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- A Summary of the Glacial Lakes sta



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# A Management Plan for Glacial Lakes State Park

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Minnesota Department of Natural Resources

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

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

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A Summary of the  
**Glacial Lakes**  
State Park  
Management Plan

Minnesota Department of Natural Resources  
Office of Planning  
Printed - June 1983



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# Introduction

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## AN OVERVIEW OF GLACIAL LAKES STATE PARK

Glacial Lakes State Park is located in central Pope County, four miles south of Starbuck. All of the acreage within the statutory boundary of the park (1,345 acres) is state owned.

The park is characterized by the rolling prairie hills of the Alexandria moraine complex. The colorful progression of prairie wildflowers in bloom provides opportunities for the study of prairie ecology as well as the appreciation of this uncommon Minnesota plant community. There are also numerous wetlands with unique vegetation which provide habitat for a variety of summer resident and migratory waterfowl. The topographic and vegetative diversity of prairie and wetlands contrasted by oak woods provide excellent habitat for a variety of wildlife species.

There are 39 semi-modern campsites, two walk-in campsites, and a separate group camp in the park. Mountain Lake is the focal point for swimming, fishing, and picnicking. A boat launch with parking and boat and canoe rentals are provided. A system of hiking, horseback riding, and snowmobile trails provide access to park resources. Several vistas provide scenic overviews of the landscape and offer a perspective for understanding the glacial history of the area.

## 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 those provided by 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 of 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 prepared. 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 the result of the interdepartmental review. The revised plan is made available to the public for a 30 day review period, at the end of 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 Department of Energy, Planning, and Development for a 60 day review period. (This management plan was approved in March 1983).
6. The plan is implemented by the DNR, Division of Parks and Recreation.

#### A SUMMARY OF MANAGEMENT AND DEVELOPMENT PROPOSALS

##### Resource Management

Conduct research to determine glacial history of park.  
Implement a program of prescribed burning for prairies.  
If prescribed burns do not result in conversion of old field to prairie, implement alternative prairie restoration techniques.  
Monitor impact of prescribed burns on woody encroachment and weed control.  
Monitor and control the spread of buckthorn.  
Burn portion of oak woods to create oak savanna.  
Conduct vegetation inventory.  
Screen gravel pit in northwestern corner of park with vegetation.  
Reduce the number of resident and wintering deer in the park.  
Establish prairie chickens.  
Maintain maximum abundance of snags (dead and downed wood).  
Monitor park for Natural Heritage Program Elements.  
Create open water in some marshes that have filled in with cattails.  
Continue to enforce "no motor" policy on Mountain Lake.  
Install water level monitoring device.  
Continue testing water supply (Department of Health).  
Continue fish stocking program (Division of Fish and Wildlife).  
Field check proposed development sites for archaeological and historic significance prior to development.

Incorporate information gained from historical research into the interpretive program.

Locate, research, and interpret marl pits.

Conduct archaeological survey.

#### Recreation Management

Plant intersite screening between some campsites.

Develop a trail with steps from site A-15 to lake.

Develop fishing dock for campers' use.

Remove existing playground equipment and construct small play structure of natural forms and materials.

Develop 15 additional campsites if use increases.

Develop 5 tent only campsites in camping Loop B.

Provide a hand pump at the walk-in sites.

Develop additional walk-in sites if use warrants.

Develop a dump station.

Improve group camp area.

Construct shelter near trail center parking lot.

Decrease size of lower picnic area by reduced mowing and allowing natural succession of vegetation to proceed.

Construct small deck in beach picnic area overlooking Mountain Lake.

Monitor erosion in beach picnic area.

Develop overflow parking area for beach picnic area if heavy use continues.

Expand beach 30-35 ft.

Move dock from swimming beach to boat launch area.

Clear channel from launching area to lake.

Landscape boat launch parking area.

#### Administrative/Support Facilities

Remove house adjacent to park manager's residence.

Bury utility lines.

Clean up sites of former residences.

#### Roads and Trails

Pave road to boat launch, beach, and campground with asphalt.

Develop system of signed ski touring trails.

Modify existing snowmobile trails.

Modify trail alignments when Pope County Trails Association develops a system.

Modify existing horseback riding trails.

Develop hard surfaced trail to provide access to interpretive overlook in northwestern part of park.

#### Visitors Services

Develop area in contact station for orientation of park visitor to natural resources of the park and other interpretive opportunities available in the park.

Develop vista west of Mountain Lake as interpretive overlook.

Construct council ring southeast of first campground loop.

Develop self-guided interpretive trail from campground to lower picnic area.

Develop a display panel in trail center parking area.

Develop general interpretive brochure on natural resources and facilities.

Develop interpretive signs to highlight outstanding features.



The first step in the classification process is to identify the natural groups of individuals that are most similar to each other. This is done by comparing the characteristics of each individual to those of every other individual in the sample. The result is a classification tree that shows the hierarchical relationship between the individuals. The tree is then used to assign each individual to a class based on its position in the tree. This process is repeated until all individuals are classified.

### Criteria for a Good Classification

One of the most important criteria for a good classification is that it should be based on natural groups of individuals. This means that the classification should be based on the characteristics of the individuals themselves, rather than on arbitrary criteria.

