

LEGISLATIVE REFERENCE LIBRARY  
F612.N47 M36

- A Management plan for Nerstrand Wo



3 0307 00052 1339

LEGISLATIVE REFERENCE LIBRARY  
- A Management plan for Nerstrand Wo  
East Hennepin State Library 3-150

F  
612  
.N47  
M36

841181

A Management Plan for  
**Nerstrand Woods**  
**State Park**

Minnesota Department of Natural Resources

This document is a summary of the Nerstrand Woods State Park management plan. All recommendations, both resource management and physical development, are included here. Detailed inventory data and specific instructions for implementing the recommendations have been compiled into a comprehensive management plan with technical appendices. These documents are on file in the:

Office of Planning  
Department of Natural Resources  
Box 10E Centennial Office Building  
St. Paul, Minnesota 55155

TABLE OF CONTENTS

INTRODUCTION

The Planning Process..... 5

An Overview of Nerstrand Woods State Park..... 6

A Summary of Management and Development Proposals..... 7

CLASSIFICATION..... 11

PARK RESOURCES

Climate..... 15

Geology..... 15

Soils..... 15

Vegetation..... 15

Wildlife..... 16

Groundwater..... 17

Surface Water/Fisheries..... 17

Archaeology/History..... 18

Resource Management Objectives..... 18

Resource Management..... 19

PHYSICAL DEVELOPMENT AND RECREATION MANAGEMENT

Existing Development..... 23

Recreation Management Objectives..... 24

Proposed Development..... 25

PARK BOUNDARY..... 31

MAPS

Existing Vegetation..... 35

Proposed Trails..... 37

Proposed Development..... 39

Ownership..... 41

Produced by the staff of the Office of Planning, Minnesota  
Department of Natural Resources, June 1983. Funded by the  
Legislative Commission on Minnesota Resources.

Planners: Mike Miller  
Grant Scholen  
Document #1506G

# Introduction



## THE PLANNING PROCESS

In 1975 the Minnesota State Legislature passed the Outdoor Recreation Act (ORA). The intent of this legislation is to ensure, through long-range planning, the protection and perpetuation of Minnesota's outstanding resources. Also included in this legislation is the mandate to provide recreational facilities which are desired by the citizens of Minnesota but which do not compete with the private sector. The Park Planning Section of the DNR Office of Planning was established to formulate long-range resource management and recreation development plans for 82 state parks, recreation areas and waysides. Funds for these plans are appropriated biennially by the Legislative Commission on Minnesota Resources (LCMR).

The park planning process consists of six steps:

1. An inventory of natural resources, visitor use and existing facilities is compiled. Specialists from other DNR divisions and sections assist in collecting pertinent data. At this point the first public workshop is held.
2. Alternatives for park management and development are developed. A second public workshop may be held to review these alternatives and invite further public comment. These alternatives are then reviewed by the Park Planning staff and the DNR Division of Parks and Recreation.
3. The recommendation for park classification is made, the park goal is developed and the draft plan is written. This step culminates in the first interdepartmental review.
4. The draft plan is revised as necessary after the interdepartmental review. The revised plan is made available to the public for a 30-day review period, after which the final public meeting is held.
5. The draft plan is revised according to information received from the public review. The plan is then sent to the State Planning Agency for a 60-day review period. (This management plan was reviewed in June 1983.)
6. The plan is implemented by the DNR Division of Parks and Recreation.

## AN OVERVIEW OF NERSTRAND WOODS STATE PARK

Nerstrand Woods State Park was established in 1945. It is located in east-central Rice County, 1 1/2 miles west of the town of Nerstrand. The statutory boundary encloses two entire sections of land, a total of 1,280 acres. State ownership encompasses 1,100 acres and the remaining 180 acres are in private ownership. Four hundred sixty acres of the state-owned land are designated as state trust fund land.

The topography of the park varies significantly. The northern section contains several steep-sided ravines, two waterfalls, and a portion of Prairie Creek with its bottomland and steep-sided valley slopes. The southern section also has a portion of Prairie Creek and some ravines but, in general, contains much more level land.

The vegetation of the park is one of its outstanding aspects. Nerstrand Woods, better than any other state park, is representative of the Big Woods type of vegetation which once covered 3,400 square miles of south-central Minnesota. In addition, the park is rich in wildflowers and contains one of the few remaining communities of the endangered dwarf trout lily.

In addition to its wealth of natural resources, Nerstrand Woods offers park visitors a variety of recreation opportunities. Park facilities include a 61-site semimodern campground, a primitive group camp, a picnic ground and a total of 8 1/2 miles of trails. The entire trail system is available for hiking and, during the winter, 3 1/2 miles of trail are available for ski touring. The remaining 5 miles are available for snowmobiling.



## A SUMMARY OF MANAGEMENT AND DEVELOPMENT PROPOSALS

### Resource Management

Realign the Hidden Falls Trail between the picnic area and the waterfall.

Identify and protect plants that are recognized by the Minnesota Natural Heritage Program (MNHP).

Manage the old fields in the park.

Develop two one-acre deer exclosures.

Manage vegetation in the developed recreation areas.

Identify and protect areas that have had minimal disturbance since presettlement times.

Restrict the number of fuelwood permits issued.

Consideration: Forestry Demonstration Area.

Control the deer population so that the number of deer wintering in the park does not adversely affect park vegetation and/or adjacent lands.

Maintain a maximum number of snags.

Test the water quality of the well at the park manager's residence, and make corrections as necessary to improve it.

Field-check major proposed development sites for the presence of prehistoric and historic remains before any work is begun.

### Recreation Management

Install electrical service for up to one-third (20 sites) of sites in the campground.

Manage the overstory and groundcover vegetation in the campground.

Replace the group camp pit toilets.

