A Management Plan for

Father Hennepin State Park

August, 1978

Prepared by the
Minnesota Department of Natural Resources

This plan was prepared for the citizens of the state of Minneosta under the aegis of the Outdoor Recreation Act of 1975 by a multi-disciplinary team of Department of Natural Resources employees.

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Minnesota Historical Society
Minnesota Department of Transportation
United States Department of Agriculture Soil Conservation Service

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Purpose of Plan

MANAGEMENT AND DEVELOPMENT PHILOSOPHY

Minnesota is blessed with an abundance of high quality resources and, even more importantly, with leaders who have the wisdom and foresight to protect these resources. As a result, Minnesota today has one of the finest state recreation systems in the country. The Department of Natural Resources, with the assistance of concerned lawmakers, conservation and recreation groups, and private citizens, intends to do its utmost to provide planning that will be responsive to the needs of this generation while protecting the birthright of the next.

The management and development philosophy for the Minnesota state park system consists of two major objectives. The first is the protection of the natural resources within the recreation system. Without this protection, a resource can be destroyed in an alarmingly short period of time. Thus, protection benefits not only future generations, but present-day users as well. The second objective is maximizing the recreation opportunities available to the user, both in terms of quality and variety. It is the DNR's position that every citizen should share in the beauty and recreational opportunities of Minnesota's natural resources as well as the responsibility for maintaining and preserving them.

Obviously, there are going to be situations where use and preservation conflict. Every attempt will be made to reconcile these conflicts by the use of responsible management and development techniques. When this is not possible, however, the primary concern must be preservation of the resource. Allowing our resources to deteriorate would not only jeopardize high quality recreation for this generation but for future generations as well. To maintain a high quality recreational experience, it may be necessary to limit the number of people using a unit at a given time or to restrict certain activities within that unit. When this occurs, an attempt will be made to provide these activities at a nearby unit that has a higher tolerance to use.

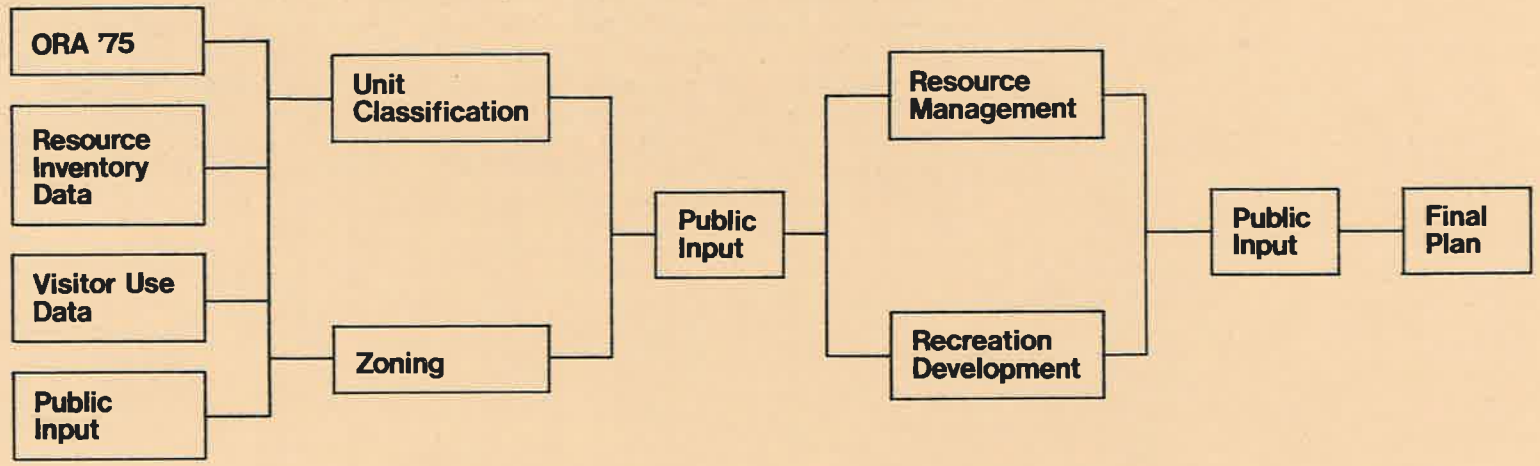
In planning management and development of the various units, the DNR will consider probable future impacts which would affect each unit. In spite of this, unforeseen circumstances are bound to occur. Therefore, each plan should be reviewed periodically to see that it is still relevant in light of current conditions. While a plan can and should be modified if conditions change, nothing should be done that would be detrimental to the objectives set forth in this philosophy.

OUTDOOR RECREATION ACT REVIEW

The Outdoor Recreation Act of 1975 (ORA '75) was enacted by the Minnesota Legislature to "preserve an accurate representation of Minnesota's natural and historical heritage" and to "provide an adequate supply of scenic, accessible, and usable lands and waters to accommodate the outdoor recreation needs of Minnesota's citizens." In an effort to improve long-range planning for the state recreation system, the legislature has directed that management and development plans be prepared for each unit in the system.

ORA '75 also redefined certain recreation unit classifications. For example, the state park classification was divided into recreational state parks and natural state parks. As a part of the overall planning process, the classification of each unit will be reviewed to insure that it is consistent with the resources in that unit. These plans will be used as a guide for developing management policies and planning recreation facilities in each unit. The ORA '75 also states that after August 1, 1977, no development funding will be permitted for any unit until a management and development plan has been completed and reviewed for that unit. By authorizing this planning program, the legislature has taken a significant step toward building a state recreation system in which every Minnesotan can take great pride.

Planning Process Diagram



INTRODUCTION

Father Hennepin State Park is a 316-acre park located in east central Minnesota on the southeast shore of Mille Lacs Lake. The park is on the slightly rolling floodplain of glacial Mille Lacs Lake. Originally the park area was covered with northern hardwoods vegetation mixed with marsh areas and stands of virgin pine along the rivers. Much of the pine and some of the hardwoods have been logged off leaving the present vegetative cover of hardwoods with a scattering of remnant pine. Today the park is a small wooded oasis bordered on the north and east by Mille Lacs Lake, on the south by small farms and on the west by forest.

CLASSIFICATION

Father Hennepin State Park has been recommended for classification as a recreational state park in accordance with the Outdoor Recreation Act of 1975.

GOAL

The goal for Father Hennepin State Park is to provide the people of Minnesota with a broad selection of water-related recreation opportunities in a reasonably natural setting.

NATURAL RESOURCES INVENTORY, OBJECTIVES AND MANAGEMENT

Father Hennepin State Park offers the visitor an abundance of surface water but a questionable groundwater supply. The park borders on the expansive Mille Lacs Lake and borders and contains many marshes and spring ponds. This range of standing waters provides many opportunities for both active and passive water activities. The groundwater, on the other hand, comes from bedrock aquifers that may or may not provide an adequate supply of water if the park use increases sharply. The waters management objective is to provide an adequate water supply for park use and to protect ponds and marshes within the park where possible. These objectives will be accomplished by opening a blocked water flowage in one place, blocking two artificial flowages in another, and carrying out hydrological studies on the aquifers to determine volume and location and then making appropriate recommendations from these findings.

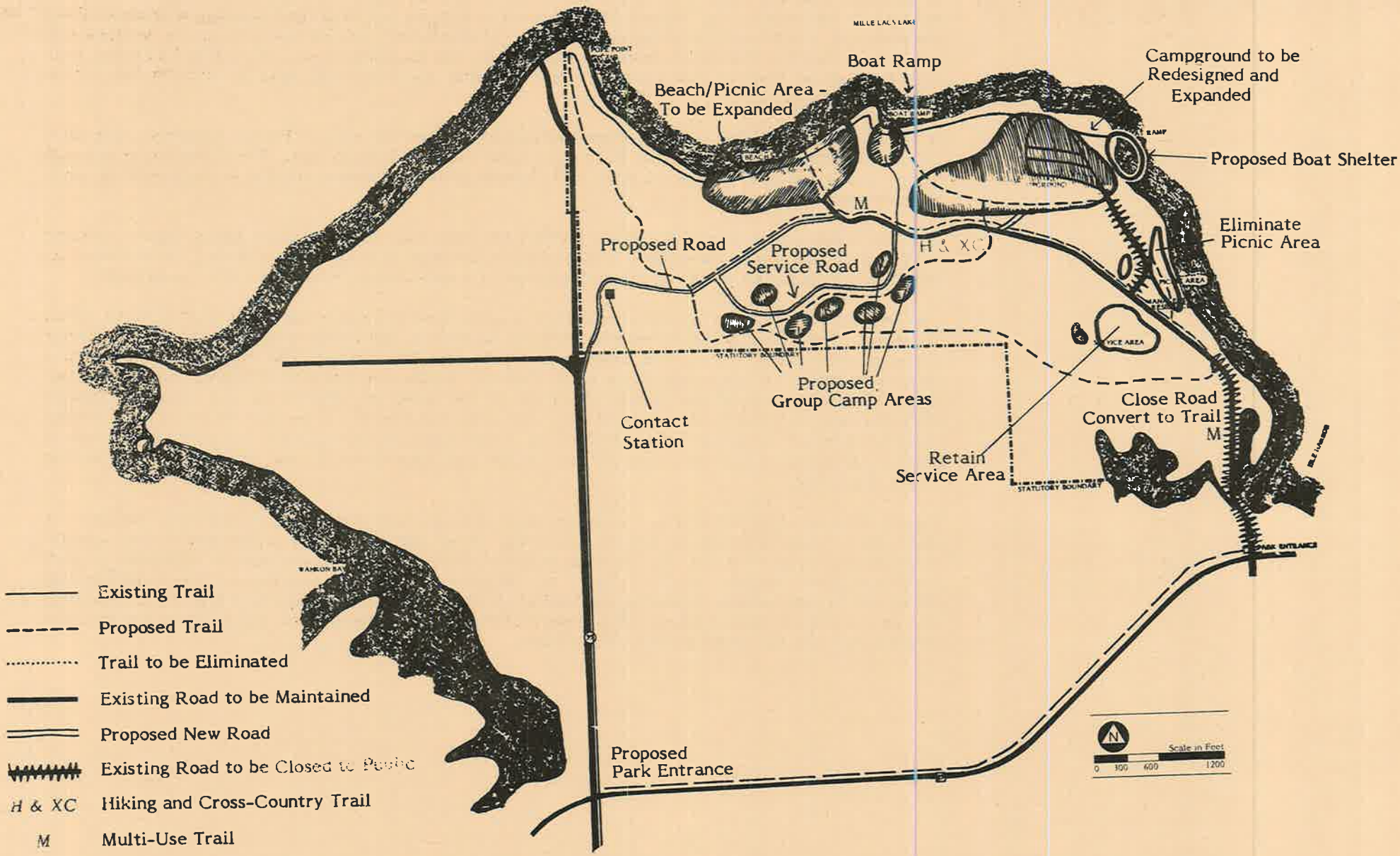
Fishing on Mille Lacs Lake is one of the most popular reasons for visiting Father Hennepin. The lake is well known for the walleye fishing it offers,but it also has many other game and rough fish species to interest the angler. The fisheries management objectives are to protect the spawning areas along the park and to enhance the fishing experience. Coordinating park use and keeping the development away from most of the park's shoreline will protect the spawning areas. Providing functional boat launch areas as well as fish handling and camping facilities will help to improve the fishing experience at this park.

A combination of glacial and post-glacial activities created the soils in Father Hennepin. The park lies on the floodplain of the glacial Mille Lacs Lake and thus is fairly flat. The combination of small slopes and a mixture of glacial drift with lake-deposited sediment results in good soil for park development.

The soil management objectives are to protect the soils from future erosion and to correct existing erosion problems where they exist. Future erosion can best be controlled by placing development on the Milaca soils and by designing future facilities for a use capacity which the soils can support.

The vegetation in Father Hennepin State Park is quite diverse considering the limited acreage within the park. The major communities are northern hardwoods and marsh with portions of the former suffering from three destructive windstorms in the last four years. The vegetation management objectives are to maintain vegetative types that will handle the stress of intensive recreational use and still retain some of the natural character of the area; to enhance the age class and species diversity; and to improve the songbird and small mammal habitat. The plan recommends a timber removal program to remove the diseased or dead vegetation throughout the park, along with a planting program to provide increased species and age class diversity and to maintain the existing hardy vegetation.

Mainly because of its small size, Father Hennepin does not have great wildlife diversity. However, it does have many interesting species, including many shorebirds and waterfowl. The wildlife management objectives are to increase wildlife diversity and populations to eliminate a park traffic/wildlife habitat conflict and to improve waterfowl habitat. The management recommendations include improving the habitat through vegetation management practices, re-routing the park entrance road, keeping large areas of the shoreline undeveloped, and plugging the drainage ditches from the two small ponds on Pope Point.


Boat Ramp
Campground to be Redesigned and Expanded
Beach/Picnic Area - To be Expanded
Proposed Boat Shelter
Eliminate Picnic Area
M
Proposed Road
Proposed Service Road
H & XC
Proposed Group Camp Areas
Contact Station
Close Road Convert to Trail
M
Retain Service Area
Proposed Park Entrance
Existing Trail
Proposed Trail
Trail to be Eliminated
Existing Road to be Maintained
Proposed New Road
Existing Road to be Closed to Public
H & XC Hiking and Cross-Country Trail
M Multi-Use Trail
Scale in Feet
0 300 600 1200

RECREATION INVENTORY, OBJECTIVES AND MANAGEMENT

Camping is the most popular activity in Father Hennepin State Park. The park has a 62-site, semi-modern campground with modern sanitation facilities and a trailer dump station. The planning staff's management objectives are to improve the quality and quantity of camping opportunities and to provide alternative camping opportunities outside the semi-modern campground. The management recommendations include rehabilitation, redesign, and expansion of the semi-modern campground and development of a group camping facility.

Because fishing and boating are an integral part of Father Hennepin, boat launching and fish cleaning facilities are essential. The park has two boat launches now, one in the campground and one open to all park visitors. Currently, there is only one fish cleaning facility and that is located in the campground. The objectives are to provide protection to boats during storms, to eliminate the need for campers to reload their boats everytime they use them, and to expand fish cleaning and fisherman's sanitation facilities. Recommendations include construction of a boat shelter/harbor including a boat launch adjacent to the campground, elimination of the existing campground boat launch, and construction of a modern sanitation building and a fish cleaning facility near the main day-use boat launch.

The park has two picnic areas that offer the park visitor two different types of experience. One area is at the beach and the other along the east side of the park. Management objectives are to consolidate the day-use facilities and to eliminate the present manager's residence/picnic area conflict. Recommendations include elimination of the east picnic area and expansion of the beach picnic area to compensate for the space eliminated in the east area.

Although it is small, Father Hennepin has more than two miles of combination hiking, nature interpretation, and cross-country skiing trails. During the winter, the roadways (approximately 2 miles) are used for snowmobile access to the lake. The two major problems inherent in the present trail system are fragmentation and arbitrary termination. Management objectives are to increase the trail mileage, to provide full loop systems, and to provide an access trail spur to the city of Isle. Recommendations include the development of four miles of hiking/cross-country skiing and interpretation trails, conversion of part of the old park entrance road into a multi-use trail and development of a multi-use trail to connect the main park use areas.

CAMPGROUND

County State Aid Highway 29 (CSAH 29) serves as the access road to all park facilities. The management objective is to eliminate the conflict between vehicular traffic and a sensitive marsh area. The recommendations are to construct a new park entrance road off CSAH 55 which will tie into the existing road and convert the eastern part of the existing park road into a service road and multi-purpose trail.

The administrative facilities in Father Hennepin consist of a contact station, shop, residence,and an old storage shed. The management objectives are to improve public relations and visitor orientation, improve the manager's living situation,and to provide adequate shop facilities. The recommendations are plant a dense vegetation screen in front of the shop, construct an unheated storage building with a loading ramp, and construct a new contact station along the new entrance road.

If, at some future date, the park is expanded to include all or part of the point of land north of Trunk Highway 27 (TH 27) the manager's residence and the shop complex should be relocated away from the lake and main use areas. One of the existing developed sites would be acceptable.

A detailed survey of the boundary should be conducted and the boundary should be posted as per statute. All fences and unnecessary buildings on state land within the park boundary should be removed.

BOUNDARY CHANGES AND ACQUISITION PROBLEMS, OBJECTIVES AND MANAGEMENT

Forty-three and one-half acres within the statutory boundary of the park are still in private ownership, and six and one-half acres are in trust fund ownership. The trust fund land presents no problem at this time, but two of the three private parcels (one-40 acre and one-1 acre) are of primary importance if this management plan is to be implemented. The existing park area is too small to provide a high level state park experience with the amount of development already present. More acreage is needed to give this park the necessary area to provide this experience. The management objectives are to provide enough acreage to sufficiently implement this plan and to provide the visitor with a recreational state park experience. The first recommendation is to acquire the forty-acre and one-acre parcels as soon as possible. The second is to purchase the 2.5-acre parcel and the trust fund land as it becomes available or necessary for park management purposes. The third is to expand the statutory boundary so that parcels may be picked up as they become available. It would be desirable to change the boundary to include the entire point of land north of TH 27. However, because of public sentiment expressed at the March 1, 1977 public information meeting, DNR will not propose a boundary expansion at this time.

INTERPRETIVE PROGRAM

DNR's interpretive section does not expect to establish a major interpretive program in Father Hennepin State Park. The present program consists of films and other programs conducted in the campground primarily during the evening. In the future an interesting program will be provided that concentrates on Mille Lacs Lake and other aquatic ecology. It is recommended that the regional naturalist develop multi-media programs and the seasonal naturalist conduct interpretive hikes to point out natural features and processes that were presented in the multi-media program. If the park is expanded, the program should also be expanded by increasing staff and perhaps an interpretive cruise on the lake. The entire interpretive program will be coordinated with the statewide interpretive plan that is nearing completion.

STAFFING AND EQUIPMENT OBJECTIVES AND MANAGEMENT

The present park staff consists of a park manager, two park workers, one lifeguard, three laborers and two volunteer-in-parks (VIP) naturalists. The equipment, except for one tractor, is in poor condition and in need of replacement. This plan will help ensure that the park has enough staff and equipment to operate efficiently and effectively. The need projections for staff and equipment, found later in the plan on pages100-101, should be followed.

INTRODUCTION

Father Hennepin State Park is located on the southeast shore of Mille Lacs Lake in east-central Minnesota (Mille Lacs County). Over 266 of the 316 statutory acres are state-owned.

Access to the park is excellent. It is served directly from TH 27, a major east-west highway that intersects most major highways in east-central Minnesota. TH 169, ten miles west, TH 47, 1 mile east, and TH 65, ten miles east of the park are the main north-south highways which access the Mille Lacs Lake area from the Twin Cities and the northern part of the state. Complementing the private auto transportation system is public bus service to the city of Isle and a municipal airport that can accommodate light aircraft.

Father Hennepin is centrally located between three population centers. St. Cloud is 60 miles southwest, Duluth is 90 miles northeast,and the Twin Cities are 100 miles south of the park, making it accessible to over 2.5 million people in about a two-hour drive. The number one recreational resource in the area is Mille Lacs Lake, the second largest lake which lies entirely within Minnesota. With its size, it offers an almost unlimited potential for water-related recreation. Much of the shore is lined by resorts and private campgrounds which provide such services as food, lodging, boats and motors, launch services, winter fish houses, fishing tackle,and other related services. Other recreational facilities within a few miles drive include Mille Lacs Kathio State Park, Mille Lacs Wildlife Management Area, Rum River State Forest, Mille Lacs Indian Museum, several large private campgrounds, resort facilities on nearby lakes,and many other points of interest.

With all these facilities in the region, Mille Lacs County obtains a comparatively high percentage of gross sales from expenditures related to recreation. According to figures from the Department of Economic Development, Mille Lacs County derives 11% of its gross sales from tourism/travel expenditures.[1] That compares with the statewide average of 3.4%.[2] These expenditures include lodging, food,auto, recreational,and retail goods.

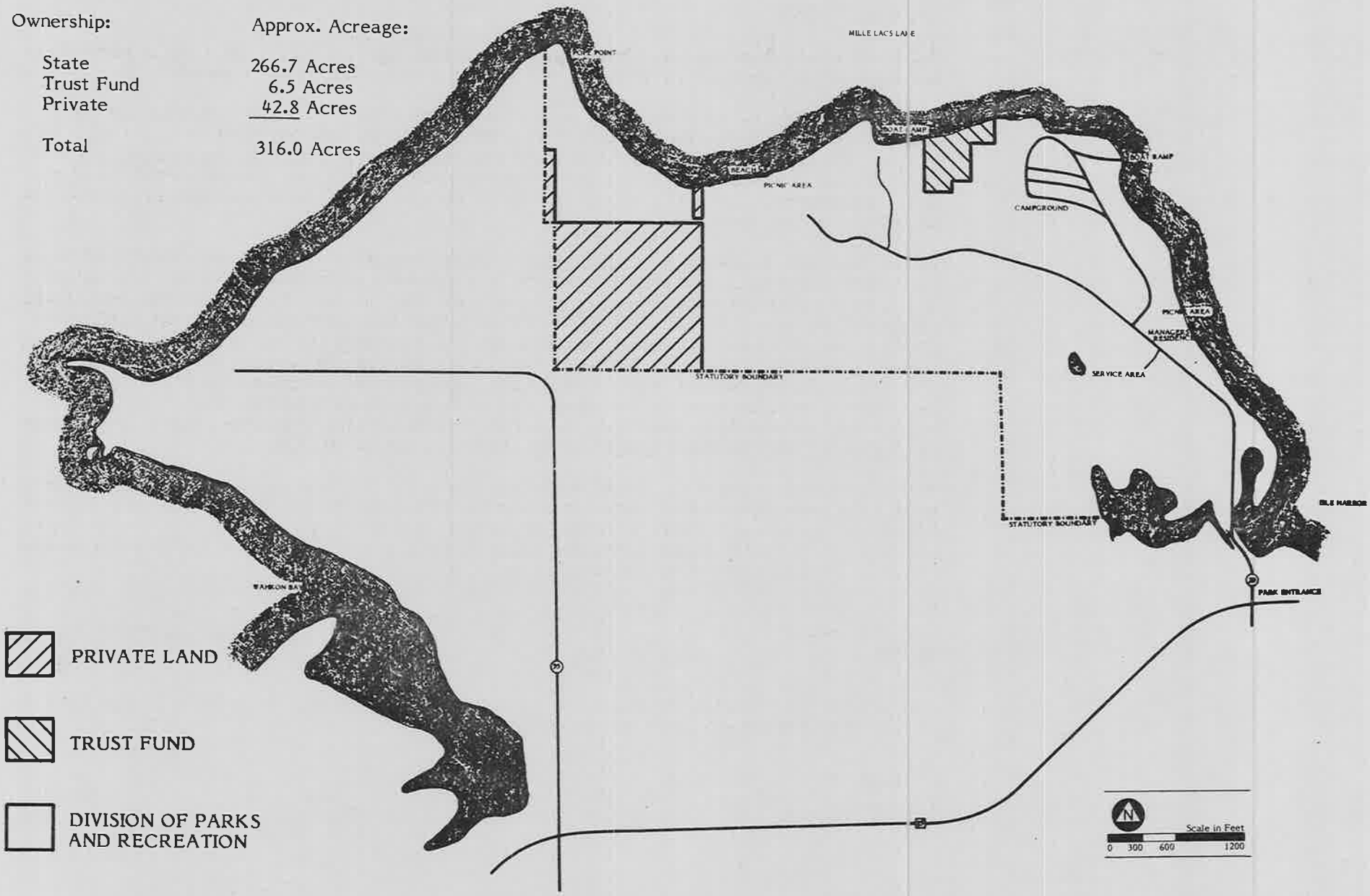
Source

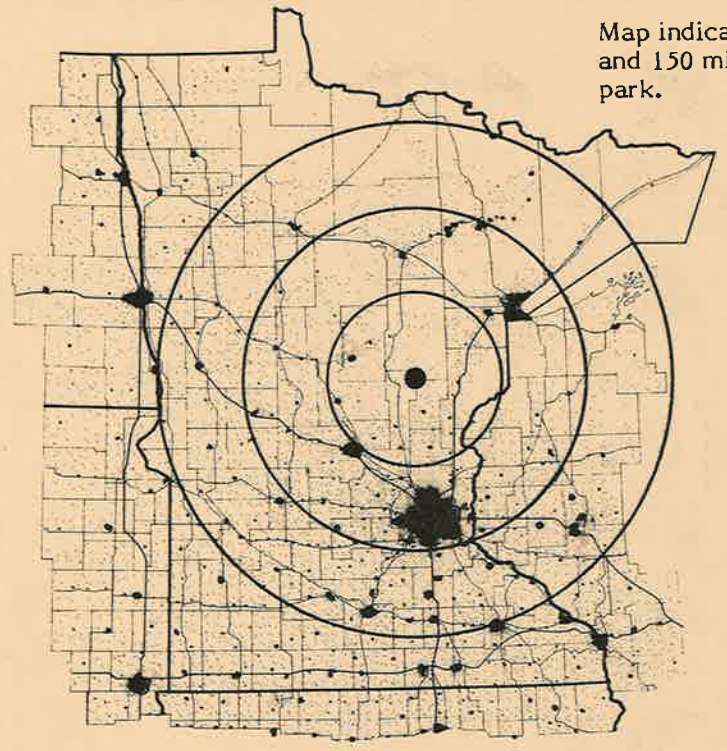
[1]Department of Economic Development, "Economic Distribution of Tourist/Travel Expenditures in Minnesota by Regions and Counties," October, 1975, p. 8.