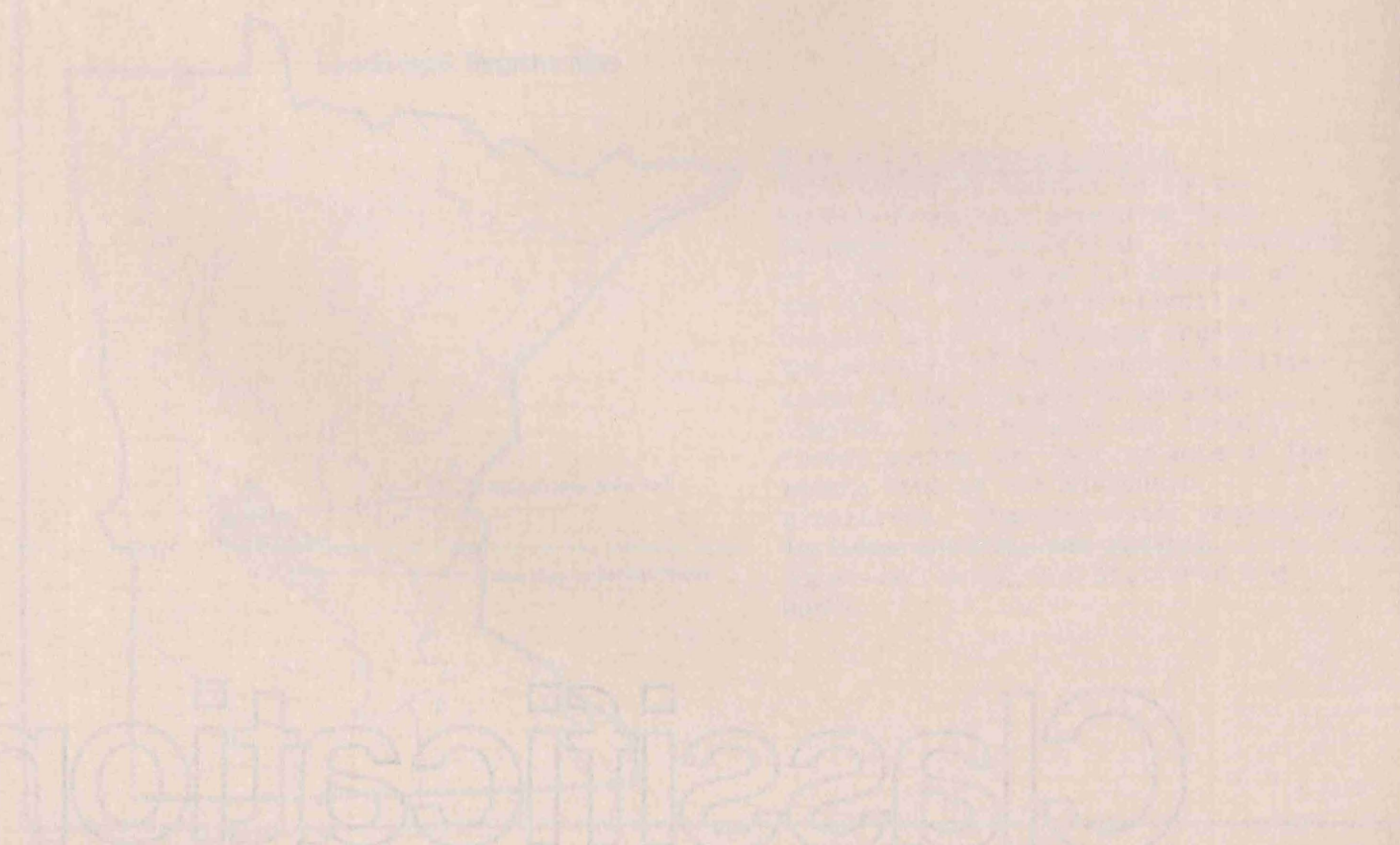
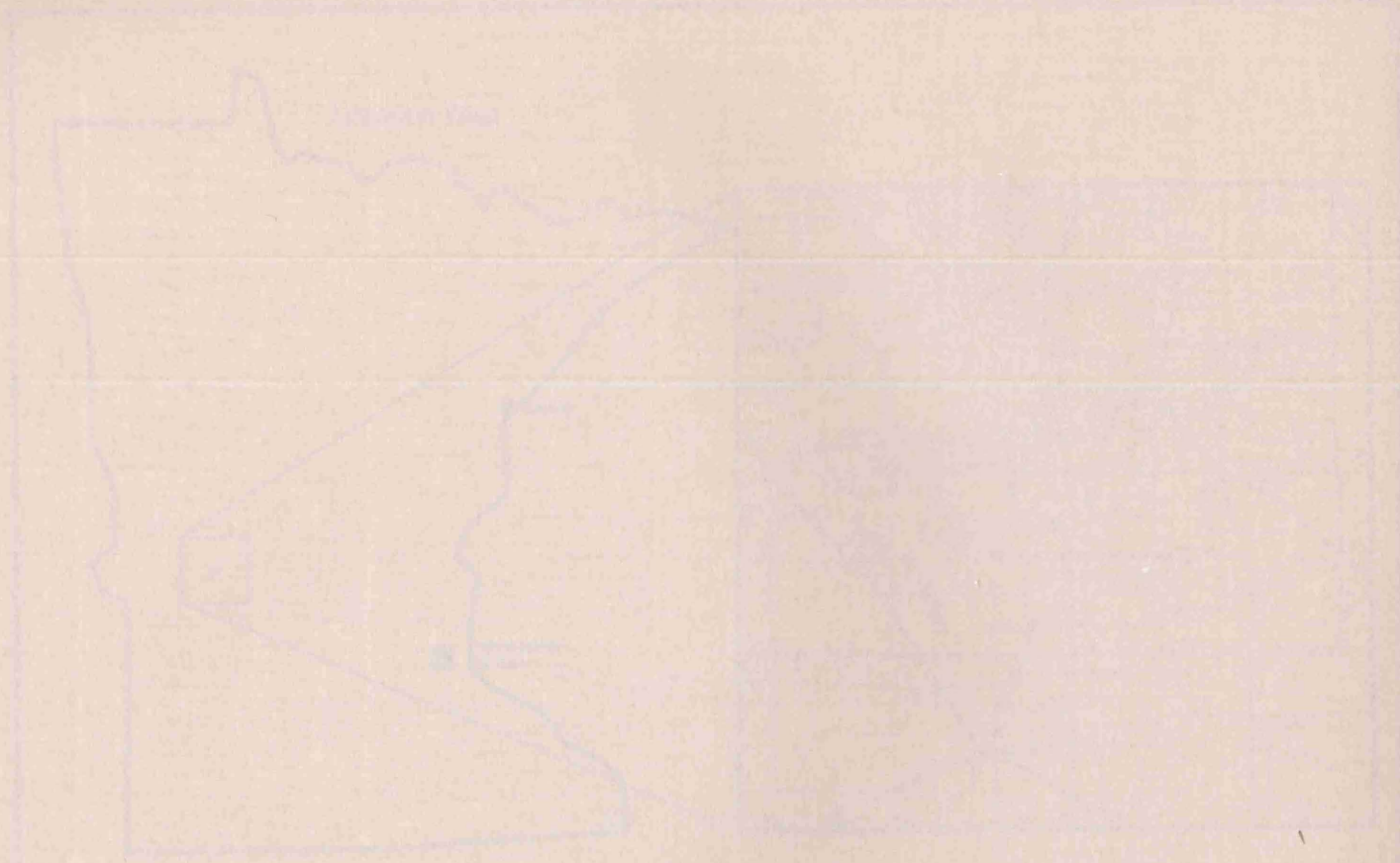
Another important criterion is that the classification should be based on a small number of characteristics. This is because a large number of characteristics can make the classification process very complicated and difficult to interpret.

A third important criterion is that the classification should be based on a small number of classes. This is because a large number of classes can make the classification process very complicated and difficult to interpret.

Finally, a good classification should be based on a small number of individuals. This is because a large number of individuals can make the classification process very complicated and difficult to interpret.

In conclusion, a good classification is one that is based on natural groups of individuals, a small number of characteristics, a small number of classes, and a small number of individuals.

# Classification



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 that this recreation/resource balance is maintained, the Minnesota State Legislature established, through the Outdoor Recreation Act of 1975 (ORA '75), a classification system 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. Glacial Lakes State Park meets these criteria.

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

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

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

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

Recommended Classification

Glacial Lakes State Park is recommended for classification as a natural state park.

GOAL

The goal for Glacial Lakes State Park is that of all natural state parks as stated in DNR policy, namely, to:

"...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



Park  
Resources

## ELEVATION AND SLOPE

The highest altitudes in western Minnesota are found in the Alexandria moraine complex with elevations of 1,700 ft above sea level. Elevations in the park range from 1,352 to 1,200 ft above mean sea level. The topography of the park can best be described as gently rolling hills with the summits providing scenic vistas of the surrounding landscape. Slopes of the hills range up to 40 percent.

## CLIMATE

The climate in the area of the park is characterized by warm, moist summers and cold, dry winters. The average July minimum temperature is 60°F and the average maximum is 84°F. The average temperature for June, July, and August is 69°F, the average January minimum temperature is 0°F, and the average maximum is 20°F. The average temperature for December, January, and February is 13.9°F.

The annual precipitation is approximately 22.6 inches. About 75 percent of that annual precipitation (17 inches) falls during April through September. The average depth of snow is 4 in. during the months of December, January, February, and March.

