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A Management Plan for Split Rock Lighthouse State Park

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STATE OF MINNESOTA

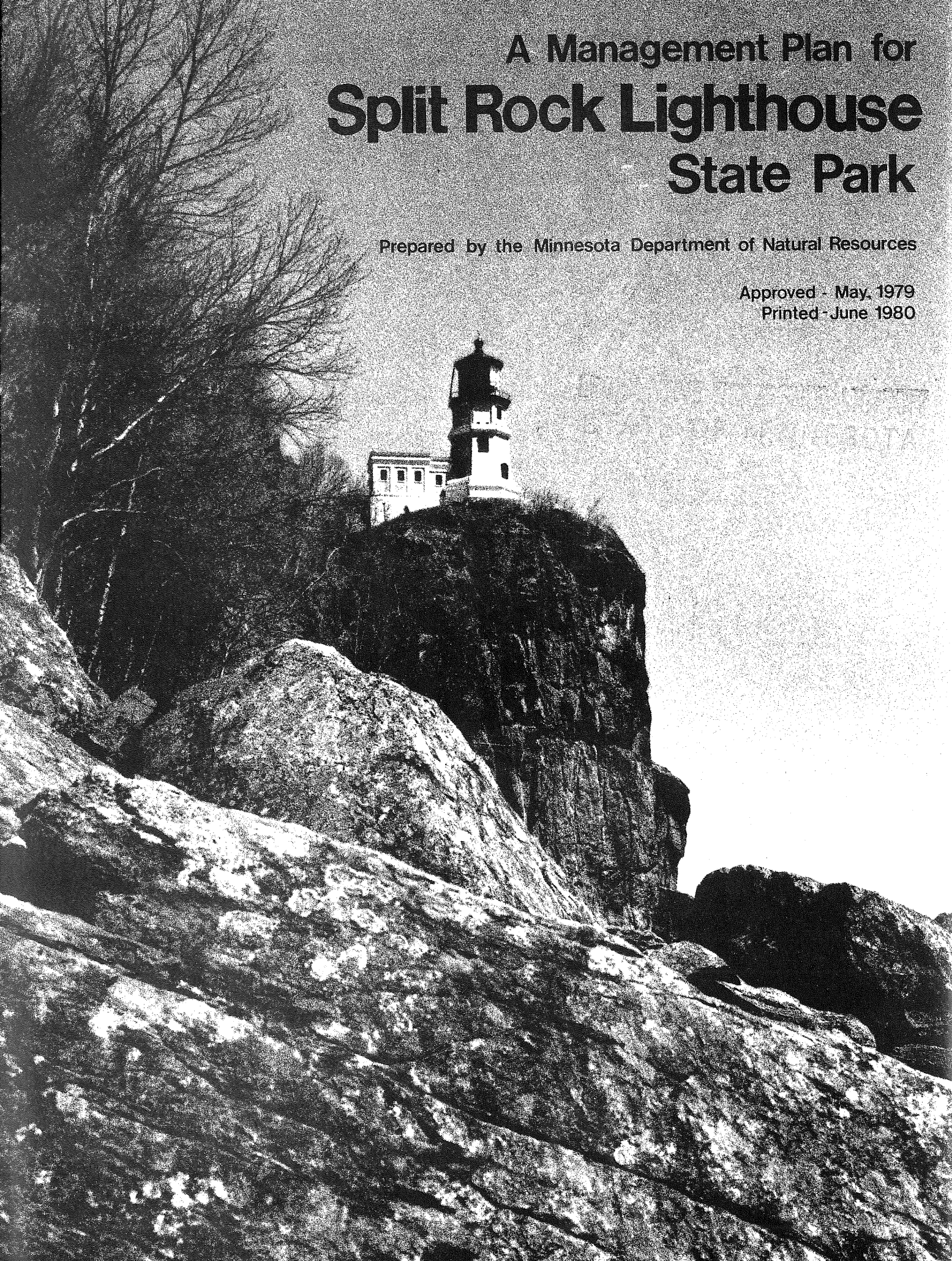
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Minnesota Department of Natural Resources

A Management Plan for Split Rock Lighthouse State Park

Prepared by the Minnesota Department of Natural Resources

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LIST OF ABBREVIATIONS

ORA '75 - Outdoor Recreation Act of 1975
DNR - Minnesota Department of Natural Resources
MHS - Minnesota Historical Society
MPD - Management Plan Details
GPMP - General Park Management Plan
CETA - Comprehensive Employment Training Act
SNA - Scientific and Natural Area
CSAH - County State Aid Highway
TH - Trunk Highway
I - Interstate
mi - mile
km - kilometer
sq mi - square mile
sq km - square kilometer
ft - foot/feet
m - meter
in. - inch
cm - centimeter
kg - kilogram
cfs - cubic feet per second
cms - cubic centimeters per second
ppm - parts per million
F - Farenheit
C - Centigrade
p - page
pp - pages

