sufficient water supply for municipalities to expand industry. Such reservoirs will also contribute to the improvement of fish and wildlife habitat and water-based recreational activities. (Priority A.)

Flood Plain Zoning – FLOOD PLAIN ZONING IS RECOMMENDED TO REDUCE FLOOD DAMAGE AND DISTRESS BY RESTRICTING THE USE OF OVERFLOW AREAS. Disastrous results of floods have occurred by reason of man's interference with nature, such as encroachment on the flood plains of streams. The possibilities of flood plain zoning have been widely recognized and advocated, but warrant more consideration. This is a highly desirable means of discouraging unwise over-development of flood plains and of reducing the cost to government and charitable organizations in emergency flood rescue and rehabilitation work. This proposal would greatly reduce the cost to all taxpayers by eliminating the need for extensive reservoirs and flood protection measures. (Priority A.)

Parks, playgrounds, picnic areas and boating facilities can often be developed on flood plains in such a manner that damage resulting from occasional severe floods will be kept at a minimum. Flood plain zoning often results in designation of areas for such purposes.

This recommendation should not be overlooked especially where there is need for recreational areas along streams. Where this situation exists, local units of government should be urged to take advantage of the Flood Plain Studies Program of the U. S. Corps of Engineers. Under this program the Corps will make technical studies of the magnitude, frequency and stage of floods which will serve as a basic authority to adopt zoning ordinances.

#### LAKE CONTROL

Abandoned Dams – Many logging dams, mill dams and hydroelectric dams are no longer used for their original purpose. Ownership and responsibility for these dams is uncertain. Many may possess high recreational, scenic or historic values. A COMPLETE STUDY OF THESE DAMS, LEGAL PROBLEMS INVOLVED, AND AN APPRAISAL OF THEIR VALUE TO THE PUBLIC IS RECOMMENDED. Through this measure a policy can be established for their permanent maintenance where justified. (Priority A.)

The Boundary Waters Canoe Area possesses such abandoned logging dams still maintaining well-established water levels. IT IS RECOMMENDED THAT SPECIFIC PROVISIONS BE MADE FOR THE PRESERVATION AND REPAIR OF THESE ABANDONED LOGGING DAMS TO PREVENT FURTHER DETERIORATION. (Priority A.)

Sedimentation Studies – STUDIES SHOULD BE INITIATED TO DETERMINE THE FEASIBILITY AND METHOD OF IMPROVING CERTAIN LAKES THAT HAVE BECOME TOO SHALLOW FOR RECREATIONAL USE. (Priority A.)

Many of the state's finest lakes are being damaged by the deposition of sediment on the lake bed. Lake level control in the southern part of the state and the protection of lakes from further damage by sedimentation is a problem of special interest. SURVEYS TO DETERMINE RATE OF SEDIMENTATION AND METHOD OF CONTROL IS RECOMMENDED. (Priority A.)

Level Control – THE CONSTRUCTION OF DIVERSIONS TO IMPROVE THE WATER SUPPLY OF CERTAIN VALUABLE RECREATION LAKES IS A POSSIBILITY THAT DESERVES FURTHER STUDY. Such structures may provide for diversion of surplus water from one area into another where there is insufficient water. (Priority A.)

There are areas where additional opportunities for recreational boating can be provided by construction or improvement of connecting channels between lakes where two or more lakes are normally at about the same level. (Priority A.)

## NAVIGATION

Currently, nine-foot channels are maintained on the Mississippi below St. Anthony Falls and the lower St. Croix and Minnesota rivers. The study authorized by the 1965 legislature of certain rivers in relation to navigability for canoes and pleasure boats will be ready for the 1967 session of the legislature. It is desired that the continuation of this study include all navigable rivers and streams or those that will be navigable following channel improvements. A DEVELOPMENT PROGRAM FOR STREAMS OF HIGH PRIORITY SHOULD BE PRESENTED TO THE LEGISLATORS FOR THEIR CONSIDERATION. (Priority A.)

Channel Improvement – Many miles of Minnesota's streams have become clogged with sediment and snags deposited on the beds making navigation by small power boats or canoes difficult and dangerous. THE INCREASED INTEREST IN PLEASURE BOATING NECESSITATES THE RECOMMENDATION FOR INCREASED ACTIVITY IN SNAG-CLEARING TO MAKE STREAMS SUITABLE FOR RECREATIONAL NAVIGATION. (Priority A.)

## maintaining the plan

This preliminary plan will be expanded into a forthcoming comprehensive plan to be updated, rewritten and published a minimum of every five years by the Department of Conservation. The 1965 legislature made planning a permanent part of the state's governmental structure by creating a Central Planning Agency. The legislature also authorized the Bureau of Planning as a permanent part of the Department of Conservation.

