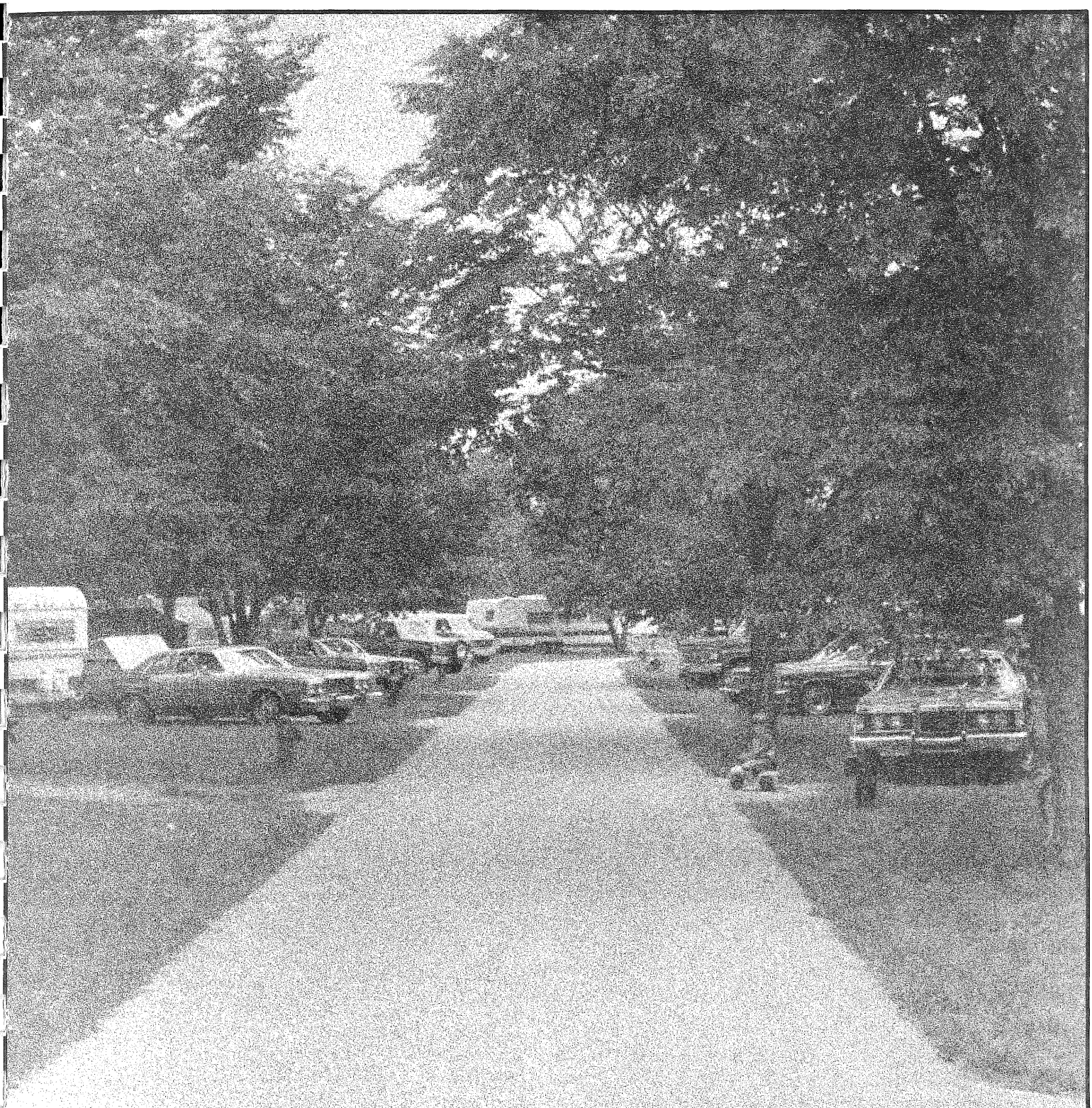
A Management Plan for Lake Carlos State Park

Minnesota Department of Natural Resources

This document is a summary of the Lake Carlos 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
Department of Natural Resources
Box 10E Centennial Office Building
St. Paul, Minnesota 55155



A Summary of the

Lake Carlos State Park Management Plan

Office of Planning

Minnesota Department of Natural Resources

November 1981

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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 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. Funding is 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 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 the result of 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 Department of Energy, Planning, and Development (DEPD) for a 60 day reviewal period. (This management plan was approved in July, 1981.)

6. The plan will be implemented by the DNR, Division of Parks and Recreation.

A SUMMARY OF MANAGEMENT AND DEVELOPMENT PROPOSALS

Resource Management

- Implement a burn program for park grasslands.
- Restore natural drainage.
- Establish a forestry demonstration area.
- Establish a tree nursery area.
- Plant native trees and shrubs along CSAH 62 on the northern park boundary.
- Survey development sites for archaeological significance.

Structured Group Camp

- Repair buildings and make them accessible to special populations.
- Upgrade the boat launch.

Horseback Rider Area/Primitive Group Camp

- Develop 4 to 6 camping pods.
- Construct a gravel road through the area.
- Repair erosion around the shelter.
- Remove the barn.
- Plant native trees and shrubs.
- Monitor use.

Lakeside Campground

- Repair existing erosion and prepare a long range shoreline protection plan.
- Close "peanut row" for 3 to 6 years to allow the vegetation to be reestablished.
- Redesign the layout of campsites in "peanut row" to increase site size and intersite screening.
- Realign campground roads.
- Plant native trees and shrubs.
- Rehabilitate the eastern toilet building and make it accessible to special populations.
- Upgrade service in electrical hookup campsites.

Upper Campground

- Eliminate the southeastern lane and develop a new lane to the north.
- Install electrical hookups in 12 sites in the westernmost lane.
- Remove existing toilet facilities and construct a new toilet building accessible to special populations.
- Plant native trees and shrubs.
- Remove the water storage tank.