[2]Ibid., p. 14.

Legal Description: Secs 3 and 4, T42N R25W

Ownership:	Approx. Acreage:
State	266.7 Acres
Trust Fund	6.5 Acres
Private	42.8 Acres
Total	316.0 Acres





Map indicates 50, 100, and 150 mile radii from park.

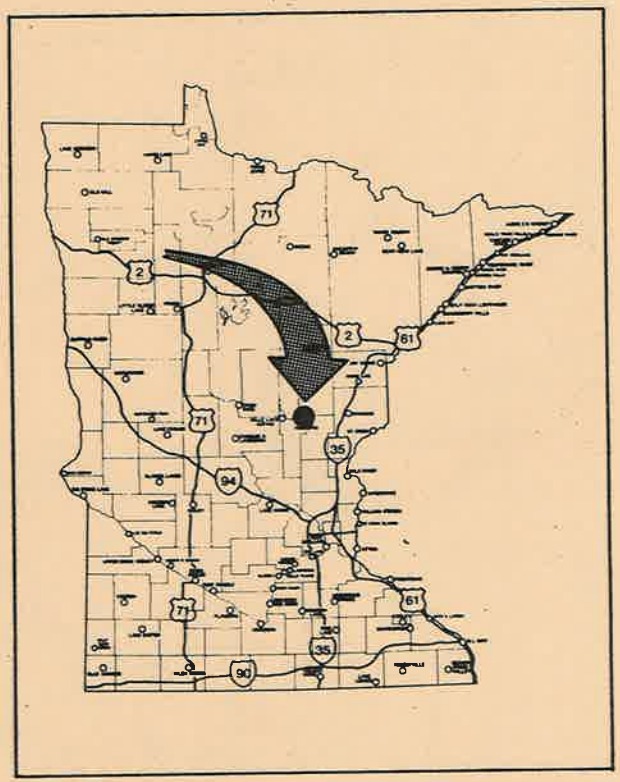
POPULATION DISTRIBUTION 1970

PROXIMITY TO POPULATION CENTER

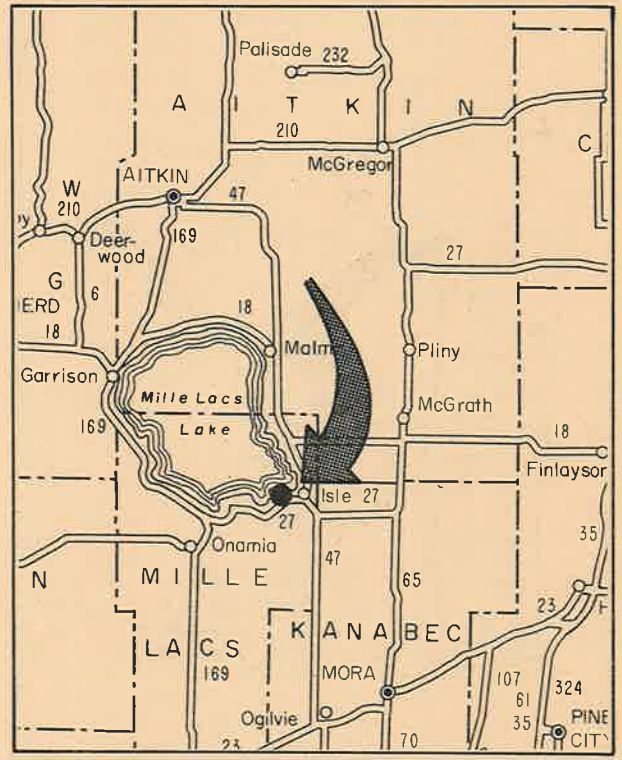
Center	*Distance	Travel Time	Approximate Population
St. Cloud	59	1¼ hrs.	42,223
Duluth	80	1 3/4 hrs.	100,578
Twin Cities	100	2 hrs.	2,090,000
Counties within 25 miles			
Aitkin			10,887
Chisago			20,245
Pine			16,384
Kanabec			10,156
Mille Lacs			16,096
Morrison			26,239
Crow Wing			36,211

*Approx. Road Mileage

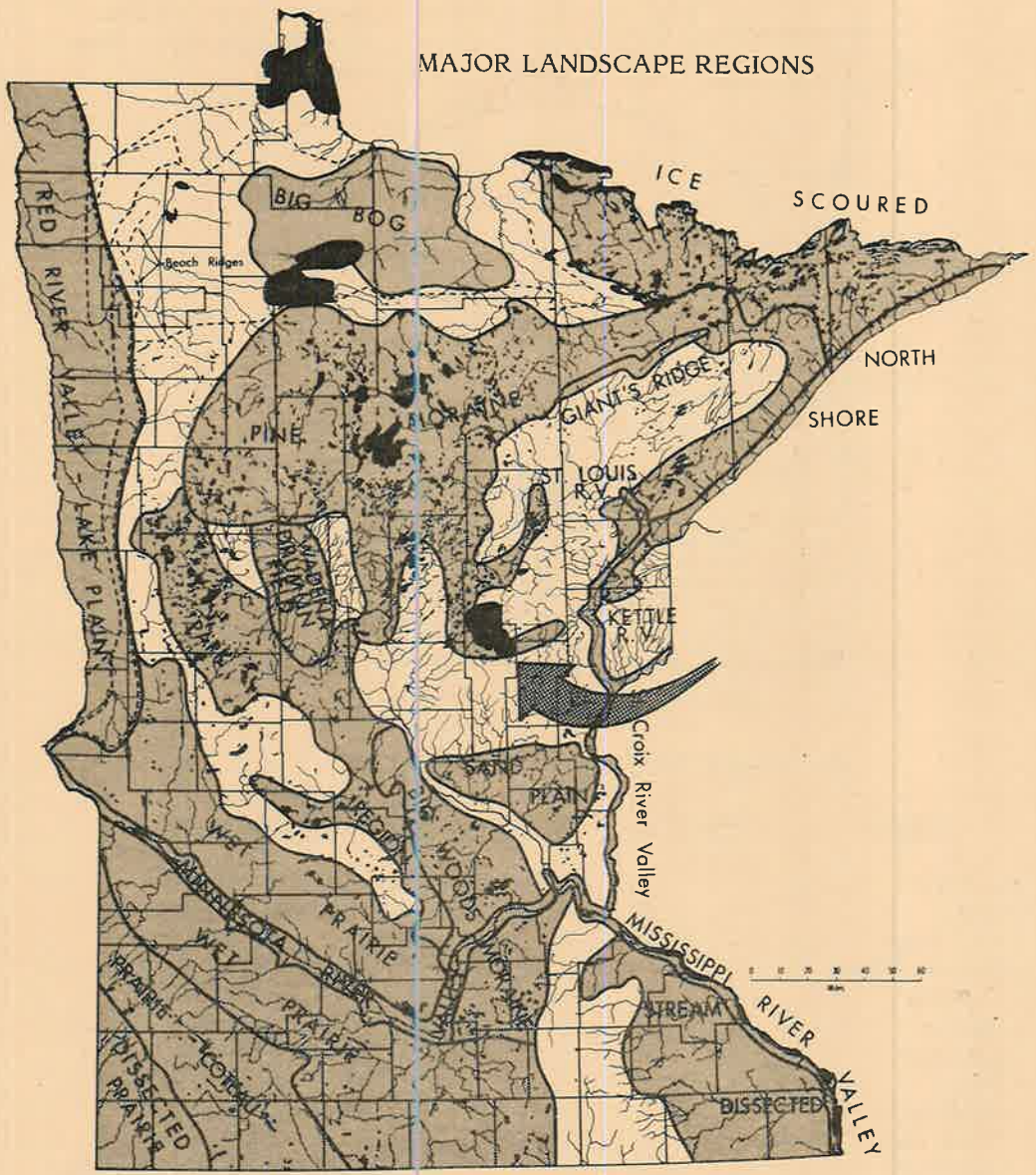
LOCATION MAP



VICINITY MAP



MAJOR LANDSCAPE REGIONS



Project 80 Staff Report No. 1, July 1971.

REGIONAL PERSPECTIVE

Father Hennepin State Park is located in the pine moraine region which is part of the larger big moraine complex.[3] This region exhibits the rough, lake-studded terrain commonly found in terminal moraines. The region contains material from fine clay to large boulders. On a smaller scale, Father Hennepin is located on the Mille Lacs Moraine which is underlaid with granite. This moraine is a giant dike which created Mille Lacs Lake.

The original vegetation of the pine moraine region was dominated by pine with scattered areas of mixed hardwoods and spruce-fir. Though some pine has regenerated in the cut-over areas, aspen and birch forests generally dominate the region today. This area which includes the park has some pine mixed with northern hardwoods. The vegetation today is relatively unchanged, with the exception of fewer pine.[4]

Source

[3]Bureau of Planning and Environmental Planning Division, Minnesota Resource Potentials in State Outdoor Recreation, Project 80 Staff Report No. 1 (St. Paul: Department of Natural Resources and State Planning Agency, 1971).

[4]Ibid.

CLIMATE

Father Hennepin State Park is subject to the strong continental weather patterns that influence all of Minnesota. The area is influenced by cold Arctic air during winter months and is frequently dominated by hot air masses from the Gulf of Mexico during summer months. The most important factor affecting the micro-climate is the summer wind off Mille Lacs Lake which cools the park and keeps mosquitoes away.[5]

Temperature Variations

Mean January Maximum	21°
Mean January Minimum	-2°
Mean July Maximum	80°F
Mean July Minimum	56°F

Mean Average Extremes/Frequency

-0°F 48 days/year
+90°F 9 days/year

Precipitation

Annual Total 26"
Annual Snowfall 40-45"

Prevailing Winds

Northeast (October - May)
South (June - September)

Source

[5]U. S. Department of Commerce, Climate of Minnesota, by Earl L. Kuehnast, Climatography of the United States No. 60-21, 1959, Rev. 1972.

GEOLOGY

The area including Father Hennepin has had a fairly quiet geologic history. The bedrock under the park consists of undivided intrusives, predominantly quartz diorite (granite) from the middle Precambrian era. This rock is part of an extensive field that extends from northeast of Mille Lacs Lake to northern Wright County. There are numerous places throughout the field where these intrusives are exposed and quarried. A gray granite is quarried five miles south of the city of Isle. In the park, the bedrock is covered with approximately 130 feet of glacial till.[6]

The most recent glaciation of this area was by the Wisconsin ice sheet sometime between 16,000 and 20,000 years ago. Then the Automba phase of the Superior lobe formed the Mille Lacs Moraine which encloses Mille Lacs Lake on the west, south and east.

The park is located on the relatively flat bed of glacial Mille Lacs Lake which existed before the outlet through the moraine was cut by the glacial Rum River.

According to the Department of Natural Resources, Minerals Division, there is little possibility of finding concentrations of any metal in the park. An economic concentration is defined as an ore deposit of sufficient size and quality to make it profitable to mine. However, based on analysis of the bedrock, there is a possibility that uranium and copper may be found.

Source

[6]Schwartz and Thiel, Minnesota Rocks and Waters, (Minneapolis: University of Minnesota Press, 1954), p. 102.

HISTORY AND ARCHAEOLOGY

According to historical studies, the Mille Lacs Lake region was originally inhabited (in modern times) by the Dakota. As the Ojibway moved south and west, the Dakota were pushed south and west, particularly after the battle of 1745. It may be assumed that activities were carried on by these two nations in the region at the south end of Mille Lacs Lake. However, there is no indication that any concentrated settlements developed in the area which is now Father Hennepin State Park. Many Ojibway still live in this region today on a reservation along the west side of the lake.

Information concerning the history of the park area is sketchy. According to a survey done by O. E. Garrison, dated September 5, 1870, oak, black oak, elm, aspen and tamarack were found in the immediate area. No mention is made of pine, however, some are found in the park. Logging for commercial purposes occurred primarily on either side of the park area, with logging centers at the towns of Wahkon and Red Top.

There is evidence that several families homesteaded within the park boundaries. Apple and plum trees in one location are evidence indicating settlement. Other home sites have also been identified by Orville Haggburg, a lifelong resident of the city of Isle.

The state archaeologist found a burial mound and habitation site in Father Hennepin behind the manager's residence. Test trenching in 1962 produced Malmo focus pottery indicating Middle Woodland occupation dating sometime between 300 B.C. and 500 A.D.

VENERABLE SURVIVOR OF THE LOGGING ERA

PARK HISTORY AND USE

Father Hennepin State Park was established in 1941 mainly through the efforts of a group headed by Monsignor Reardon and the Knights of Columbus. The reason for establishing the park was the desire to set aside an area commemorating Father Hennepin, the French missionary who named St. Anthony Falls and was captured by the Dakota at Mille Lacs Lake.

The park provides public access to Mille Lacs Lake and its recreational opportunities as well as being a recreational use area itself. The park receives heavy use throughout the summer, particularly the opening weekend of the summer fishing season. Winter use is considerably less. Snowmobilers using park roads as an access to the lake are the predominant users. Use figures for Father Hennepin have fluctuated over the past twenty years, varying from 15,000 visitor days in 1954 to 44,835 visitors days in 1973. Then in 1974, usage jumped dramatically to 93,549 visitor days and then to 95,085 in 1975. One thing to remember, however, is that these figures are estimates and the methods for deriving these estimates change. Thus, at least part of the big jump between 1973 and 1974 may be attributed to changing methodology and not actual attendance changes.

The types of use Father Hennepin receives are varied. According to the 1974 Park User Survey[7], camping was the most popular activity at the park, followed by swimming, hiking and fishing. However, this survey was taken in July and August which are not good fishing months. If it had been taken in May, June or September, the percentage of visitors participating in fishing would probably have been considerably larger.

Source

[7]Minnesota DNR, Bureau of Environmental Planning, Minnesota 1974 Park User Survey.

ADJACENT LAND

The land adjacent to Father Hennepin State Park is all privately owned with the exception of a narrow strip along the west side of the park entrance road, TH 29, which is state-owned, and is presently undeveloped woods and swamp. The land along the south side is mostly agricultural with a few rural residences. The majority of the land along the west side is undeveloped meadow and woods except for a recreational residence near the northwest corner of the park. The southeast corner is bounded by the city of Isle and the north and east sides are bounded by Mille Lacs Lake.

The access corridor to Father Hennepin is along TH 27 which is a through highway passing east and west below the park. The vegetation along the corridor to the west is mostly open fields with small patches of woods and swamps. The roadside is developed for agriculture and rural residences. The corridor to the east consists of the city of Isle.

There are no through-site intrusions into Father Hennepin. Evidently, the park's small size and location on the large lake have sheltered it from any intrusion. Adjacent land use and ownership are shown on the Existing Development - Utilities Map in the Recreation Development Section, (page 69).

Classification

INTRODUCTION

In accordance with the Outdoor Recreation Act of 1975, the park planning staff has reviewed the classification of each park under study this biennium. After the park resource inventory was completed for each unit, the planning staff determined:

A. Which of the eleven classifications from ORA '75 was most appropriate for the unit
B. Whether sub-units should be considered to deal with special areas within the unit (scientific and natural areas or other sub-units authorized in ORA '75)
C. Whether administration of the unit should be reassigned to other governmental bodies (other state agencies, county or local governments)

Each park has been recommended for classification according to its resources and as such will be managed and developed according to the nature of those resources and their ability to tolerate visitor use.

CLASSIFICATION OBJECTIVE

The objective of classifying state parks is to determine the most suitable management direction for a given unit based on its natural resources and recreational potential. Of primary concern in setting management direction is the protection and perpetuation of those natural resources which set a particular park apart from all other parks. Also of concern is the need for a statewide recreation system which will meet the legitimate recreational needs of our society without unduly harming the resources of the unit.

UNIT CONSIDERATIONS

Father Hennepin State Park has been recommended for classification as a recreational state park because it substantially fulfills the following criteria:

"Contains natural or artificial resources which provide outstanding outdoor recreational opportunities that will attract visitors from beyond the local area"

"Contains resources which permit intensive recreational use by large numbers of people"

"Located in areas which have serious deficiencies in public outdoor recreation facilities"

Obviously, the natural resource with the greatest drawing power for Father Hennepin State Park is Mille Lacs Lake. The lake attracts people from throughout the state and country. The huge size and the quality of the lake provide almost unlimited water-based recreational opportunities throughout the year.

The beach, campground and picnic areas all receive heavy use and are capable, with expansion, of handling considerably more. Expansion of this small park would further enhance the present high quality recreational opportunities that exist there.

The park is located in a region that has a deficiency in recreation opportunities. That deficiency is growing according to the 1974 Minnesota SCORP plan.[1] It is also located in one of the most popular vacation areas in the state which, coupled with the deficiency, lends support to the recreational classification.

PARK GOAL

The goal for Father Hennepin State Park is to provide the people of Minnesota with a broad selection of water-related recreational opportunities in a natural setting.

Source

[1]Bureau of Environmental Planning and Protection, Minnesota State Comprehensive Outdoor Recreation Plan (SCORP), (St. Paul: Department of Natural Resources, 1974).

ZONING

Introduction

Before the specific management of an area within a park can be considered, a zoning concept must be established to evaluate the various management alternatives within the park. General management strategies can then be determined by zoning the park according to prime management objectives.

Objective

To establish a zoning system which formally recognizes the various features of a park and delineates appropriate non-destructive uses

Park zoning identifies those areas suitable for specific uses and establishes certain management requirements necessary to provide for the overall recreational needs of park users while protecting natural resources.

Management Zoning

A land classification system utilizing six major management zones has been adopted which will permit effective, comprehensive management of park resources while centralizing park development and uses.

Land Classification Zones

To aid in understanding the final zoning concept map, each of the six potential zones have been defined along with a description of their prime management objectives. A separate map following each zone description will identify each potential zone within a unit. All six management zones may not necessarily be found in each and every park.

The final zoning map is a composite of all potential zones to show where management decisions have been made to eliminate conflicts between individual zones. This final zoning map will guide the recreation resource management decision-making process.

There are four resources that have an effect upon, or are affected by, recreational use. They are: wildlife, soils, vegetation and cultural resources. These resources were used as a basis for developing the following management zones and accompanying zoning maps.

Map Code (Page 28)

1 Ecological Protection Zone - The ecological protection zone includes areas having ecological communities which are either sensitive to certain uses, require special management or protection and/or have significant value for research. Areas having unique or endangered wildlife habitat or vegetative communities are included in this zone. Management will be directed toward perpetuating these ecological values. Development will be restricted to interpretive facilities or trails which do not disturb these values. All forms of access may be prohibited when necessary. In certain instances, small structures may be necessary to orient use and protect habitat.

2 Outstanding Natural Feature Zone - The outstanding natural feature zone includes areas which are geologically or biologically of statewide significance. These features often are the park's principal resource attractions and will be managed to provide for visitor enjoyment without impairing their quality. Development of restricted forms of recreation facilities may be necessary to allow for enjoyment and interpretation. All development must be compatible to the features of the site to protect its natural character. Resource management will be restricted to restoring the resources and perpetuating their natural characteristics.

3 Primitive Zone - The primitive zone includes extensive areas of land and water remote from high-density use areas and major development within the park and removed from the external influences of civilization. Development will be restricted to non-riding trails, primitive walk-in campsites and appropriate interpretive facilities. Resource management will be directed toward restoring and perpetuating the natural environment and the aesthetic character of that environment.

4 General Environment Zone - This zone includes areas which, while they may be very scenic, contain no identified outstanding natural, historical or cultural features. In addition, the resources in this zone must be able to tolerate moderate use. Properly managed, this zone will serve to unite the other zones into a cohesive unit.

5 Historical and Cultural Zone - The historical and cultural zone includes those sites which help to illustrate the historical and archeological heritage of the area that should be preserved or restored. Activities should emphasize the interpretive values of the site. Recreation development will be restricted to activities such as non-riding trails, small picnic areas, interpretive facilities and parking. Activities and improvements should be limited to those which will not detrimentally affect the preservation and restoration of these sites and should be reviewed with the Minnesota Historical Society. All historical or cultural sites should be surrounded by sufficient natural buffers to minimize encroachment from other activities.

Natural resource management activities should maintain and perpetuate historical and cultural values while insuring regeneration of native or historically compatible plant and animal species.

6. Development Zone - The development zone includes lands and waters where major park development and intensive use, both existing and proposed, has or will substantially alter the environment. This zone will be managed to provide and maintain the level of development necessary to serve the needs of the park visitors and staff. Park roads extending beyond this zone may be included in appropriate natural or historic zones through which they pass. Resource management will be directed toward improving the recreational capabilities and characteristics of the environment. However, native vegetation should not be extensively replaced solely for aesthetic reasons.

Potential Zones

Potential Ecological Protection Zone - Areas that have high concentrations of fish or wildlife, areas which are seasonally used by fish as spawning areas or migratory waterfowl as resting areas, or areas which have terrestrial or aquatic vegetation which is sensitive to human use have been included in the ecological protection zone.

Potential Historical and Cultural Zone - There is one site within the park that has historical or cultural value. The Minnesota Historical Society has identified a prehistoric burial mound and habitation site (21-ML-15) near the manager's residence.

Potential Development Zones - The development zones were determined primarily by soil types. The development map illustrates soil areas that would impose severe limitations on all types of recreational facilities. These areas include fragile soils and soils with high water tables. Consequently, the non-shaded areas do have development potential for some types of recreational activities.

Established Zones

There are many areas of the park that qualify for more than one management zone. Where conflicts exist, the zone was always classified into the most restrictive category unless the classification proposed is restrictive enough to provide sufficient protection.

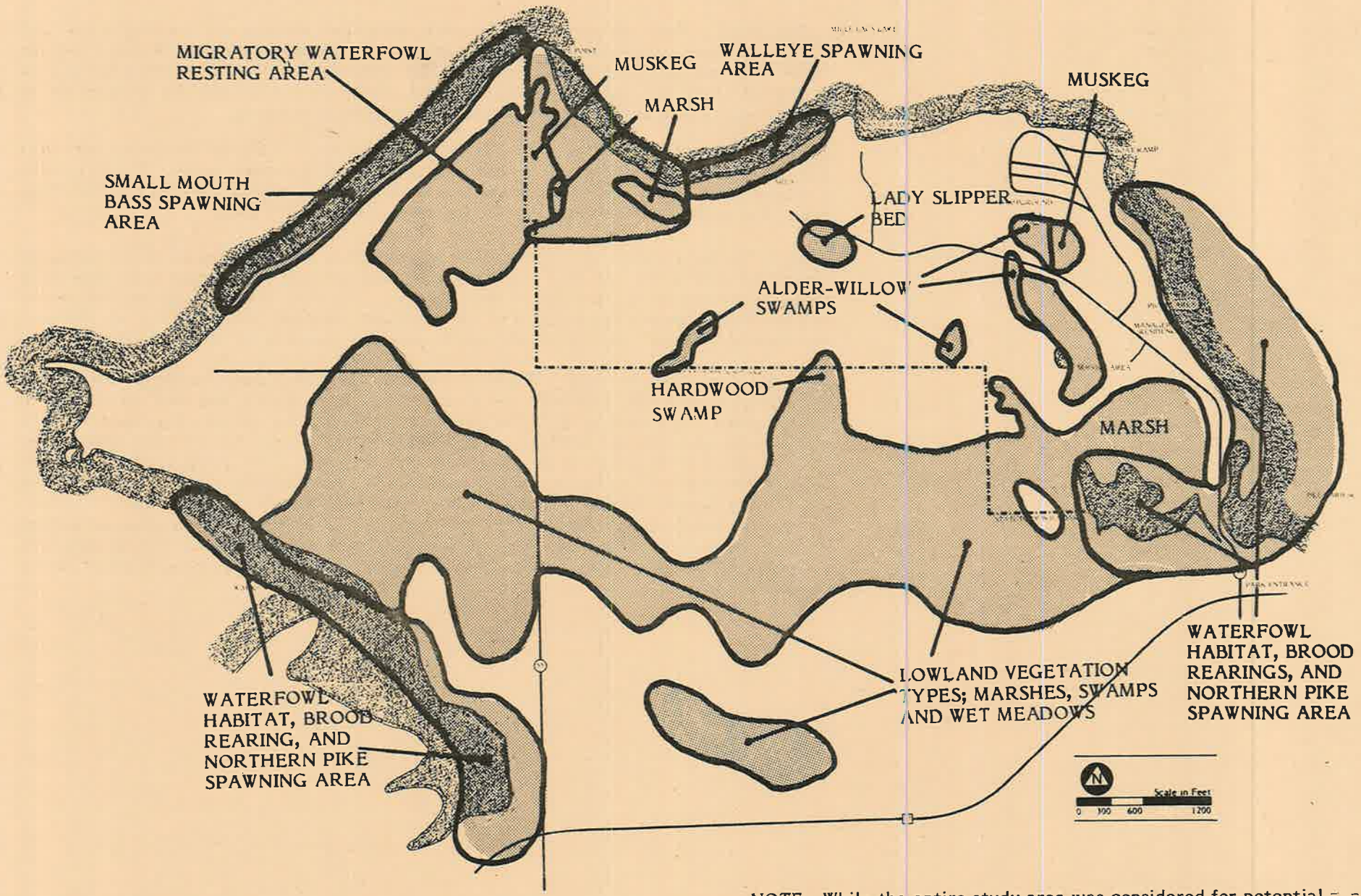
Zone 2 - Ecological Protection Zone - There are four ecological protection zones in the park. One is a lady slipper bed located near the present beach area. Other areas of the park that are considered sensitive are swamp and marsh communities on Pope Point west of County Road 55 on Wahkon Bay and the large area southeast of the present park boundary. These three areas all contain extremely fragile soils and vegetation

communities. They all serve as migratory waterfowl resting and feeding areas and contain resident waterfowl and aquatic furbearers. Shoreline areas on Wahkon Bay, on Pope Point, and Isle Harbor are important fish spawning areas and have been designated ecological protection zones. Generally, these zones are not suitable for designation as another type of management zone, so there is no conflict in zoning.