The prevailing direction of the wind is from the northwest in the winter and the south in summer. The average windspeed is approximately 12 mph. Because of the open prairie in the park, the direction of the wind is an important consideration in the location of winter trails and the proposed group camp shelter.

## GEOLOGY

Glacial action which occurred during the Wisconsin ice stage 100,000 - 10,000 years ago shaped the present landscape. The park is located in the Alexandria moraine complex which is composed of an end moraine interrupted by outwash areas. An end moraine is an accumulation of material forming ridges and hills that was deposited in front of a glacier as it remained in one place for a period of time. Outwash areas were formed when glacial meltwaters carried and deposited material.

The Alexandria moraine complex is 10-20 miles wide and extends north of Detroit Lakes and curves south to Willmar. This moraine complex was formed by the advances of two glacial lobes - the Wadena lobe and the Des Moines lobe. The thickest glacial drift in the state is found in the Alexandria moraine complex with depths up to 700 ft. Deposits in the park are approximately 300 ft deep.

There is a formation in the park which is most likely a glacial esker. This formation is located in the northwestern part of the park and borders Mountain Lake. Research is needed to verify that this formation is an esker. Mountain Lake was formed when water was dammed by the end moraine. The other wetlands in the park were formed when ice chunks broke off the glacier and were buried in the glacial deposits. Meltwater filled the depression left by the ice chunk.

#### SOILS

The majority of the soils in the park belong to the Sioux-Maddock association. The soils in this association are hilly to steep and excessively drained. They are very shallow soils over sand or gravel. There are some level areas, poorly drained areas, potholes, marshes, and lakes.

#### VEGETATION

Information on park vegetation prior to European settlement was obtained from the map "Original Vegetation of Minnesota" by Francis J. Marschner and from the original U.S. General Land Office survey notes. Copies of these notes are included in the management plan details (MPD).

Before European settlement, the vegetation pattern in the vicinity of the park included five major plant communities: prairie, oak savanna, aspen oak lands, wet prairies, and marshes and sloughs.

The DNR, Park Planning staff inventoried plant communities of

the park using aerial photographs and field checks in September, 1981. Communities identified include: old fields, prairie, oak woods, basswood, lowland shrubs, wet meadow, and cattail marsh.

#### WILDLIFE

An abundance and diversity of wildlife is found in the park because of the varied habitats. The volunteer park naturalist has compiled a list of 165 species of birds in the park which is included in the MPD. Several of these species are considered exemplary, unique, threatened, or endangered on a national or statewide basis by the DNR, Natural Heritage Program. The park is located along the migration corridor for several species of waterfowl. These birds are attracted to park wetlands which makes birdwatching in the fall an exciting experience.

Many of the vegetation management actions will benefit wildlife by improving habitat. Increased amounts of forest edge provide food and cover for a variety of wildlife species. The prairie management actions will also benefit wildlife by improving a specific habitat.

The management of the deer population is an issue of concern because of crop deprecation on adjacent farmland and overbrowsing of vegetation in the park. The number of deer wintering in the park was rather constant in 1975-1978, however, during the winter of 1979 the count doubled any previous winter count. In 1980 a special hunt was conducted in the park and the herd was reduced substantially to about 25 deer. In 1982 the area wildlife manager counted 158 deer wintering in the park area. A population of this size results in crop deprecation and overbrowsing.

The interrelationship of the deer population in the park and the deer population, habitat, and hunting success in the area around the park must be evaluated in the determination of a management strategy which is mutually agreeable to management goals of the divisions of Parks and Recreation and Wildlife.

Determination of the appropriate number of deer for the park is difficult. The park contains approximately 300 acres of winter deer habitat. A resident herd of approximately 30 and a wintering herd of approximately 80 are target numbers which may be used on a trial basis to direct management efforts. To reach these levels, both the resident deer herd and wintering deer herd need to be reduced.

Glacial Lakes State Park has the potential to sustain and support a population of prairie chickens. Their requirements include 400-500 acres of native grassland for booming grounds, roosting areas, and a winter food source. The introduction of prairie chickens would benefit the park because it would reintroduce the species into its former range. Also it would be an added attraction for park visitors and would fit the proposed prairie management of the park.

#### SURFACE WATER

There are a number of outstanding surface water resources in Glacial Lakes State Park. Mountain Lake is the most exceptional. It is a clean beautiful lake which provides opportunities for fishing, swimming, and boating. It also provides wildlife habitat and is an aesthetic attraction in the park. The lake is 56.5 acres in size, has a maximum depth of 15 ft, and 1.5 miles of shoreline. There are no drainage outlets and the only flow into the lake is from springs along the shore. This spring water is high in iron as the rusty color of the surrounding vegetation indicates. The water quality of the lake is good in part because the entire drainage system is located within the park.

The park is dotted with marshes, wet meadows, and small lakes scattered among rolling hills. Every depression seems to support a wetland area. These wetlands provide valuable wildlife habitat and a diversity of plant communities within the park.

Signalness Creek begins at a spring in the northern part of the park and flows northwest. It is fed by additional springs as it flows through the park. An earthen dam with a drop spillway has created an approximately 3 1/2 acre impoundment. This impoundment provides additional wildlife habitat and a refuge for migrating species.

#### GROUNDWATER

Most aquifers in the area of the park are ice contact sand and gravel. This type of aquifer is located almost exclusively within the moraine area. The water-yielding potential of this type of aquifer is good and artesian conditions are common.

The water supply for the park is provided by four wells all of which are located and constructed in accordance with the standards of the Minnesota Department of Health.

#### FISHERIES

Mountain Lake is the only water resource in the park that supports game fish populations. A fish survey of the lake conducted in 1978 revealed the following species present: northern pike, walleye, largemouth bass, bluegill sunfish, yellow perch, white sucker, yellow bullhead, and crappie.

This survey indicated the northern pike population was twice the local average in numbers and weight. The 15 acre marsh area in the southeast and northwest corner of the lake provides a good spawning area for northern pike. The lake has unfavorable conditions for walleye spawning, but good for bass and sunfish.

The lake has been stocked for many years. From 1924-1946, 530,000 walleye fry, 1,200 bass fingerlings, and 200 sunfish fingerlings were stocked. During 1953-1969, 60,000 walleye fry, 30,000 northern pike fingerlings, 3,800 bass fingerlings, and 11,500 panfish were stocked. Largemouth bass broodfish have been stocked periodically to stimulate the bass population.

Mountain Lake has winterkilled several times, but stocking programs continue to provide summer family fishing.

#### ARCHAEOLOGY AND HISTORY

There is evidence that a group of prehistoric Indian cultures, lived in the region in which the park is located from approximately 500 BC-1700 AD. Two cultural features which distinguish this culture from earlier cultures are the use of pottery and burial mounds. Burial mounds are widely scattered throughout the central part of the state.

The most significant interpretive theme for the area is the story of the immigrant farmer. The history of settlement in the area by various ethnic groups and the subsequent development of agriculture and towns is representative of the immigration and rural settlement story throughout the state. The first settlers of Pope County were predominately Swedish and Norwegian. Later settlers included people of German, English, and Bohemian descent.

The development of railroads influenced the location and growth of towns. Westport, Villard, and Cyrus grew up along the Little Falls and Dakota Railroad now a branch of the Northern Pacific constructed in 1882. Sedan, Lowry, and Farwell developed along the Soo Line constructed in 1866. The growth of Glenwood, established in 1866, was influenced by both railroads.