Picnic Ground/Swimming Beach

- Install a drinking fountain/faucet.
- Develop 3 or 4 new picnic sites.
- Plant native trees and shrubs.
- Upgrade all picnic sites and replace fire rings.
- Convert the west bay of the parking lot to a road.
- Repair erosion.

Water Access

- Construct a second boat launch and upgrade the parking lot.
- Remove the amphitheater and develop a new one near the trail/interpretive center.

Administrative/Support Facilities

- Remove two sheds.
- Construct an unheated storage building.
- Insulate the east bay of the shop building.
- Upgrade the service court.
- Plant vegetative screening.
- Remove the parking lot at the old contact station.
- Construct a new parking lot north of the new contact station and redesign road and turnaround.
- Sign the entry area.
- Bury eletric lines.
- Remove the sewage lagoon.
- Upgrade the park sanitation system.
- Construct a gas and oil storage building.

AN OVERVIEW OF LAKE CARLOS STATE PARK

Lake Carlos State Park is located in Douglas County in west central Minnesota, 10 miles (16 km) north of Alexandria and 61 miles (97 km) southeast of Fergus Falls. The park is accessible from the north and south by Trunk Highway 29 (TH 29). Interstate 94 (I-94) is 13 miles (21 km) to the south. (See Location Map, p 9.)

Located on the northern shore of Lake Carlos, the park typifies the rolling, woody terrain of the Leaf Hills Landscape Region (see p 9). Its vegetation is largely maple-basswood interspersed with pine, prairie, and marshes. Its vegetational diversity supports a wide variety of wildlife. There are also known and suspected prehistoric sites in the park.

The park is heavily used year-round. Visitors come from throughout Minnesota, North and South Dakota, Iowa, and Nebraska. Total visitation at Lake Carlos in 1980 was 112,600.

The park was established 1936 and was developed under the Works Progress Administration (WPA) between 1937 and 1941. Several of the stone and wood structures that are typical of WPA projects are still in use today.

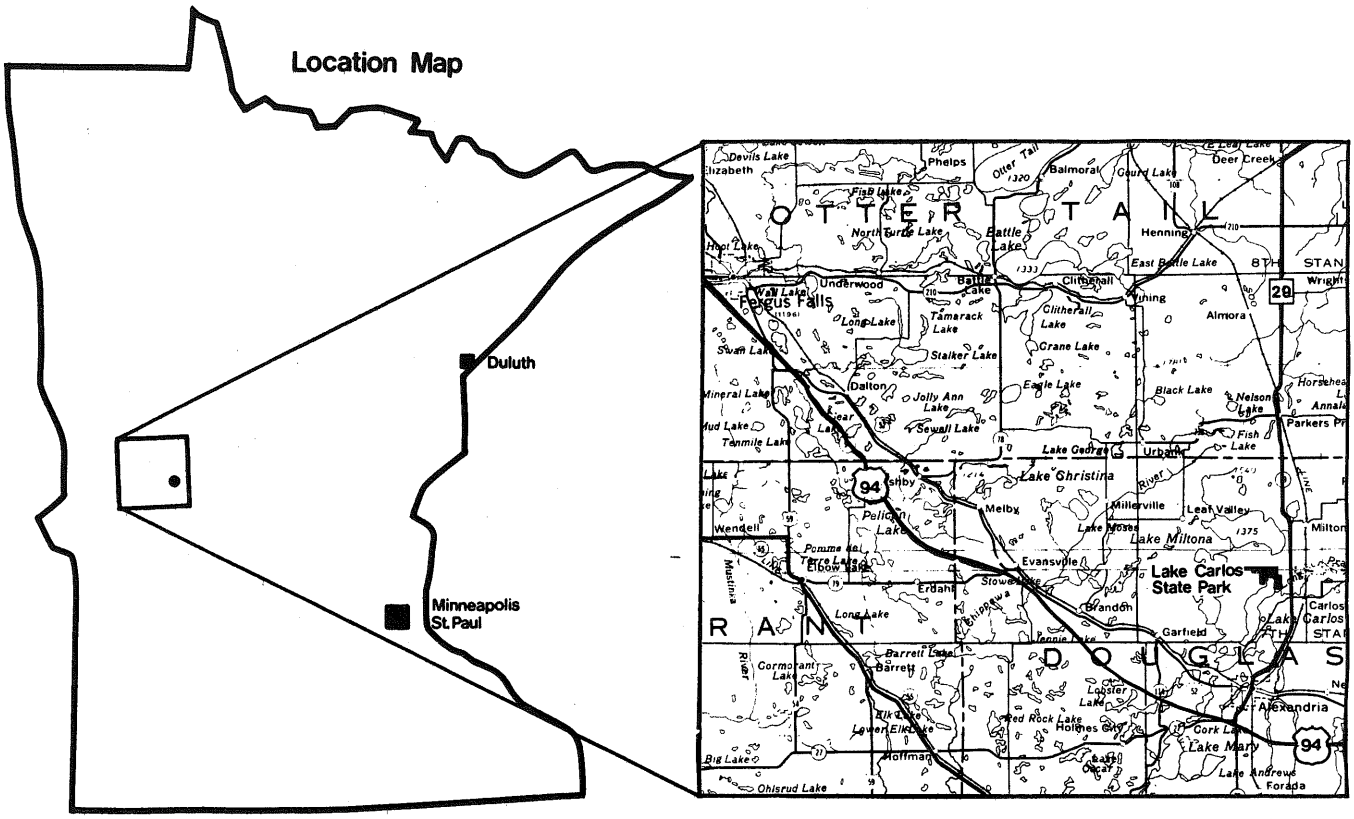
Park facilities include two campgrounds with a total of 146 campsites, a horseback rider/primitive group camp, a structured group camp, an interpretive program, a boat launch, an amphitheater, a swimming beach, a picnic ground, 23 miles (21 km) of trails, and administrative facilities.