PREFACE

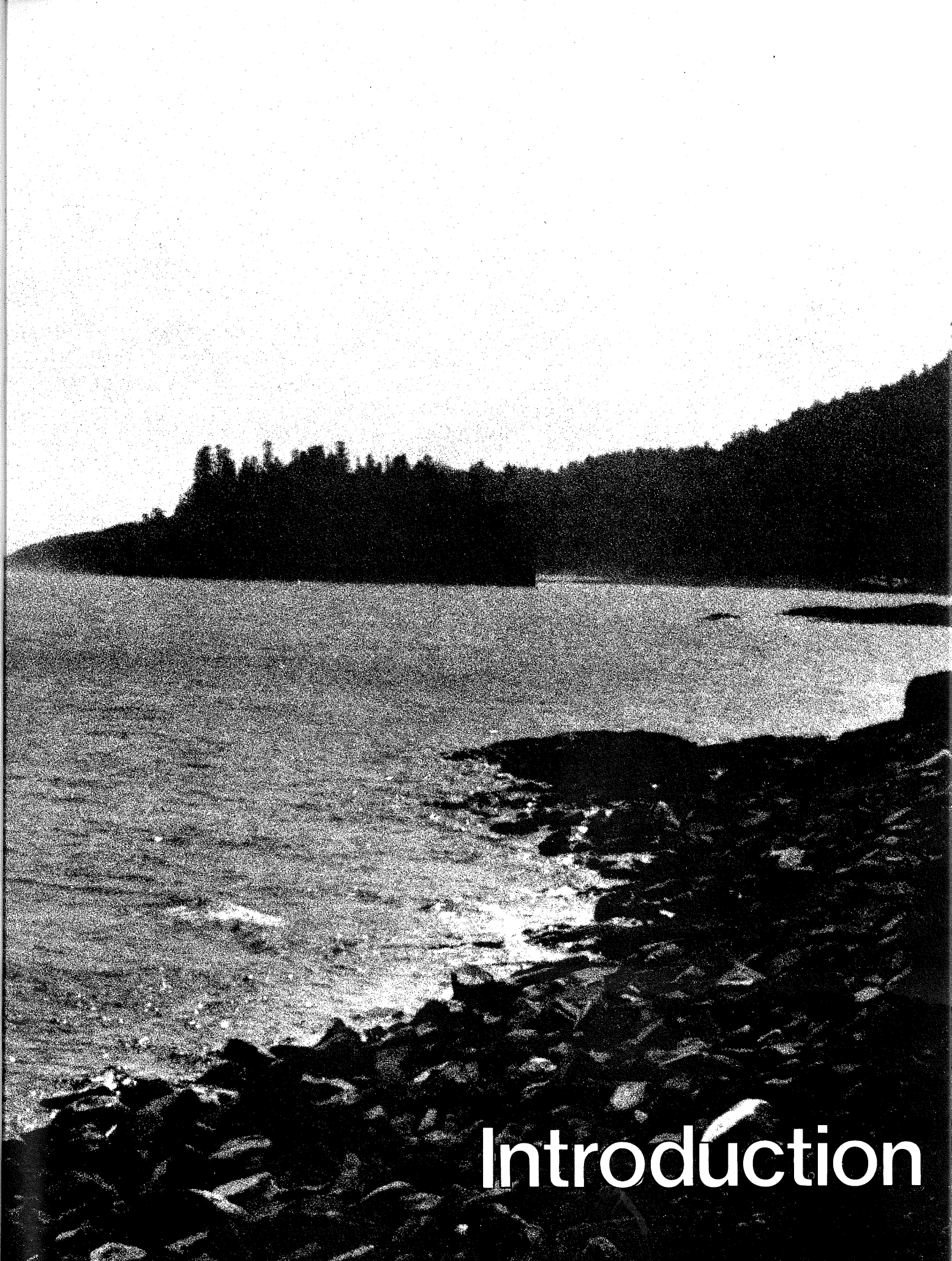
The primary concern in the development of the park management plan format for the 1978-79 biennium was the identification of the "audience." For whom are these plans to be written? Eight different audiences were identified.

1. DNR reviewers of the whole planning process
2. DNR reviewers whose main concern is one specific part to the plan
3. DNR regional administrators, supervisors, and park managers
4. SPA reviewers
5. The general public
6. Special interest groups
7. Reviewers of the environmental impacts of proposed actions
8. Legislators

The requirements of each of the audiences are different. All audiences require a document which includes some technical data, but the degree of detail as well as the manner of presentation varies. Some audiences require that specific topics be discussed in detail in all phases from inventory through recommended management. Other groups require a short, non-technical, yet comprehensive and logical management plan. A plan, obviously, cannot be both technical and non-technical nor can it be both long and short. It seemed logical then to produce two documents: 1) a short, comprehensive, non-technical document for the general public ("General Park Management Plan" GPMP), and 2) a detailed, technical document for specialists ("Management Plan Detail" MPD).