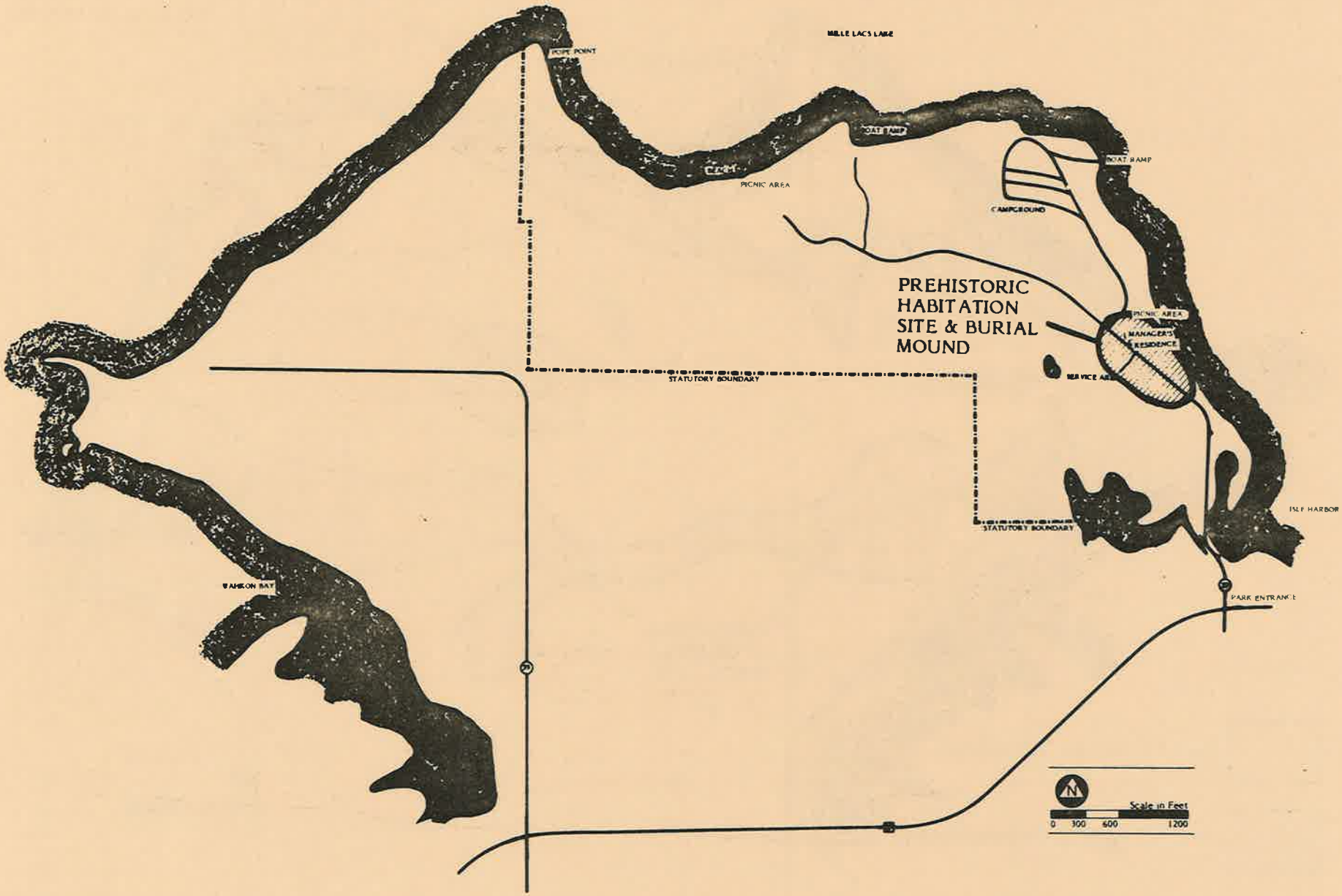
Zone 4 - General Environment Zone - There are two areas in Father Hennepin, one large and one small, that do not comfortably fit into any of the other zones. The large area contains most of the open field areas in the central and southern portions of the study area. The small area is situated in the east central area of the park.

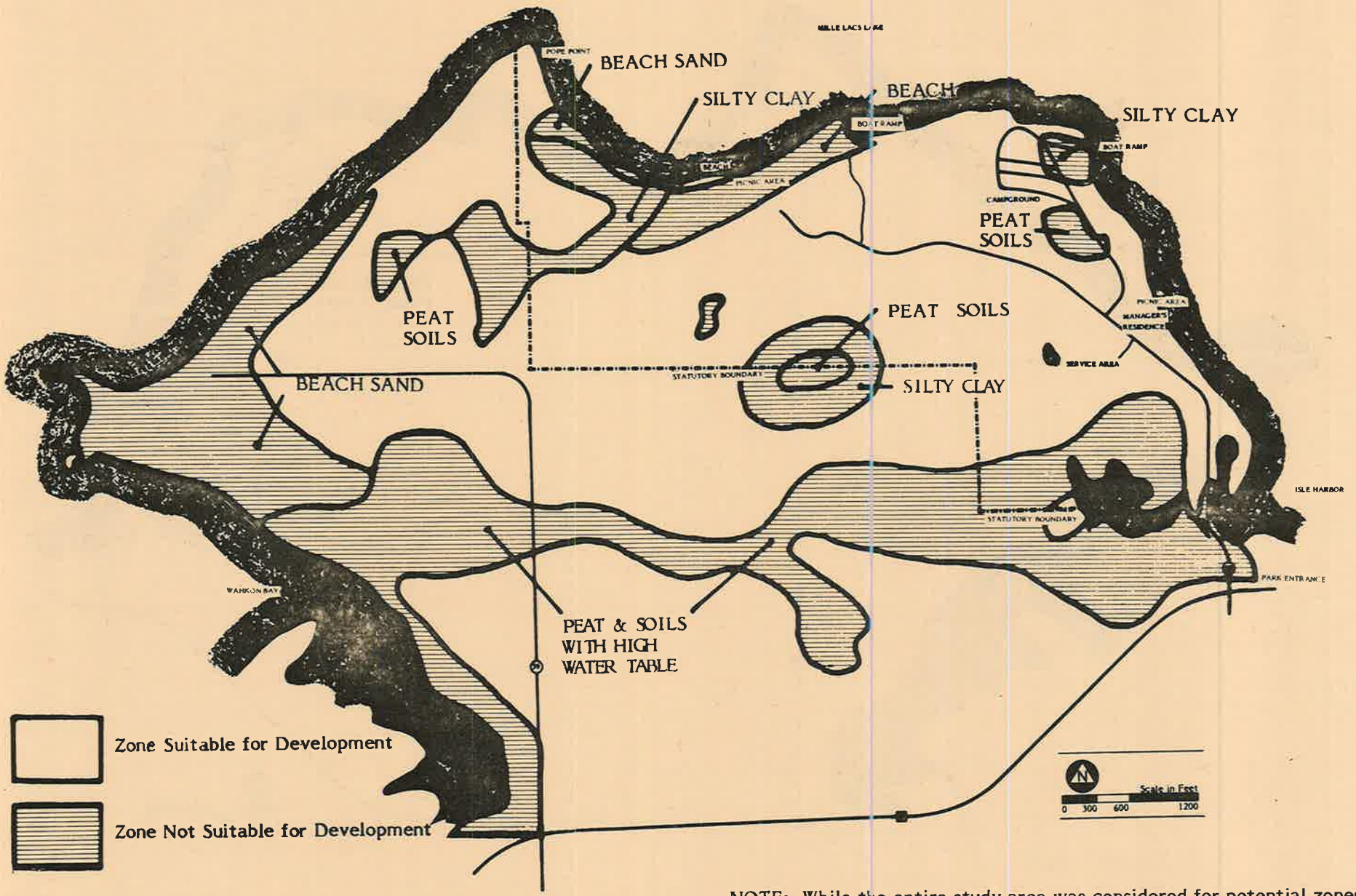
Zone 5 - Cultural and Historical Zone - Because little is presently known about the burial mound and habitation site that was identified, the site and surrounding area have been zoned to protect them from future development. This area has potential for designation as a development zone but because of the abundance of other developable land, the area was considered more valuable for its historic potential than for its development potential.

Zone 6 - Development Zone - There are four development zones proposed for Father Hennepin, two are located within the present statutory boundary and two are located in the proposed expansion area. The large zone within the present boundary consists primarily of land that is excellent for development, but within this zone are small areas that may be very sensitive to development. Preservation of the small sensitive areas is not considered a limiting factor in development. The development area that encompasses the present beach and the proposed development area on the extreme west are both located on beach soils. These areas are suitable for development as long as sewage systems are self-contained and development density is kept minimal. The development zone on TH 27 is a proposed service area and is located in an area that has no other zoning conflicts.

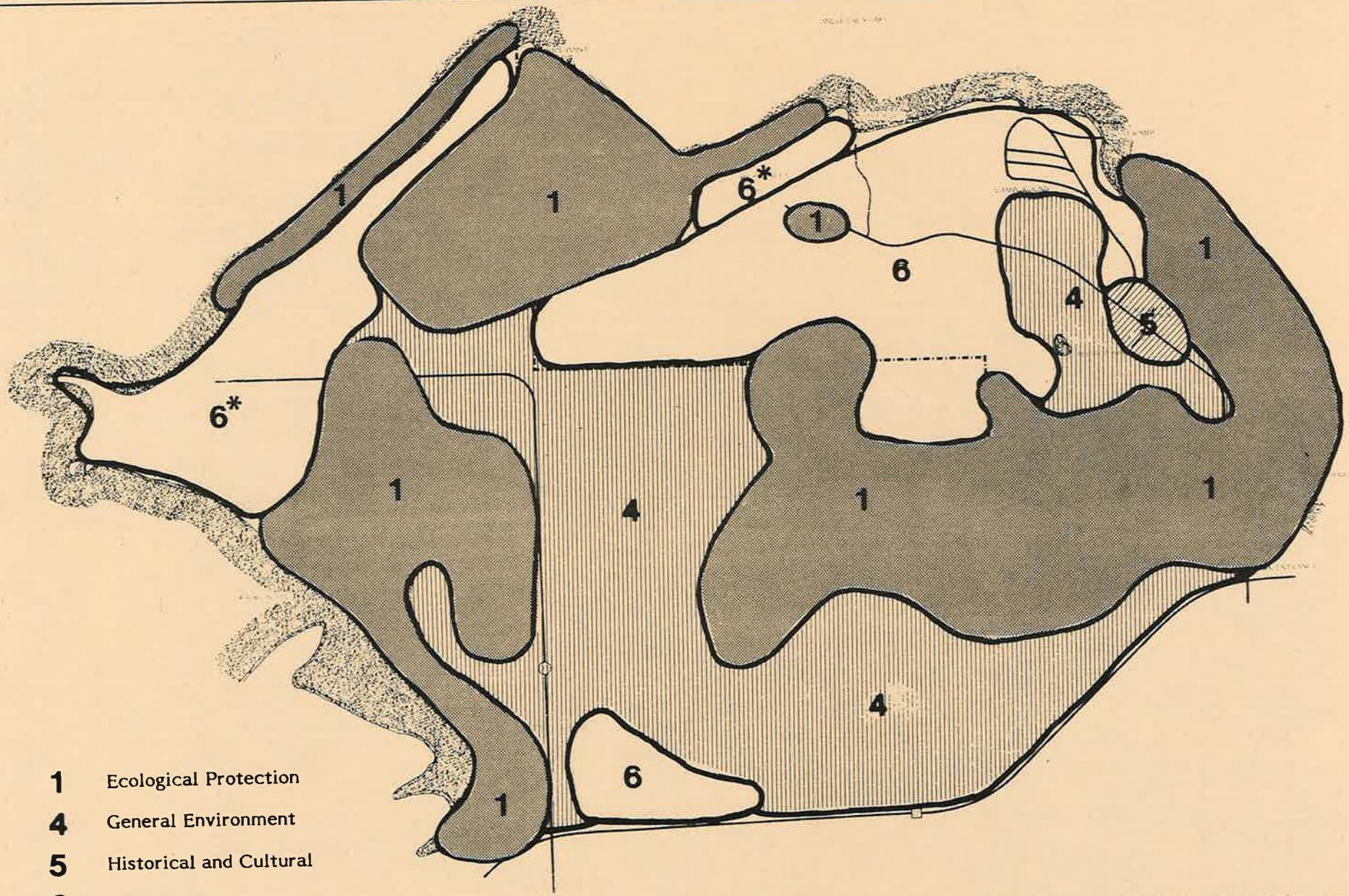


NOTE: While the entire study area was considered for potential zones, only the areas within the park are affected.


MILLE LACS LAKE
POPE POINT
BOAT RAMP
PICNIC AREA
CAMPGROUND
BOAT RAMP
PREHISTORIC
HABITATION
SITE & BURIAL
MOUND
PICNIC AREA
MANAGER'S
RESIDENCE
STATUTORY BOUNDARY
STATUTORY BOUNDARY
ISLE HARBOR
PARK ENTRANCE
WAHKON BAY
N
Scale in Feet
0 300 600 1200



NOTE: While the entire study area was considered for potential zones, only the areas within the park are affected.



1 Ecological Protection

4 General Environment

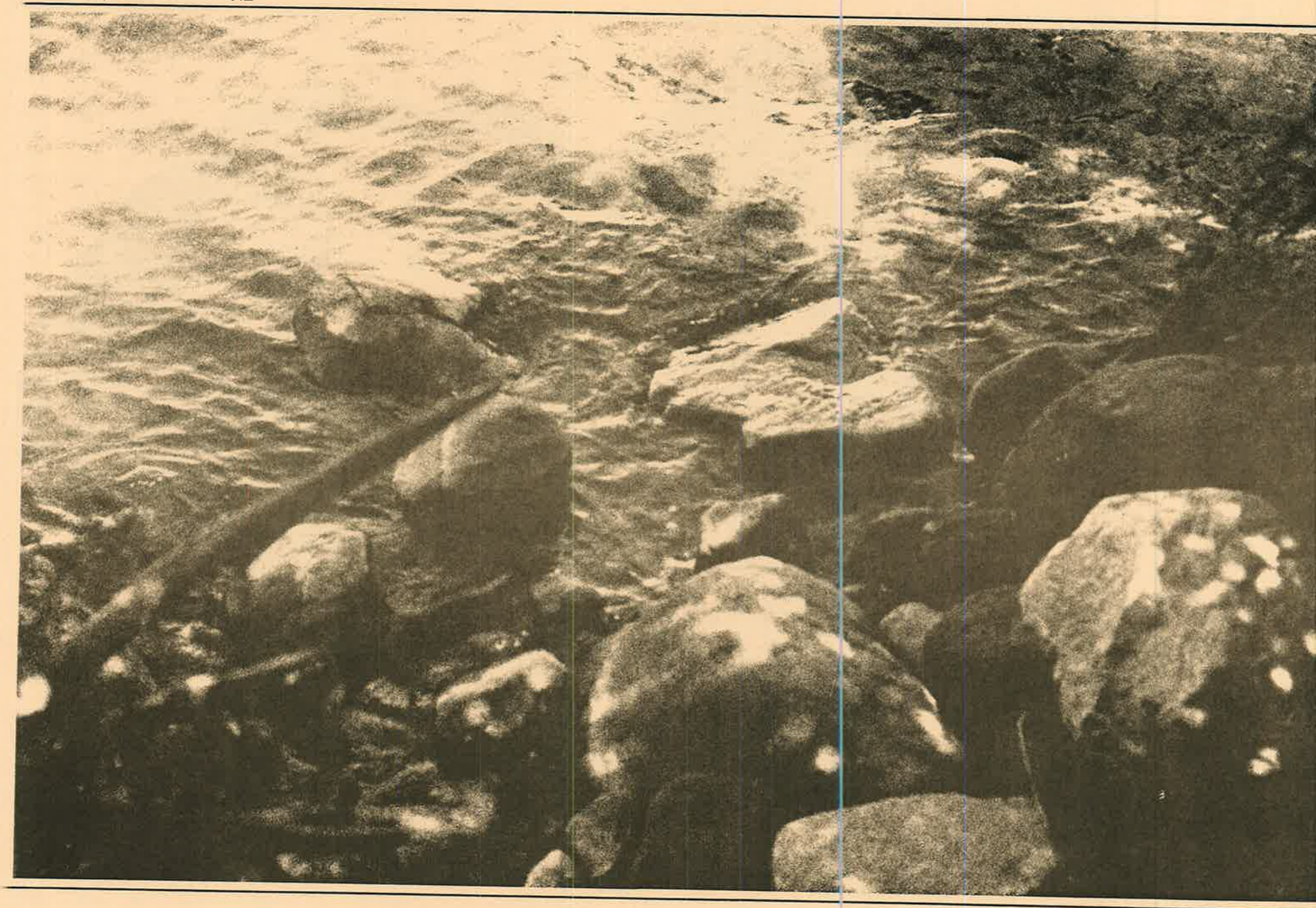
5 Historical and Cultural

6 Development

6* Development With Restrictions

NOTE: While the entire study area was considered for potential zones, only the areas within the park are affected.

MILLE LACS SHORELINE



WATER RESOURCES MANAGEMENT

Introduction

There are two aspects to water resource management -- underground and surficial. In general, underground water resources are managed to maintain a high quality and supply. Surface water management programs ideally should include total watersheds, not just an individual lake or stream. Unfortunately, few parks encompass total watersheds, therefore effective management is minimized.

By statute, the Division of Parks and Recreation can control surface,as well as shoreline,use of any lake or stream which is totally within a park's statutory boundary and in state ownership. However, if any parcels along a shoreline are in private ownership, a common agreement must be reached before any effective management techniques may be employed on the water body.

Water provides the prime recreational resource at Father Hennepin State Park. Therefore, an inventory of this resource is very important, if logical management decisions are to be made concerning water and the park.

Groundwater Resource Inventory

From three widely-spaced wells in Father Hennepin State Park, DNR obtained some information on the park's underground hydrology. The statistics for the three wells are shown in the table below.

Well	Depth	Static Water Level	Aquifer	Pumping Tests Time	Pump Volume	Drawdown
West Picnic Area	210'	12'5"	Granite Bedrock	2 hrs.	5 gpm	No Data
Campgrounds	258'	24'	Granite	No Data	20 gpm	74'
Service Area	152'	10'	Pink Granite Bedrock	2 hrs.	25 gpm	8'

The recharge areas are unknown at this time because the aquifers are fractured granite. This type of aquifer may be recharged from a variety of sources, i.e., underground reservoirs, underground streams in the fractures,or slow percolation from the ground above.

Current data is not sufficient to estimate aquifer volume. In the future, as more research in this area is conducted, estimates can be made that will be reasonably accurate.

There is no data immediately available concerning the water quality from these wells but the Department of Health checks each well annually for contaminants.

Surficial Hydrology Inventory[1]

The only sizable water body connected with Father Hennepin State Park is Mille Lacs Lake. The lake, covering 132,516 acres, is located in Mille Lacs, Crow Wing,and Aitkin counties (T 42-45N, R25-28W). The lake has a maximum depth of 36 feet with an average of 21 feet. The check dam at the outlet of Ogechie Lake, limits the level fluctuation of Mille Lacs Lake to between 6 inches and 12 inches annually.

Small intermittent streams feeding into Mille Lacs Lake are:

Garrison Creek in Section 12, T 44N, R28W
Twenty Creek in Section 32, T 45N, R25W
Deer Creek in Section 32, T 44N, R25W
Cedar Creek in Section 15, T 43N, R25W
Malone Creek in Section 2, T 43N, R25W
Wahkon Creek in Section 18, T 42N, R25W
Whitefish Creek in Section 7, T 42N, R27W
Seguchie Creek in Section 36, T 44N, R28W

The only outlet from Mille Lacs Lake is the Rum River, which begins its flowage on the southwest shore in Section 33 of T 43N, R27W.

The lake's shoreline is composed largely of sand or boulders. Just over fifty percent is sand beach. Most of the remainder is rocky and boulder-strewn as a result of soil erosion. There are a few small areas of marsh around the park. A little over 1% of the total shoreline is within the park.

The water quality data is somewhat sketchy. Furthermore, the quality changes with time and within areas of the lake. The following data was taken on July 8, 1954 in the center of the lake:

color - light green
clarity/turbidity reading - 7 feet by Secchi disc.
alkalinity - 125 ppm
sulfate ion - 17.0 ppm
phosphorus - .006 ppm
nitrogen - 1.66

	Surface	At 35 feet	
water temperature	71°F	68°	(Mille Lacs Lake has no thermocline.)
oxygen	8.1 ppm	6.4 ppm	

Mille Lacs Lake is classified by the Pollution Control Agency as a 2B (Recreation-Fisheries) lake. Readings were taken at the lake outlet during 1973 and 1974 for water quality. The table summarizes the findings.[1]

Date	Temp.*	(ppm) D.O.*	(mpn) Fecal Coliform*	(mpn) Total Coliform	(ppm) No_3	(ppm) $CaCo_3$	(ppm) Alkalinity	Cu*	Pb	(ppb) Fe	Hg	Cd
9/27/73	55	9.8	20	80	.1	120	110	23	130	100	.3	10
10/11/73	57	9.9	20	230	.1	88	90	10	10	650	.2	10
11/27/73	32	10.0	20	20	.1	90	96	15	10	10	.2	10
12/11/73	31	12.9	20	20	.06	71	87	10	10	310	.2	10
1/21/74	37	8.9	20	20	.1	86	94	10	10	140	.2	10
2/26/74	32	12.2	20	20	.1	78	93	10	12	40	.1	10
3/26/74	32	16.0	20	20	.1	100	110	10	10	10	.5	10
4/25/74	49	13.9	20	20	.110	76	77	10	10	48	.5	10

ppm - Parts per million
mpn - Most probable number
ppb - Parts per billion
D.O. - Dissolved oxygen
No_3 - Nitrates
$CaCo_3$ - Carbonates (hardness)
Cu - Copper
Cd - Cadmium
Pb - Lead
Fe - Iron
Hg - Mercury

*Constituents for which limits have been set for a 2B classification. Temperature: not applicable to Mille Lacs Lake because their are no potential temperature pollutors on the lake or draining into the lake. Dissolved oxygen: the allowable minimum is 6.0 ppm in the summer and 5.0 ppm in the winter. Copper: the allowable limit is 10 ppb. Fecal coliform: the allowable limit is 200 mpn.

The Mille Lacs Lake watershed encompasses 400,000 acres. The land in it is used for a variety of purposes. There are a number of recreational homes and full-time residences, parks, forests, and agricultural lands. Most commercial development is confined to the surrounding communities.

No inlets or outlets pass through the park, therefore, flooding data is not pertinent.

Management

Objective:

To protect the ground and surface waters from pollution

Specific Management

While existing data is limited, a study and field review of available data revealed few water resource problems at Father Hennepin State Park. The inventory indicated that the wells are deep and in bedrock aquifers. The park and the nearby city of Isle both handle their sewage safely and consequently there is little chance of groundwater contamination. Any future development that will require a separate well will require a site test for availability of water before the development is started. One problem known presently is in a muskeg bog at the west end of the park. An access road to a private cabin follows the park boundary, bisecting the bog and interrupting the drainage pattern. The result has been a lowering of the water table on the downflow side of the road. The rising water table on the upflow side is killing off much of the vegetation.

Culverts should be placed in the road to allow drainage through the barrier. The culverts would cost between $500 and $4,000 apiece. A hydrological engineer must determine the number and size of the culverts needed to handle the flow.

Another minor problem is posed by two drainage ditches that have been dug to drain a spring pond near Pope Point. The lowered water level is destroying some wood duck habitat in the pond. This problem can be corrected by plugging the ditches. A small work project could fill in these ditches at a cost of $50.

A possible future problem is water supply. Since very little is known concerning the park's underground hydrology, it is recommended that a groundwater study be carried out to determine volume and location of the aquifers. $5,000 should be appropriated for the study.

The only other water feature is Mille Lacs Lake and the Division of Parks and Recreation has little control over what happens on the lake. The Division of Parks and Recreation should work closely with the Division of Waters to ensure that the lake remains in good condition.