Construct a shelter building in the group camp.

Construct a picnic/trail shelter in the open area north of the picnic ground parking lot.

Develop a children's play area.

Realign the Hidden Falls Trail between the picnic grounds and the waterfall.

Upgrade and add to the ski trail system.  
Replace the Hickory Bridge.  
Eliminate one of the two snowmobile access trails which are located on the south end of the park adjacent to County Road #27.

Replace the Maple Bridge.  
Develop a scenic overlook and access trail north of the proposed picnic shelter.  
Develop a hiking-only trail between the proposed scenic overlook and Fern Hill.  
Construct a small wooden deck at Hidden Falls to serve as an observation and rest area.  
Open the trail system in the southern half of the park to horseback riding.  
Develop a vehicle and trailer parking area.  
Negotiate with the private landowner for a trail easement on the Fawn Trail.  
Consideration: Camping for horseback riders.

#### Administrative/Support Facilities

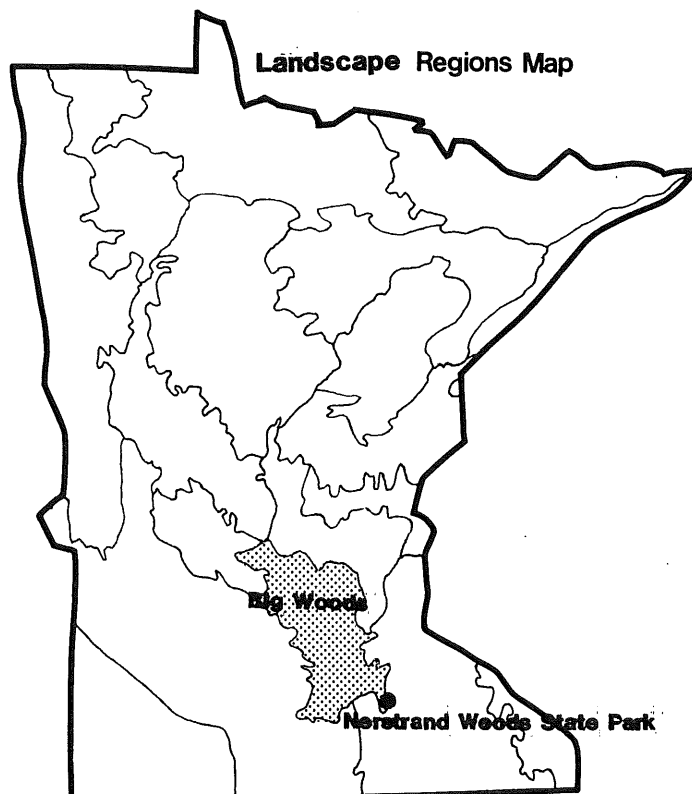
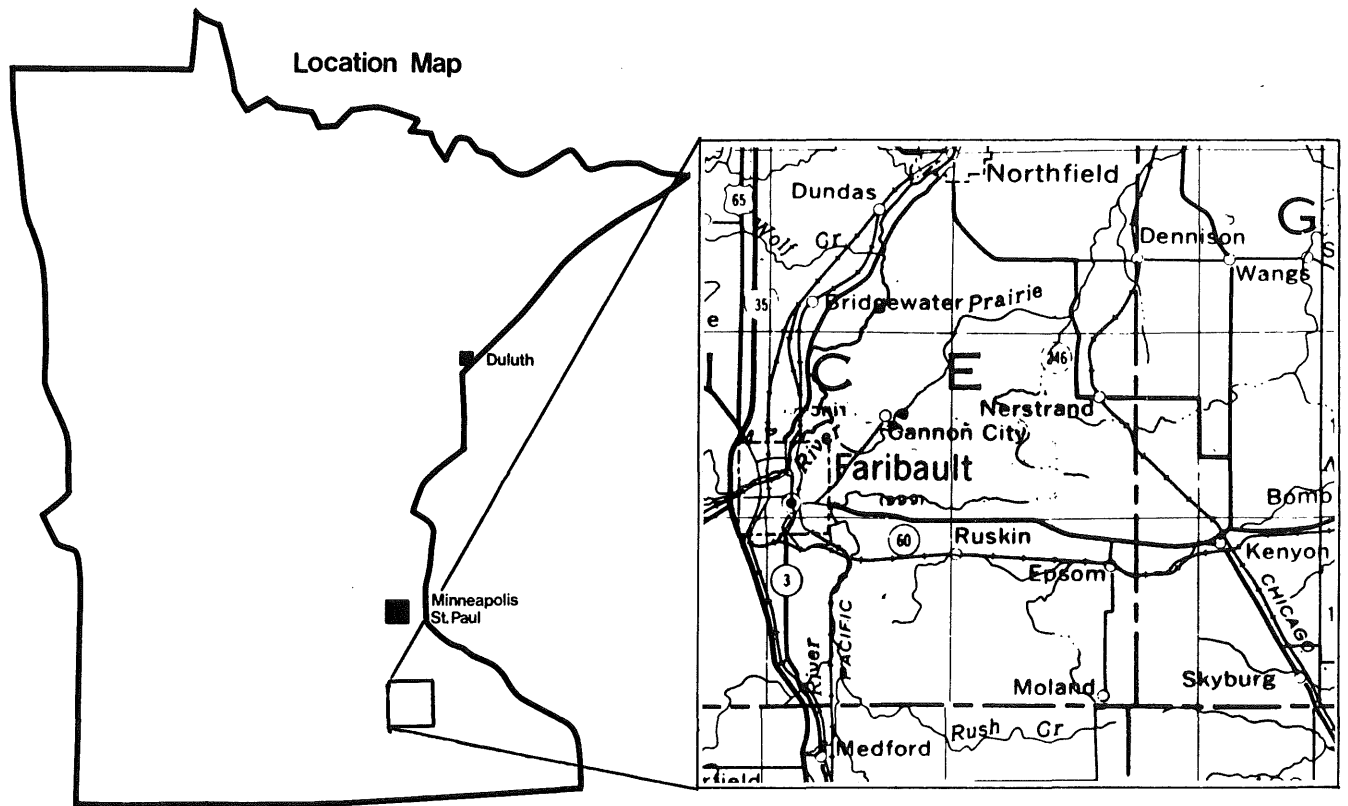
Realign the park entrance road.  
Remodel and possibly relocate the contact station.  
Provide underground storage for gasoline.  
Construct a facility for storage of bundled wood.  
Consideration: Eventual replacement of the shop building.