This document is the General Park Management Plan. All recommendations, both resource management and physical development, are included in this document. Detailed inventory data and specific instructions necessary for implementation of the plan are not included. This information has been compiled into technical appendices, which are available upon request from:

Park Planning
Department of Natural Resources
444 Lafayette
St. Paul, Minnesota 55101



Introduction

SUMMARY

Split Rock Lighthouse State Park has been recommended for classification as a recreational state park, with a historic site secondary unit and a water access site sub-unit. (A highway rest area secondary unit is under consideration by Mn/DOT). The park has potential for classification as either a natural state park or a recreational state park. However, with the close proximity of Gooseberry Falls Natural State Park, classification of Split Rock as a recreational park will result in excellent complementary facilities.

Resource management recommendations in this plan are directed toward providing outstanding recreational opportunities in a natural setting. Manageable resources include: soils, waters, fisheries, vegetation, and wildlife. Soils management will focus on location of development on the most suitable soils, elimination of existing erosion problems, and prevention of future soil damage. Water resource management will focus on prevention of degradation of water quality. Fisheries management of the Split Rock River will emphasize improving trout habitat. Vegetation management will be directed toward reestablishment of a significant example of the original vegetation community and diversification of vegetational type and age classes. This will increase the opportunities for wildlife observation, by improving wildlife habitat. Wildlife management will promote population diversity through vegetation management and location of development away from sensitive wildlife areas. Beaver populations on the Split Rock River will be controlled and permit public hunting north of Trunk Highway 61 (TH 61) will be permitted.

Recreational facilities proposed for development include a picnic area; a campground; walk-in campsites; a trail center; hiking, skiing, and snowmobiling trails; a fishermen's access site; a group camp area; and an administrative facility.

THE PLANNING PROCESS

The variety of outstanding natural, cultural, and historical resources of Minnesota provide abundant opportunities for outdoor recreation and education. In order to ensure that present and future generations will have the opportunity to enjoy these resources, we must plan now to protect, perpetuate, and provide access to these resources. For this reason, the Minnesota Legislature passed the Outdoor Recreation Act of 1975 (ORA '75).

This act mandated that a comprehensive management plan be completed for each of the major units in the state recreation system. In the course of this planning process, each park will be classified in recognition of its resources and its role in the statewide system.

This plan sets the long range goals and objectives for resource management and recreational development which are appropriate for the park's classification. The actions that should be taken to move toward fulfilling these goals and objectives are then stated and scheduled.

The planning process consists of five steps:

1. Compilation of an inventory of natural resources and existing facilities. Task forces of specialists from other DNR divisions and sections are mobilized to assist in collecting pertinent data. At this point the first public workshop is held.
2. Identification of alternatives for park management and development. A second public workshop is held to review these alternatives and invite further public comment. These alternatives are then reviewed by the Division of Parks and Recreation.
3. Classification of park, development of park goal, and writing draft plan. This step culminates in the first interdepartmental review, followed by a 30 day public review. Within this 30 day period, the third public workshop is held.

4. Revision of the draft plan according to information received from public and interdepartmental reviews. Plan is then sent to the State Planning Agency for a 60 day reviewal period.

5. Implementation of development plan by the Division of Parks and Recreation.

AN OVERVIEW OF SPLIT ROCK LIGHTHOUSE

Prompted by several tragic shipwrecks, the U. S. Lighthouse Service constructed Split Rock Lighthouse in 1910 approximately 5 mi (8 km) southwest of Beaver Bay.

Nearby, on land given by Frank A. Day of Duluth, the state developed a wayside rest. This wayside had a commanding view of Split Rock Lighthouse and the magnificent shoreline cliffs.

The 1958 Great Lakes Shoreline Study by the National Park Service recommended that a state park be established which would include both the wayside and the lighthouse.