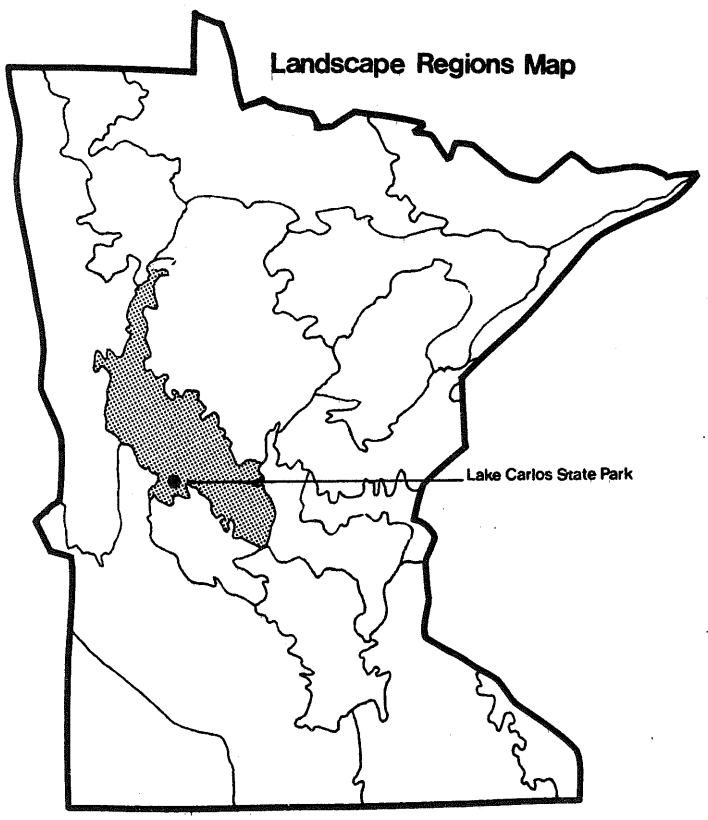
A statutory boundary is established by the legislature. It identifies land which has outstanding resource and recreation value. The DNR has authority to acquire land for park purposes only from within this boundary. The statutory boundary encloses 1,250 acres (500 hectares). Of this, 1,100 acres (442 hectares) are state owned and 150 acres (60 hectares) are in private ownership.

The 80 acre (32 hectare) parcel of privately owned land (S 1/2 SE 1/4 of Section 8, T129N, R37W) and the four lake home properties along CSAH 38 (Section 10, T129N, R37W) are recommended for exclusion from the statutory boundary. All other parcels, regardless of current ownership, should remain within the statutory boundary.

The relationship of Lake Carlos State Park to other recreational facilities and population centers in the area was analyzed to assess the demand for recreational opportunities and to determine how the park should function in fulfilling this demand. The recommendations for development of the park were based on this analysis. A complete discussion of the regional analysis of the area surrounding the park is included in the comprehensive management plan.

The landscape region system divides the state into 18 regions. (See map, p 9.) 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 planning Minnesota's state parks. Lake Carlos State Park is in the Leaf Hills Landscape Region.





Leaf Hills Landscape Region

This region encompasses the northern Alexandria moraine complex and pitted outwash plain. It is characterized by steeply rolling terrain and clear, sparkling lakes. The vegetation type is big woods. It is comprised primarily of maple, basswood, aspen, and oak. There are brush prairie openings in the western portion of the landscape region.

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 Recreational State Park Designation

DNR policy identifies four criteria based on ORA which a park must substantially meet to qualify for classification as a recreational state park. Lake Carlos State Park meets these criteria.

> "Possess natural resources, or artificial resources in a natural setting, with outstanding outdoor recreation potential.
>
> "Provide outstanding outdoor recreational opportunities that will attract visitors from beyond the local area.
>
> "Contain resources which permit intensive recreational use by large numbers of people and be of a size sufficient to provide for effective management and protection of the natural and/or artificial outdoor recreational resources, so that they will be available for both present and future generations.
>
> "Be located in areas where they appropriately accommodate the outdoor recreational needs of the state population, provided that they complement but are not in place of recreational service normally offered by local or regional units of government or the private sector."

Recommended Classification

There are two state parks in the Leaf Hills Landscape Region-Maplewood and Lake Carlos. The 1978 management plan for Maplewood State Park recommended classification as a natural state park. Both Maplewood and Lake Carlos are representative of this landscape region. However, Maplewood is much larger (9,000 acres/3,600 hectares) and Lake Carlos has more intensive use. Designating Lake Carlos as a recreational state park would provide complementary recreational opportunities within the landscape region. Lake Carlos could be considered for either natural or recreational classification, but the intensive use it receives and its proximity to Maplewood State Park make the recreational classification the best alternative.

GOAL FOR THE PARK

The goal for Lake Carlos State Park follows the overall goal for recreational state parks as stated in the DNR policy.

> "It is the goal of the Department of Natural Resources in recreational state parks to:
>
> "Provide lands and waters which offer a broad selection of outdoor recreational activities in a natural setting and which may be used by large numbers of people."

Park Resources

PARK RESOURCES

Soils. There is a variety of soils in Lake Carlos State Park. Most predominant are the Nebish series. Also found are the Nymore series (lake beach soils), Cathro muck (Rifle mucky peat), and the Dorset Sioux association (Sand and gravel). Most existing park development is located on soils which pose few limitations for development. The exception to this is Lakeside Campground which is on lake beach soils. The water table in this area is near the surface and drainage is poor to excessively poor. In spite of this, there have been no problems with standing water in the campground. There is, however, a severe erosion problem on the shoreline in the campground. (See Proposed Development, Lakeside Campground, Action #1, p 24.)

Vegetation and Wildlife. Lake Carlos State Park is located in the deciduous transition zone between the grassland prairies of southwest Minnesota and the conifer forests of the northeast. This deciduous forest type, known as Big Woods, is predominated by basswood, oak, and aspen, with areas of tamarack and sugar maple. Interspersed throughout are pockets of prairie and marsh. Park vegetation is typical of this transition zone.