#### RESOURCE MANAGEMENT OBJECTIVES

To maintain or reestablish plant and animal life which represent pre-European settlement biotic communities

To utilize resource management techniques that will harmonize with the park's natural systems

To identify, evaluate, and preserve the park's archaeological and historical resources

To provide for visitor enjoyment without adversely affecting park resources

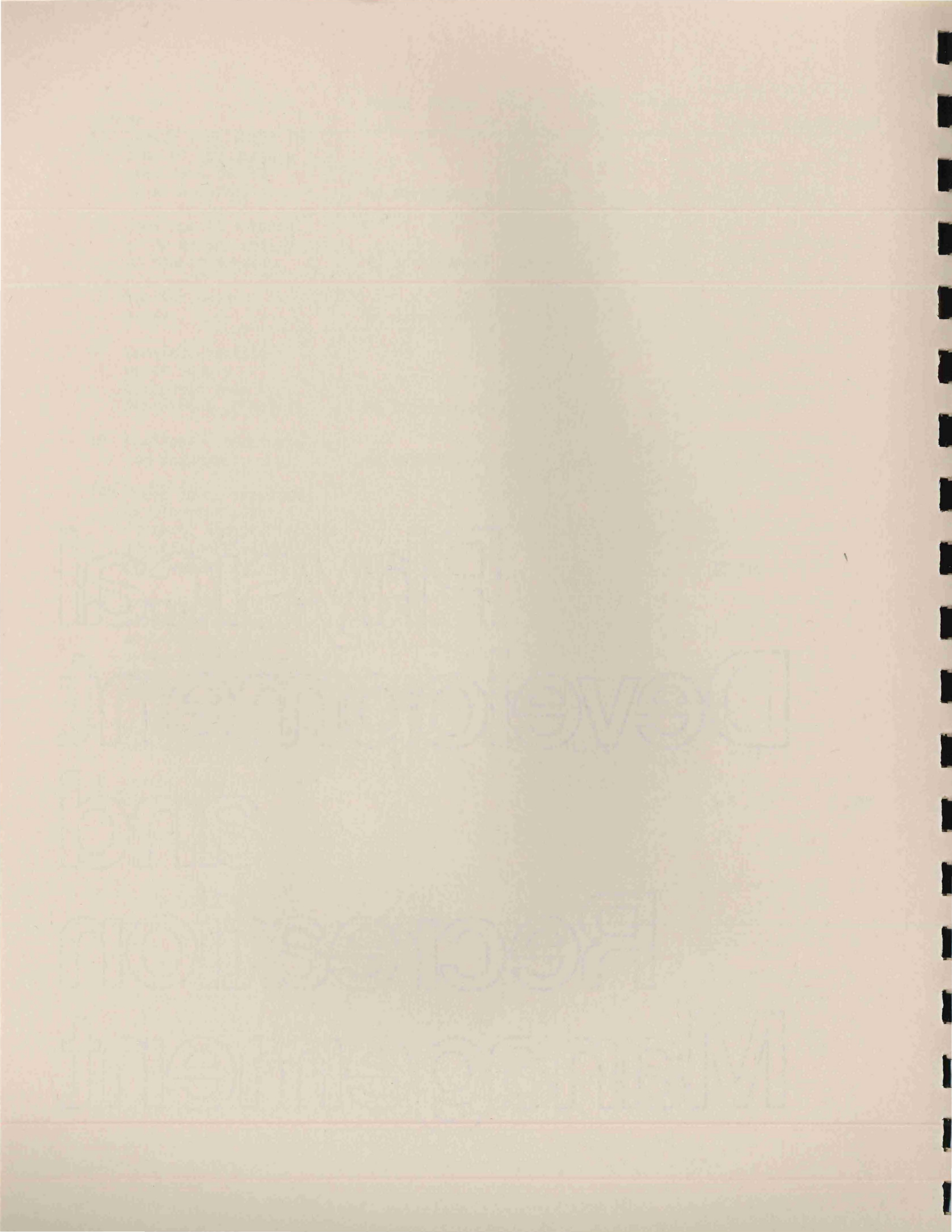
RESOURCE MANAGEMENT

Action	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Total	Conditional
1 Conduct research to determine glacial history of park.		\$ 2,000				\$ 2,000	
2 Implement a program of prescribed burning.	\$2,000	2,000	\$2,000	\$2,000	\$2,000	10,000	(ongoing)
3 If prescribed burns are not effective, additional prairie restoration techniques should be undertaken.	500	500	500	500	500	2,500	(ongoing)
4 Monitor results of prescribed burns on encroachment of woody species.				2,000	2,000	4,000	(ongoing)
5 Monitor results of prescribed burns on weed control.			1,000	1,000	1,000	3,000	(ongoing)
6 Control the spread of buckthorn.							\$5,000
7 Burn portion of oak woods to create oak savanna.				3,000		3,000	(ongoing)
8 Conduct vegetation inventory.		3,000				3,000	
9 Screen gravel pit.	2,000					2,000	
10 Reduce resident and wintering deer populations.	Ongoing management and coordination						
	500	500	500	500	500	2,500	(ongoing)
11 Establish prairie chickens.			500	500	500	1,500	(ongoing)
12 Maintain snags.	No development cost						
13 Monitor park for Natural Heritage Program Elements where found, protect habitats.	No development cost						



Action	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Total	Conditional	
14 Create open water in some of the marshes that have filled in with cattails.	No development cost							
15 Continue to enforce a "no motor" policy on Mountain Lake.	No development cost							
16 Monitor water levels.	No development cost							
17 Continue testing water supply currently done by Department of Health.	No development cost							
18 Continue fish stocking programs.	No development cost							
19 Field check proposed development sites for historic and prehistoric significance before development.	\$5,000					\$5,000		
20 Incorporate all information from excavations and research on prehistoric and historic sites into interpretive program.	No development cost							
21 Locate, research, and interpret marl pits.				\$3,000			3,000	
22 Conduct archaeological survey.						\$ 5,000	5,000	

Physical  
Development  
and  
Recreation  
Management



## EXISTING DEVELOPMENT

### Campground

- 39 vehicular campsites
- sanitation building (flush toilets and showers)
- four pit toilets
- playground with metal play equipment
- parking area for the two walk-in campsites
- 2 walk-in campsites (fire rings, picnic tables, and pit toilet)

### Group Camp/Horseback Rider Camp

- parking area (capacity of 100 cars)
- hand pump
- horse tieup area
- picnic table and fire ring
- pit toilet

### Picnic Areas

- 20 tables
- 2 pit toilets
- picnic shelter with fireplace
- parking lot (capacity 55 cars)
- amphitheater (seating capacity of 100)

- 15 tables with grills
- sanitation building
- parking lot (capacity 58 cars)

### Swimming Beach

- 75 ft sand swimming beach with dock
- 2 changing cabanas

### Boat Ramp

- boat ramp
- parking for 10 cars with trailer
- six canoes and three row boats for rent

### Trails

- 9 miles of horseback riding and snowmobiling trails
- 11 miles of hiking trails
- trail head parking lot for winter trail users

### Sliding Hill

- located near trail head parking lot

### Administrative Facilities

- contact station/park office
- park manager's residence
- assistant manager's summer residence
- service court
  - wood-frame warehouse
  - cement block and wood-frame garage/shop
  - metal quonset

## RECREATION MANAGEMENT OBJECTIVES

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

To locate and design development in such a way as to:

heighten visitor awareness of the natural environment and minimize disruption of the natural environment both ecologically and perceptually

disperse and screen activities so that an individual user's experience is dominated by the natural environment

separate large group use of the park from individual or small group use and/or control use in such a way that large groups do not dominate general use areas of the park