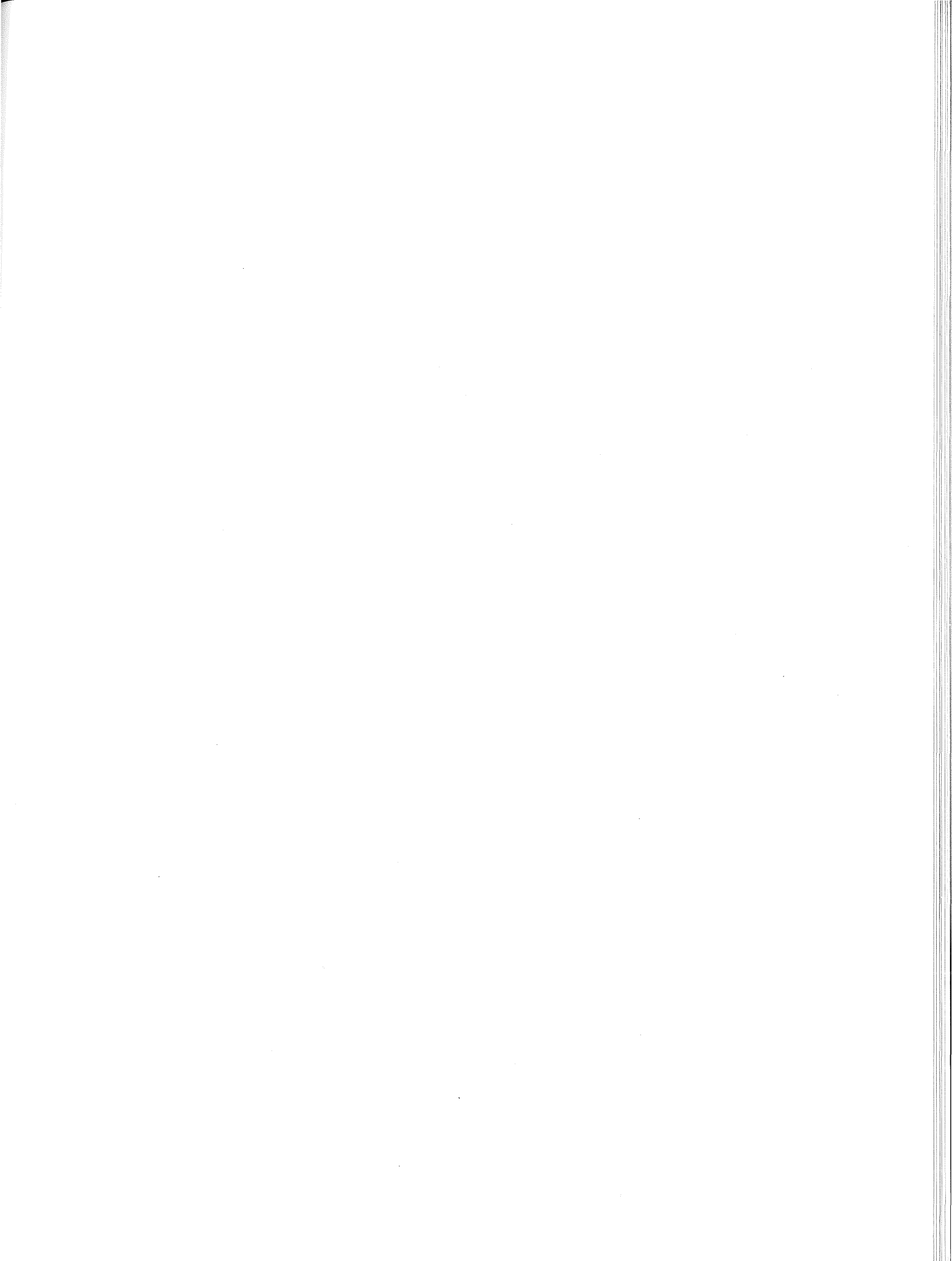
In 1967, Senator Ray Higgins and Representative James E. Ulland authored legislation which established Split Rock Lighthouse State Park, (1967 Laws of Minnesota, Chapter 787). The statutory boundary enclosed 996 acres (403 hectares) and included the Split Rock Wayside, the lighthouse, Little Two Harbors, and the area between the lighthouse and the Split Rock River.

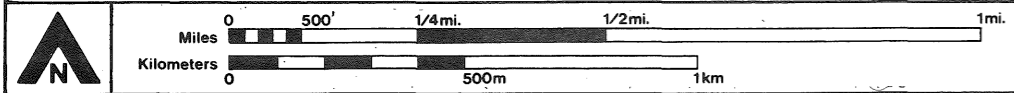
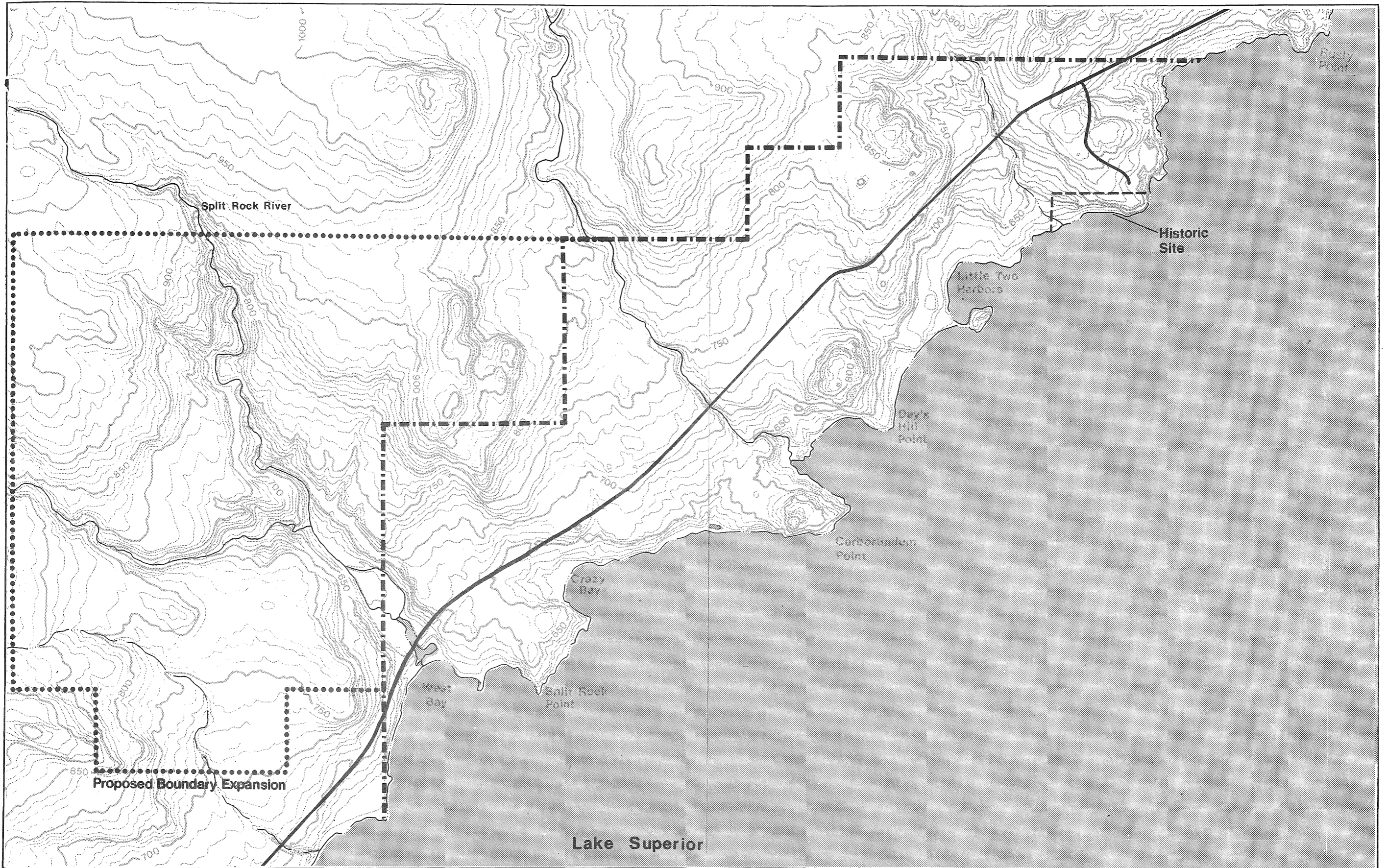
Early in January of 1969, the Coast Guard shut down operation of the lighthouse and federal officials were notified of the state's interest in acquisition.