Source

[1]Department of Natural Resources, Fisheries Division, "Mille Lacs Lake Fisheries Survey," 1955 and Pollution Control Agency, "Computer Printout Sheet on Classification Guidelines," 1977.

FISHERIES MANAGEMENT

Introduction

The primary goal for any fisheries management program is to maintain the optimum natural fish population that a water body can support. The optimum is determined by such factors as water fertility, oxygen supply, food supply,and water temperature. Periodic fishery surveys are conducted to determine species diversity, size, and condition of fish populations. From the results of these surveys,the classification and site-specific management goals for a water body are determined.

Inventory

Because of its size and generally good fish condition, intensive management is not carried on in Mille Lacs Lake.

The lake is relatively shallow and thus wave action has kept aquatic plant populations down. Less than 5% of the lake has emergent plants. Bulrush found in Vineland Bay and cattail found in Wahkon Bay, are the most abundant species. Arrowhead is also present in some areas.

Submergent vegetation grows to a depth of 15 feet. The most abundant species include clasping-leaf and Robbins' pondweed, waterlily,and coontail. These plants are found in all the bays, where they are somewhat sheltered from wave action, and in a band along the north and northwest shoreline at a depth from 4 feet to 8 feet.

Mille Lacs, a popular fishing lake is known primarily for its walleyes, but it also contains other species. The following table lists the species and their relative abundance.

Species	Relative Abundance [1]	Gill Net Census for 20 Sets 1972	1975
Bass, Largemouth	No Data	No Data	No Data
Bass, Rock	No Data	3	No Data
Bass, Smallmouth [2]	Occasional	No Data	No Data
Bullhead, Black [3]			
Bullhead, Brown [3]	Occasional	2	No Data
Bullhead, Yellow [3]			
Carp	Occasional	No Data	No Data
Crappie, Black	No Data	3	No Data
Dogfish	No Data	No Data	No Data
Muskie	No Data	1	2
Perch, Trout [4]	Abundant	No Data	No Data
Perch, Yellow	Abundant	126	732
Pike, Northern	Occasional	73	54
Sucker, Common	No Data	1	No Data
Sunfish, Bluegill	Occasional	No Data	No Data
Sunfish, Pumkinseed	No Data	No Data	No Data
Tullibee	Abundant	53	214
Walleye	Abundant	116	376

Sources

[1] Relative abundance was taken from 1955 fisheries lake survey.

[2] Only known to be in Wahkon area and islands nearby.

[3] Abundance data only looked at genus.

[4] Trout Perch seldom reach over 6".

All the species found in Mille Lacs Lake spawn in the lake. There are several good spawning areas for walleyes, especially near Garrison on gravel, sandbars,and shoals. There is fair spawning habitat for northern pike in the floodplain areas of the creeks flowing into the lake. There are also fair spawning areas in the protected bays for centrarchids.

There was only spotty gill net census data available and size data is difficult to assess because it is constantly changing. Therefore, this data has been omitted from the plan but is available in fisheries surveys from the Fisheries Section of the DNR.

Management practice techniques have been developed which generally describe the specific recommendations for each water body. The techniques are population monitoring, annual monitoring with supplemental stocking program, "put-and-take" stocking program, reclamation, water level modification, habitat modification, rough fish control, and other specific management.

Management

Objective:

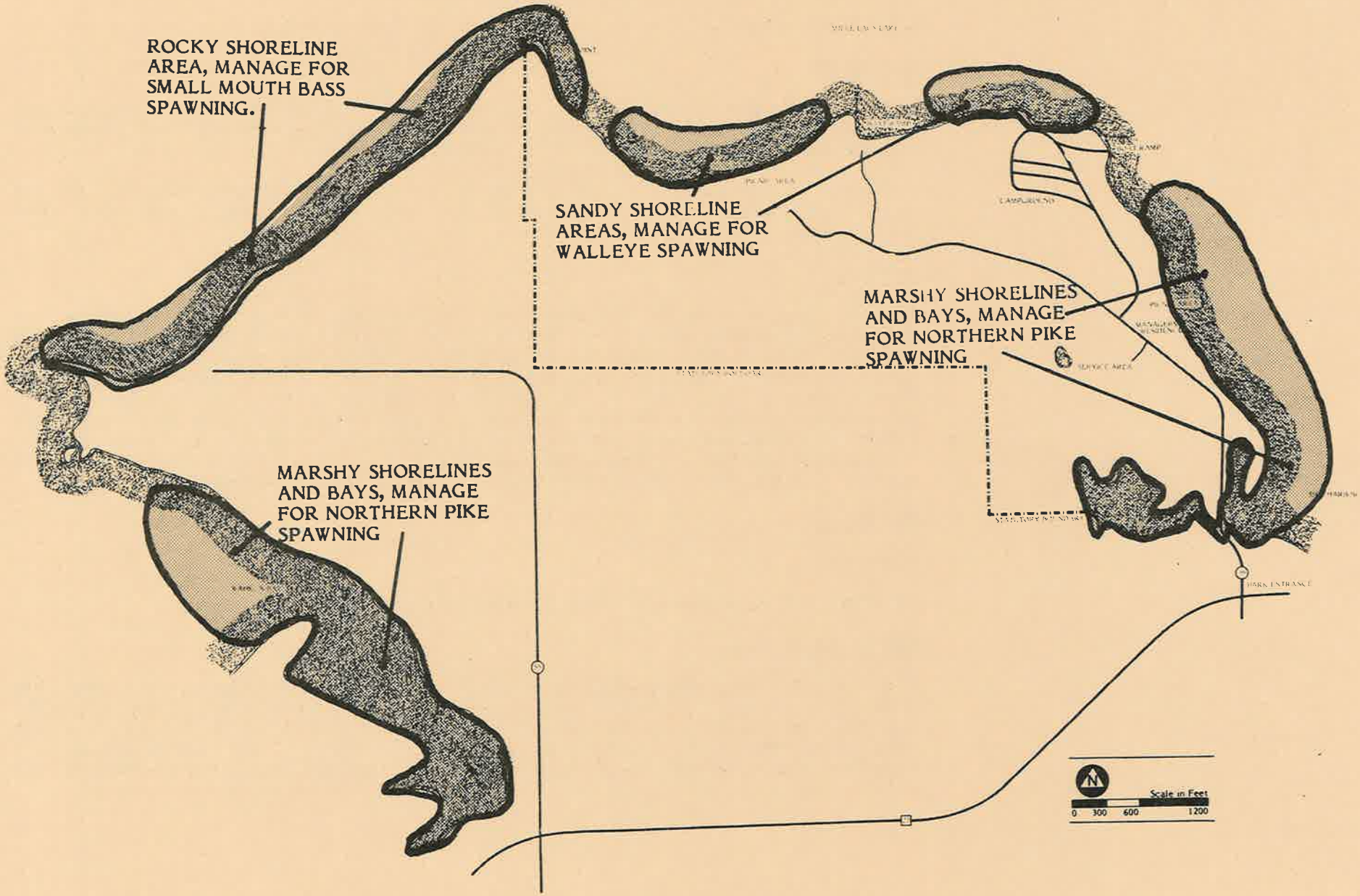
To protect spawning areas and enhance the fishing experience

Specific Management

Father Hennepin State Park has an insignificant influence on Mille Lacs Lake. Furthermore, because of its size, the lake doesn't presently have a formal management plan. The lake is classified as a walleye lake and has excellent natural reproduction areas for this species. While no regular stocking program is being exercised at this time, excess stock from other programs is released in Mille Lacs. Some muskellunge have also been stocked in recent years.

The park has excellent spawning areas. A shoal near the park's swimming beach is a favorite walleye spawning area. Because walleye spawning is over before the water is warm enough for swimming there is no conflict. Other spawning areas, however, do need protection. The rocky shoreline, the reedy areas in the bays, and backwaters must be left undisturbed for the bass and northern pike. DNR Fisheries, Waters, and Parks must work together to ensure this protection. The concentration of shoreline development will insure the preservation of these delicate areas. The accompanying fisheries management map delineates spawning areas, (map, page 39).

The recommendations for improving the fisherman's experience do not relate to fishing success but rather to providing auxiliary facilities that will allow the fisherman a safer, more enjoyable fishing trip. The Recreation Section will describe the boat harbor and camping facilities in detail.


ROCKY SHORELINE AREA, MANAGE FOR SMALL MOUTH BASS SPAWNING.
SANDY SHORELINE AREAS, MANAGE FOR WALLEYE SPAWNING
MARSHY SHORELINES AND BAYS, MANAGE FOR NORTHERN PIKE SPAWNING
MARSHY SHORELINES AND BAYS, MANAGE FOR NORTHERN PIKE SPAWNING
Scale in Feet
0 300 600 1200

SOILS MANAGEMENT

Introduction

Soil structure, type, and fertility play an important role in dictating what types of vegetation are presently found in the park or what types of plant communities might logically be reintroduced to replicate plant communities which exerted a dominant influence in the formation of that soil type.

In developing a park management plan, detailed soil surveys of the park are a necessity. Soils data must be considered when locating park roads, recreation buildings, campgrounds, picnic areas, sewage lagoons, and septic tank filter fields.

Inventory

The soils of Father Hennepin were formed from a reddish-brown till deposited by the Cary Patrician sublobe of the Wisconsin glacier. A reconnaissance soil survey was completed over the park area in 1927. According to this survey, the major soil series found in the park are the Milaca silt loams (Ms), and Milaca very fine sandy loam (Mv). These soils, when on slight slopes, can support park development. The table (page 41) contains some of the characteristics and limitations of all the series known to be found in the park. The map shows the locations of the series based on the 1927 survey. The series descriptions and the soil map separate the two Milaca soils, but the table has them grouped together. The Soil Conservation Service has been requested to complete a new soil survey of the park. When this is completed the new data and map will be inserted into this plan.[1]

Management

Objective:

To correct existing erosion problems and to prevent future erosion from occurring

Specific Management

With only a few steep slopes in the park, Father Hennepin has few erosion problems. One small problem is a slope between the beach and the parking lot. Rather than using the paved trail at one side, many users cut down at a point near the middle of the lot's north end. The vegetation has worn off a path at this spot and created a small gully. The solutions are to repair the damage and plant vegetation again or to repair the damage and construct a stairway or sloped trail over the spot. It is

Soil Type	Map Code	Slope	Permeability	Erosion Hazard	Potential Frost Action	Intensive		Paths and Trails	Recreation Buildings	Sewage Lagoons	Septic Tank Filter Fields
						Picnic Areas	Camp Areas				
Adolph	10	0-2%	0.2-2.0	Slight	High	Severe[9,7]	Severe[9,7]	Severe[9,7]	Severe[B,9,7]	Severe[9,7]	Severe[9,7]
Beach Sand	20	0-4%	Variable	No Data	Mod-High	Severe[9,7,4]	Severe[9,7,4]	Severe[9,7,4]	Severe[B,9,7,4]	Severe[9,7,4]	Severe[9,7,4]
Freer	30	0-2	0.2-6.0	Slight	High	Moderate[9,7]	Moderate[9,7]	Moderate[9,7]	Severe[B,9,7,8]	Slight[9,7]	Severe[9,7,6]
Milaca	40s & v	0-6	0.2-6.0	Slight	High	Slight	Moderate[6]	Moderate[6]	Slight[B]	Slt.-Mod.	Severe[6]
	40s & v	6-12	0.2-6.0	Slight	High	Moderate[1]	Moderate[6]	Moderate[6]	Moderate[B,1]	Severe[1]	Severe[6]
	40s & v	12-18	0.2-6.0	Mod.-Sev.	High	Severe[1]	Severe[1]	Moderate[6]	Moderate[B,1]	Severe[1]	Severe[6]
	40s & v	18-25	0.2-6.0	Mod.-Sev.	High	Severe[1]	Severe[1]	Severe[1]	Severe[B,1]	Severe[1]	Severe[6]
Onamia	50	0-2	2.0-20.0	Slight	Low	Slight	Slight	Slight	Slight[B]	Severe[6]	Slight
	50	2-6	2.0-20.0	Slight	Low	Slight	Slight	Slight	Slight[B]	Severe[6]	Slight
Peat	60	0-2	10.0-30.0	Slight	High	Severe[4]	Severe[4]	Severe[4]	Severe[B,4,8]	Severe[4]	Severe[4]

[A] Permeability measured in inches per hour

[B] Based on buildings without basements

[C] Based on buildings with basement or foundation

[D] Estimated from available data

[E] No data

LIMITATIONS

[1] SLOPE

[2] SURFACE TEXTURE

[3] DEPTH TO BEDROCK

[4] FLOODING (DURATION & FREQUENCY)

[5] POLLUTION POTENTIAL

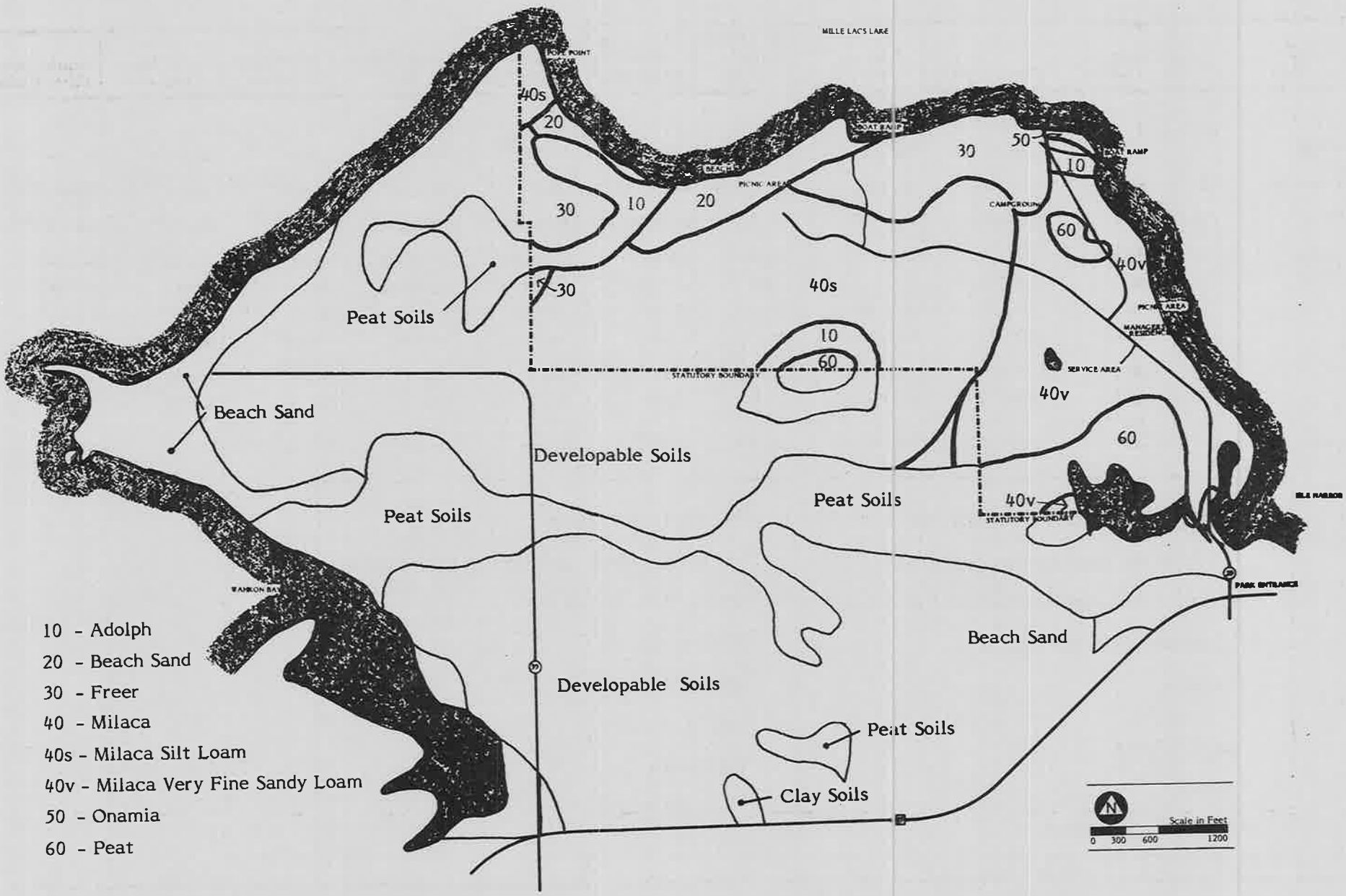
[6] PERMEABILITY

[7] WATER TABLE

[8] FROST ACTION

[9] DRAINAGE

[10] SHRINK-SWELL


MILLE LACS LAKE
BOAT RAMP
BEACH
PICNIC AREA
CAMPGROUND
BOAT RAMP
PICNIC AREA
MANAGER'S RESIDENCE
SERVICE AREA
STATUTORY BOUNDARY
STATUTORY BOUNDARY
WARREN BAY
ISLE HARBOR
PARK ENTRANCE
40s
20
30
10
20
30
50
10
60
40v
30
40s
10
60
40v
60
40v
Peat Soils
Beach Sand
Developable Soils
Peat Soils
Peat Soils
Beach Sand
Developable Soils
Peat Soils
Clay Soils
10 - Adolph
20 - Beach Sand
30 - Freer
40 - Milaca
40s - Milaca Silt Loam
40v - Milaca Very Fine Sandy Loam
50 - Onamia
60 - Peat
Scale in Feet
0 300 600 1200

recommended that the damage be repaired and good sized vegetation be planted over the area. Judicious use of thorny or other rough stemmed species is recommended to help direct traffic toward the paved trail. With picnic area expansion, another access path may be developed off the northwest corner of the lot. The project would cost approximately $1,000 (primarily for the large planting stock) and should be done in 1980 unless funds become available sooner.

The major soil series (Milaca) found in Father Hennepin State Park is capable of handling recreational development with only minor limitations on slopes up to twelve percent. Some facilities may also be placed on slopes over twelve percent, but extreme care must be used in their design and construction. The beach sand soils can withstand light development, such as a picnic area, as long as sanitation buildings are not located on these lake-deposited sandy soils.

Source

[1]Bodman, G. B.; Hammar, C. H.; Hill, S.; Mather, T. H.; Petraborg, H. T.; Moon, J. W.; Hasty, A. H.; and Zentmire, J. H.; Soil Survey of Mille Lacs County, Minnesota, Soil Survey Sheets, U. S. Department of Conservation.

VEGETATION MANAGEMENT

Introduction

Before any management of a park is attempted, an inventory must be taken so that an account of the assets and attributes of a unit is available. The success of a management plan is then based upon the improvements that have taken place.

Inventory

To rapidly inventory the vegetation component of a park, a system was devised which would not only categorize vegetation,but would also recognize those species of wildlife normally associated with these plant communities. The system used to describe vegetation/wildlife associations is called the "Ecological Community System". In designing the system,several factors were considered. These factors included existing land use patterns, soil, moisture, plant species composition, physical appearance (i.e., grassy, brushy, forested, bare, etc.),and the habitat choices of the various species of wildlife commonly found in Minnesota.

Original Vegetation

The original vegetation of the park was generally northern hardwoods with mixed red and white pine.

Existing Ecological Communities

The predominant ecological communities of the park are northern hardwoods, marsh and ponds, open brush, alder-willow swamp,and pioneer hardwoods.

Major Ecological Communities

Northern Hardwoods

Northern hardwood communities are characterized primarily by sugar maple, but associates such as oak, basswood, green ash, and elm are also found in some areas. Small scattered clumps and individual white pine also occur.

Dominant Tree Species

Sugar Maple
Basswood
Red Oak
Bur Oak
Butternut

Dominant Shrub Species

Prickly Ash
Beaked Hazel
Raspberry
Speckled Alder

Dominant Ground Layer Species

Fern sp.
Solomon's Seal
Large Flowered Trillium
Wood Horsetail

Marsh and Ponds

Marsh and pond communities are characterized by soils that are normally flooded by 6"-10" of water throughout the growing season. Indicator species include cattails, bulrush, bur-reed, duckweed, coontail, arrowhead,and giant reed grass.

Other communities found in Father Hennepin are too small to have any major ecological impact on the area. They do, however, provide for community diversity within the park and breakup the dominant masses of mature northern hardwoods.

Scenic Communities

Landscapes with the greatest variety or diversity tend to have the highest scenic value. The numerous woodland potholes, marshes, sand beaches, and Mille Lacs Lake along with the varied vegetation communities create a landscape that is highly scenic and has a high recreational value. The deciduous forest and marsh communities have a constantly changing character that provides visual pleasure and interest throughout the year.

Rare or Endangered Species or Communities

None known, more research needed.

Diseased, Mature or Overmature Stands

Generally, the northern hardwood community that comprises most of the upland vegetation in the park is overmature. Within the last two years, severe windstorms have hit the park from the northwest. The mature hardwood communities that had been weakened by age and disease were seriously damaged with little regeneration to replace the downed trees. Vegetation in the campground is also suffering because of the usage of the area.

Some problems that are common in heavy use areas are soil compaction, breaking and cutting for firewood, and nails in trees. Elm trees throughout the park are suffering from Dutch elm disease.

Wildlife/Vegetation Relationship

Vegetation provides habitat for wildlife. Generally, the more diverse a vegetative cover, the more wildlife species will be found in it. Father Hennepin doesn't have a very diverse vegetative cover and consequently doesn't have much diversity in its wildlife.

Management

Objectives:

To maintain a vegetative cover that will tolerate intensive recreational use and still retain some of the natural character of the area

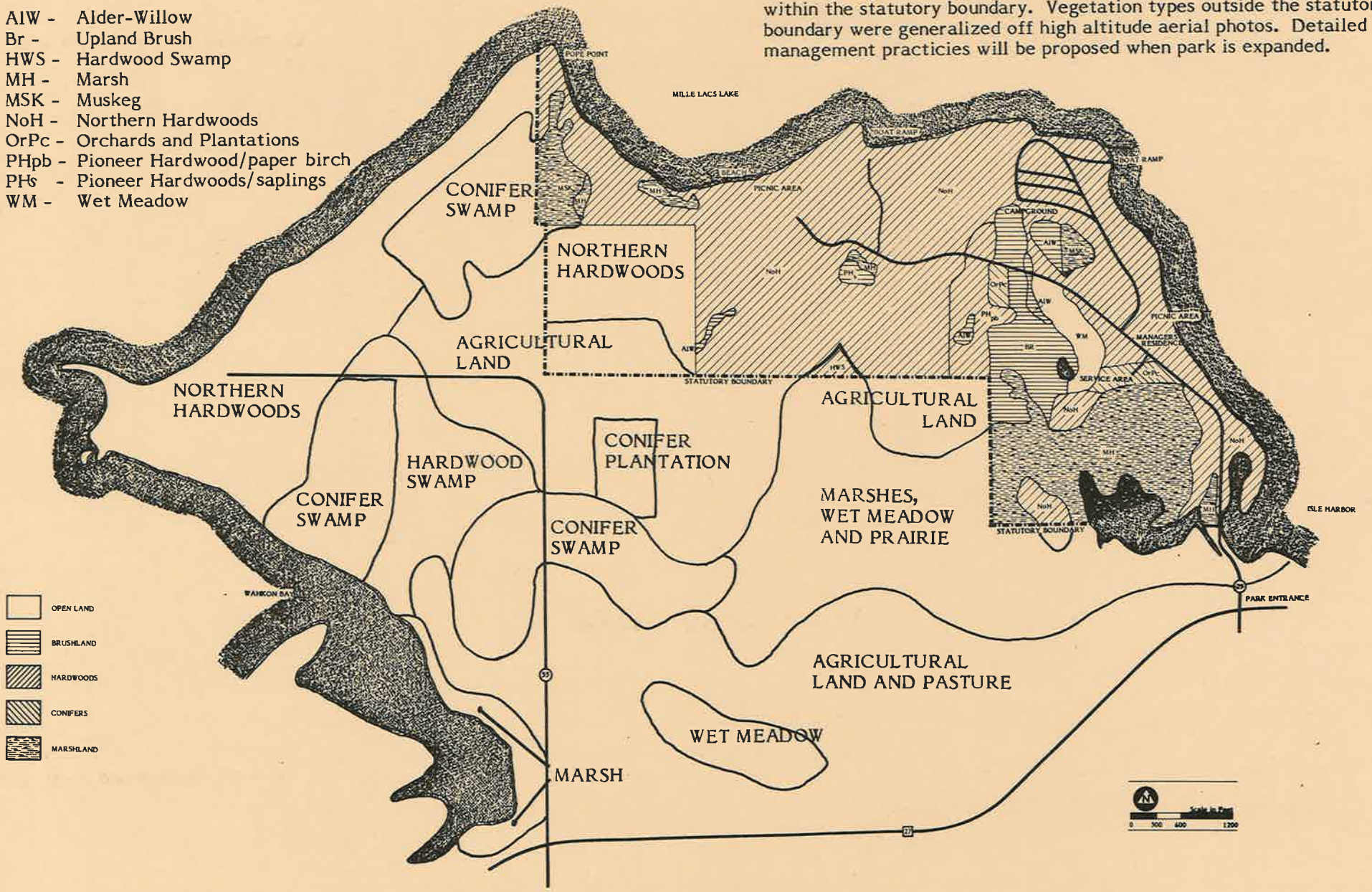
To enhance the age, class, and species diversity

To improve songbird and small mammal habitat

LEGEND

AIW - Alder-Willow
Br - Upland Brush
HWS - Hardwood Swamp
MH - Marsh
MSK - Muskeg
NoH - Northern Hardwoods
OrPc - Orchards and Plantations
PHpb - Pioneer Hardwood/paper birch
PHs - Pioneer Hardwoods/saplings
WM - Wet Meadow

NOTE:
Detailed vegetation typing has been done only for state owned land within the statutory boundary. Vegetation types outside the statutory boundary were generalized off high altitude aerial photos. Detailed management practicies will be proposed when park is expanded.