To ensure that development in a state park results in no significant deterioration of the park's air or water quality and no significant increase in noise levels

To allow for management areas to be delineated in order to guide management and development programs. A development area may be outlined in park plans as a method for focusing and limiting future development in appropriate areas of the park. Development will be limited to not greater than ten percent of the park

To provide only those facilities and types of recreation necessary for appropriate use and enjoyment of the park's resources

To design or locate facilities in a manner that will be compatible with the aesthetic qualities of the park and will not significantly affect the natural resources

To establish an architectural design theme and appropriate color combination for each park

To direct building site selection, design, and construction to emphasize energy efficiency, energy conservation, and accessibility by persons with physical disabilities

To ensure that developments are cost-effective and designed for efficient maintenance and operation

To give prime consideration in facility design, location, and construction to user health and safety

PROPOSED DEVELOPMENT

Action	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Total	Conditional
<u>Campground</u>							
1 Plant intersite screening between campsites.			\$ 5,000		\$ 5,000	\$10,000	
2 Develop a trail with steps from site A-15 to lake.	\$ 7,000					7,000	
3 Install fishing dock for campers.	5,000					5,000	
4 Replace existing playground equipment with small structure of natural forms and materials.			3,000			3,000	
5 Develop 15 additional campsites if use warrants.			Conditional				
6 Develop 5 tent sites in campground expansion area.	2,000					2,000	
7 Provide water (hand pump) at walk-in sites.				\$ 8,000		8,000	
8 Develop additional walk-in sites if use warrants.							\$ 2,500
9 Develop dump station in campground.				1,000		1,000	
<u>Group Camp</u>							
1 Improve group camp.	6,000					6,000	
2 Develop a shelter near trail center parking area.		\$ 35,000					35,000
<u>Picnic Areas</u>							
1 Decrease size of lower picnic area by reduced mowing and allowing natural succession to proceed.			No development cost				
2 Construct deck overlooking Mountain Lake in beach picnic area.		6,000					6,000

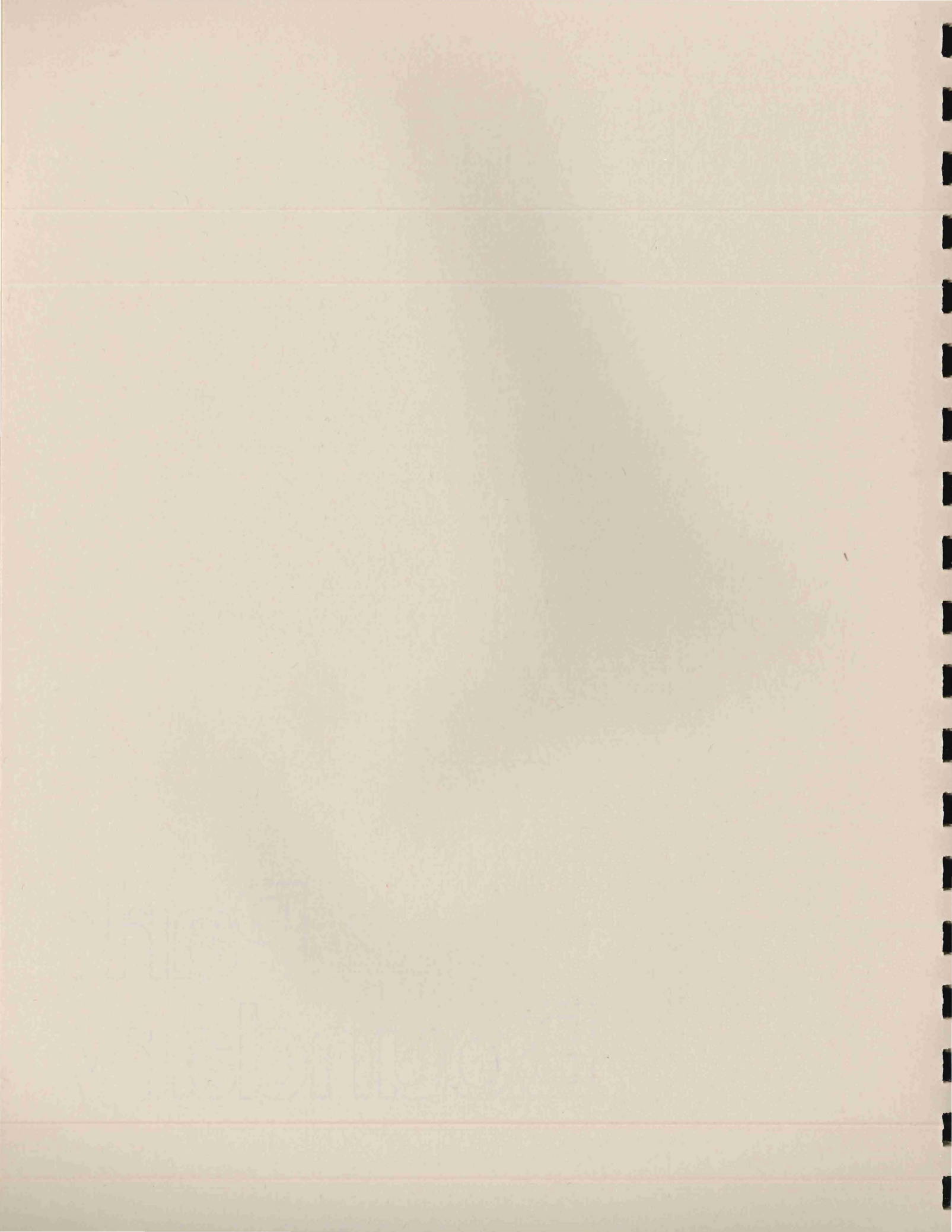
Action	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Total	Conditional
3 Monitor erosion in picnic area.							
			No development cost				
4 Develop overflow parking area for beach picnic area.							\$ 5,000
<u>Swimming Beach</u>							
1 Expand beach 30-35 ft.		\$ 6,000				\$ 6,000	
2 Move dock from swimming beach to boat launch.							
			No development cost				
<u>Boat Launch</u>							
1 Clear channel from launching area to lake.							
			Cost to be determined				
2 Landscape launch parking area.				\$ 8,000		8,000	
<u>Administrative/Support Facilities</u>							
1 Remove assistant manager's summer residence.							
			No development cost				
2 Bury utility lines.				\$10,000		10,000	
3 Clean up sites of former residences.							
			No development cost				
<u>Roads</u>							
1 Pave road to boat launch, beach, and campground with asphalt.				50,000		50,000	
<u>Trails</u>							
1 Develop system of signed ski touring trails.	\$ 6,000					6,000	
2 Modify snowmobile trail alignments.	3,000					3,000	
3 Develop link trails to Pope County Trails Association trail system when that system is developed.							4,000
4 Modify horseback riding trails.							Included in cost of other trails actions

Action	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Total	Conditional
5 Develop hard surfaced trail to interpretive overlook in northwestern part of park.		\$ 8,000				\$ 8,000	
<u>Visitor Services</u>							
1 Provide area in contact station for visitor orientation material.	\$ 1,000					1,000	
2 Develop scenic vista west of Mountain Lake as interpretive overlook.				\$ 1,000		1,000	
3 Construct council ring southeast of first campground loop.				1,000			\$ 1,000
4 Develop self-guided interpretive trail from campground to lower picnic area.	2,000					2,000	
5 Develop display panel in trail center parking area.	1,500					1,500	
6 Develop a general park interpretive brochure.		1,000				1,000	
7 Develop interpretive signs which highlight outstanding features of park.	500	1,000				1,500	
Total	\$50,000	\$59,000	\$71,500	\$32,500	\$16,500	\$229,500	\$16,500





# Park Boundary



#### BOUNDARY MODIFICATION

The statutory boundary of a park defines the lands which have recreational and resource value adjacent to a park for which DNR can negotiate for purchase from willing sellers. It is important to note that when privately owned lands are included within a statutory boundary, the landowner retains all rights to use and sell.