This and the forthcoming plan should be used as guides for long-range developments for the effective utilization of Minnesota's natural resources and recreation areas. It is hoped that the ideas set forth will give Minnesota an opportunity to develop an action program in which all levels of government and the private segment can contribute effectively to meet the requirements not only of today's citizens, but of the generations to follow.

This plan has been developed in such a manner that it can be maintained and improved on a continuing basis as demands change and as ideas progress. It has not been possible to explore and evaluate all pertinent outdoor recreation possibilities. Omissions will be considered and detailed studies made for inclusion in the forthcoming plan.

The process of planning must be in sufficient depth to assure the administrator that the planning decisions and priority evaluations are correct and will warrant approval. An approved plan is a commitment to action, subject to legislative approval for the allocation of funds.

It is emphasized that the role of planning is advisory rather than administrative. This preliminary plan is not aimed at providing ready-made answers to the problems of resource management. Rather, it has presented some of the basic facts to be used in exploring recreation and resource needs. This is a preliminary assessment of Minnesota's supply of resource land and facilities for use in recreational activities. Pending completion of a land use plan for the state, it will be used in the allocation of funds.

The Omnibus Natural Resources Act of 1965 and the first Omnibus Natural Resources Act of 1963, have provided the enabling authorizations and the financial means necessary to aid in developing the state's natural resources for recreational use. The 1965 Act has provided matching funds for meeting the requirements of the 701 Urban Planning and Beautification Programs and the Land and Water Conservation Fund Act of 1965.

"We and our children will be the losers if we do not care enough to save from exploitation some hills, dunes, swamps, woods and lakes where we can renew our ties to Nature and where God's other creatures can live and move and have their being. Let us not delude ourselves, or be content with sentimentality or mere words. The time has come when men must choose what kinds of permanent relationship they want to have with their land and her creatures."

Stewart L. Udall,  
Secretary of the Interior  
"Waterfowl Tomorrow"

## ATTACHMENT "A"

The following documents are available for a more detailed analysis of data referred to in Minnesota's Preliminary Outdoor Recreation Plan:

### 1. Minnesota Outdoor Recreation Resources Commission Reports:

- No. 2, An Historic Sites Program for Minnesota. \$2.
- No. 3, Public Access in Minnesota. \$1.
- No. 4, Minnesota's Memorial Hardwood Forest. \$1.
- No. 5, An Archaeology Program for Minnesota. \$1.
- No. 6, A Paleontology Program for Minnesota. \$1.
- No. 7, An Accelerated Mapping Program for Minnesota. \$2.
- No. 8, An Accelerated Program for Hydrologic Studies in Minnesota. \$1.
- No. 9, Control of Aquatic Nuisance Organisms in Minnesota. \$1.
- No. 10, An Accelerated Water Resources Program for the Red River Basin. \$1.
- No. 11, Acquisition of Wildlife Land in Minnesota (Wetland Program). \$1.
- No. 12, Parks and Recreation in Minnesota (including maps in color of each of Minnesota's State Parks). \$3.
- No. 13, Planning in Minnesota (Youth Program). \$1.
- No. 15, Fort Snelling. \$1.
- No. 16, MORRC Legislative and Appropriation Recommendations. \$2.

Available from the Department of Administration, Division of Central Services, Documents Section, Room 140 Centennial Office Building, St. Paul, Minnesota. 55101

### 2. Minnesota Outdoor Recreation Resources Commission Staff Reports:

- No. 1, A Study of Users Fees. \$1.
- No. 2, A Study of Minnesota's Scientific Areas. \$1.
- No. 3, A Study of Land Ownership in Minnesota. \$2.
- No. 4, A Study of Private Enterprise in Outdoor Recreation. \$1.
- No. 5, Grants in Aid for Outdoor Recreation. \$1.
- No. 6, Driving for Pleasure in Minnesota (Memorial Trails, Waysides and Directional Signs and Scenic Highways). \$2.
- No. 7, The Minnesota River Valley. \$1.
- No. 9, Recreational Use of Rivers and Streams in Minnesota. \$1.
- No. 11, Recreational Use of the St. Croix River. \$1.
- No. 12, The Great River Road in Minnesota. \$1.

Available from the Department of Administration, Division of Central Services, Documents Section, Room 140 Centennial Office Building, St. Paul, Minnesota. 55101

### 3. 1963 Omnibus Natural Resource Act

### 4. 1965 Omnibus Natural Resource Act

### 5. 1961 County Park Law

Available from the Department of Conservation, Bureau of Planning, 304 Centennial Office Building, St. Paul, Minnesota. 55101

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