The vegetational diversity of the park provides habitat for a wide variety of wildlife. The Minnesota Natural Heritage Program has identified species which are threatened, rare, or of special concern. They include: bald eagle, Cooper's hawk, goshawk, Wilson's phalarope, common loon, and upland sandpiper. More specific lists and information on park wildlife are included in the comprehensive management plan and the management plan details. All the recommended vegetation management actions will directly benefit wildlife.

Water Resources. The park is located along 1.5 miles (2.4 km) of shoreline on Lake Carlos, a 2,520 acre (1,020 hectare) lake. The maximum depth of the lake is 163 ft (49 m), the average depth is 50 ft (15 m). Channels connect Carlos to lakes Le Homme Dieu and Darling.

The Long Prairie River flows from Lake Carlos into the Crow Wing River which empties into the Mississippi.

There are numerous wetlands in the park which support an abundance of wildlife, the most notable of these are Schumacher Marsh and Hidden Lake.

Groundwater supplies in the park are abundant, but tend to be hard because of carbonate rock fragments in the glacial drift. The only management action needed is an updated park utility map which will be developed by the DNR, Bureau of Engineering.

Fisheries. Fishing is one of the most popular activities in the park. Panfish, northern pike, walleye pike, and largemouth bass are the most commonly caught species.

Stocking records date back to 1910, but regular stocking did not begin until 1945. Despite heavy fishing pressure, fish populations are in good condition. This plan recommends continuation of the management programs which are currently being carried out by the Fisheries Section of the Division of Fish and Wildlife.

History and Archaeology. Within 10 miles (16 km) of the park, there are at least five known archaeological sites. One of these lies under Lakeside Campground in the park. It was probably a seasonal campsite of a group of late Woodland peoples.

All development sites in the park will be surveyed to determine archaeological significance before construction is begun. Any information resulting from these surveys will be incorporated into the park's interpretive program.

RESOURCE MANAGEMENT OBJECTIVES

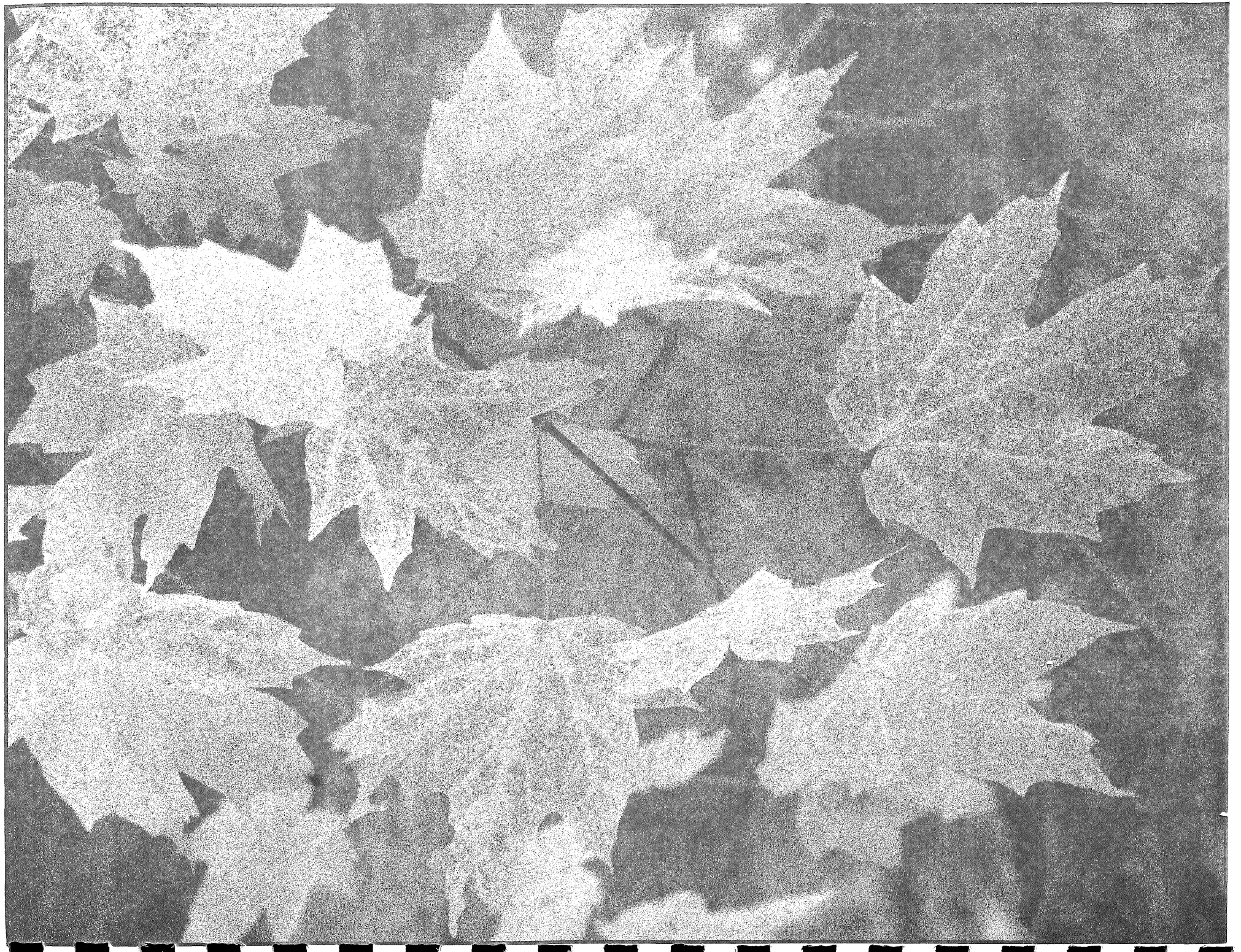
To maintain or reestablish plant and animal life which represent pre-European settlement biotic communities