#### Interpretive Services

Develop a self-guiding trail along the Fawn Trail loop.  
Develop interpretive pamphlets to dispense to park visitors.  
Construct a council ring.

#### Park Boundary

Sign the park boundary.



The landscape region system divides the state into 18 regions. These regions are differentiated according to the characteristic plant and animal life, landforms, and cultural patterns which existed before, during, and after European settlement. This system is a framework which provides information valuable in the planning of Minnesota's state parks.

Nerstrand Woods is located within the Big Woods Landscape Region. This region covers 3,300 square miles or 4.1% of the park. The region is characterized by the rough, wooded terrain and terminal moraines left by the retreating glaciers. The area was originally covered by northern hardwoods such as maple, basswood, elm, and oak.



Classification



## CLASSIFICATION

There is a delicate balance which must be maintained when recreational facilities are provided for large numbers of people in areas of outstanding and often sensitive resources. Inappropriate development can result in irreparable damage to the resource. To help ensure this recreation/resource balance, the Minnesota State Legislature established, through the Outdoor Recreation Act of 1975 (ORA), a classification process whereby each unit in the state recreation system can be identified as one (or more) component in the system. These components are: natural state park; recreational state park; state trail; state scientific and natural area; state wilderness area; state forest and state forest sub-area; state wildlife management area; state water access site; state wild, scenic and recreational rivers; state historic site; and state rest area. Included in this legislation are general criteria for classifying, planning and managing each of these components.

### Criteria for a Natural State Park Designation

DNR policy identifies four criteria based on ORA which a park must substantially meet to qualify for classification as a natural state park. Nerstrand Woods State Park meets these criteria:

Depict most of the major components characteristic of the landscape region, or contain a natural component(s) of statewide significance representing a feature of presettlement Minnesota.

Contain natural resources sufficiently diverse and interesting to attract people from throughout the state.

Be sufficiently large to provide for the maintenance of ecosystems and the protection of other natural features which give an area its special qualities.

Be sufficiently large and durable to provide opportunities for enjoyment of their special natural qualities by significant numbers of people now and in the future.

Recommended Classification

Nerstrand Woods State Park substantially fulfills all of the above criteria. It is recommended that the park be classified as a natural state park.

---

GOAL FOR THE PARK

The goal for Nerstrand Woods State Park follows the overall goal for natural state parks as stated in the DNR policy:

...protect and perpetuate extensive areas of the state possessing resources which illustrate and exemplify Minnesota's natural phenomena, and provide for the use, enjoyment, and understanding of such resources without impairment for the enjoyment and recreation of future generations.



# Park Resources



## CLIMATE

Temperatures for the month of July in the Nerstrand Woods area range from an average high of 84 degrees F to an average low of 62 degrees F. Temperatures in January vary from an average high of 24 degrees F to an average low of 2 degrees F. The total annual precipitation (rain and snow) is about 30 inches.

## GEOLOGY

The landforms of Rice County are the result of glacial activity. The most recent ice stage, 10,000 years ago, reached western Rice County, but did not cover the park. The flood of meltwater from this glacial stage cut deeply into streambeds and exposed bedrock in several areas of the park. Bedrock exposures of Platteville Limestone and Galena Limestone are evident at Hidden Falls and along Prairie Creek.

## SOILS

There are a variety of soil types in Nerstrand Woods State Park. The entire park is underlain by soils of the Ostrander-Maxfield-Klinger association, and 11 different soil series are represented within the park boundary. Complete information on all park soils is included in the comprehensive management plan and the management plan details.

## VEGETATION

Prior to European settlement, significant portions of Minnesota were covered by heavily forested areas known as the Big Woods. This vegetation type was dominated by maple, basswood, elm and oak. While most of the western two-thirds of Rice County was covered by the Big Woods, the eastern and extreme southern portions of the county were primarily prairie. One exception was an "island" of Big Woods, aspen-oak and oak savanna that covered the Nerstrand Woods area. In spite of the disturbances which have occurred since the area was settled, present-day vegetation is reflective of the presettlement woods.

A number of plant species in the park have been identified by the Minnesota Natural Heritage Program as in need of special attention. The Minnesota trout <sup>15</sup> is classified as an

endangered species; it is the only plant species endemic to Minnesota, and its entire range is limited to portions of Rice and Goodhue counties. The long-leaved tick trefoil and the dissected grape fern have been identified as rare, and ginseng has been categorized as a plant of special concern.

Over the past several decades, Nerstrand Woods has served as a deer yarding area. In recent years, it has been recognized that the number of deer is beyond the carrying capacity of the area, and the damage to the vegetation from "overbrowse" is apparent.

A complete discussion of existing vegetation types is in the comprehensive management plan.

#### WILDLIFE

The predominant land use in Rice County is agriculture. Many wildlife species that prefer wooded areas are attracted to the cover and food available in areas like Nerstrand Woods. A state game refuge currently bounds the park on the east, west and north sides, providing an oasis of natural food and cover. Nerstrand Woods State Park is the heart of this oasis of wildlife habitat.