Negotiations for transfer of ownership continued until 1971. From 1971 to 1976 the lighthouse was under the jurisdiction of the DNR. In 1976 it was transferred to the Minnesota Historical Society (MHS) for administration as a historic site sub-unit within the park.

At the present time, there are no recreational facilities in the park other than the support facilities associated with the Split Rock Lighthouse Historic Site. Approximately 275,000 people visit the park annually. This use is focused primarily on the historic site because of the lack of recreational facilities and large tracts of land still in private ownership in the rest of the park.

This park has a highly scenic resource base which is ideal for a wide range of outdoor recreation both in summer and winter.





Split Rock Lighthouse State Park

Base Map



Regional Analysis

INTRODUCTION

In order to determine a park's role in protecting and perpetuating natural resources and fulfilling recreational needs, a state park analysis process has been initiated. The analysis is designed to look at a given park's interrelationship with:

the state park system

the biocultural region system

state park use patterns

regional influence/impact factors

Recognition of a state park's interrelationship with these components helps to ensure that park development will be planned to protect natural resources, meet appropriate recreational demands, and avoid undue competition with other recreation providers.

The State Park System

Minnesotans traditionally have a great appreciation for nature. The variety and everchanging beauty of our 65 state parks testify to the vast natural and historic wealth of our state. The goal of Minnesota's state park system is to protect and perpetuate these natural resources while offering the public a variety of recreational opportunities.

There is a delicate balance which must be maintained when recreational facilities are provided for large numbers of people in areas of outstanding, often sensitive resources. Generally, certain resources are best suited for particular types of recreation. To help ensure this recreation/resource balance, the Minnesota State Legislature outlined in the ORA '75 the components which comprise all state recreational lands. These components are: historic sites; state forests; water access sites; rest areas; state trails; wildlife management areas; scientific and natural areas; wild, scenic, and

recreational rivers; wilderness areas; and state parks. Also included in this legislation is a classification system which identifies general criteria for planning and management direction. The two primary classifications for state parks are natural or recreational.

A natural state park classification places primary emphasis on perpetuation of the natural resources. Recreational state park classification, while not allowing major disruption of the natural resources, focuses on providing a variety of recreational facilities for large numbers of people. This classification determines each park's role as a unit in the statewide park system. (See Classification Section, p 17 for further discussion.)

Split Rock is located in a part of Minnesota which consistently draws large numbers of statewide and out-of-state tourists. The rugged topography and vast expanse of Lake Superior combine to form a resource base of statewide and national significance.

It is the intent of the state park system to protect and perpetuate not only those resources which attract large numbers of users, but all representative examples of the varied resources of Minnesota.