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

To enhance wildlife habitat diversity and wildlife observation

RESOURCE MANAGEMENT

Action	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Total
Vegetation and Wildlife						
1 Implement a burn program to maintain grasslands.		$ 1,000	$ 1,000		$ 1,000	$ 3,000
2 Develop a nesting platform for Canada geese in Schumacher Marsh.		2,000				2,000
3 Control cattail encroachment by cutting in midsummer.	No development cost					
4 Restore drainage in tamarack stand.	$ 2,000				2,000	4,000
5 Identify and monitor tree diseases.	No development cost					
6 Maintain an abundance of snags.	No development cost					
7 Establish a forestry demonstration area.	Funded by the DNR, Division of Forestry					
8 Close "peanut row" to camping and rehabilitate the campsites.		10,000			10,000	20,000
9 Relocate the tree nursery and diversify the stock.		1,000				1,000
10 Plant trees along north boundary near Cty Rd 62.			1,000			1,000
11 Vegetate the horseback rider campground.		5,000				5,000
12 Rehabilitate vegetation in Upper Campground.			6,000			6,000
13 Rehabilitate vegetation in Lakeside Campground.		15,000				15,000
14 Screen the service court area with vegetation.					1,000	1,000
Archaeology/History						
1 Field check all proposed development sites for artifacts before construction begins.		5,000				5,000



Physical Development and Recreation Management

EXISTING DEVELOPMENT (see map, p 31)

Lakeside Campground
86 campsites
2 sanitation buildings with showers
(1 not accessible to special populations)

Upper Campground
62 campsites
Sanitation building with showers
(not accessible to special populations)

Primitive Group Campground
Picnic shelter
Barn (miscellaneaous storage)
Well house
9 pit toilets
Gravel parking lot

Structured Group Camp
2 barracks (24 beds each)
Crafts building
Dining hall
Staff quarters/infirmary (12 beds)
Sanitation building with showers
2 pit toilets

Boat Launch
Concrete boat launch
Dock
Fish cleaning house
Gravel parking lot

Swimming Beach
Bathhouse/sanitation building
(changing rooms and vending machines)
Sand beach
Large gravel parking lot

Picnic Grounds
Picnic shelter
50 picnic tables
Water tower
(not used for water storage)
Sanitation building
(not accessible for special populations)

Administrative Facilities
Contact station/park office
Manager's residence/garage
Assistant manager's residence
Shop building (half heated)
2 storage buildings

Visitor Services
Interpretive center/equipment storage

Trails

Hiking	9 miles (14 km)
Ski touring	3 miles (5 km)
Horseback riding	3 miles (5 km)
Snowmobiling	8 miles (13 km)

RECREATION MANAGEMENT OBJECTIVES

To coordinate park development 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, studv, and enjoy the natural resources

To locate park development where it will have the least impact on sensitive natural, archaeological 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 of new developments by special populations (i.e., persons with physical disabilities, the elderly, and the very young)

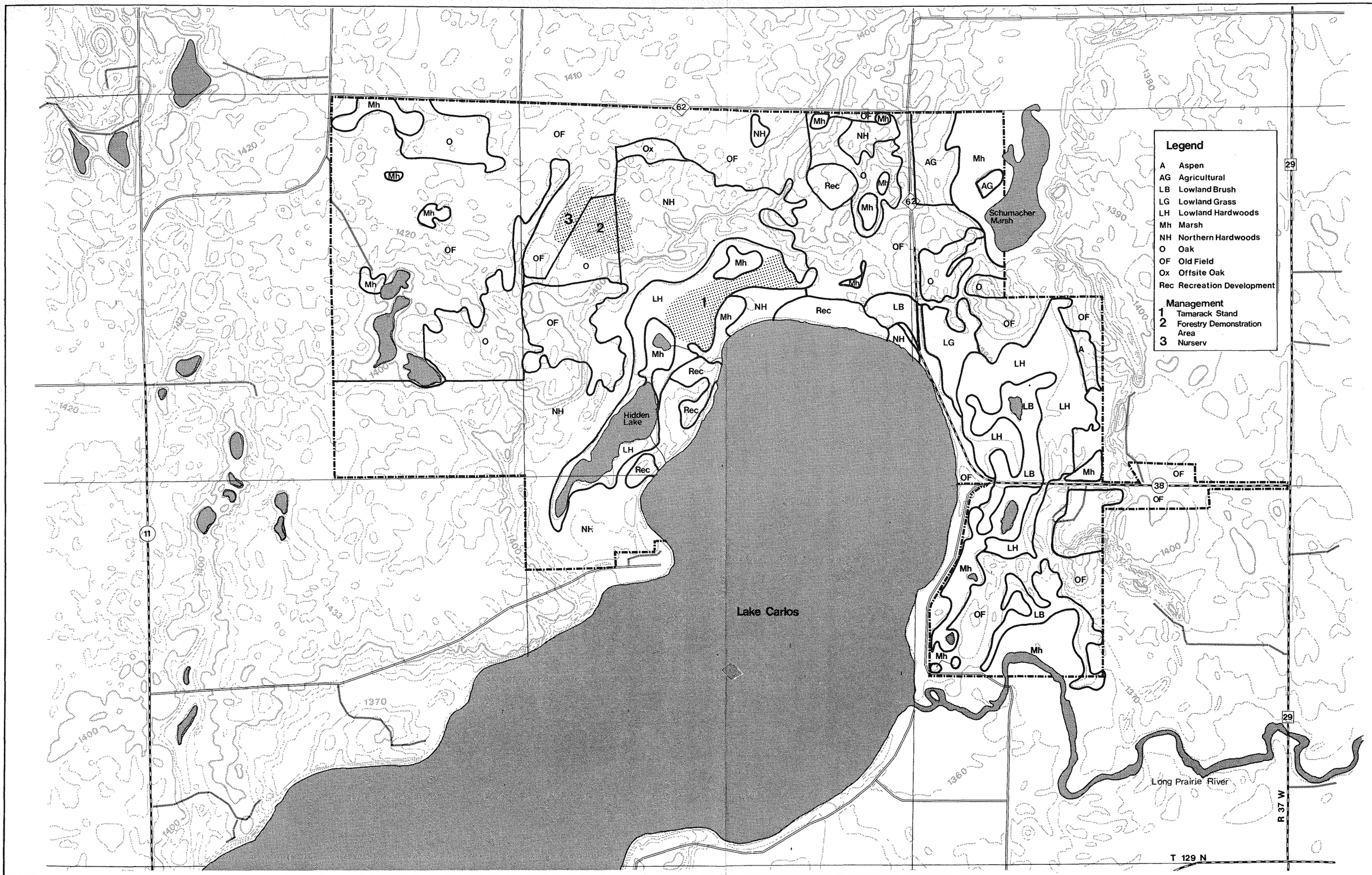
PROPOSED DEVELOPMENT (see map, p 33)