In recent years, Nerstrand Woods has supported a wintering population of several hundred white-tailed deer. In terms of preserving the natural vegetation of the park, the deer herd is beyond the carrying capacity of the wooded area. Overbrowsing is a problem which, if left unchecked, will affect the species composition and overall structure of the woods. Special hunts within the park and refuge to reduce the deer population have been held in recent years.

A variety of small-game species inhabit the park. They include raccoon, red and gray fox, pheasant, red and gray squirrel and cottontail rabbit.

#### GROUNDWATER

The majority of the park is underlain by 100 to 200 feet of glacial drift. The drift becomes deeper (200 to 300 ft) in the southwest corner of the park, and thinner (0-100 ft) in the northeast corner of the park. The greater the thickness of drift, the greater the likelihood of providing a satisfactory water supply.

The Cannon River and Prairie Creek (north of the park) valleys contain one of the largest outwash sand plains in southeastern Minnesota. The park well near the picnic shelter was drilled to a depth of 219 feet in 1958. This well obtains water from the St. Peter sandstone aquifer, from which moderate amounts of water are usually available. Wells are also located at the park manager's residence and the group camp.

#### SURFACE WATER/FISHERIES

The only surface water in the park is a tributary to Prairie Creek. Prairie Creek is a part of the Cannon River watershed and flows roughly from Faribault to Cannon Falls. Its source (tile drainage) is located just south of the park and its mouth is just north of the park near Minnesota State Highway 246. Flow data for this stream are limited, but local residents claim that the stream flows at all times except during very dry years. The fish population in the tributary stream is limited to small (6" or less) forage species such as minnows, darters and suckers.

Two natural waterfalls occur in the northern section of the park. The larger of the two falls (Hidden Falls) is one of the most popular attractions in the park, and is well integrated into the park's skiing and hiking trail system. The smaller falls is adjacent to the northern park boundary near the existing northern loop trail. This falls is not accessible by foot trail and should remain "off the beaten path." No trail should be developed to this falls.

## ARCHAEOLOGY/HISTORY

Although archaeological sites dating back to 5000 B.C. have been found within 20 miles, sites in close proximity to the park are not well known.

Several tribes of Dakota Indians used the Cannon River valley for hunting grounds and village sites until the mid-1800s. In 1851 the Dakota ceded the vast majority of their land in western and southern Minnesota to the United States. By the mid-1850s, the Rice County area had been surveyed and intensive settlement began.

Prime agricultural land, abundant water power and about 5,000 acres of wooded land made Wheeling Township (which surrounds Nerstrand Woods) an attractive area to settle. A road constructed between Hastings and Faribault in 1854 made access to this area easier. In 1854 and 1855, German and Norwegian pioneers began to settle in the sections along the edge of the woods. The woods was divided into small woodlots, which provided a constant source of wood for building supplies and fuel for each woodlot owner. The woods also provided income to several maple syrup operations during the 1880s.

By the mid-1930s, the value of preserving Nerstrand Woods as a state park was becoming apparent. Nerstrand Woods State Park was established in 1945.

## RESOURCE MANAGEMENT OBJECTIVES

To identify, monitor and protect significant plants and vegetation communities.

To manage the deer population at a level which minimizes crop depredation and vegetation overbrowse.

To enhance wildlife observation as a recreational experience for all park visitors.

To provide an adequate supply of good-quality water to park users and staff.

To preserve and protect all important prehistoric sites in the park.

To encourage archaeological research that will increase the existing knowledge of prehistoric human activity in Minnesota.

RESOURCE MANAGEMENT

The following cost estimates were generated in February 1983. The estimates were based on current prices and available information.

Action	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Total	Conditional
<u>Vegetation</u>							
1 Realign the Hidden Falls trail between the picnic area and the waterfall.							Covered before plan implementation.
2 Identify and protect plants that are recognized by the Minnesota Natural Heritage Program (MNHP).							No development cost
3 Manage the old fields in the park.		\$ 5,500	\$ 2,000	\$ 2,000	\$ 2,000	\$ 11,500	
4 Develop two one-acre deer exclosures.		1,500				1,500	
5 Manage vegetation in the developed recreation areas.	\$ 2,000	1,000		2,000		5,000	
6 Identify and protect areas that have had minimal disturbance since presettlement times.							No development cost
7 Restrict the number of fuel wood permits issued.							No development cost
* CONSIDERATION: Forestry Demonstration Area.							No Development Cost

Action	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Total	Conditional
--------	---------	---------	---------	---------	---------	-------	-------------

Wildlife

- |   |        |        |        |        |        |                     |  |
|---|--------|--------|--------|--------|--------|---------------------|--|
| 1 Control the deer population so that the number of deer wintering in the park does not adversely affect park vegetation and/or adjacent lands. | \$ 500 | \$ 500 | \$ 500 | \$ 500 | \$ 500 | \$ 2,500(ongoing)   |  |
| 2 Maintain a maximum number of snags.   |        |        |        |        |        | No development cost |  |

Water Resources/Fisheries

- |  |  |  |  |  |  |   |  |
|--|--|--|--|--|--|---|--|
| 1 Test the water quality of the well at the park manager's residence, and make corrections as necessary to improve it. |  |  |  |  |  | Dependent on DNR Bureau of Engineering findings |  |
|--|--|--|--|--|--|---|--|

History

- |  |       |  |       |  |  |       |  |
|--|-------|--|-------|--|--|-------|--|
| 1 Field-check major proposed development sites for the presence of pre-historic and historic remains before any work is begun. | 1,000 |  | 1,000 |  |  | 2,000 |  |
|--|-------|--|-------|--|--|-------|--|



Physical  
Development  
and  
Recreation  
Management



## EXISTING DEVELOPMENT

### Campground

61 campsites in 3 camping lanes  
modern toilet building (with flush toilets and showers)  
trailer dump station

### Primitive Group Camp

large, open camping area  
5 separate primitive campsites  
pit toilets  
water supply (well with electric pump)  
small parking lot

### Picnic Grounds

picnic shelter with modern, handicapped-accessible toilet  
facilities  
picnic tables  
fire rings  
60-car-capacity parking lot (asphalt-surfaced)

### Trails

8 1/2 total miles (all available for hiking)  
5 miles of snowmobile trails  
3 1/2 miles of ski touring trails

### Administrative/Support Facilities

contact station/park office  
manager's residence  
shop building (2 parking bays)

## RECREATION MANAGEMENT OBJECTIVES

To coordinate the development of all recreational facilities in the park with private and other public facilities and resources in the vicinity.