Specific Management

There are ten ecological communities located in Father Hennepin State Park, but two-thirds of the park's vegetation is comprised of northern hardwoods and marsh. The age group diversity within most of the communities is poor. Therefore, the general management objective for this park is to increase the age group and community diversity. The management practices explained on the following pages will improve the age and species diversity. However, management effectiveness is severely limited by the small size of the park.

FATHER HENNEPIN STATE PARK VEGETATION MANAGEMENT PLAN

NOTE: Map Code locates management areas on accompanying Vegetation Management Map

Map Code	Ecological Community	Management Practice	Specific Management	Estimated Cost
1	Muskeg (MSK)	Maintain bog community	No active management except fire suppression.	None
2	Marsh (MH)	Maintain marsh community	No active management except fire suppression.	None
3	Alder-Willow Swamp (AlW)	Maintain present community	No active management except fire suppression.	None
4	Hardwood Swamp (HWS)	Maintain present community	No active management except fire suppression.	None
5a	Upland Brush (Br)	Increase wildlife habitat	Burn 10 acres in varying size and shape tracts and plant with a random mixture of coniferous and deciduous trees and shrubs. Species should include high seed and berry-producing varieties such as hawthorn, wild plum,and high bush cranberry. The total project should be done in one year and only once.	$200 - Burn 650 - Plant $850/1979
5b	Upland Brush (Br)	Maintain present community	No active management except fire suppression.	None
6a	Pioneer Hardwood/ paper birch (PH pb)	Convert to northern hardwood	No active management except fire suppression. This allows stand to slowly convert to northern hardwoods.	None

6b	Pioneer Hardwood/ paper birch (PH pb)	Diversify stand age	Cut 8 tracts in 1979 of varying sizes and shapes (.2 to .8 acres) to diversify the age of the stand and to perpetuate the stand. Make cuts every 10 years. Cutting can be accomplished by issuing fuel wood permits or having park personnel cut for park firewood.	$1,000
7	Pioneer Hardwood/ sapling (PHs)	Let stand mature	No active management except fire suppression.	None
8a	Wet Meadow (WM)	Maintain meadow	Burn the area every 5 years. (1979 and 1984.)	$120 - Burn $240
8b	Wet Meadow (WM)	Improve raptor habitat	See Management Recommendation #1.	$180 - 1978 and 1985 $ 80 - 1979, '80, '81, '82, '83, '84, '86 and '8 $600/10 years
9a	Conifer Plantation (OrPc)	Maintain nursery plantation	Maintain small plantation to plant throughout park development area (campgrounds, picnic area, etc.). Replant plantation areas as groups of trees are removed.	$150
9b	Conifer Plantation (OrPc)	Maintain stand	No active management except fire suppression.	None
10a	Northern Hardwoods (NoH)	Maintain present community	No active management except fire suppression.	None
10b	Northern Hardwoods (NoH)	Create and maintain wildlife openings	Cut 10 one-half (½) acre tracts in 1979 leaving 5-10,18" dbh or larger trees per tract standing and leaving at least a few of the dropped trees on the ground. ($1000) After cutting, tracts should be burned ($150) and seeded to grass ($175), half the standing trees should be girdled and the tract should then be treated with Torden as needed to maintain the opening.	$1,325/10 years

1-10	All Communities	Research	Initiate a research project to determine best methods of managing the total groundcover. If the expansion is approved, particular attention should be paid to the old fields.	$6,500/10 years

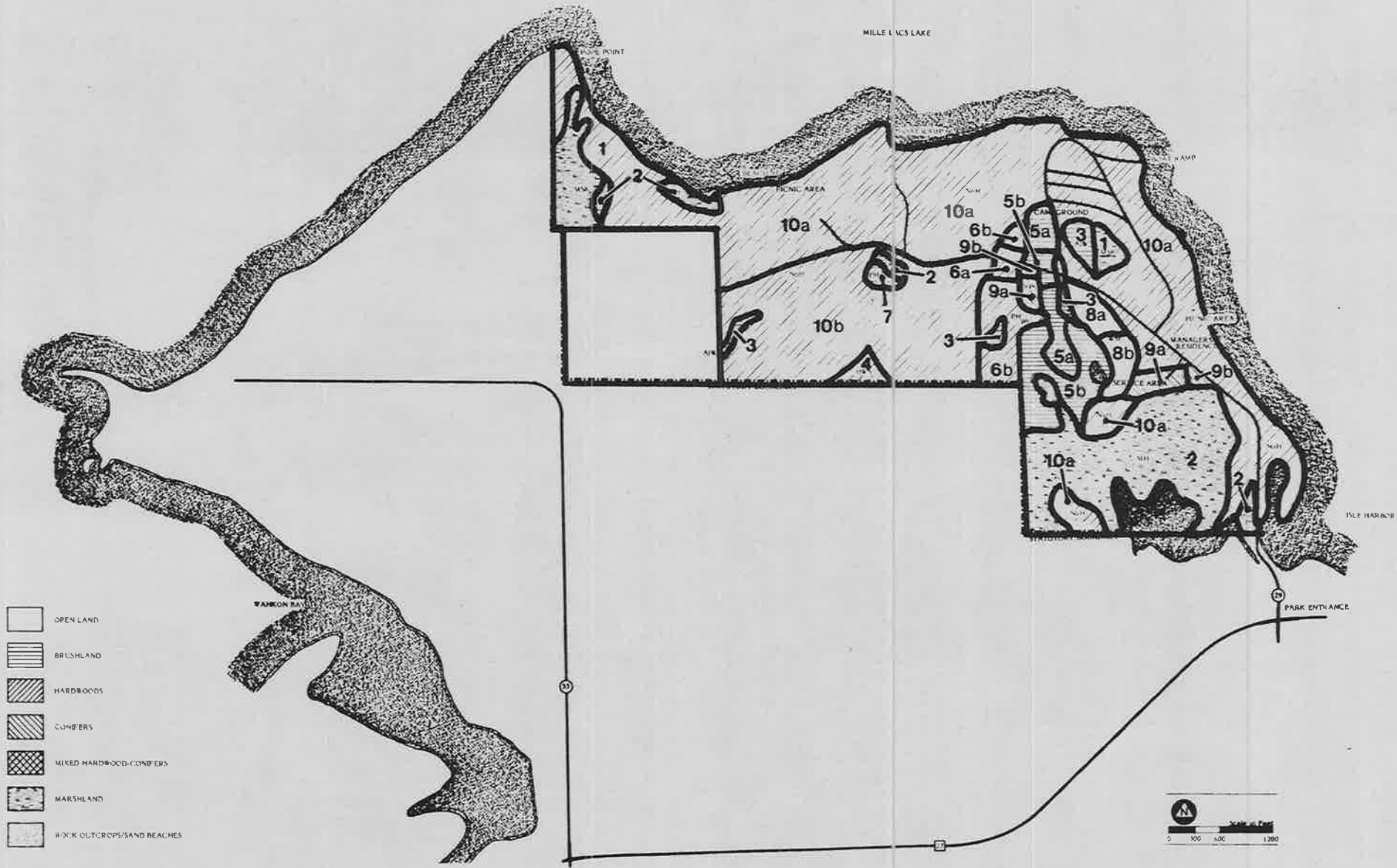
A noticeable vegetation problem in Father Hennepin is the damage done by windstorms off the lake. Scores of trees were blown down along the lakeshore during July, 1974 and June, 1975. The cleanup of the downed timber was facilitated through a joint effort by the park manager and district forester. Park personnel has cleared some of the downed timber, but the most effective method of cleanup has been the issuing of permits to private citizens in to cut and remove downed timber for firewood. Basswood is naturally suckering back very well and in non-use areas this natural method should be sufficient management. The use areas, particularly the campground, however, will need supplemental planting from the pine plantation (see Management Chart, page 50). This planting program is discussed in the Recreation Section.

A third problem is the access road along the west boundary that bisects the muskeg bog. The road, as mentioned in the Water Resource Section, has blocked the drainage patterns of the bog causing the vegetation on the upflow side of the road to flood out. The recommended solution has been discussed in the Water Resource Section (page 33).

Dutch elm disease, a common problem in many state parks, will have little effect on this park because elm is not a dominant tree species.

The vegetation in Father Hennepin State Park if managed properly, can greatly increase its aesthetic value and make it a very attractive park to visit. To help ensure proper vegetation management, research money is needed to further explore types of management which will be most effective. If the park is expanded at some future date, the district forester should inventory the added acreage and make appropriate management recommendations.

ELM MANAGEMENT IN PROCESS NEAR THE PICNIC GROUND


MILLE LACS LAKE
PARK ENTRANCE
ISLE HARBOR
OPEN LAND
BRUSHLAND
HARDWOODS
CONIFERS
MIXED HARDWOOD-CONIFERS
MARSHLAND
ROCK OUTCROPS/SAND BEACHES

WILDLIFE MANAGEMENT

Wildlife Inventory

One of the most intriguing assets of any park is its resident wildlife. Many species are commonplace but unnoticeable because of their elusive or secretive behavior. For many visitors the mere awareness of the presence of wildlife is all that is needed to change a dull, uneventful walk through the brush into a challenging, refreshing stroll through nature's handiwork.

In order to provide such an experience for park users, detailed inventories of park wildlife are needed. This will enable park personnel to manage and protect habitat to attract certain species and retain existing species.

The following wildlife inventory was based on checklists and reports submitted by local residents, "birders", naturalists, area game managers, and park managers. The list is not all inclusive and will continue to be revised and updated as new data is reported. Therefore, additional detailed studies must be continued in those areas where management needs for wildlife have been identified.

It is estimated that 131 species of birds, 31 mammal species and 9 species of reptiles and amphibians inhabit the park. Certain wildlife species in the park are especially noteworthy because special precautions are required in their management. These species may be sensitive to human activity or have the potential of damaging vegetation and property or they may pose a threat to park visitors.[1] The charts on the following pages list known species and those suspected to be in the area.

Endangered, Threatened, or Rare Species

Species within this group are those which are presently in danger of extinction in Minnesota in the immediate future, species which could become endangered in the foreseeable future in Minnesota but not necessarily throughout their entire range, or species that once resided in Minnesota but have been extirpated because of changes in land and water use patterns.

There are no known species in the park which are endangered, threatened, or rare.

Species of Special Interest

Species within this group include those which are uncommon or locally distributed in Minnesota and are not presently threatened or endangered but might become so. Also included are those species which presently are not in any particular danger but should be closely watched because of unusual or special values, because they are of special public interest, or because their habitat is especially vulnerable. Special habitat management techniques may be required.

- Birds

  -Seasonal Residents-

  Great Blue Heron
  Franklin's Gull

  -Migrants-

  Double-crested Cormorant
  Northern Bald Eagle
  Osprey

  -Permanent Residents-

  Pileated Woodpecker

  -Uncertain-

  Marsh Hawk

- Mammals

  None known

- Reptiles and Amphibians

  Snapping Turtle

Troublesome Species

Troublesome species include those species of wildlife which might be detrimental to either the natural resources of a park, park property, or park visitors.

- Birds

Species	Potential Problems
None known	

RED-TAILED HAWK

- Mammals

Striped skunk	General nuisance
Raccoon	General nuisance - raiding garbage cans
White-tailed deer	Vegetation destruction
Beaver	Vegetation destruction

- Reptiles and Amphibians

None known

Sensitivity to Humans

Species within this group are those which are unusually sensitive to disturbance by human activity. Disturbance during one season or another may result in nest or den abandonment, decrease in territorial size or shift in territorial movement. Such disturbance might be detrimental to the survival of the species in a given area or may have effects over a much larger area.

- Birds

None known

- Mammals

None known

- Reptiles and Amphibians

None known

FOUND IN PARK	SPECIES	RELATIVE ABUNDANCE: ABUNDANT	COMMON	UNCOMMON	RARE	ENDANGERED	UNKNOWN	SEASONAL OCCURRENCE: PERMANENT RESIDENT	SUMMER RESIDENT	MIGRANT	WINTER VISITANT	SEASONALLY INACTIVE	UNCERTAIN
●	Common Loon		●						●				
	Red-throated Loon												
	Red-necked Grebe												
●	Horned Grebe			●					●				
	Eared Grebe												
	Western Grebe												
●	Pied-billed Grebe			●					●				
	White Pelican												
●	Double-crested Cormorant				●					●			
●	Great Blue Heron		●						●				
●	Green Heron		●						●				
●	Cattle Egret			●						●			
	Great Egret												
●	Black-crowned Night Heron			●									●
	Yellow-crowned Night Heron												
	Least Bittern												
●	American Bittern		●						●				
	Whistling Swan												
●	Canada Goose			●						●			
	White-fronted Goose												
●	Snow Goose			●						●			
●	Mallard	●							●				
	Black Duck												
●	Gadwall			●						●			
	Pintail												
●	Green-winged Teal			●						●			
●	Blue-winged Teal		●						●				
●	American Wigeon			●						●			
●	Northern Shoveler		●							●			
●	Wood Duck		●						●				
●	Redhead			●						●			
●	Ring-necked Duck		●						●				
●	Canvasback			●						●			
●	Greater Scaup		●							●			
●	Lesser Scaup			●						●			
●	Common Goldeneye		●							●			
●	Bufflehead		●							●			
	Oldsquaw												
	Harlequin Duck												
	White-winged Scoter												
	Surf Scoter												
	Black Scoter												
●	Ruddy Duck			●						●			
●	Hooded Merganser			●						●			
●	Common Merganser			●						●			
●	Red-breasted Merganser			●						●			
●	Turkey Vulture		●							●			
●	Goshawk		●										●
	Sharp-shinned Hawk												
	Cooper's Hawk												
●	Red-tailed Hawk		●										●

FOUND IN PARK	SPECIES	RELATIVE ABUNDANCE: ABUNDANT	COMMON	UNCOMMON	RARE	ENDANGERED	UNKNOWN	SEASONAL OCCURRENCE: PERMANENT RESIDENT	SUMMER RESIDENT	MIGRANT	WINTER VISITANT	SEASONALLY INACTIVE	UNCERTAIN
	Red-shouldered Hawk												
	Broad-winged Hawk												
	Swainson's Hawk												
	Rough-legged Hawk												
	Ferruginous Hawk												
	Golden Eagle												
●	Bald Eagle			●						●	●		
●	Marsh Hawk			●								●	
●	Osprey			●						●			
	Peregrine Falcon												
	Merlin												
●	American Kestrel		●						●				
	Spruce Grouse												
●	Ruffed Grouse			●				●					
	Greater Prairie Chicken												
	Sharp-tailed Grouse												
	Bobwhite												
	Ring-necked Pheasant												
	Chukar												
	Gray Partridge												
	Sandhill Crane												
	King Rail												
	Virginia Rail												
●	Sora		●						●				
	Yellow Rail												
●	Common Gallinule		●						●				
●	American Coot		●						●				
●	Semipalmated Plover		●							●			
	Piping Plover												
●	Killdeer		●						●				
	American Golden Plover												
	Black-bellied Plover												
	Ruddy Turnstone												
●	American Woodcock		●						●				
●	Common Snipe		●						●				
	Whimbrel												
	Upland Sandpiper												
	Spotted Sandpiper												
●	Solitary Sandpiper			●						●			
	Greater Yellowlegs												
●	Lesser Yellowlegs			●						●			
	Willet												
	Red Knot												
	Pectoral Sandpiper												
●	White-rumped Sandpiper			●						●			
	Baird's Sandpiper												
	Least Sandpiper												
	Dunlin												
	Semipalmated Sandpiper												
	Western Sandpiper												
	Sanderling												

FOUND IN PARK	SPECIES	RELATIVE ABUNDANCE: ABUNDANT	COMMON	UNCOMMON	RARE	ENDANGERED	UNKNOWN	SEASONAL OCCURRENCE: PERMANENT RESIDENT	SUMMER RESIDENT	MIGRANT	WINTER VISITANT	SEASONALLY INACTIVE	UNCERTAIN
	Short-billed Dowitcher												
	Long-billed Dowitcher												
	Stilt Sandpiper												
	Buff-breasted Sandpiper												
	Marbled Godwit												
	Hudsonian Godwit												
	American Avocet												
	Wilson's Phalarope												
	Northern Phalarope												
	Parasitic Jaeger												
	GlaucousGull												
●	Herring Gull	●						●					
●	Ring-billed Gull		●					●					
●	Franklin's Gull		●					●					
	Bonaparte's Gull												
	Forster's Tern												
	Common Tern												
	Caspian Tern												
●	Black Tern		●					●					
	Rock Dove												
●	Mourning Dove		●					●					
	Yellow-billed Cuckoo												
●	Black-billed Cuckoo			●				●					
●	Screech Owl			●				●					
●	Great Horned Owl		●				●						
●	Snowy Owl				●					●			
	Hawk-Owl												
	Burrowing Owl												
●	Barred Owl		●				●						
	Great Gray Owl												
	Long-eared Owl												
	Short-eared Owl												
	Saw-whet Owl												
●	Whip-poor-will		●					●					
●	Common Nighthawk		●					●					
	Chimney Swift												
●	Ruby-throated Hummingbird			●				●					
●	Belted Kingfisher		●					●					
●	Common Flicker		●					●					
●	Pileated Woodpecker			●			●						
●	Red-bellied Woodpecker			●			●						
●	Red-headed Woodpecker	●					●						
●	Yellow-bellied Sapsucker			●			●						
●	Hairy Woodpecker		●				●						
●	Downy Woodpecker			●			●						
	Black-backed 3-toed Woodpecker												
	Northern 3-toed Woodpecker												
●	Eastern Kingbird			●			●						
	Western Kingbird												
●	Great Crested Flycatcher			●				●					
●	Eastern Phoebe		●					●					

FOUND IN PARK	SPECIES	RELATIVE ABUNDANCE: ABUNDANT	COMMON	UNCOMMON	RARE	ENDANGERED	UNKNOWN	SEASONAL OCCURRENCE: PERMANENT RESIDENT	SUMMER RESIDENT	MIGRANT	WINTER VISITANT	SEASONALLY INACTIVE	UNCERTAIN
	Yellow-bellied Flycatcher												
	Acadian Flycatcher												
	Willow Flycatcher												
	Alder Flycatcher												
	Least Flycatcher												
●	Eastern Wood Pewee		●						●				
●	Olive-sided Flycatcher			●						●			
	Horned Lark												
●	Tree Swallow		●						●				
●	Bank Swallow		●						●				
	Rough-winged Swallow												
	Barn Swallow												
	Cliff Swallow												
●	Purple Martin		●						●				
	Gray Jay												
●	Blue Jay		●						●				
	Black-billed Magpie												
	Common Raven												
●	Common Crow		●						●				
●	Black-capped Chickadee		●						●				
	Boreal Chickadee												
	Tufted Titmouse												
●	White-breasted Nuthatch		●						●				
	Red-breasted Nuthatch												
●	Brown Creeper		●							●			
●	House Wren		●						●				
●	Winter Wren			●					●				
●	Long-billed Marsh Wren			●					●				
●	Short-billed Marsh Wren			●					●				
	Mockingbird												
●	Gray Catbird	●							●				
●	Brown Thrasher		●						●				
●	American Robin	●							●				
	Varied Thrush												
●	Wood Thrush		●						●				
●	Hermit Thrush			●					●				
	Swainson's Thrush												
	Gray-cheeked Thrush												
●	Veery		●										●
	Eastern Bluebird												
	Blue-gray Gnatcatcher												
	Golden-crowned Kinglet												
●	Ruby-crowned Kinglet			●						●			
	Water Pipit												
	Sprague's Pipit												
	Bohemian Waxwing												
●	Cedar Waxwing		●						●				
	Northern Shrike												
	Loggerhead Shrike												
●	Starling		●						●				
	Bell's Vireo												

FOUND IN PARK	SPECIES	RELATIVE ABUNDANCE: ABUNDANT	COMMON	UNCOMMON	RARE	ENDANGERED	UNKNOWN	SEASONAL OCCURRENCE: PERMANENT RESIDENT	SUMMER RESIDENT	MIGRANT	WINTER VISITANT	SEASONALLY INACTIVE	UNCERTAIN
	Yellow-throated Vireo												
	Solitary Vireo												
●	Red-eyed Vireo		●						●				
●	Philadelphia Vireo		●							●			
●	Warbling Vireo		●						●				
●	Black-and-white Warbler			●					●				
●	Prothonotary Warbler			●					●				
●	Golden-winged Warbler			●					●				
	Blue-winged Warbler												
●	Tennessee Warbler			●					●				
	Orange-crowned Warbler												
●	Nashville Warbler			●									●
●	Northern Parula			●					●				
●	Yellow Warbler			●					●				
●	Magnolia Warbler		●						●				
	Cape May Warbler												
●	Black-throated Blue Warbler			●					●				
	Yellow-rumped Warbler												
●	Black-throated Green Warbler			●					●				
	Cerulean Warbler												
●	Blackburnian Warbler			●					●				
●	Chestnut-sided Warbler			●					●				
	Bay-brested Warbler												
	Blackpoll Warbler												
●	Pine Warbler			●					●				
●	Palm Warbler			●						●			
●	Ovenbird			●					●				
●	Northern Waterthrush			●					●				
	Louisiana Waterthrush												
●	Connecticut Warbler			●					●				
	Mourning Warbler												
●	Common Yellowthroat			●					●				
●	Wilson's Warbler			●					●				
●	Canada Warbler			●					●				
●	American Redstart		●						●				
●	House Sparrow					●							●
	Bobolink												
●	Eastern Meadowlark		●						●				
	Western Meadowlark												
●	Yellow-headed Blackbird			●					●				
●	Red-winged Blackbird	●							●				
	Orchard Oriole												
●	Northern Oriole		●						●				
	Rusty Blackbird												
	Brewer's Blackbird												
●	Common Grackle		●						●				
●	Brown-headed Cowbird		●						●				
	Scarlet Tanager												
●	Cardinal			●									●
●	Rose-breasted Grosbeak			●					●				
	Blue Grosbeak												

FOUND IN PARK	SPECIES	RELATIVE ABUNDANCE: ABUNDANT	COMMON	UNCOMMON	RARE	ENDANGERED	UNKNOWN	SEASONAL OCCURRENCE: PERMANENT RESIDENT	SUMMER RESIDENT	MIGRANT	WINTER VISITANT	SEASONALLY INACTIVE	UNCERTAIN
●	Indigo Bunting			●					●				
	Dickcissel												
●	Evening Grosbeak			●						●	●		
●	Purple Finch			●					●				
	Pine Grosbeak												
	Hoary Redpoll												
	Common Redpoll												
	Pine Siskin												
●	American Goldfinch		●						●				
	Red Crossbill												
	White-winged Crossbill												
●	Rufous-sided Towhee		●						●				
	Lark Bunting												
	Savannah Sparrow												
	Grasshopper Sparrow												
	Henslow's Sparrow												
	Le Conte's Sparrow												
	Sharp-tailed Sparrow												
	Vesper Sparrow												
	Lark Sparrow												
●	Dark-eyed Junco		●								●		
	Tree Sparrow												
	Chipping Sparrow												
	Clay-colored Sparrow												
	Field Sparrow												
	Harris' Sparrow												
●	White-crowned Sparrow			●						●			
	White-throated Sparrow												
	Fox Sparrow												
	Lincoln's Sparrow												
●	Swamp Sparrow			●					●				
●	Song Sparrow			●					●				
	Lapland Longspur												
	Smith's Longspur												
	Chestnut-collared Longspur												
	Snow Bunting												