Action	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Total
Structured Group Camp						
1 Repair roofs, eaves, and floors in camp buildings.		$ 5,000				$ 5,000
2 Make all camp buildings accessible for special populations.	$ 9,000					9,000
3 Upgrade sanitation building, make accessible to special populations.	28,000					28,000
4 Upgrade boat landing.			$ 1,000			1,000
Horseback Rider Area/Primitive Group Camp						
1 Construct 4 to 6 small camping pods.			5,000			5,000
2 Construct a 1/4 to 1/2 mile gravel road.					$15,000	15,000
3 Remove barn.	No cost					
4 Repair dripline erosion around shelter.		2,000				2,000
5 Monitor use for possible relocation.	No cost					
Lakeside Campground						
1 Correct shoreline erosion and formulate a long range shoreline protection plan.	50,000					50,000
2 Realign campground roads.			5,000			5,000
3 Rehabilitate eastern toilet building.	30,000					30,000
4 Close "peanut row" for 3 to 6 years.	Vegetation and Wildlife Management, Action #9, p 19					
5 Upgrade electrical hookups.		18,000				18,000
Upper Campground						
1 Eliminate southeastern loop and develop new loop to the north.			40,000			40,000
2 Install electrical hookups in 12 sites in western lanes.				6,000		6,000

Action	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Total
3 Remove existing toilet facilities, construct new toilet building with showers accessible to special populations.			$120,000			$120,000
4 Remove water storage tank.		$ 500				500
Picnic Ground/Swimming Beach						
1 Install drinking fountain-faucet near shelter.		500				500
2 Develop 3 to 4 picnic sites near open play area.			1,500			1,500
3 Upgrade all sites and install new fire rings.	$ 5,000					5,000
4 Repair erosion at the end of the asphalt path.		1,000				1,000
Water Access						
1 Construct additional boat ramp and upgrade parking lot.		30,000				30,000
2 Remove amphitheater and relocate near new trail center.			1,500			1,500
Administrative/Support Facilities						
1 Remove 2 wooden frame sheds.			500			500
2 Construct unheated storage building.			30,000			30,000
3 Insulate east bay of shop building.				$2,000		2,000
4 Upgrade service court and install drain tile.		1,000				1,000
5 Bury all electric lines.		1,000				1,000
6 Remove sewage lagoon.			3,000			3,000
7 Construct gas and oil storage building.		8,000				8,000
8 Upgrade sanitation system.	Contingent on DNR, Bureau of Engineering study.					

Action	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Total
Roads and Parking						
1 Remove parking lot at former contact station and revegetate.			$ 2,000			$ 2,000
2 Construct small parking lot north of new contact station, redesign turnaround.			2,000			2,000
3 Convert west bay of beach parking lot to a road.			2,000			2,000
4 Construct service road from CSAH 38 to service court.			5,000			5,000
Trails						
1 Construct trail/ interpretive center near Upper Campground.		$100,000				100,000
2 Modify the horse/ snowmobile trail west of horseback rider camp.		2,000				2,000
3 Study feasibility of developing new horse trail east of horseback rider camp.	Contingent on DNR, Trails and Waterways study.					
4 Realign and expand hiking-ski touring trail system.		3,000				3,000
5 Develop hiking trail from contact station to Lakeside Campground.		3,000				3,000
Visitor Services						
1 Develop 3 self-guided, interpretive trails with brochures and signage.		6,000	5,000			11,000
2 Develop a set of permanent interpretive aids for year round use.				$ 4,000		4,000
Park Boundary						
1 Delete S 1/2, SE 1/4, Section 8, T129N, R37W, resurvey.	Legislative action, no cost					
2 Delete 4 lake home properties along CSAH 38 in Section 10, T129N, R37W.	Legislative action, no cost					

Maps



Lake Carlos State Park

Vegetation

Horseback Riders Area
Shelter
Restrooms
Upper Campground
Contact Station
Service Area
Trailer Sanitary Station
Lakeside Campground
Showers / Restrooms
Peanut Row
Managers Residence
Asst. Managers Residence
Fish Cleaning House
Amphitheater
Boat Landing
Restrooms / Showers
Bathhouse
Water Tower
Restrooms
Picnic Shelter
Structured Group Camp
Hidden Lake
Lake Carlos
Long Prairie River
62
29
38
11
17
16
15
8
9
10
R 37 W
T 129 N
1410
1420
1400
1390
1370
1360
1430