To limit park development to that which is necessary for efficient management and for the public to experience, study, and enjoy the natural resources.

To locate park development where it will not adversely affect sensitive natural or historic resources, will not detract from the enjoyment of other users, and will allow easy access to areas of high scenic or study value.

To ensure physical accessibility and program usability by people with physical disabilities, the elderly, and the very young.

To recognize and make efforts to comply with appropriate state, county, and municipal policies and regulations as they relate to park development and management.

PROPOSED DEVELOPMENT

The following cost estimates were generated in February 1983. The estimates were based on current prices and available information.

Action	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Total	Conditional
<u>Camping</u>							
1 Install electrical service for up to one-third (20 sites) of sites in the campground.	\$ 6,500					\$ 6,500	
2 Manage the over-story and ground cover vegetation in the campground.			(See Vegetation Management Action #5, p 19)				
3 Replace the group camp pit toilets.		\$ 7,000				7,000	
4 Construct a shelter building in the group camp.			\$20,000			20,000	
<u>Picnic Grounds</u>							
1 Construct a picnic/trail shelter building in the open area north of the picnic ground parking lot.			45,000			45,000	
2 Develop a children's play area.	2,500					2,500	
<u>Trails</u>							
1 Realign the Hidden Falls Trail between the picnic grounds and the waterfall.			See Vegetation Management, Action #1				

Action	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Total	Conditional
2 Upgrade and add to the ski trail system.	\$ 5,000					\$ 5,000	
3 Replace the Hickory Bridge.	6,000					6,000	
4 Eliminate one of the two snowmobile access trails which are located on the south end of the park adjacent to County Rd #27.			No development cost				
5 Replace the Maple Bridge.	10,000					10,000	
6 Develop a scenic overlook and access trail north of the proposed picnic shelter.		\$ 6,000				6,000	
7 Develop a hiking-only trail between the proposed scenic overlook and Fern Hill.		2,000				2,000	
8 Construct a small wooden deck at Hidden Falls to serve as an observation and rest area.	3,500					3,500	
9 Open the trail system in the southern half of the park to horseback riding.	3,500	2,000				5,500	
10 Develop a vehicle and trailer parking area.	1,500					1,500	

Action	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Total	Conditional	
11 Negotiate with the private landowner for a trail easement on the Fawn Trail.								
	No development cost							
* CONSIDERATION: Camping for horseback riders.						(Figure does <u>not</u> include cost for water supply)	\$10,500	
<u>Administrative/Support Facilities</u>								
1 Realign the park entrance road.		\$ 7,500				\$ 7,500		
2 Remodel and possibly relocate the contact station.				\$40,000		40,000		
3 Provide underground storage for gasoline.		3,000				3,000		
4 Construct a facility for storage of bundled wood.	\$ 5,000					5,000		
* CONSIDERATION: Eventual replacement of the shop building.						Cannot be determined at this time		
<u>Interpretive Services</u>								
1 Develop a self-guiding trail along the Fawn Trail loop.		2,000				2,000		
2 Develop interpretive pamphlets to dispense to park visitors.		1,500		1,500		3,000		
3 Construct a council ring						To be done by park staff		
<u>Park Boundary</u>								
1 Sign the park boundary.						To be determined by DNR, Bureau of Engineering		