FOUND IN PARK	SPECIES	RELATIVE ABUNDANCE: ABUNDANT	COMMON	UNCOMMON	RARE	ENDANGERED	UNKNOWN	SEASONAL OCCURRENCE: PERMANENT RESIDENT	SUMMER RESIDENT	MIGRANT	WINTER VISITANT	SEASONALLY INACTIVE	UNCERTAIN
	Opossum												
●	Eastern Mole		●					●					
	Star-nose Mole												
●	Cinerous Shrew		●					●					
	Richardson Shrew												
	Water Shrew												
●	Pygmy Shrew		●					●					
	Least Shrew												
●	Short-tailed Shrew		●					●					
●	Little Brown Bat		●						●				
●	Keen Myotis		●						●				
●	Big Brown Bat		●					●					●
	Pipistrelle Bat												
●	Silver-haired Bat			●									●
●	Red Bat			●									●
●	Hoary Bat			●									●
	White-tailed Jackrabbit												
●	Snowshoe Hare		●					●					
●	Eastern Cottontail Rabbit	●						●					
●	Woodchuck			●				●				●	
	Richardson's Ground Squirrel												
●	Thirteen-lined Ground Squirrel		●					●				●	
	Franklin Ground Squirrel												
	Least Chipmunk												
●	Eastern Chipmunk	●						●					
●	Red Squirrel	●						●					
●	Eastern Gray Squirrel		●					●					
	Fox Squirrel												
●	Southern Flying Squirrel			●				●					
	Northern Flying Squirrel												
	Northern Pocket Gopher												
	Plains Pocket Gopher												
	Pocket Mouse												
●	Beaver		●					●				●	
●	Western Harvest Mouse		●					●					
	Northern Grasshopper Mouse												
	Prairie Deer Mouse												
●	Woodland Deer Mouse		●					●					
●	White-footed Mouse		●					●					
	Bog Lemming												
	Northern Bog Lemming												
	Boreal Redback Vole												
	Meadow Vole												
	Rock Vole												
	Prairie Vole												
	Pine Vole												
●	Muskrat		●					●				●	
	Norway Rat												
	House Mouse												
	Meadow Jumping Mouse												
	Woodland Jumping Mouse												

FOUND IN PARK	SPECIES	RELATIVE ABUNDANCE: ABUNDANT	COMMON	UNCOMMON	RARE	ENDANGERED	UNKNOWN	SEASONAL OCCURRENCE: PERMANENT RESIDENT	SUMMER RESIDENT	MIGRANT	WINTER VISITANT	SEASONALLY INACTIVE	UNCERTAIN
●	Porcupine		●					●			●		
●	Black Bear				●			●			●		
●	Raccoon		●					●			●		
	Fisher												
	Marten												
	Short-tailed Weasel												
●	Long-tailed Weasel			●				●					
	Least Weasel												
●	Mink			●				●					
	River Otter												
	Spotted Skunk												
●	Striped Skunk	●						●			●		
	Badger												
●	Red Fox			●									●
	Gray Fox												
	Coyote												
	Timber Wolf												
	Canada Lynx												
	Bobcat												
●	White-tailed Deer		●					●					
	Moose												

FOUND IN PARK	SPECIES	RELATIVE ABUNDANCE: ABUNDANT	COMMON	UNCOMMON	RARE	ENDANGERED	UNKNOWN	SEASONAL OCCURRENCE: PERMANENT RESIDENT	SUMMER RESIDENT	MIGRANT	WINTER VISITANT	SEASONALLY INACTIVE	UNCERTAIN
●	Common Snapping Turtle			●				●				●	
	Wood Turtle												
●	Map Turtle						●	●				●	
●	Western Painted Turtle		●					●				●	
	Blanding's Turtle												
	False Map Turtle												
	Western Spiny Softshell												
	Eastern Spiny Softshell												
	Northern Prairie Skink												
	Five-lined Skink												
	Six-lined Racerunner												
●	Northern Red-bellied Snake		●					●				●	
	Texas Brown Snake												
	Northern Water Snake												
	Eastern Plains Garter Snake												
●	Eastern Garter Snake		●					●				●	
	Red Sided Garter Snake												
	Plains Hognose Snake												
	Eastern Hognose Snake												
	Blue Racer												
	Eastern Smooth Green Snake												
	Western Smooth Green Snake												
	Bullsnake												
	Western Fox Snake												
	Black Rat Snake												
	Eastern Milk Snake												
	Eastern Massasauga												
	Timber Rattlesnake												
	Mudpuppy												
	Central Newt												
	Jefferson Salamander												
●	Eastern Tiger Salamander			●				●				●	
	Gray Tiger Salamander												
	Red-backed Salamander												
	Dakota Toad												
●	American Toad		●					●				●	
	Great Plains Toad												
●	Northern Spring Peeper		●					●				●	
	Eastern Gray Treefrog												
	Blanchard's Cricket Frog												
	Boreal Chorus Frog												
	Western Chorus Frog												
●	Pickerel Frog		●					●				●	
	Mink Frog												
	Northern Leopard Frog												
	Green Frog												
	Wood Frog												

DEFINITIONS

Abundant - Trained observer may see several individuals in one day during the residency period of the species.

Common - Trained observer may see 1 or more individuals in one day.

Uncommon - Trained observer may see one individual in the course of one summer.

Rare - Species normally not observed by the trained observer.

Endangered - Listed in the Federal Register as a threatened or endangered species.

Unknown - Abundance of an individual species in a given park has not been determined.

Permanent Resident - Resident in the park area on a year-round basis.

Summer Resident - Only found in the park area during the summer months, presence may or may not indicate breeding activity.

Migrant - Normally found in the park area only during the spring or fall migratory season.

Winter Visitant - Normally found in the park area only during the winter months.

Uncertain - Seasonal occurrence status is not known for the species in the park area.

Seasonal Inactive - Species is seasonally inactive in the park area, may enter dormancy, hibernation,or aestivation.

Management

Objectives:

To increase the diversity and number of species that inhabit the park

To improve waterfowl habitat

To eliminate the park traffic/wildlife area conflict

Specific Management

Father Hennepin State Park does not have the wildlife diversity found in many state parks. The known reasons for this problem, other than the lack of vegetational diversity are the park's size, the disturbance of a major marsh area, and development along the shoreline.

The park's size is perhaps the single most limiting factor. The park's present 316 acres are just not sufficient to provide the habitat necessary for wildlife species diversity. Even if there were many communities, limited space would keep wildlife population at a minimum because wildlife generally avoids overcrowded situations. The vegetation management techniques will be directed toward increasing wildlife diversity. The best management solution would be an expansion of the park. The added acreage would give present populations more area and through inclusion of different vegetation communities, more species would be attracted to the park. Such a proposal was advanced as part of this plan, but it was dropped after considerable opposition was expressed at the public meeting (see Boundary Expansion Section, page 84).

The marsh is located at the present park entrance which means that all park traffic passes through it. If this intrusion is scaled down or removed, more wildlife may inhabit the marsh. It is recommended that the present road be converted to a trail and a new entrance road be built.

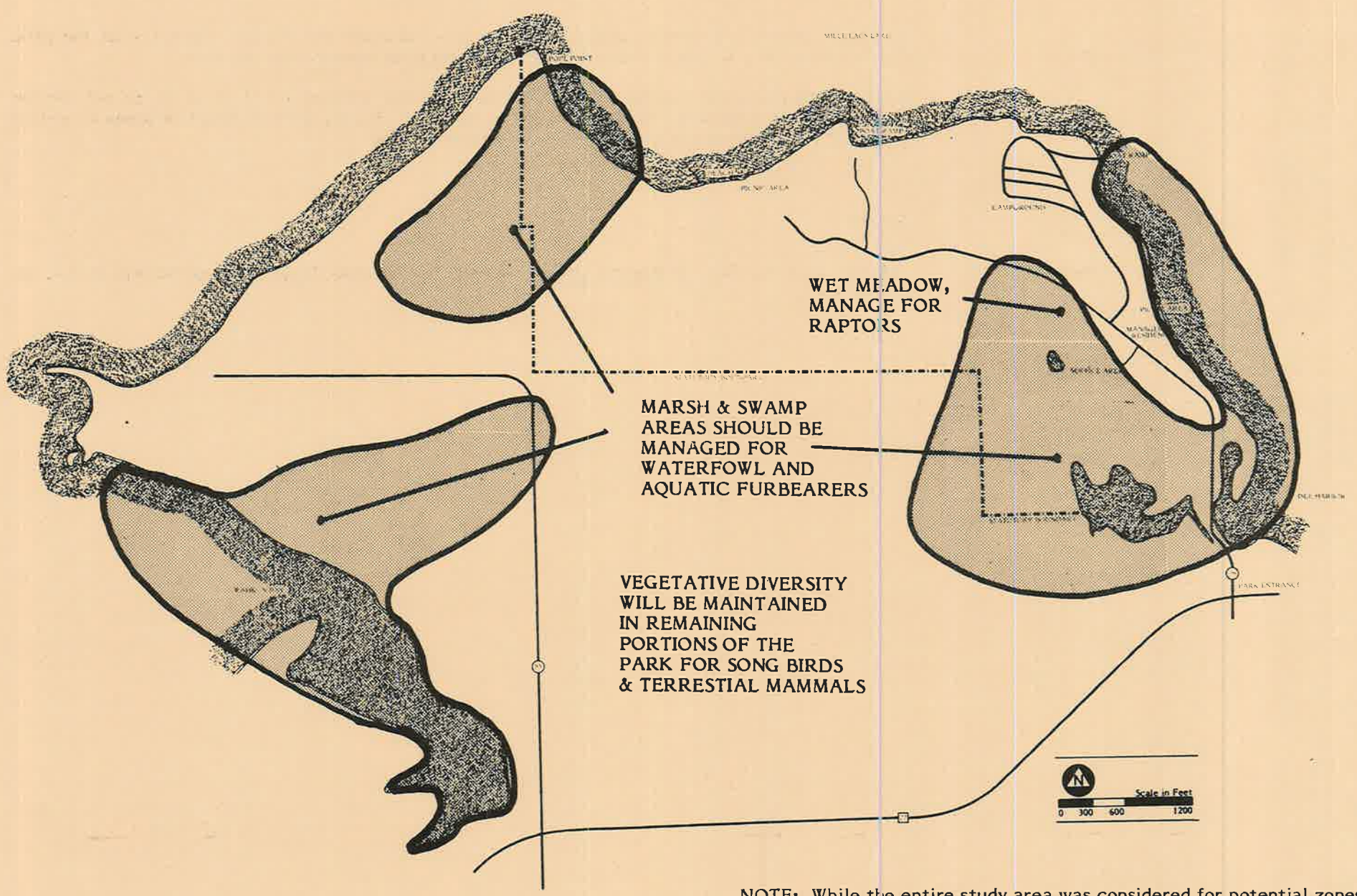
Protection of the lakeshore habitat is a more difficult problem. This park's main attraction is the lake for swimming, fishing, and boating. Shore birds and waterfowl also need shoreline areas for nesting and resting. In order to resolve this conflict, it is recommended that swimming and boating facilities be retained on the lake, but other activities such as camping and picnicking be moved inland. Another problem is the draining of two spring ponds near Pope Point. Small ditches have been dug from the ponds to Mille Lacs Lake. These should be plugged, restoring the ponds to their normal levels.

Research money is needed to accurately inventory and study the wildlife population of the park. This information will help in future wildlife and vegetation management decisions.

If the problems noted can be solved, wildlife in Father Hennepin will prove to be yet another important attraction of the park. The map on page 64 depicts wildlife-sensitive areas as well as potentially sensitive areas in the park and on adjacent lands.

Source

[1]Moyle, John B., The Uncommon Ones, (St. Paul: Minnesota Department of Natural Resources, 1975), p. 67.



NOTE: While the entire study area was considered for potential zones, only the areas within the park are affected.

USER ANALYSIS

Introduction

Careful consideration must be given to future needs of the park user. Although a great deal of data exists concerning disparate elements of the subject, no comprehensive authoritative study on recreational tourism demand within Minnesota is currently available. Trends in travel patterns are now discernible, but estimates of the time period over which this demand develops and of its magnitude are only speculative at this time. Furthermore, published data largely documents what people have done in the past. Only if we assume that these trends will continue, can conclusions be drawn. Obviously, this data is not (nor can it be) sensitive to any unpredictable technological changes or political events. For example, the oil embargo created an "energy crisis" overnight. This development and its implications have had a direct impact upon travel patterns.

There are two basic aspects of recreational demand. The first involves measurement of the amount and kind of recreational opportunities/facilities currently demanded by the public (e.g., the size of the park or the number of campsites). The second aspect involves an estimate of latent demand for recreational opportunities/facilities which would exist if citizens were given ample opportunity and adequate conditions to participate in an activity (e.g., the number of handicapped campers that would have utilized campsites if the architectural barriers to their use had been removed).

In the planning for the use and development of state parks, an attempt has been made to anticipate the recreational needs of the public by providing increased recreational opportunities while protecting the park's natural resources.

Regional and Park Considerations

According to a 1974 Opinion Survey of Twin City Residents conducted by the Minneapolis Star and Tribune, the southern Heartland tourist region is the second most popular vacation region in Minnesota. Father Hennepin State Park is located in the northeast corner of this region, and is one of only four state parks in the region. Of the four, it is by far the most popular, according to attendance figures for 1974, 1975 and 1976. The park is also within a two-hour drive of three metro areas, the Twin Cities, Duluth, and St. Cloud. These two facts, coupled with a developing trend toward vacationing closer to home, all but guarantee that the demand for Father Hennepin will continue to increase. In addition, Mille Lacs County ranked 14th in the state with 11.9% ($6,911,005) of total retail sales spent on tourism-travel expenditures in 1974.[1]

On the other side of the demand picture, Father Hennepin is located within an economic development region which, according to the 1974 Minnesota State Comprehensive Outdoor Recreation Plan (SCORP) will have deficiencies in outdoor recreation facilities by 1980. The park, though located in Region 7, is in close proximity to both Regions 3 and 5, therefore, the table below shows the facility projections for all three regions.

FACILITY AND LAND DEFICIENCIES (-) OR
SURPLUSES (+) IN THE ECONOMIC DEVELOPMENT REGIONS 3, 5, 7

	Swimming (water/acre/land/acre)			Camping (sites/acre)			Picnicking (tables/acre)		
Ecological Regions	3	5	7	3	5	7	3	5	7
1980 Units	+75.6	+137.8	- 36.9	-2487	-1205	-2540	-1470	- 879	-3248
Acres	-	-	-369	- 622	- 302	- 635	- 147	- 88	- 325
1990 Units	+65.3	+128.3	- 63.7	-5527	-2635	-5064	-1762	-1055	-4552
Acres	-	-	-637	-1381	- 659	-1266	- 176	- 106	- 455

SCORP recommended that counties and private enterprise provide facilities to correct these deficiencies. This is a sound recommendation, if the county wants to take on the task and has money to do the job. In most counties, however, particularly rural ones, the cost is simply too high. Although it is not the intent of the DNR to provide for the total recreational needs of Minnesota, the DNR is committed to assisting in the development of recreational facilities wherever the private sector or local units of government are unable to underwrite such projects.

Source

[1]Department of Economic Development, The Economic Distribution of Tourist Travel Expenditures in Minnesota by Regions and Counties, (St. Paul: Department of Economic Development, 1975).

EXISTING DEVELOPMENT

Father Hennepin State Park has an extensive system of recreational facilities. The contact station, in the southeast corner of the park, is only open during the summer season and functions only to sell stickers and firewood.

The park has two picnic areas. The first is along Mille Lacs Lake at the east end of the park. This area has pit toilets, a parking lot, and an enclosed shelter that is also used for interpretive programs. The other picnic area is next to the beach on the north side of the park. It contains an open shelter, parking lot, flush-style sanitation building,and pit toilets. Also, there is a paved trail through this area for the handicapped. There are approximately seventy tables on the two sites.

The campground is located along the lake in the northeast corner of the park. It has 62 sites, a flush-style sanitation building with showers, pit toilets, a trailer dump station, fish cleaning house and a boat ramp. Between the campground and the beach picnic area,there is a public boat access. A large parking lot and a set of pit toilets are adjacent to the boat ramp.

Other facilities include the beach, with a set of changing stalls, and two miles of trails which have been developed for use as hiking, nature, and cross-country skiing trails. Two miles of roadway are maintained for snowmobile trails during the winter. These trails provide winter access to the lake.

Utilities include an overhead telephone line which enters the park near TH 27, branching from a pole near the manager's residence, overhead to the residence and underground to the contact station.

The electric feeder line parallels the telephone line to the meter pole near the manager's residence, then continues on to another meter pole near the fish cleaning house in the campground. From the meter pole near the manager's residence, one line runs underground to the contact station, one line runs overhead to the residence, a third to the maintenance building,and a fourth to the picnic shelter. From the second meter pole in the campground, one line runs overhead to the fish cleaning house, another to a security light, and a third runs underground to the sanitation building.

About midway between the two meter poles, a line branches to a pad transformer and then underground to the beach picnic sanitation building.

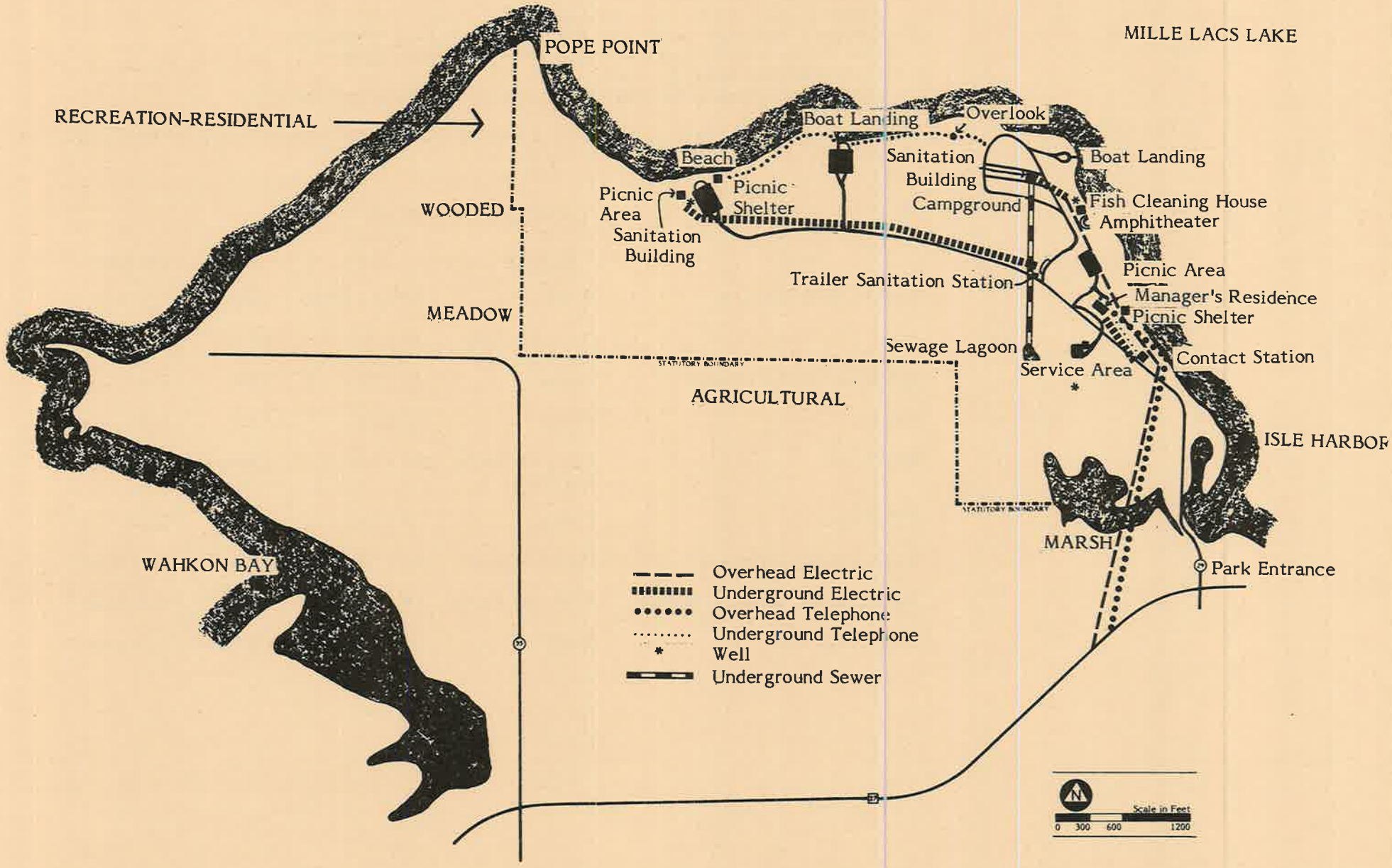
There are three wells in Father Hennepin. One is between the parking lot and sanitation building at the beach. A water line runs from this well to the sanitation building and to a location near the picnic shelter. Another well is located next to the fish cleaning house by the campground. This well services the campground facilities, the east picnic area,and the third well. This inter-well line eliminates dependence on one well for a given area. This third well is located south of the maintenance area and has lines running to the manager's residence and garage.

Sewage disposal facilities are:
contact station - septic tank and drain field
manager's residence - septic tank and two 1,078 gallon leeching pits
dump station - septic tank which drains into the sewage lagoon
beach sanitation building - vault
campground sanitation building - drains directly into the sewage lagoon.

The map on page 69 shows the location of existing facilities and location or approximate location of the utilities.

BUILDING INVENTORY

Name	Material	Size	Age	Condition
Beach Shelter Building	Wood	49'-4" x 25'-4"	1975	Excellent
Shop	Concrete Block	31' x 51'	1970	Good
Office and Contact Station	Frame	10' x 26'	1964	Fair
Shelter	Frame	30' x 54'	1958	Fair
Residence	Concrete Block and Frame	24' x 73'	Unknown	Fair
Fish House	Frame	12' x 24'	1966	Good
Beach Sanitation Building	Concrete Block	18' x 23'	1973	Very Good
Campgrounds Sanitation Building	Wood and Block	19' x 32'	1964	Very Good
Old Storage Shed	Wood	No Data	No Data	Very Poor


MILLE LACS LAKE
POPE POINT
RECREATION-RESIDENTIAL
WOODED
MEADOW
AGRICULTURAL
WAHKON BAY
Beach
Boat Landing
Overlook
Sanitation Building
Boat Landing
Campground
Fish Cleaning House
Amphitheater
Picnic Area
Picnic Shelter
Picnic Area
Sanitation Building
Trailer Sanitation Station
Picnic Area
Manager's Residence
Picnic Shelter
Sewage Lagoon
Service Area
Contact Station
ISLE HARBOR
MARSH
Park Entrance
Overhead Electric
Underground Electric
Overhead Telephone
Underground Telephone
Well
Underground Sewer
Scale in Feet
0 300 600 1200

RECREATIONAL DEVELOPMENT PLAN

Introduction

Physical development within Father Hennepin State Park is directed toward providing only those facilities necessary for appropriate use and enjoyment of the resources. The recreational development plan is designed to enhance and promote the use and enjoyment of the recreational resources of the area and to provide a broad selection of outdoor activities consistent with maintaining a pleasing natural environment.

The development plan discusses recommended recreational developments for the proposed expansion area. Even though the expansion was dropped for the present, the development recommendations have been retained in case another expansion proposal is advanced in the future. This plan was designed, however, to be functional immediately.

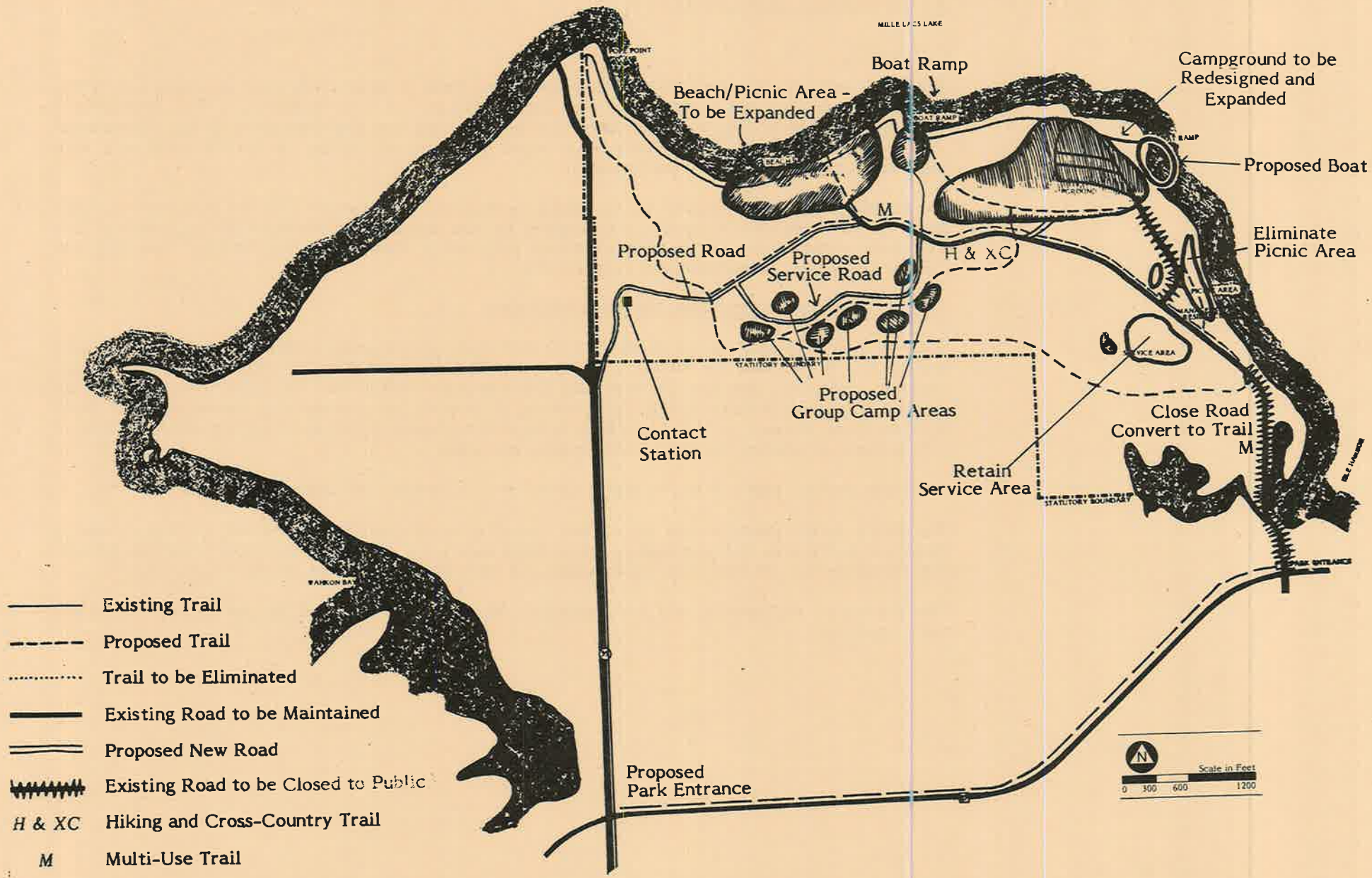
Architectural Theme for Father Hennepin State Park

An architectural theme will be established for each state park in order to develop visual compatibility and continuity between the different structures within the park and give meaning to their design. There is a tendency to relate the heavy log buildings built back in the CCC days to our present park system. These buildings definitely had a feeling of serenity and a wilderness character about them. In many cases, however, it is impossible to replace or duplicate this style of building either because of cost or because building materials aren't readily available.