The resource and recreational value of lands adjacent to the park was evaluated. This land (see map, p 43) is of the same quality as the prairie in the park. The prairie hills are essentially unaltered and the only apparent disturbance of them has been use as pasture land. Addition of this acreage in the future would be valuable because it would add a significant amount of high quality prairie to the state park system. The opportunity to preserve and manage high quality prairie in such a large tract would be unique in the state.

It is important to note the prairie within the park quality area has been preserved because of the excellent land use practices and wise stewardship by the current landowners. Therefore there appears to be no immediate need to acquire this area. The recommendation is to acquire this acreage in the future when there are willing sellers and when the DNR has available funds.

There are other lands adjacent to the park that have resource value and recreational potential. The area west of CSAH 41 has prairie and woods that are extensions of the topographic features and plant communities in the park. This area is valuable wildlife habitat and complements the park because it has wooded acreage of which the park has little.

The WPA to the south also has wildlife habitat and some recreation potential.



# Maps

2013

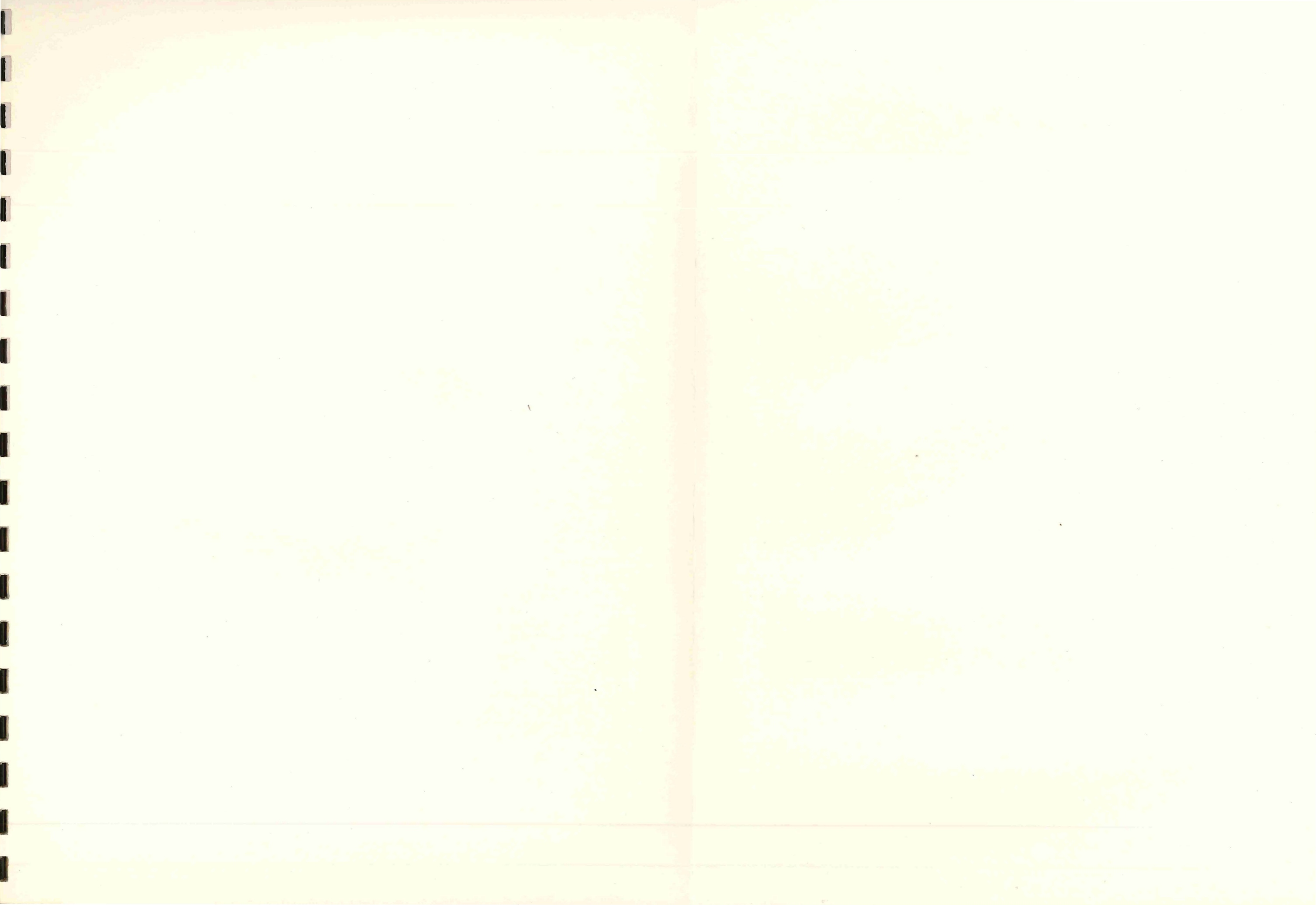


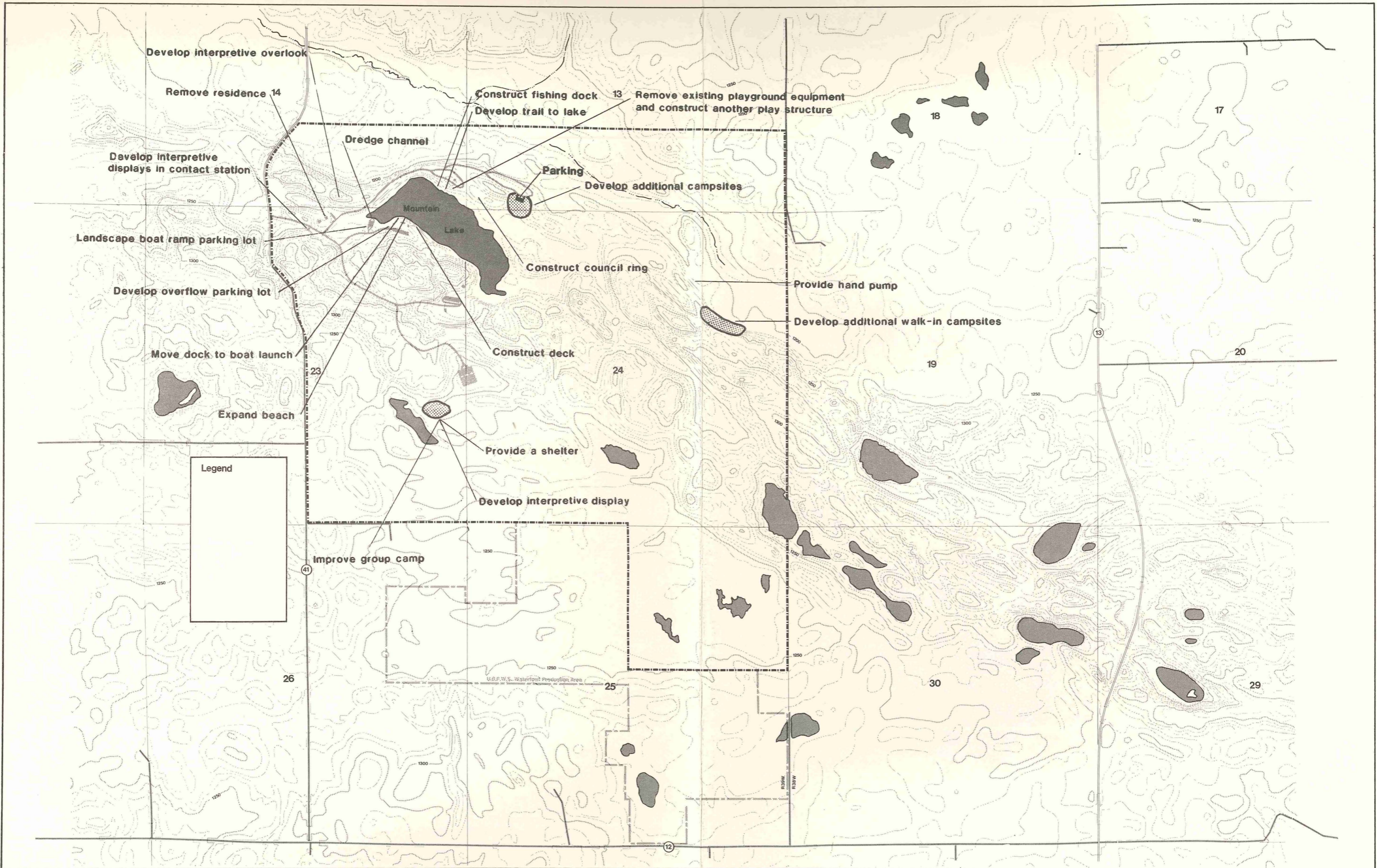
Legend  
 Numbers 1-11  
 refer to burn  
 units.  
 See P.  
 for the proposed  
 burning schedule.