# Park Boundary



#### PARK BOUNDARY

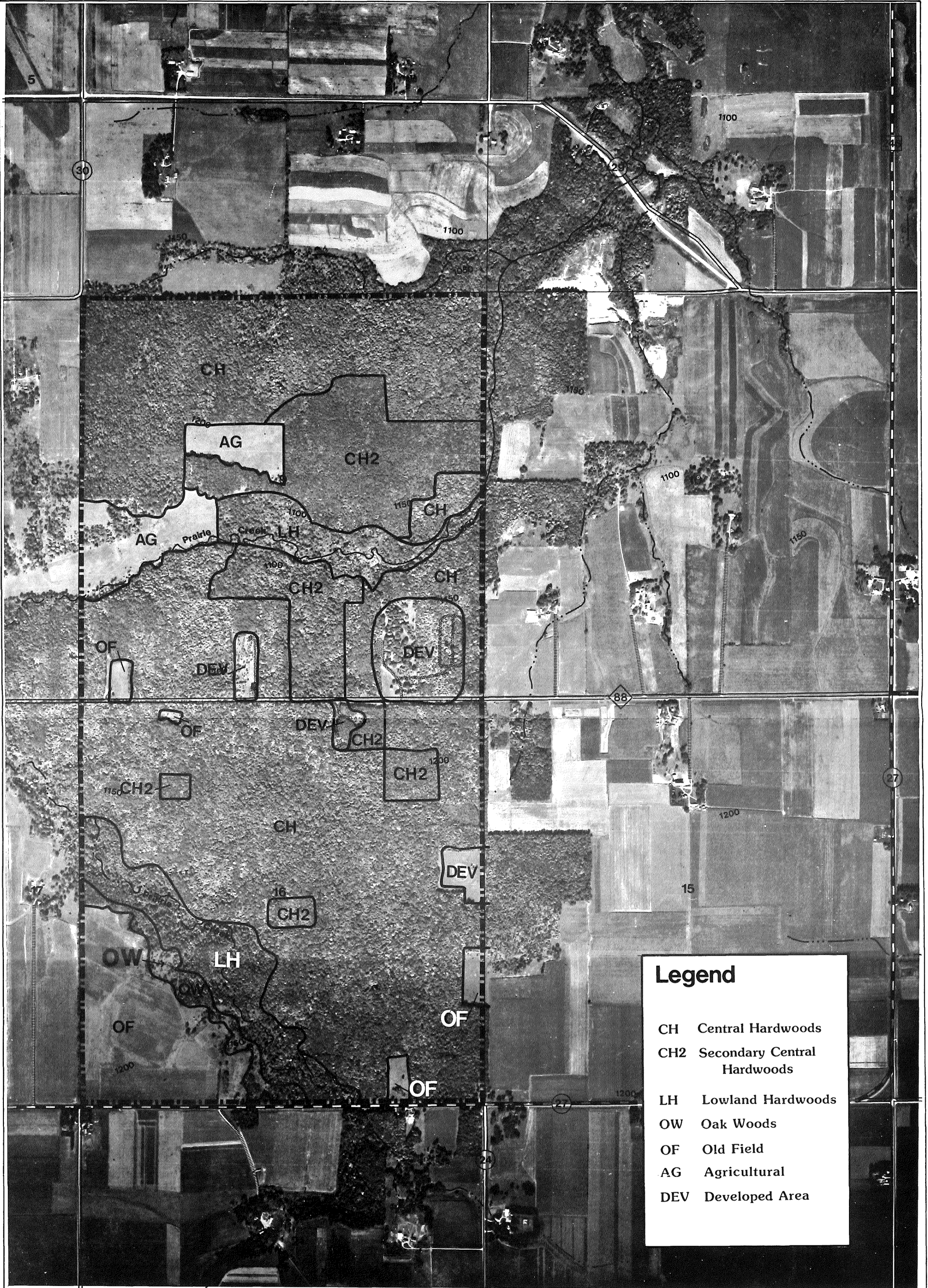
Nerstrand Woods State Park was established in 1945. The existing statutory boundary is easily defined, running along the outside lines of Sections 9 and 16 of T 110N, R 19W. This boundary encompasses and protects at least 80 percent of the remaining contiguous woods in the immediate area. It is the recommendation of this plan to retain the existing park boundary.

The existing boundary encompasses 1,280 acres, 1,100 of which are owned by the State of Minnesota (this includes 460 acres of state trust fund land). The remaining 180 acres are privately owned. The private ownership is scattered throughout the park. Although there are eight private parcel blocks within the boundary, there are currently only three private owners (two of the owners hold title to several of the blocks). All of the private lands are considered park-quality lands and should remain in the park boundary. Priorities for acquisition should include all wooded tracts and the parcel that has a segment of park trail passing through it. Because these lands are within the park boundary, the DNR Division of Parks and Recreation can negotiate for their purchase should they become available (lands are purchased on a "willing-seller" basis only).