Biocultural Region System (Formerly Landscape Region System)

The ORA '75 defines a landscape region as "an identifiable geographic region with generally homogeneous natural characteristics which exemplify the natural processes which formed the geography, geology, topography, and biology of the state." Since 1975, it has become apparent that human impact on the landscape has not be included to a sufficient extent in this system. As a result, several studies have been directed toward amending the system to include the interrelationship of cultural, biological, and geological impacts on the environment. The system has been renamed the biocultural region system. This system divides the state into 18 regions which are differentiated according to the characteristic plant life, animal life, and landforms of presettlement times and the cultural impacts which have altered the landforms since settlement.

Minnesota's Biocultural Regions



Split Rock Lighthouse State Park is located in the North Shore Highlands Biocultural Region. This region is characterized by a thin glacial deposited soil layer, frequent rock outcroppings, rolling hills, and steep, shoreline cliffs. Split Rock Lighthouse State Park is a representative example of the outstanding topography and vegetation of the North Shore Highlands Biocultural Region.

State Park Use Patterns

State park users are often classified into two types -- destination and non-destination users. A comparison of the differences and similarities of these users groups will help to clarify the park's role in providing resource and recreation opportunities.

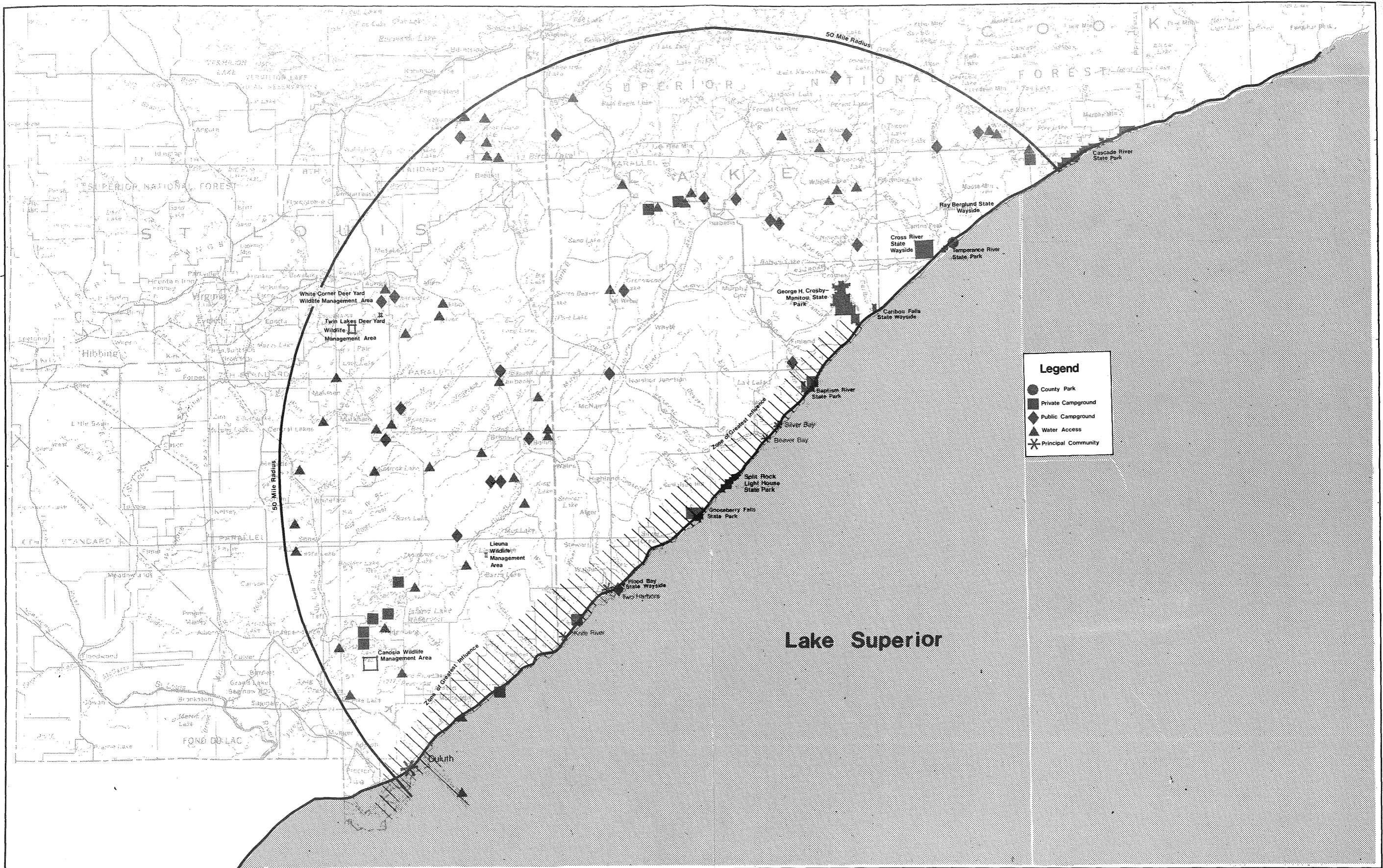
Currently, Split Rock accommodates only the day use visitor. It is a popular day use destination for residents of Duluth and neighboring communities within 50 mi (80 km) of the park. In addition, the park is a key stop for statewide and out-of-state North Shore visitors. Split Rock ranks eighth in popularity among all state parks (based on 1977 Annual State Park Attendance Figures).