**Vegetation Managment**   **Glacial Lakes** State Park



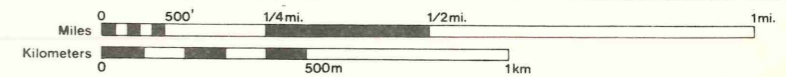


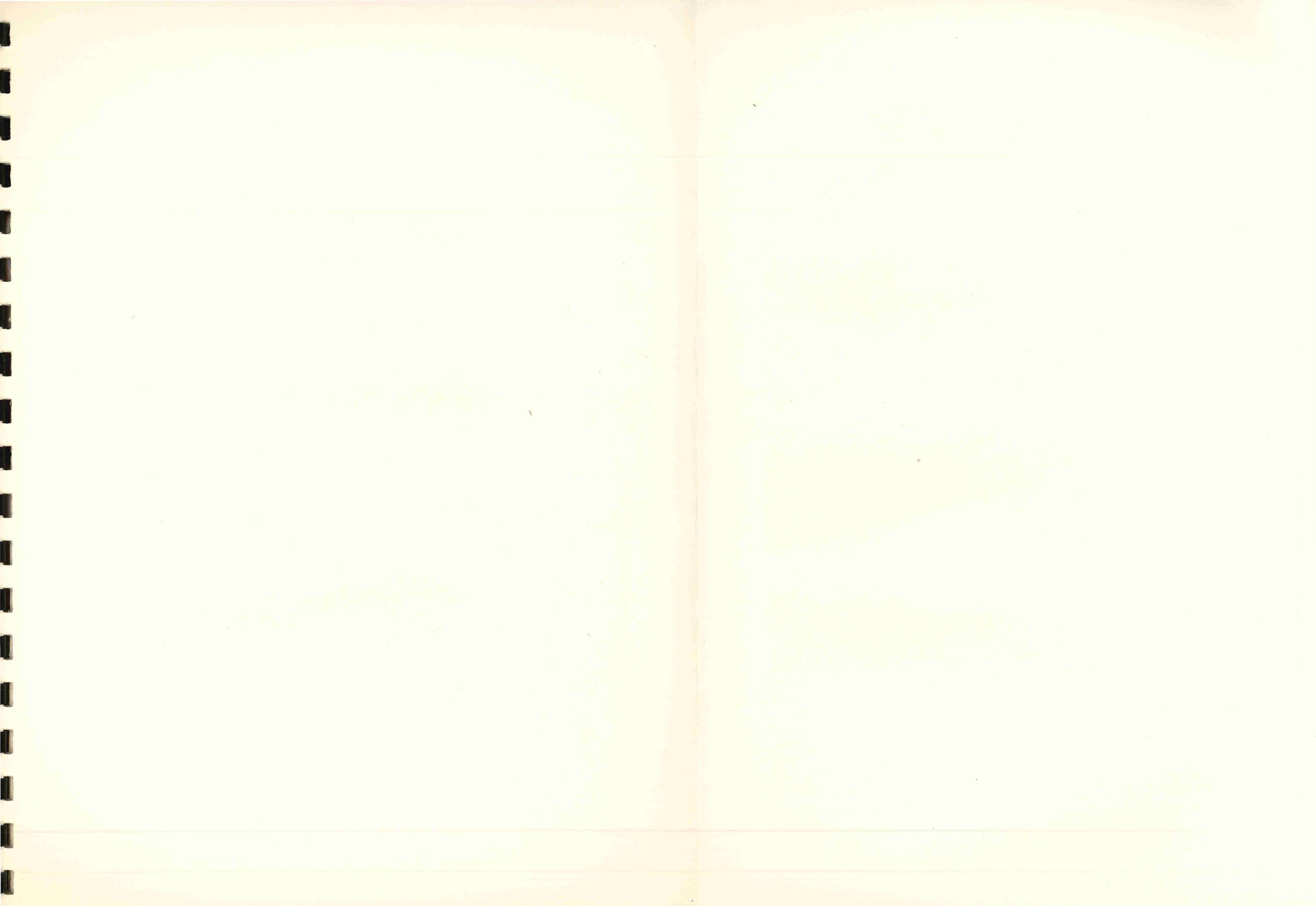


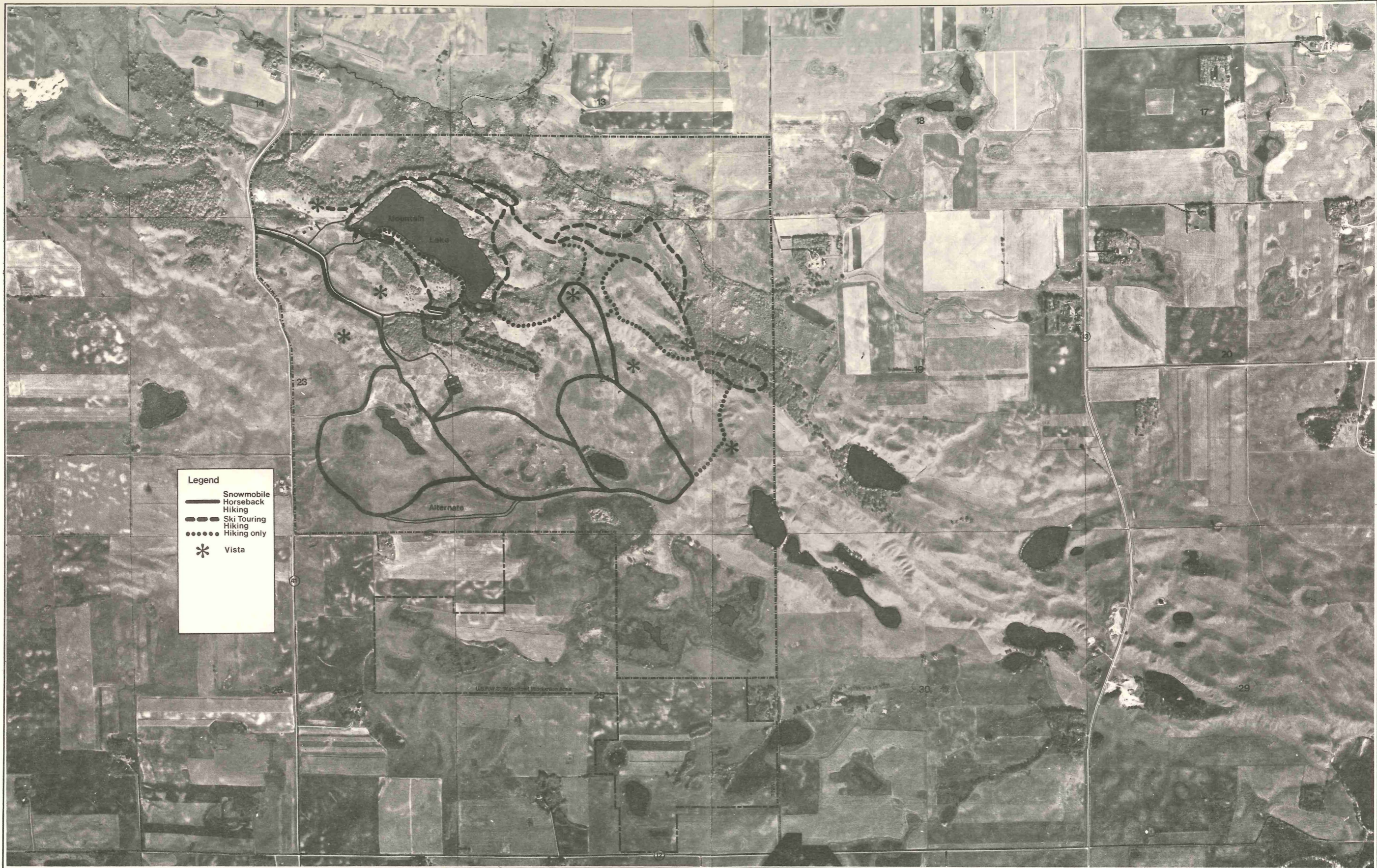


**Proposed Development**

**Glacial Lakes State Park**





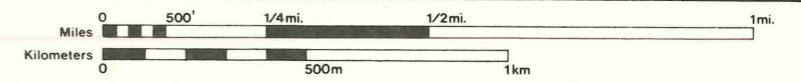


**Legend**

- Snowmobile
- - - Horseback