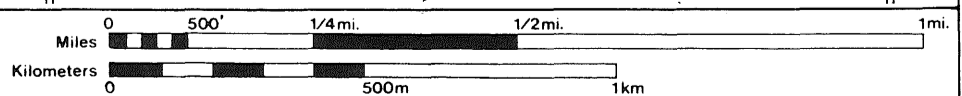
Maps





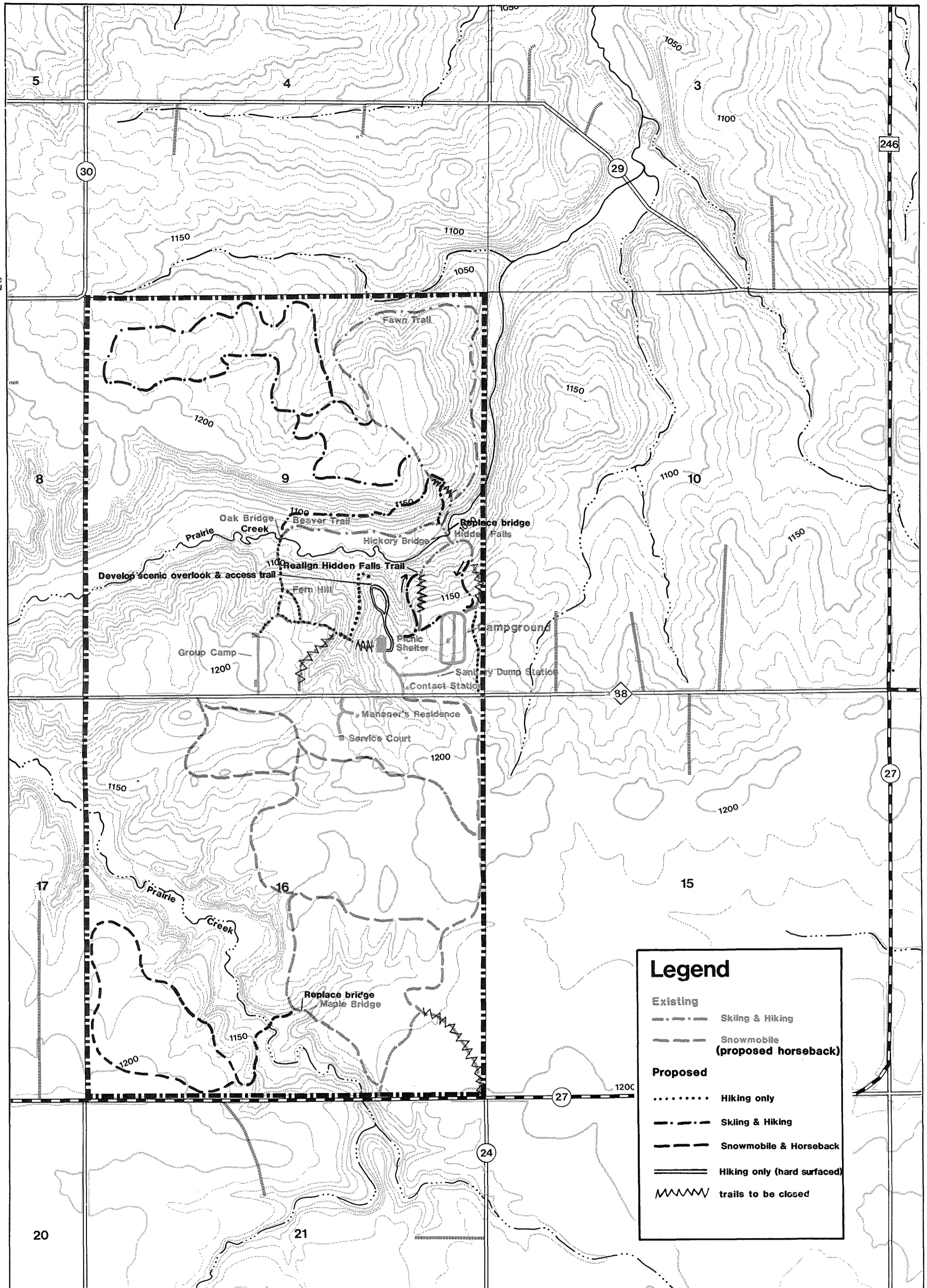
**Legend**

- CH Central Hardwoods
- CH2 Secondary Central Hardwoods
- LH Lowland Hardwoods
- OW Oak Woods
- OF Old Field
- AG Agricultural
- DEV Developed Area









37

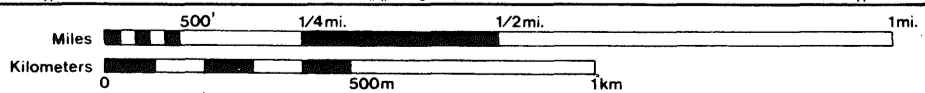
### Legend

**Existing**

- Skating & Hiking
- Snowmobile (proposed horseback)

**Proposed**

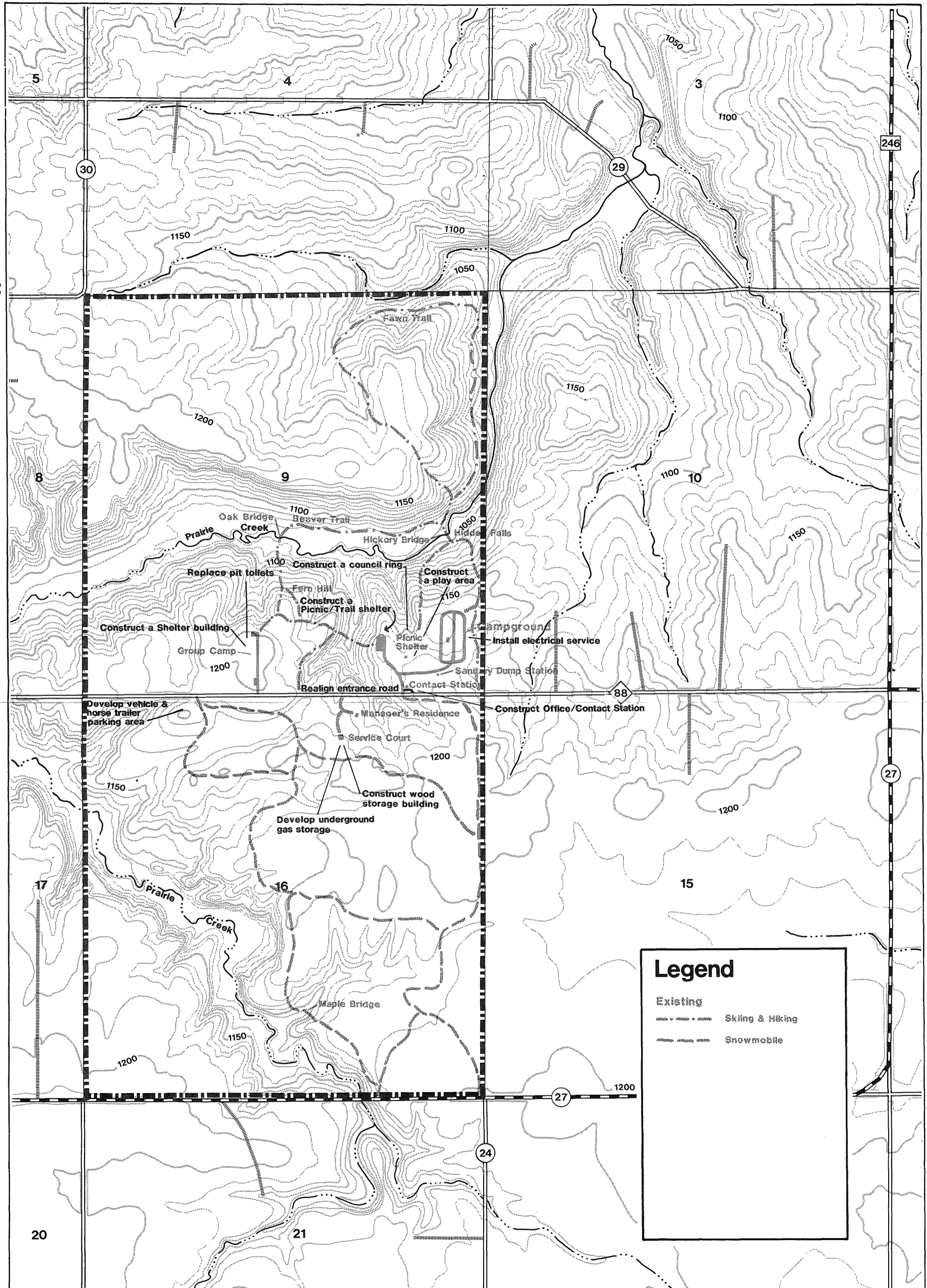
- Hiking only
- Skating & Hiking
- Snowmobile & Horseback
- Hiking only (hard surfaced)
- trails to be closed