Presently, Father Hennepin has no design theme nor does it have any uniform building style.

The park's design theme should reflect the character of the northern hardwoods community that is dominant in the area and it should relate to Mille Lacs Lake, the area's dominant landscape feature. The theme should also have meaning in relation to the cultural history of the Mille Lacs area.

The Bureau of Engineering will be responsible for preparing proposed designs for review by the planning staff.


Boat Ramp
Campground to be Redesigned and Expanded
Beach/Picnic Area - To be Expanded
Proposed Boat Shelte
M
Eliminate Picnic Area
Proposed Road
Proposed Service Road
H & XC
Proposed Group Camp Areas
Contact Station
Close Road Convert to Trail
M
Retain Service Area
Proposed Park Entrance
Scale in Feet
0 300 600 1200
Existing Trail
Proposed Trail
Trail to be Eliminated
Existing Road to be Maintained
Proposed New Road
Existing Road to be Closed to Public
H & XC Hiking and Cross-Country Trail
M Multi-Use Trail

Proposed Development

I. Camping $135,000

Objectives: To improve the quality and quantity of camping opportunities and to provide alternative camping opportunities

A. Existing

1. Rehabilitate and expand present campground

a. Proposed Action

Redesign parking spurs within existing campground maintaining approximately the same number of spurs but improving their quality. (For expansion proposal, see Proposed Action d)

1. Space sites at a minimum of 100'.
2. Provide pull-through sites where terrain requires.
3. Add space in each spur for boat trailers.
4. Develop some sites to accommodate small groups of campers. (Approximately 40% of the sites should be able to handle from 2-3 parties.)

Rationale

Father Hennepin is a small park, but it is a major recreational facility in the state park system. Most people come to the park primarily to use Mille Lacs Lake.

1. Sites should be spaced to provide more privacy, to reduce crowding, and to allow the resources to carry the camping without suffering severe damage.
2. Some pull-through sites should be provided, because occasionally people using recreational vehicles are not capable of manuevering large vehicles in the tight spaces normally provided for vehicle parking.

3. Many campers have boats and no space is currently provided for boat trailers.
4. Many people who use Father Hennepin come to the park in parties with two or three vehicles. Because the park has been classified as a recreational state park, DNR should allow for the social camping experience by providing small group camping facilities.

Cost $30,000

b. Proposed Action

Revegetate present campground.

1. Discontinue mowing, except in designated areas around individual campsites and keep brush from encroaching onto roads and trails.
2. Supplement natural revegetation in the campground with a planting and mowing program to be developed by the Bureau of Engineering. Large conifers and clumps of native shrubs should be planted in buffer areas.

Rationale

State parks are intended to provide people with recreational opportunities in natural surroundings. The campground in Father Hennepin has lost much of its natural character due to overuse, storm damage, and over-grooming. The proposed revegetation plan is intended to return the park to a natural condition while providing a good camping experience.

Cost $10,000

c. Proposed Action

Redesign road system in campground.

1. The present road system should be changed from four lanes connected on the ends to two loops originating from a central road.
2. The numbering system for campsites should be changed from lettered lanes with numbers to a consecutive numbering system.

Rationale

1. A loop system would disperse vehicular traffic evenly throughout the campground. Presently all traffic out of the campground moves on the same lane. The concentrated traffic is disturbing to campers along this lane.
2. The present numbering system is confusing to campers who aren't familiar with the lettered lane system.

Cost $10,000

B. Proposed

1. Expand campground

a. Proposed Action

1. Construct a new loop west of the existing campground.
2. Provide the following facilities:
   - 30-40 additional campsites
   - a sanitation building
   - a fish cleaning building

Rationale

Father Hennepin is recommended for classification as a recreational state park. There is presently a demand for more camping and there is room to add sites to the campground. With additional campsites, it will be necessary to provide an additional sanitation building to comply with the standard that states no campsite can be located further than 400 feet from sanitation facilities. Since fishing is such a popular activity for campers at Hennepin, one fish house simply isn't adequate for approximately 100 campsites.

Cost $70,000

2. Develop a group campground

a. Proposed Action

Develop 4 one-half to one acre clearings for group campsites south of main road near the beach and boat ramp.

1. Clear trees from sites and maintain grass cover. These sites will also serve as wildlife openings. They should be mowed once each year, no earlier than the last week in July. Periodic burning (3-5 year intervals) should be done to eliminate excessive build-up of dead grass. Burning should be done in early spring when there is still snow in the surrounding woods.
2. Sites should be randomly spaced and they should be irregularly shaped to fit natural vegetation patterns.
3. Access should be provided to sites by connecting them with a one-way gravel road. The road should have a locked gate with keys given only to group camp users.
4. Each site should be furnished with several picnic tables, pit toilets, one large fire ring,and a drinking water supply.

Rationale

There is a demand for group camping facilities that can very easily be provided. Developing group camps would also serve the purpose of providing badly needed permanent wildlife openings.

Cost $15,000

C. If, at some future date, the park is expanded to include the entire point of land, between Isle Harbor and Wahkon Bay, the following actions are recommended.

1. Develop a semi-modern campground

a. Proposed Action

An additional camping facility should be located on the extreme northwest point of land in Sections 4 and 5. This campground should have capacity for an additional 75-100 semi-modern sites with two sanitation buildings. Detail design should be done for the entire point of land and development should begin when the present campground, including new additions, becomes overused.

Rationale

Father Hennepin is located in an area of the state that is expected to have a shortage of outdoor recreation facilities in the future. Because no other state park has access to Mille Lacs Lake, this is an ideal place to provide more high-quality camping opportunities.

Cost $150,000 (proposed for a time beyond the ten year scope of this plan)

II. Picnic Areas $16,000

Objectives: To consolidate the day-use facilities and eliminate the present manager's residence/picnic area conflict

A. Existing

a. Proposed Action

Phase out east picnic area, including adjacent playground area, immediately.

Rationale

The east picnic area is located too close to the manager's residence. It is partially situated on a prehistoric site, has little room for expansion, and is located too far from other day-use facilities. Playgrounds are not compatible with state parks; they are provided by local units of government.

Cost $1,000

b. Proposed Action

Expand present beach picnic area and remove playground equipment.

Rationale

The present beach area is the most suitable location for day-use activities and it can be expanded to handle many more day-use park visitors. Most people who come to the park for day-use, use the beach or the boat launching facilities. Day-use facilities should be concentrated in the most suitable areas and, where possible, should be adjacent to each other.

Cost $15,000

III. Watersports $170,500

Objectives: To provide boater protection during storms, to eliminate the need for campers to trailer their boats everytime they leave the water, and to expand fish cleaning and fisherman sanitation facilities

A. Boat Shelter/Launching Area

a. Proposed Action

Develop a sheltered area for park users to beach their boats where they will be protected from the large waves that frequently occur.

1. Excavate a sheltered area on east end of existing campground.
2. Provide a sheltered boat ramp to get boats out of the lake when it is too rough to use the present ramps.
3. Provide campers a place to leave their boats when not in use.

Rationale

Father Hennepin is a high-use recreational park that is used primarily by people who come to use Mille Lacs Lake. Many of these users bring their boats. There is no suitable or safe place for park users to beach their boats. Currently, they must pull their boats out of the water everytime they leave the lake.

Cost $125,000

b. Proposed Action

Develop a flush-type sanitation building between the main boat launch area and the picnic/beach area.

Rationale

When the campground is expanded and water and sewer lines are extended, a new facility should be developed to replace the pit toilets presently provided.

Cost $38,000

PUBLIC BOAT LAUNCH

c. Proposed Action

Develop a fish cleaning building near main boat launch.

Rationale

The present building is located too far from the boat landing area and is only accessible to campers.

Cost $7,500

IV. Trails $42,000

Objectives: To increase the trail mileage, to provide full loop systems, to provide a trail for bikers, and to provide a non-automotive trail spur to the city of Isle

a. Proposed Action

1. Expand hiking trails to include all major use areas.
2. Develop loops that will serve as interpretive hiking trails in the summer months and skiing trails in the winter.

Rationale

Because of the small size of Father Hennepin, the trails should be developed for maximum use throughout the year.

Cost $7,000

b. Proposed Action

Connect major use areas within the park with an 8' hard-surfaced trail.

Rationale

Park users presently use park roads to tour the park on bikes. To prevent conflicts between bicycles and automobiles, an independent trail should be provided.

Cost $35,000

V. Roads $52,000

Objective: To provide a safe, efficient, and ecologically sound road system

a. Proposed Action

Put in new entrance road from CSAH 55 to the present road.

Rationale

The new road will have the correct flow for traffic in a park. The present road forces the day-use traffic to drive past the campground to reach the day-use facilities. The present road also crosses a marsh at the present entrance. The vehicular traffic impacts the waterfowl that would otherwise add an interesting interpretive stop for park visitors. Finally, the present road bisects the shop and manager's residence area which allows the manager little privacy.

Cost $50,000

b. Proposed Action

Convert present park entrance road from existing service area to TH 27 into a multi-use access trail connecting the park to the city of Isle. It will continue to function as a service road to maintenance area.

Rationale

Many local people use the present park entrance road as a bicycle access to the beach in the summer and campers use the road as a bike access to Isle. During winter months the entrance is used for snowmobile access to the lake.

Cost No special funding necessary.

c. Proposed Action

Construct a right turn lane for west-bound traffic and a left turn lane for east-bound traffic at the intersection of TH 27 and CSAH 55.

Rationale

Since the park entrance will now move to CSAH 55,the volume of traffic will increase considerably at this intersection. For the public's safety and convenience,these turn lanes should be added.

Cost $2,000

VI. Administrative Area $72,800

Objectives: To provide adequate shop facilities, to improve visitor orientation, and to improve the manager's living conditions

A. Existing

1. Shop Area

a. Proposed Action

The shop area should be screened from all park activity areas. A dense mass of shrubs should be planted between the shop and the main park road using shrubs which are native to the park or which have a high wildlife value.

Rationale

The present shop building is visible from the present entrance road and future trails. This exposure invites vandalism and other related problems.

Cost $4,800

b. Proposed Action

Build an unheated storage building and a loading ramp.

Rationale

There are many tools, pieces of equipment,and materials which must be stored indoors but which don't require heat. Presently they are taking up needed shop space.

Cost $15,000

2. Contact Station/Office

a. Proposed Action

Build a new contact station at a location just inside the present western boundary. The site should be designed so that entrance roads can be redesigned without requiring major changes in site design.

Rationale

A new entrance road will be constructed that will enter from the west. The new contact station will serve this road.

Cost $48,000

3. Manager's Residence

a. Proposed Action

Once the new entrance road and contact station have been completed, the residence should be screened from the multi-use trail with a buffer of trees and shrubs.

Rationale

The house will no longer serve as an off-season contact station. Therefore, the planting will give the manager more privacy.

Cost $5,000

B. If, at some future date, the park boundary should be expanded to include the entire point of land, the following measures are recommended.

1. Manager's Residence

a. Proposed Action

Move the manager's residence to one of the farmsteads off TH 27.

Rationale

The manager's residence is located on a prehistoric habitation site which should be preserved. The building is a non-conforming use of this zone. Also, the area is heavily used and affords little privacy for the manager.

Cost $45,000 (proposed for a time beyond the ten year scope of this plan)

2. Shop Building

a. Proposed Action

Construct a larger shop in new location.

Rationale

The present building is a non-conforming use. With the expansion more buildings will be needed.

Cost $40,000 (proposed for a time beyond the ten year scope of this plan)

VII. Miscellaneous $10,000

A. Within current park boundary

1. Utilities

Objective: To develop or locate all utilities in a place or manner which does not detract from the park's aesthetics

a. Proposed Action

Place all overhead electric lines underground.

Rationale

Overhead lines are unsightly.

Cost $10,000

B. If, at some future date, the park boundary should be expanded to include the entire point of land, the following measures are recommended.

Objectives: To determine the exact location of park boundaries and to post boundaries per statute and to remove all unnecessary fences and buildings

1. Signing

   a. Proposed Action

      Survey and sign boundary.

      Rationale

      When park is expanded, new boundary must be legally posted.

      Cost $5,000 (proposed for a time beyond the ten year scope of this plan)

2. Building Removal

   a. Proposed Action

      Once all the land in the expansion area is purchased, the unusable buildings and fences should be removed.

      Rationale

      Old buildings and fences are unsightly and pose a safety hazard.

      Cost $60,000 (proposed for a time beyond the ten year scope of this plan)

Boundary Changes & Acquisition

Introduction

Boundary changes and acquisition must be considered in the management of any state park. The amount of land necessary to manage a park correctly must be determined and acquired before management can be efficiently carried out. There are two goals that should be strived for in every park:

1. To provide sufficient park acreage to preserve and perpetuate the natural resources and provide the necessary recreation facilities to interpret and enjoy these resources, without including acreage that would be unnecessary or unreasonable to purchase. In cases where buffer land is needed but purchase is not reasonable or possible, an attempt should be made to zone the area to protect it or to obtain easements (partial interest) or other forms of agreement with the adjacent landowner. Such agreements would state that the landowner would agree not to develop any non-conforming use on the land in question

2. To control all land within the statutory boundary by fee title (direct ownership)

Because it would be fiscally and physically impossible to achieve these goals overnight, this plan will only establish priorities. The following criteria will be used in establishing boundary change and acquisition priorities:

1. Land needed for preservation or perpetuation of park resources

2. Land needed for development of facilities

3. Unimproved buffer land needed to prevent threatened development or use which would be incompatible with existing or potential park purposes

Objectives:

To provide enough acreage to sufficiently implement this plan and to provide a high quality recreational state park experience.

Specific Recommendations

The procedure for boundary change and acquisition recommendation for Father Hennepin State Park is two-fold. The first step is to purchase the remaining private land within the present statutory boundary. There is a 40-acre parcel, a 2.5-acre parcel,and a parcel of less than one acre within the present statutory boundary which are in private ownership. Though most of the management plan can be implemented without these parcels, some of the key developments, such as the entrance road

relocation and conversion to a multi-purpose trail, cannot be started until at least the 40-acre and one-acre tracts are purchased. The third parcel is not needed immediately and should be purchased only if it becomes available.

Looking 25 to 50 years into the future, it is anticipated that there will be a need to increase the size of Father Hennepin State Park. From analysis of the inventory and past demand studies, the park planning staff has determined an expansion of up to 700 acres would be the best long-term solution to accommodate future needs. The largest expansion considered included all the land (excluding the present park and the islands) west and north of a boundary described as follows:

> Starting at the intersection of CSAH 29 and the line between Government Lot 5 of Section 3 and Government Lot 2 of Section 10 T.42N, R25W; thence southerly along CSAH 29 to the intersection of said road with TH 27; thence westerly along TH 27 to the intersection with CSAH 55; thence westerly along the half section line of Section 9, T.42N, R25W, to the point where said line meets Mille Lacs Lake.

The present uses of the land vary from agriculture and open space to residential recreational and commercial recreational. All but one 2.5-acre parcel is in private ownership. Some justifications and benefits for expansion of Father Hennepin are:

1. The area is in a region of high demand for recreational facilities. A survey of Twin Cities residents indicated that the Mille Lacs Lake area is the second most popular tourism region in the state, next to the North Shore. This demand could increase even more because of the trend to vacation closer to home due to rising petroleum costs. Father Hennepin State Park is within two hours of the Twin Cities and St. Cloud

2. Two studies show that there is a lack of public recreational lands in the area

3. Resource management could be improved. The expansion would add more ecological communities as well as increase the size of communities in the present park

4. The expansion would provide a buffer zone between recreational use areas and outside development. Land in state ownership is absolutely protected from non-conforming usage

5. Present and future park facilities would be enhanced because, with more acreage, the development can be spread out, providing a higher quality park experience

6. The new park boundary would be much easier to patrol and the park would, in general, be easier to administer

At the final public information meeting held for Father Hennepin State Park, however, considerable opposition to any expansion of the park was expressed not only by the landowners involved but also by the local governments and civic organizations. Therefore, the planning staff recommends no immediate expansion for the following reasons:

1. Tax loss - the local county, school district,and township would lose a portion of their tax base for which the state presently offers little or no compensation

2. Existing compatible uses - the land is now being used in a compatible manner. Nearly half is in agricutlure and the remainder is residential-recreational and commercial-recreational use. The latter two are not only compatible,but provide an alternative to the state park experience

3. Low turnover - unlike other areas in the state, there has been very little turnover in the lakeshore property over the past thirty years. In fact, many of the properties have been handed down within families

4. Much of the management plan can be implemented within the present statutory boundary to accommodate present needs

Rather than an expansion, the staff recommends the following alternatives:

1. The county should be encouraged to implement strict zoning regulations in the study area to help insure that non-conforming uses, including platting the areas into small home lots, will not take place

2. A local park advisory committee should be formed of interested citizens to work regularly with the Division of Parks and Recreation and local governments in providing the best management for Father Hennepin State Park and surrounding lands

Implementation of these alternatives will lead to a better managed park, protection of the park's boundary from infringement,and better public relations between the Division of Parks and Recreation and the local public. If, in the future, the cabin turnover rate increases substantially or development pressures increase dramatically, the Division of Parks and Recreation along with the local park advisory board should review the situation and make subsequent recommendations to the legislature.

Introduction

Interpretation is "an educational activity which aims to reveal meanings and relationships through the use of original objects, by first-hand experience, and by illustrative media, rather than simply to communicate factual information" (Freeman Tilden). In this light, the interpretive services program fosters in the public an understanding of park resources and management by:

1. Revealing the kinship of park visitors to the park environment and, by association, their even broader involvement with ecosystems

2. Illuminating the historic and ongoing impacts of natural forces within the park and upon the people who use them

3. Assisting park visitors in the discovery of meaningful and satisfying ways in which to enjoy their visits without intruding on the experiences of others or impairing the quality of the park environment

4. Explaining the mission of the Department of Natural Resources, interdisciplinary park management practices, and the importance of public participation and support in the operation and maintenance of our state park system

Interpretive programs will be developed in recognition of the following:

1. All parks are fragile communities of life which can be perpetuated only through careful management

2. People are a natural and necessary element in park environments -- free to enjoy them in non-destructive ways

3. All natural resource units and the public they serve are tied to one another ecologically, economically, socially,and politically

It is hoped that the people who recreate and learn in the parks will, by experiencing the parks and related interpretive services, derive a better quality of life and gradually increase their environmental awareness. As people are encouraged to think and to feel more about park environments, they can be expected to do more on behalf of these environments. They can also be expected to strengthen their own ties with the land and with our state's cultural heritage.

SHORELINE SPAWNING AREA

Objective:

To provide an interesting program that concentrates on the aquatic ecology of Mille Lacs Lake its past, present, and future

Interpretive Theme

Glacial Lake Ecology/Geology

The interpretive theme for Father Hennepin State Park should concern itself primarily with the ecology of Mille Lacs Lake and the concomitant glacial and geological processes inherent in its origin.

Existing

1. Proposed Action

   a. Until demand increases, the program should be continued in its present format.

   b. Living quarters for the naturalist should continue to be provided near the administration site.

   c. Audio-visual equipment should be provided to maintain present interpretive program.

   Rationale

   At the present time, there is no need to expand the program because present demand does not warrant a program increase, however, the program needs its own audio-visual equipment. In the past, equipment has been burrowed from other parks.

   Cost

   Funding is covered in operations budget.

Proposed

1. Proposed Action

   a. Expand the existing program if, at some future date, the park is expanded and/or demand for the interpretive program increases.

b. Provide permanent office space for the park naturalist. This area would also be used to store interpretive equipment and prepare interpretive programs.

c. Encourage a local launch owner to provide excursion tours of the lake in cooperation with the park naturalist.

Key Features and Program Opportunities

Wisconsin Glaciation

Interpretation should focus on the Minneapolis lobe and Gary substage, the St. Croix morainic system and the Mille Lacs moraine. Present landforms and ground terrain of the Mille Lacs Lake area should be featured. A slide show could be developed for this purpose along with a self-guided automobile tour.

Waves and Currents

Interpretation should take into account wind velocity, direction, and duration; the fetch and reach of a body of water; the depth of water in terms of affecting wave length and height; shoreline erosion; wave energy, including wave base; the minimal effect of lake currents on lake modification; and the greater effect of swash and backwash, including beach drifting. A beach hike would be appropriate to this study.

Lake Ecology

Mille Lacs Lake presents an optimal situation for implementing cultural ecological principles within an interpretative program. Programs developed in cooperation and consultation with fisheries research, limnologists, and others would yield an abundance of information related directly to the recreational interests of park visitors.

The park itself does not have an over abundance of features upon which to base an extensive interpretative program, however Mille Lacs Lake is a vast interpretive resource which should be utilized to its full potential.

Prehistoric and Historic Features

Prior to the management of prehistoric or historic resources, sites must be documented and identified. It is then of primary importance to protect both known and suspected locations from activities which could adversely affect these irreplaceable cultural resources. Once protected, excavation, analysis, and interpretation can take place.

Father Hennepin State Park contains a known prehistoric burial mound and habitation site (21-ML-15)[1] which produced Malmo focus pottery indicating a Middle Woodland occupation. It was recommended by Elden Johnson in 1974 that excavation of burial mound and habitation area is needed because so little is known about Malmo focus pottery.

Although in historic times, the Dakota and Ojibway inhabited the Mille Lacs Lake region, a literature search revealed nothing specific about native American habitation in the area of the park. There is however, evidence of early homesteads within the statutory boundary.

Because of documented evidence of prehistoric and historic activity, an intensive survey should be conducted to confirm and research all known and suspected sites.

Further consideration for interpretation should be given following the survey for prehistoric and historic sites.

Phase #1 (intensive field survey) cost estimate: $1,100

Source

[1]Department of Anthropology, Archaeology Laboratory, "Prehistoric Archaeological Sites in Minnesota State Parks," University of Minnesota.

Personnel

In order to properly implement this plan, a full-time seasonal naturalist with specific background in glaciology, geology and ecology is required. The naturalist will conduct interpretive activities with the cooperation and concurrence of the park manager and appropriate regional managers. The park naturalist will report to the regional naturalist on interpretive activities and to the park manager on operational matters.

Program Equipment and Supplies

It is next to impossible to anticipate every item that a naturalist might reasonably need to carry out creative and effective programs. Some excellent activities are routinely dropped each summer for lack of relatively low cost equipment and supplies. The following is a list of basic equipment and supplies which are necessary to carry out a viable interpretive program:

- 16 mm projector
- 35 mm camera, lenses, film,and processing monies
- slide projector and slide trays
- series of large format display maps concerning the glaciology and geology of the park
- set of standard reference works on the earth and natural sciences
- contingency fund of approximately one hundred dollars per season

Cost $5,000

Interpretive Prospectus

Detailed procedures for interpretive plan implementation with specifics on costs, phasing, etc. will be prepared by the regional naturalist in consultation with DNR park planning staff during the next biennium. The prospectus will include recommendations for research on park ecology, visitor use, oral history,and other areas, as well as possible plan modification.

STAFFING AND EQUIPMENT

Introduction

Maintenance is an essential, little noticed, and difficult to finance responsibility of the Parks and Recreation Division. It is the basic obligation of the state to maintain the landscape resources and state park facilities in a safe, sanitary, environmentally sound and esthetically pleasing condition. These facilities must be operated in a manner that provides maximum use and enjoyment at the least possible cost, consistent with state law. There are four basic aspects to maintenance and operations.

1. Maintenance of the landscape resources for the use and enjoyment of future generations
2. Maintenance of the recreation facilities that provide access to those resources
3. Provision of services to the park visitors for maximum enjoyment of facilities and resources
4. Enforcement of rules and regulations to protect the resources from abuse and to ensure enjoyment of the facilities by park visitors

Accomplishment of these goals requires (a) trained staff, (b) sufficient supplies, and (c) proper equipment to maintain an efficient operation and keep costs to a minimum.