- ..... Ski Touring
- . - . Hiking
- ..... Hiking only
- \* Vista

**Proposed Trails**

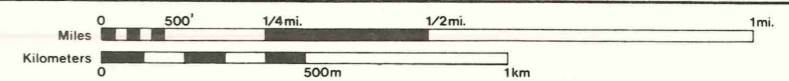
**Glacial Lakes State Park**

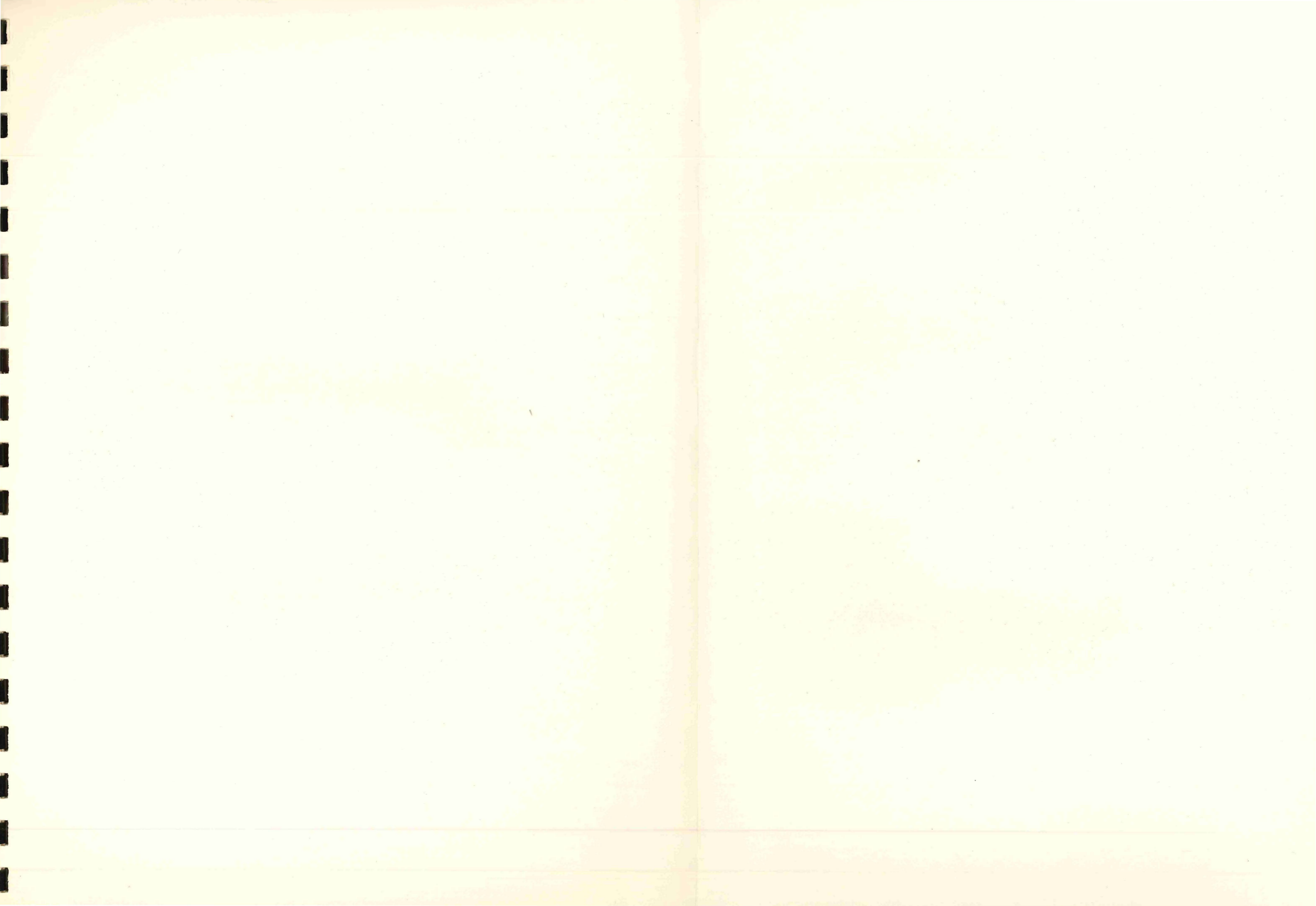




**Proposed Trails**

**Glacial Lakes State Park**







**Boundary Adjustments**

**Glacial Lakes State Park**