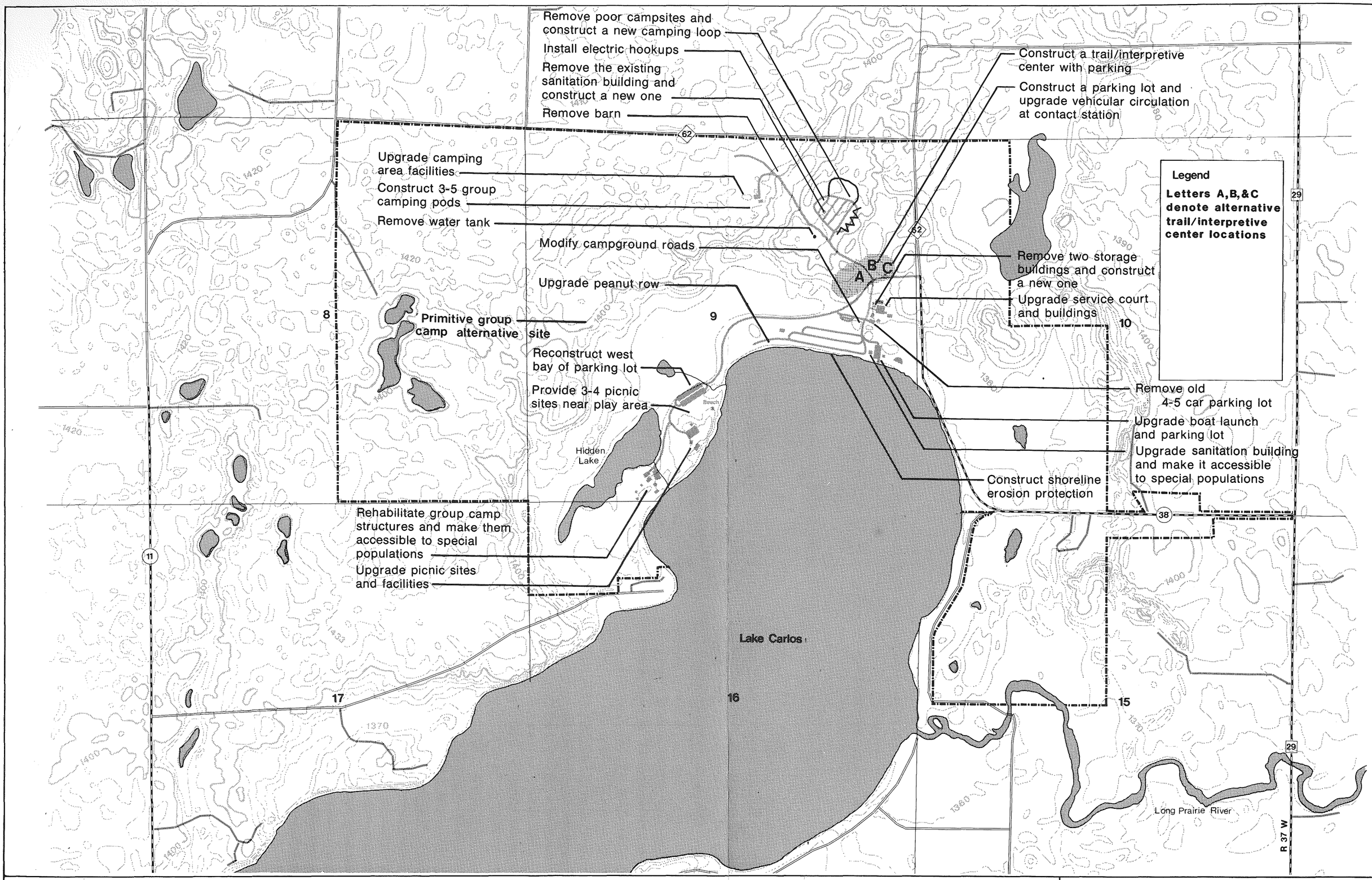
Legend

- Highway
- Paved Road
- Unimproved Road
- Statutory Boundary
- Private Land
- Delete from Statutory Boundary - See Page 25