The task of providing services to the public and security for park facilities and resources 24 hours per day, 12 months of the year is monumental. During the busy season, full time operations are necessary 98 hours per week (8:00 to 10:00 p.m., seven days a week). The remaining hours are covered by night patrol and the presence of the resident manager. During other seasons only part time operations are provided 98 hours per week, however, maintenance repair and park security responsibilities account for many extra man-hours. If these responsibilities are to be met, competent trained personnel are necessary.

A workload analysis of park operating functions has been initiated to ascertain the personnel needs of each park, based upon existing facilities and current operations. This study identifies the man-hours needed to perform all tasks required for adequate maintenance and operation of the park. Initial results reveal that:

1. there is an extreme shortage of personnel
2. high cost labor employees are being used for jobs more appropriate to other job classifications because of difficult procedures in hiring seasonal personnel
3. a high percentage of man-hours are related to direct services to the public

These factors limit the personnel available for proper maintenance of facilities. Extensive development since the inception of the Natural Resources Act of 1963 has been a primary contributor to the widening gap between maintenance and development. From the workload study, standards can be established to determine man-hour operating requirements for future facilities as they are proposed for development, so that sufficient personnel and supplies can be provided. Facilities must meet the needs of the public, while being operational with minimum personnel at the lowest possible cost to the public.

Another contributing factor to the current park operations problem is the heavy reliance on federally funded work programs such as CETA, N.Y.C., and Green Thumb. The low cost personnel provided by these programs make it possible for parks to offer programs and services which would otherwise be impossible. However, these employees are hired on a short-term basis (usually 8 to 10 weeks) and often do not have the training and experience necessary to provide needed services without constant supervision in already understaffed parks. To avoid these problems, funding should be made available to hire adequately trained personnel for major public service and maintenance programs. using temporary employees only for minor maintenance and special projects.

Enforcement of park rules and regulations is a vital element in the management of state parks. Currently, violations are referred to DNR enforcement officers for follow through on prosecution. Park personnel should have the technical training and tools needed to carry out this responsibility in a manner which will protect the resources from abuse, while educating the visitor on the importance of environmental protection.

One of the major maintenance problems of recreation areas is the extreme impact of large numbers of people concentrating use in specific locations. These areas include campsites, trails, lakeshore, river banks, the area around buildings, and scenic points of interest. This overuse affects the groundcover and frequently exposes tree roots to damage from foot traffic. The eventual result may be erosion, slides, disfigured sites, and even danger to park visitors. Regular maintenance programs with adequate personnel, supplies, and equipment would reduce the damage and consequently prevent major reconstruction expenditures. It will also preserve the aesthetic character by preventing unsightly scars or exposed areas.

The purpose of a maintenance and operations plan is to identify specific problems of each park, establish the basis for solution of those problems, and to specify techniques of management which would decrease the costs of operation. It should make specific recommendations for facilities which will serve the needs of visitors with a minimum of regimentation, and provide for ease of maintenance and enforcement. It should also identify basic management duties, establish adequate staffing requirements, and identify supply and equipment needs.

Objective:

To ensure that the park has adequate staff and equipment to efficiently and effectively operate Father Hennepin State Park

Park Management Duties and Responsibilities

Park Manager

The park manager at Father Hennepin State Park will administer the total park maintenance and operations programs, and implement appropriate segments of the development program under the direct supervision of the regional park supervisior at DNR headquarters, Brainerd, Minnesota. This consists of supervising park employees, providing law enforcement, providing interpretative services, maintaining sound public relations, recruiting employees, soliciting volunteers for various work programs, and assisting in park operations when possible. These administrative responsibilities limit the time available for actual participation in maintenance and operations activities during the busy season. Additional seasonal and part-time personnel, as specified in the following pages, are necessary to provide adequate public services and fully implement this plan.

Contact Station

The contact station requires personnel to provide initial public contact, information, permit sales, campground registration, and other miscellaneous duties.

Swimming Beach

To fully protect swimmers, two lifeguards seven days a week are necessary.

Maintenance Personnel

Maintenance personnel (laborers, park workers,and student workers) provide a broad range of services. This includes maintaining buildings, grounds, trails, roads, parking areas, tables, signs and equipment, and providing semi-skilled labor for rehabilitation and development projects.

Interpretive Services

Father Hennepin's interpretive program is provided by V I P 's (volunteer in parks) with the assistance of the naturalist from Mille Lacs Kathio.

Current Staff (As of June 1978)

park manager	(12 month)
1 park worker	(4 month)
1 park worker	(5 month)
1 lifeguard	(3 month)
2 laborers	(5 1/2 month)
1 laborer	(5 month)

Operational Problems and Programs

Summer - Mid-May through Labor Day

Problems

The opening of fishing season brings capacity camping and boating use. Then as the fishing pressure decreases, family camping and swimming increases with weekend capacity crowds continuing through Labor Day. Operating time during this period is 98 hours per week, plus 35 hours of night patrol.

1. Two park workers must maintain contact station services 98 hours a week, supplemented by CETA workers and laborers.

   Recommendation - Hire one additional park worker or student worker eliminating the need to use higher paid laborers and untrained short-term CETA workers for this function.

2. There is an overcrowding problem with boats and extra cars in the campground.

   Recommendation - Redesign campsites to accommodate extra vehicles and boats, and allow groups to camp together on multiple unit sites.

3. Lack of docking facilities for boat users from the campground results in boaters having to take boats out of the water every time they come ashore. Some boaters illegally pull boats up on the swimming beach.

   Recommendation Alternatives -
   (a) Provide boat docks along shoreline
   (b) Construct boat shelter or harbor which will, primarily be for camper use, but which will provide shelter for all boaters in the area in severe weather.

4. Late evening socializing in the campground causes conflict among campers, creating enforcement problems. This is currently handled by laborers who are on cleanup duty.

   Recommendation - Trained personnel with summons authority for serious problems should be hired to handle these situations.

5. One lifeguard is not sufficient to protect the large numbers of swimmers, especially on weekends.

   Recommendation - Hire an additional part-time lifeguard.

6. There is insufficient transportation and maintenance equipment.

   Recommendation - Purchase a tractor/loader and an additional administrative vehicle for shuttling park personnel and equipment.

7. During the busy season there is more maintenance and cleanup to be done than can be accomplished by existing staff.

   Recommendation - Hire two student workers for miscellaneous maintenance and cleanup during the busy summer months. (A portion of the funds to salary this position would be provided by cutting one laborer position from 5 to 4 months.)

8. Current use of residence as the office interferes with the private lives of the manager and his family.

   Recommendation - Construct a new manager's office and contact station.

Fall - Early September through October

During this season full-time visitor services are provided on weekends and part-time services on weekdays. Both the spring and fall are principle maintenance seasons requiring competent personnel to accomplish rehabilitation programs for upgrading and rejuvenating facilities and grounds.

Problems

Insufficient personnel to adequately provide needed services.

Recommendations -
(a) Extend the 2 park worker positions to 6 months each, from May 1 through October.
(b) Extend 2 laborer positions to 7 and 8 months respectively.

Winter - November through March

Only the park manager is employed during this season. This is a time for catch-up work on reports, audits, ordering of supplies and material, service building improvements, fixture maintenance, snow clearing, and annual leave. Public use is minimal except for some skiing and snowmobiling.

Problems

Insufficient personnel to adequately accomplish necessary procedures.

Recommendation - Hire a nine month technician to assist the park manager.

Spring - April 1 through mid-May

During this season part-time visitor services are provided throughout the week. See Fall for problems and recommendations.

Other Problems and Recommendations

(a) Enforcement of state laws and park rules is difficult under existing conditions, without the training necessary for full enforcement authority needed to handle situations on-site and the summons authority necessary for prompt action. Current violations must be processed through DNR Enforcement or by formal processes through a county attorney. As problems increase each permanent park officer should obtain this training and authority.

(b) Extensive tree and stump removal from two successive wind storms will require major vegetative maintenance and management.

(c) Inadequate sewage disposal for the park residence can be rectified by connecting the plumbing to the sewage lagoon.

(d) The swimming beach requires extensive cleanup at certain times due to normal fish kill on the lake. A beach rake should be purchased.

(e) Firewood for campers is currently being purchased by the park manager from outside vendors for resale to park visitors. If commercially prebundled wood is not available, it would have to be provided from park supplies.

(f) Inadequate supplies, materials, and equipment which are needed to accomplish maintenance and improvement programs.

(g) Solid waste disposal is currently carried out by a local vendor four days each week, Memorial Day to Labor Day, and as needed the balance of the year. This arrangement provides excellent service at a savings in manpower and equipment to the state and should be continued.

(h) Snow removal is currently done by a snowplow on the dump truck and tractor loader shared with Mille Lacs Kathio. The dump truck is in bad condition and should be replaced (or retained, as long as a 4-wheel-drive vehicle with a snowplow is purchased).

Existing Staff Requirements

The chart shows existing staff and staff needed to adequately accomplish current maintenance and operations functions. These needs are based upon a workload analysis which identifies present park tasks and manhours necessary to accomplish those tasks.

	Existing		Needs	
Administrative Personnel				
Park Manager	12 mo.	$ 13,296	12 mo.	$ 12,296
Technician	---	---	9 mo.	$ 7,596
Public Services Personnel				
Two Park Workers	1 - 4 mo 1 - 5 mo.	$ 5625	2 @ 6 mo.	$ 7,500
One Park Worker or Student Worker	---	---	4 mo.	$ 2,340
One Lifeguard	3 mo.	$ 1,755	3 mo.	$ 1,755
One Lifeguard (Part-time)	---	---	1½ mo.	$ 878
One Naturalist	---	---	3½ mo.	$ 3,066
Maintenance Personnel				
Two Laborers I	5½ mo.	$ 4,823	15 mo.	$ 13,155
One Laborer I	5 mo.	$ 4,385	4 mo.	$ 3,508
Two Student Workers	---	---	4 mo. @	$ 4,040
TOTAL (Annual)		$ 29,884		$ 57,134

CETA and other programs are currently providing personnel to perform contact station services and other vital duties, however, their responsibilities should not exceed supplemental maintenance and cleanup or public service duties in emergencies. Student worker funds can provide additional personnel for maintenance.

Future Staff Requirements

As future development provides additional recreational facilities at Father Hennepin, additional personnel will be necessary to serve the public. Potential future development and the personnel required for operation are:

1. Expansion of existing campground and construction of boat harbor and ramp by 1979. One additional maintenance employee, four months, estimated annual cost:

$ 8,000

2. Picnic area construction by 1981 - estimated annual cost:

$ 4,000

$ 12,000

If, at some future date, the park is expanded and some of the developments recommended in this plan are built, additional personnel will be needed. Possible additions would include two maintenance employees and one public service employee to service the new campground and boat harbor facilities.

Equipment

The items of equipment listed below, replaced on a regularly scheduled basis, are considered essential for the current overall operations of this park. However, these needs may change, throughout the 10-year projection. Heavy equipment and specialized equipment not listed should be obtained through the regional office. Equipment of the proper size and type must be selected on a park by park basis to match the conditions and jobs. Proper, up-to-date equipment will reduce the personnel needs, the cost of repairs on old equipment, and the cost of maintenance and improvement projects.

1978 - 1987 Projected Equipment Replacement Schedule

Unit	Existing	1978-79	1980-81	1982-83	1984-85	1986-87	Total
Sedan - None	1973	$ 4,000	$	$	$ 5,000	$	$ 9,000
1/2 Ton Pickup	1976			5,000			5,000
3/4 Ton Pickup - Inoperable	1966	4,000			5,000		9,000
3/4 Ton Pickup - Dodge	1966						
Dumptruck - Ford	1966		10,000				10,000
Tractor/Loader - Shared	1967		10,000				10,000
Tractor Mower	1966			5,000			5,000
Small Equipment		4,000	4,000	4,000	4,000	4,000	20,000
Total		$ 12,000	$ 24,000	$ 14,000	$ 14,000	$ 4,000	$ 68,000

Future replacement will be based upon the following general cirteria:

- Light maintenance and administrative vehicles: 5 years or 70,000 miles.
- Heavy maintenance equipment: With the limited use received, this equipment could last a long time and be replaced on an individual item basis when necessary, or be exchanged through the region for other improved vehicles.
- Small equipment: Mowers and chainsaws need regular replacement with the consistent use received. Other motorized equipment will be purchased and replaced as needed.
- Other equipment: Interpretive furniture and fixtures will be purchased as needed.

MANAGEMENT COSTS SUMMARIES

	Biennium					
	78-79	80-81	82-83	84-85	86-87	TOTAL
WATER RESOURCE MANAGEMENT						
Correct Blocked Drainage	$	$ 10,000	$	$	$	$ 10,000
Fill in Drainage Ditches	50					50
Groundwater Survey		5,000				5,000
TOTAL	50	15,000				15,050
SOILS MANAGEMENT						
Correct Bank Erosion		1,000				1,000
TOTAL		1,000				1,000
VEGETATION MANAGEMENT						
Burn	650	80	200	180	80	1,190
Timber Removal (Cut)	2,000					2,000
Plant	750	50				800
Seed	175					175
Research	1,500	5,000				6,500
TOTAL	5,075	5,130	200	180	80	10,665
WILDLIFE MANAGEMENT						
Wildlife Species Study	2,000	2,000				4,000
TOTAL	2,000	2,000				4,000
CULTURAL RESOURCE MANAGEMENT						
Field Study	1,100					1,100
TOTAL	1,100					1,100

	Biennium					
	78-79	80-81	82-83	84-85	86-87	TOTAL
RECREATION MANAGEMENT						
Camping						135,000
Family Campground	90,000	30,000				
Group Campground		15,000				
Picnicking				16,000		16,000
Watersports						170,500
Boat Harbor	125,000					
Sanitation Building			38,000			
Fish Cleaning House		7,500				
Trails						42,000
Bike Trail			35,000			
Hiking/Interpretive Trails		2,000		3,000	2,000	
Roads						52,000
Entrance Road		50,000				
Right Turn Lane		2,000				
Administrative Area						72,800
Shop Area		4,800		15,000		
Contact Area		48,000				
Manager's Residence		5,000				
Miscellaneous						10,000
Utilities			10,000			
TOTAL	$215,000	$164,300	$83,000	$34,000	$2,000	$498,300

TOTAL MANAGEMENT BUDGET

Management Practice	Biennium 78-79	80-81	82-83	84-85	86-87	TOTAL
Water Resources	$ 50	$ 15,000	$	$	$	$ 15,050
Soils		1,000				1,000
Vegetation	5,075	5,130	200	180	80	10,665
Wildlife	2,000	2,000				4,000
Cultural Resources	1,100					1,100
Recreation	215,000	164,300	83,000	34,000	2,000	498,300
TOTAL (For Management)	$ 223,225	$ 187,430	$ 83,200	$ 34,180	$ 2,080	$ 530,115
TOTAL (For Maintenance & Operations)	$ 162,400	$ 200,000	$ 221,800	$ 232,600	$ 244,400	$ 1,060,200

MAINTENANCE AND OPERATIONS SUMMARY

The figures for the period 1980 through 1987 are estimated projections intended to illustrate the scope of the potential maintenance and operations costs, including the operation of new facilities plus an estimated 10% 2-year salary inflation cost.

		Biennium				
		78-79	80-81	82-83	84-85	86-87
PERSONNEL:						
Existing 76-77	$ 60,000	$	$	$	$	$
Actual Needs (for current operations based on staffing chart)		114,000				
*Personnel Costs (from previous biennium)			125,400	146,700	165,700	182,200
**Additional Personnel Needs (to operate new facilities)			8,000	4,000		
Sub Total		$ 114,000	$133,400	$ 150,700	$165,700	$ 182,200
*10% Salary Inflation		11,400	13,300	15,100	16,500	18,200
*TOTAL BIENNIAL PERSONNEL COSTS		$ 125,400	$146,700	$165,800	$ 182,200	$200,400
*SUPPLIES: Administrative Overhead and Expenses (20% of personnel costs)		$ 25,100	$ 29,300	$ 33,200	$ 36,400	$ 40,100
EQUIPMENT: (from equipment schedule)		$ 12,000	$ 24,000	$ 14,000	$ 14,000	$ 4,000
TOTAL PROJECTED BIENNIAL MAINTENANCE AND OPERATIONS COSTS:		$ 162,500	$ 200,000	$ 212,900	$ 232,600	$ 244,500
ANNUAL COST BREAKDOWN		$ 81,250	100,000	$ 106,450	$ 116,300	$ 122,250
TOTAL 10 YEAR COST PROJECTION:		$ 1,052,500				

*rounded figures
**see page 100

OVERALL AUTHORITIES

DIVISION OF PARKS AND RECREATION

General

Once the management plan has been completed and approved, it will become the responsibility of the director of Parks and Recreation (hereafter referred to as the director) to insure proper implementation of the concepts established in the plan. As such, the director will act as the coordinator and liaison between the planning staff, regional staff, local officials, and the general public to insure that the plan is kept current, remains on schedule, and becomes a reality.

In order to insure the accomplishment of this cooperative planning and implementation effort, the following responsibilities have been established and must be followed.

Specific Requirements

The director and staff will:

1. Coordinate and administer field operations as delegated by the assistant commissioner of operations
2. Develop and administer all programs necessary to accomplish plan goals and objectives. Programs include those necessary to implement management plans and to maintain and operate parks and other programs assigned to the division. Specific program responsibilities at this time are: acquisition, development, resource management, maintenance and service operations, interpretive services, and accessibility
3. Prepare policies, guidelines, procedures, and standards necessary to implement programs established in the plan (e.g., responsibilities relating to contracts and force account projects)
4. In coordination with DNR legislative liaison, prepare legislation necessary to provide program funding, boundary changes, and operational authorities
5. Review and approve all detailed plans, specifications, and project proposals prepared by the Bureau of Engineering (BOE) or field staff. Coordinate on–site field staking and site layouts with BOE and regional staff
6. Coordinate divisional administrative functions with other DNR administrative offices
7. Work with DNR's federal grant specialists in order to obtain maximum federal funding (e.g., LAWCON) for all division programs

8. Recommend modifications and provide information necessary to update the management plan. All modifications to the concepts established in the approved plan will be processed through the Office of Planning and Research. The director will submit requests for modifications in writing, stating justification for change and what impact the change would have on the overall management plan. If comments and rationale for opposing a proposed change are not received within 25 working days, agreement is implied. In the event that significant change in the direction of the plan is proposed, e.g., altering goals and/or objectives of the plan ,it will be necessary to follow the same procedures established in developing the original plan. If the director and the Office of Planning and Research cannot come to an agreement on the requested change, the director will then submit the request to the commissioner's Planning and Environmental Review Board (PERB) which will formulate the final recommendation to be submitted to the commissioner's Executive Council
9. Assign responsibilities and funding for implementation of the development program to BOE for contracts and to the regional staff for force account projects. In addition, the director shall coordinate the implementation of resource management programs
10. Make recommendations which will expedite the park planning process and evaluate progress toward the achievement of goals and objectives stated in the plan
11. Forward BOE requisitions and field project proposals to the Office of Planning and Research so that the progress of implementation can be monitored

REGIONAL OFFICE

General

The regional administrator and staff will supervise the physical implementation programs for the approved plans as established by the division.

Specific Requirements

1. The regional administrator will assign qualified staff to help implement this management plan. The district forester, wildlife managers, and other specialists should be consulted on specific aspects of the resource management of the plan.
2. The regional park supervisor will supervise and direct the park manager to insure that the management plan is implemented correctly.
3. The regional park supervisor will regularly field inspect all development in the park.
4. The regional park supervisor will submit written reports as necessary to keep the regional administrator and the director informed on the progress of development and any problems encountered.

5. The regional park supervisor will submit information to faciliate plan updates and changes. The regional park supervisor will submit his recommendations for change in writing to the regional administrator and the director. The recommendations should include rationale and an analysis of the impact the requested change will have on the management plan.
6. The regional park supervisor will submit project proposals to the regional administrator and the director for review and approval. The director and staff will review all project proposals verifying compliance with the intent of the plan and its schedule.

The region may implement approved project proposals once detailed specifications have been prepared and funding has been provided.

PARK MANAGER

General

It will be the responsibility of the park manager, under the direct supervision of the regional park supervisor, to coordinate the physical implementation of assigned sections of the management plan. The manager will inform the regional supervisor concerning the progress of the implementation through project proposals and written progress reports.

Specific Requirements

The park manager will:

1. Seek the assistance of the regional park supervisor in the resolution of any major implementation problems
2. Consult the regional park supervisor if there is uncertainity, concern, or opposition to recommended management of a specific item within the plan
3. Assist and give direction to field personnel assigned to the implementation of specific sections of this management plan
4. Maintain records on the development of specific items in this plan to insure continuity and reference for future updating and revision
5. Work with the regional park supervisor in initiating project proposals to be submitted to the director for review and approval
6. Submit to the regional park supervisor information to aid in the updating and revision of the plan

OFFICE OF PLANNING AND RESEARCH

General

The Office of Planning and Research will monitor and evaluate implementation of the management plan and make revisions to the plan as necessary.

Specific Requirements

The Office of Planning and Research will:

1. Review all BOE requisitions and project proposals to evaluate the proposed actions for consistency with the approved plan. Comments, suggestions, or corrections will be submitted to the director
2. Process all modifications to the approved management plan (see Parks and Recreation section)
3. Provide additional information and justification for specific recommendations within the plan when requested by the division
4. Maintain contact with the public, local officials, legislators, and DNR staff regarding the updating of the plan

PROCEDURES

DEVELOPMENT

The development procedure for the Division of Parks and Recreation can be broken down into two categories: (1) contract, and (2) force account.

Contract

Director initiates project by preparing a program which complies with the management plan.

Director distributes copies of preliminary program and drawings to the planning section and regional staff for review.

Director requests BOE to prepare detail drawings and specifications in accordance with approved program.

BOE prepares detailed drawings and specifications and submits them to the director.

Force Account

Director initiates project by preparing the program, complying with the management plan.

Director distributes copies of preliminary program and drawings to the planning section and regional staff for review.

Director assigns funds to regional administrator.

Regional administrator directs regional park supervisor and necessary staff to implement program.

Regional park supervisor may:

Request that the BOE prepare detailed drawings and specifications for review by the director

Assign the park manager to complete the project with field personnel

Assign park manager and with the regional staff to let bids to local contractors

Supervision over the project will be the responsibility of regional, divisional, or BOE staff, depending on the complexity of the specific project.

Regional park supervisor will certify to the division that the project has been completed as planned.

Director and staff will monitor the progress of the development program.

Director approves drawings and specifications, insuring compliance with management plan objectives and goals, and re-submits them to the BOE.

BOE processes contract documents through the Department of Administration, Division of Procurement for bidding and contract award procedures.

BOE provides direction to the contractor and establishes site location and field staking.

BOE supervises construction and approves completed work according to contract documents.

Director and staff monitor the progress, funding, and necessary coordination between other state agencies and funding sources.

RESOURCE MANAGEMENT

The resource management program for the Division of Parks and Recreation is also broken down into contract and force account categories.

Contract

Director initiates a project by preparing the program in compliance with management plan.

Director distributes copies of preliminary program and drawings to the planning section and regional staff for review.

Director approves project and initiates bidding process through the Department of Administration.

The director supervises and monitors the program.

Consultant or contractor, in coordination with divisional and regional staff, completes the project.

The director approves the completed project.

Force Account

Director initiates project by preparing the program in compliance with the management plan.

Director distributes copies of preliminary program and drawings to the planning section and regional staff for review.

Director assigns funds to regional administrator.

Regional administrator directs regional park supervisor and necessary resource management staff to implement program.

Regional park supervisor and resource staff prepare detailed resource implementation program.

Detailed resource management program is submitted to the director for approval.

Once approved, the regional park supervisor and resource managers may:

- Assign the park manager and field personnel to implement program
- Prepare contracts to be let to local contractors or consultants to implement program

Regional staff supervises project.

Director and staff monitor the progress of the resource management program.

Regional park supervisor certifies to the division that the project has been completed as planned.

MAINTENANCE AND OPERATIONS

The Division of Parks and Recreation will provide the regional staff with necessary direction to maintain and operate state parks as a statewide system. The director will establish rules and regulations pursuant to the ORA '75 for administering state parks. In addition, training courses and manuals will be prepared by the division on park operations, maintenance, enforcement, signing, and construction standards. If necessary, special operational orders will be prepared by the commissioner for specific problem areas. The following illustrates the general operation and maintenance procedures:

Director in cooperation with the assistant commissioner of operations, will establish policies, guidelines, and statewide procedures for maintenance and operations of all state park facilities.

The regional park supervisors, directed by the regional administrator, will follow policies, guidelines, and statewide procedures of the Division of Parks and Recreation, as well as, commissioner's orders.

The regional park supervisor will provide the necessary supervision and direction to the park managers to insure that park maintenance and operation policies, guidelines, and procedures are followed.

It will be the responsibility of the park manager, under the supervision of the regional park supervisor, to maintain and operate all park facilities.

The director and staff will inspect and review operations of state parks on a regular basis to insure that statewide procedures are being implemented and followed correctly.