**Nerstrand Woods State Park**

**Proposed Trails**

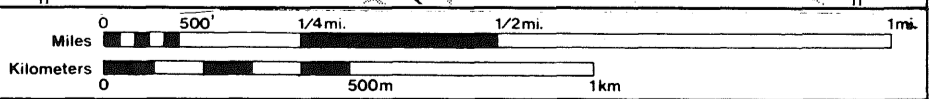




### Legend

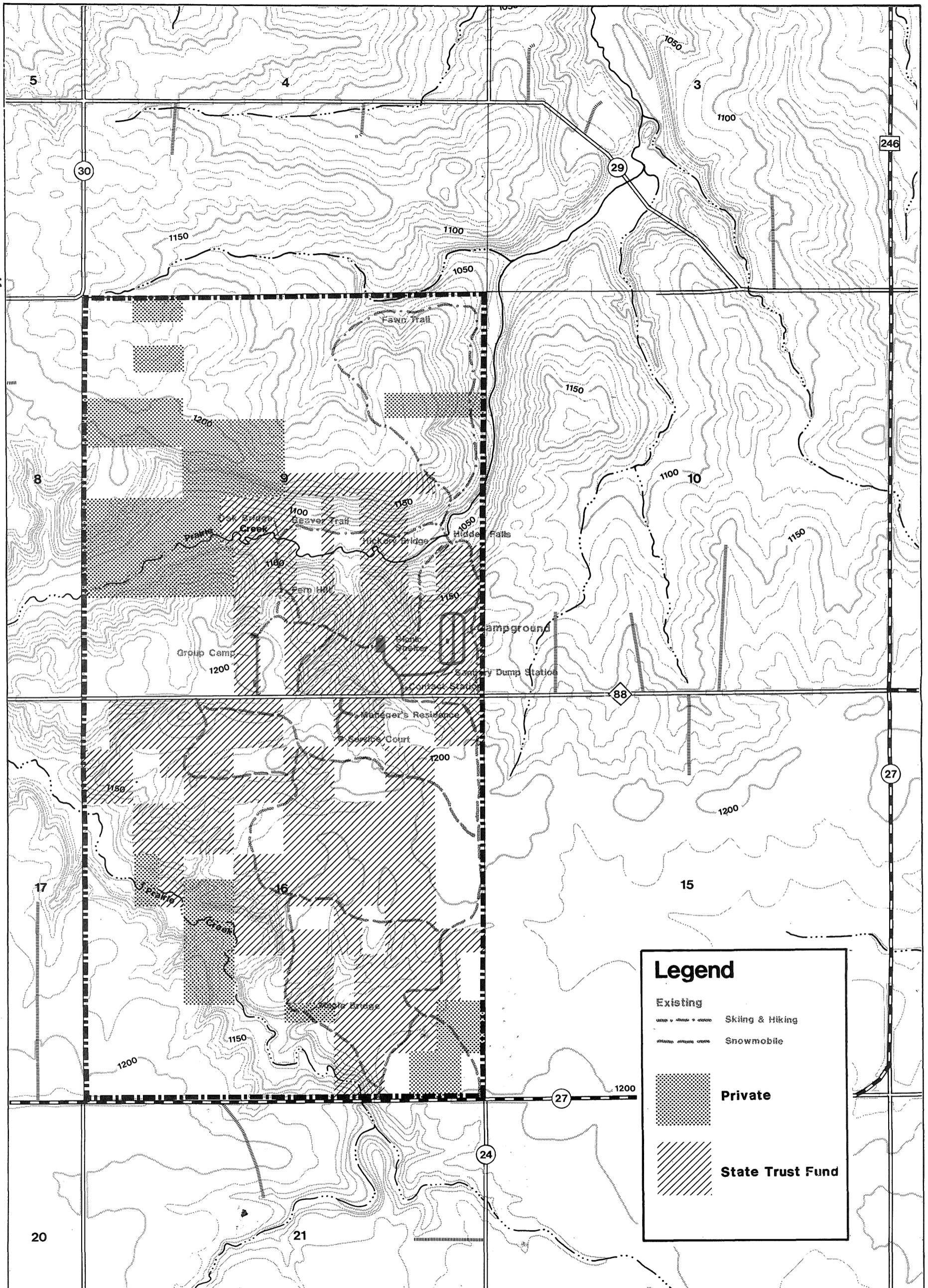
**Existing**

Sking & Hiking  
 Snowmobile



# Nerstrand Woods state Park **Proposed Development**





**Legend**

**Existing**

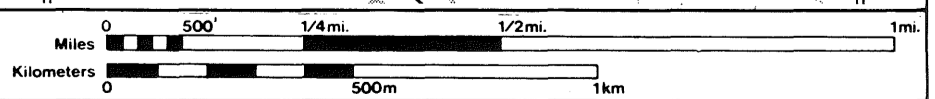
- Skiing & Hiking
- Snowmobile

**Private**

- Private

**State Trust Fund**

- State Trust Fund



**Nerstrand Woods State Park**

**Ownership**