Split Rock is located in an area of the North Shore which is impacted by demands for day use as well as overnight use. The Regional Impact/Influence subsection below will discuss the park's potential role in meeting North Shore development for both user groups.

Regional Influence/Impact Factors

Recreation patterns in the region surrounding a state park must be analyzed in order to adequately plan a park. The basis of this analysis is the relationship between a particular facility and the expectation of the user. The user will visit a state park because of: natural resources, location, facilities, and the experience sought.

The influence zone shown on p 12 highlights communities from which Split Rock users are likely to come on a regular basis. In addition, the influence zone highlights area recreational facilities which may complement and benefit from park facilities and services.



Legend

- County Park
- Private Campground
- ◆ Public Campground
- ▲ Water Access
- * Principal Community



Split Rock Lighthouse State Park

Regional Analysis

Recreational facilities within a park's zone may duplicate services. However, some people will consistently choose to frequent one area over another in the pursuit of a particular experience. For example, camping is a recreational activity which state parks provide. Municipal and county parks located within the vicinity of a state park may also have campsites. However, some people will consistently travel to the state park because of the type of experience it offers, namely, camping in a natural setting augmented by other recreational opportunities such as hiking and wildlife observation. Camping facilities may be duplicated elsewhere, but the total activity experience is not.

This interrelationship of desired activity and existing facility supply to experience is an integral part of the regional analysis process. The connection can best be analyzed according to the recreational activities available in a park, the experiences people seek by participating in these activities, and the identification of complementing facilities in the park's influence zone.

Split Rock Lighthouse State Park is one of the most visited and photographed locations along the North Shore. Visiting the lighthouse is currently the major activity of the park.

According to park use figures, nearly 3,000 people visit the park each day during the peak vacation season. Split Rock Lighthouse affords people a unique recreational and educational opportunity to experience this monument to Great Lakes history and Minnesota's rugged North Shore.

With the exception of Split Rock Lighthouse visitation and limited hiking opportunities, all other forms of recreation are in the planning stages. The following section will point out existing and potential demand for facilities recommended for development by this management plan.

Fishing

The need to provide river and lake access for fishing in the park is evidenced by the large numbers of people who currently use the area for fishing. This is in spite of the fact that there are no

authorized fishermen's accesses on either the lake or Split Rock River. The closest public small boat access to Lake Superior in the local area is in Two Harbors, 20 mi (32 km) south of Split Rock Lighthouse State Park.

Hiking

According to park use figures approximately 40-45% of the visitors to Split Rock Lighthouse State Park hike the park trails as a supplemental activity to visiting the lighthouse. The trails are limited in length and are often crowded. Baptism River State Park, Gooseberry Falls State Park, and nearby private facilities have some hiking trails, however, existing facilities do not meet demand. It is recommended that additional hiking trails be developed here to provide visitors with an expanded opportunity to hike the highly scenic Lake Superior shoreline.

Ski Touring

The popularity of ski touring has grown rapidly in recent years, but few facilities are available in the area. Providing a year-round trail system in Split Rock Lighthouse State Park will be a major emphasis in the park development plan. Included in the state park trail system plan will be a proposed ski touring trail connecting Split Rock Lighthouse State Park with Gooseberry Falls State Park. The combined trail system will provide skiers with an important addition to existing trail opportunities.

Snowmobiling

The demand for snowmobiling in the park's influence zone is significant enough to include a snowmobile access trail in future park development. Currently, a grant-in-trail system in the Silver Bay area, the North Shore Corridor Trail, the Finland State Forest Trail, a trail in Gooseberry Falls State Park, and a limited number of private snowmobile trails have been developed in the area surrounding Split Rock Lighthouse State Park. When completed, the Split Rock Trail will, in conjunction with the

Gooseberry Falls Trail, connect to the North Shore Corridor Trail to provide park users access to an extensive snowmobile trail system.

Camping

Camping is one of the fastest growing outdoor recreational activities in Minnesota and nationally. Since Gooseberry Falls State Park, located 3 mi (4.8 km) south of the Split Rock Lighthouse State Park, has consistently been over used and because of the close proximity of the two state parks, it is recommended that Split Rock relieve some of the heavy camping pressure on Gooseberry Falls. (This need for additional camping facilities was also identified in the DNR, North Shore Study, 1978.) Therefore, development of camping facilities will have a high priority in Split Rock Lighthouse State Park.

SURROUNDING LAND USE

Surrounding land use may have a positive or negative impact on park lands. Understanding this land use will help direct future development and resource management.

Land surrounding Split Rock Lighthouse State Park is primarily used for forest production. It is owned privately and by government agencies in about equal proportions. The only exceptions to forest production use are the areas adjacent to the park along TH 61. The park is bordered on the southwest by a private resort which is an excellent complement to the park. The northeastern boundary borders several private residences and summer cabins. They too are excellent neighbors, however, park users are sometimes bothersome because they frequently stray out of the park and trespass on private land. If landowners continue to have trespass problems, the boundary may have to be fenced.