Miles: 500' 1/4mi. 1/2mi. 1mi.
Kilometers: 0 500m 1km

Lake Carlos State Park

Boundary Adjustments & Existing Development



Lake Carlos State Park

Proposed Development

Maple Basswood interpretive trail

Woodland Marsh interpretive trail

Type IV Marsh interpretive trail

Overlook

Legend

Horseback

Hiking

Interpretive

Hidden Lake

Lake Carlos

Long Prairie River

R 37 W

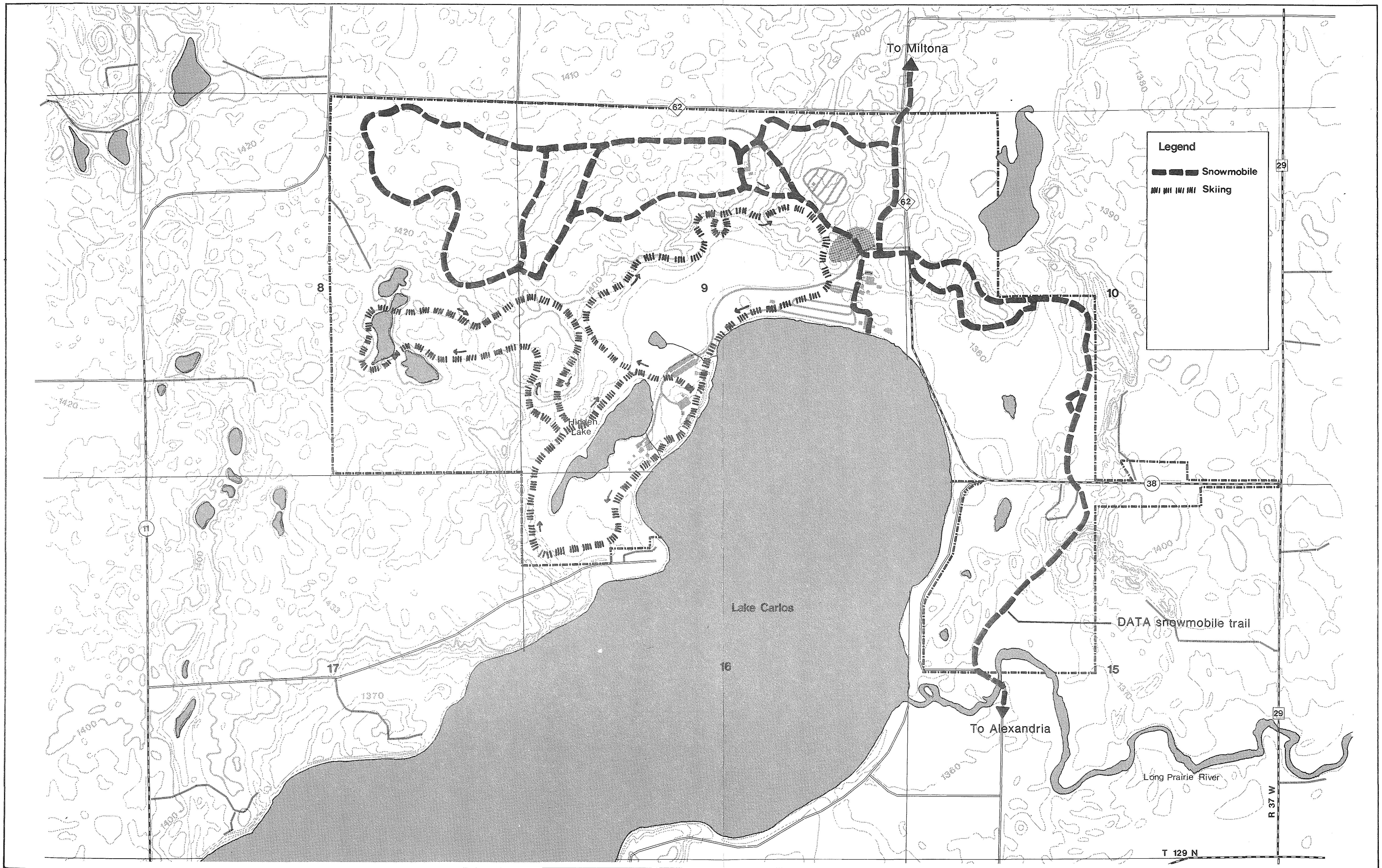
T 129 N

Miles 0 500' 1/4mi. 1/2mi. 1mi.

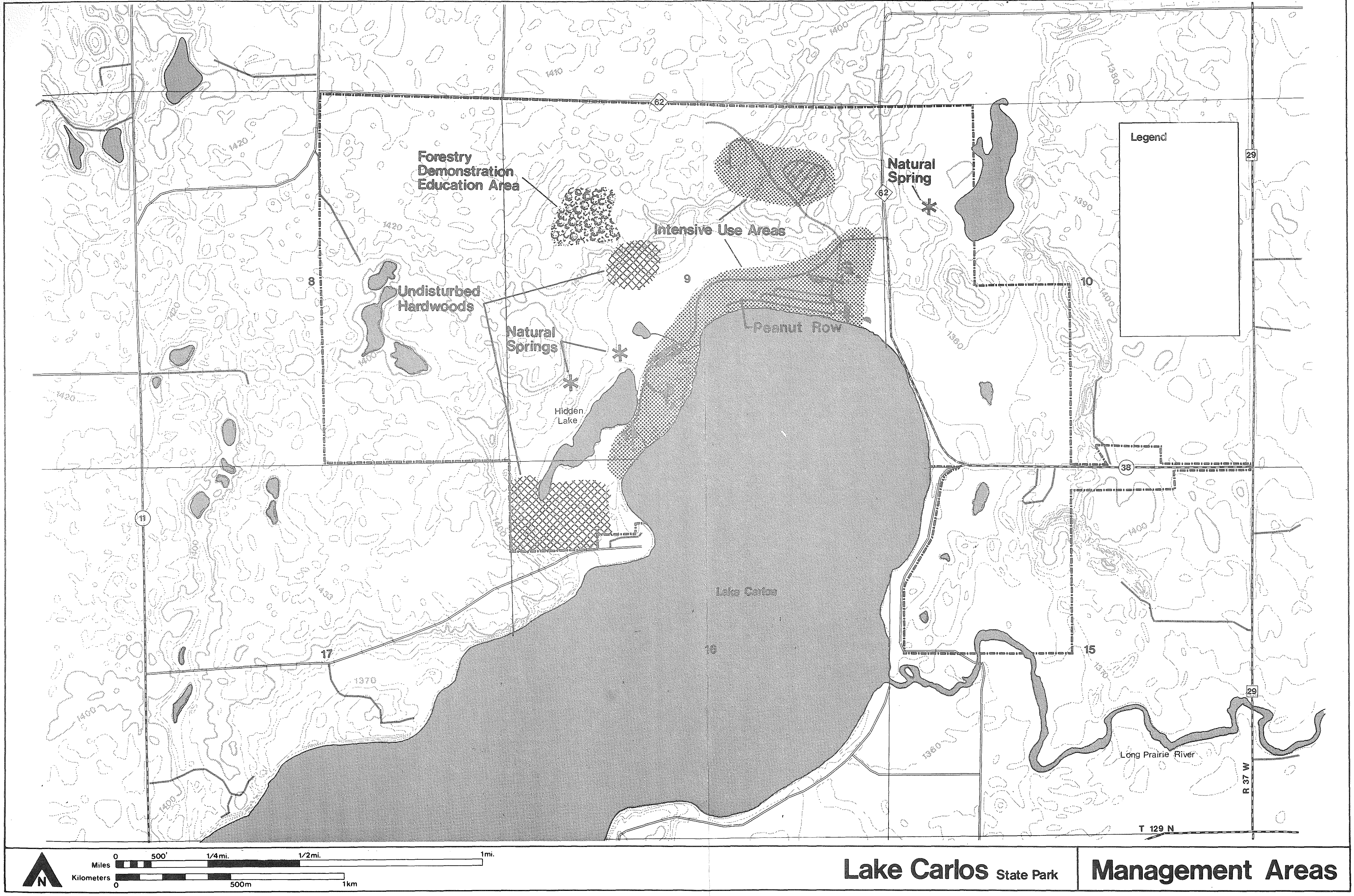
Kilometers 0 500m 1km

Lake Carlos State Park

Proposed Summer Trails



Lake Carlos State Park | **Proposed Winter Trails**



Lake Carlos State Park | **Management Areas**