SURROUNDING FACILITIES

Split Rock Lighthouse State Park functions as a component of the North Shore recreation system which is composed of state, private, and federally owned recreational units. The recreational state park classification proposed for Split Rock Lighthouse complements Gooseberry Falls Natural State Park by providing recreational alternatives. The parks are only 3 mi (4.8 km) apart and are already linked by privately developed snowmobile trails. Gooseberry is in turn, linked to the North Shore Corridor Trail. In addition to snowmobile trails, proposed trail development includes linking Gooseberry Falls and Split Rock Lighthouse by ski touring trails during winter months and a hiking trail during the summer. These trails will connect the internal park trails to most of the existing trails located along the North Shore.

The major facility having an impact on Split Rock Lighthouse State Park is TH 61. At the present time, the highway and the park do not have any major conflicts, because the park has very little development. If anything, the park is complemented by TH 61, because it provides access to the park.

Mn/DOT has proposed upgrading TH 61 in the vicinity of Split Rock Lighthouse and is in the process of preparing an environmental impact statement evaluating three alternatives. The alternatives being considered at this time are: (1) an improved road following the existing alignment, (2) a by-pass around both Gooseberry Falls and Split Rock state parks, (3) an in-land realignment, and (4) maintain the highway as it is. Both by-pass routes are far enough in-land to go around the park, but both alternatives propose maintaining the existing road as a scenic route.

Conflicts related to TH 61 will be minimal since most park facilities will be located on Lake Superior and most park users will be oriented toward the lake. Although a major campground is proposed north of TH 61, most conflicts will be minimized by providing access to the campground with an underpass. The only major area of conflict will be pedestrian crossings on TH 61, but since the proposed crossings will be located in areas where sight distances are very good, problems should be minimal.



Goal
for the
Park

CLASSIFICATION

Purpose

The purpose of the classification process as stated in the ORA '75 is to establish "an outdoor recreation system which will (1) preserve an accurate representation of Minnesota's natural and historical heritage for public understanding and enjoyment and (2) provide an adequate supply of scenic, accessible, and usable lands and waters to accommodate the outdoor recreational needs of Minnesota's citizens."

Process

In accordance with the ORA '75, 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 11 classifications from ORA '75 was most appropriate for the unit.
- B. Whether sub-units (e.g., scientific and natural areas or other sub-units authorized in ORA '75) should be considered to deal with special areas within the unit.
- C. Whether administration of the unit should be reassigned to other governmental bodies (e.g., other state agencies, county, or local governments).

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

The classification alternatives considered for Split Rock Lighthouse State Park were natural or recreational state park.

The extent to which Split Rock Lighthouse fulfills the criteria as defined by the ORA '75, is summarized below.

Natural State Park Alternative

ORA Criterion # 1

"Exemplifies the natural characteristics of the major landscape regions of the state, as shown by accepted classifications, in an essentially unspoiled or restored condition or in a condition that will permit restoration in the foreseeable future; or contains essentially unspoiled natural resources of sufficient extent and importance to meaningfully contribute to the broad illustration of the state's natural phenomena."

Split Rock Lighthouse is in the North Shore Highlands Biocultural Region. The park is an excellent example of the resource base of the region.

ORA Criterion # 2

"Contains natural resources sufficiently diverse to attract people from throughout the state."

The park is an integral part of the North Shore of Lake Superior. Because of the North Shore's drawing power, Split Rock Lighthouse State Park is visited by people from throughout the United States and the world.

ORA Criterion # 3

"Is sufficiently large to permit protection of the plant and animal life and other natural resources which give the park its qualities and provide for a broad range of opportunities for human enjoyment of these qualities."

Split Rock Lighthouse is approximately 996 acres (403 hectares) in size. With proper management and development, the natural resources of the park can be maintained while providing for the enjoyment of these resources by park users.

Recreational State Park Alternative

ORA Criterion # 1

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

The attraction of the Split Rock Historic Site, access to Lake Superior, and the outstanding scenery already attract visitors from beyond the local area. Any recreational development will no doubt attract even more visitors.

ORA Criterion # 2

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

The development potential in Split Rock Lighthouse State Park is superior to all other parks on the North Shore. The topography is extremely rugged, yet it has large, fairly level areas for development, with soils as stable as any on the North Shore.

ORA Criterion # 3

"May be located in areas which have serious deficiencies in public outdoor recreation facilities, provided that recreational state parks should not be provided in lieu of municipal, county, or regional facilities."

SCORP '74 identifies Economic Development Region Three as having the highest need for additional camping, picnicking, and trail facilities of any region in the state.

Recommended Classification

Split Rock Lighthouse fulfills the criteria for either a natural or recreational state park classification. However, it has been

recommended for classification as a recreational state park with a historic site secondary unit, a water access site sub-unit, and a highway rest area (still under study by MnDOT).

This classification is recommended because of the need for recreational facilities in the area and the proximity of Gooseberry Falls State Park, which has been recommended for classification as a natural state park.

THE GOAL FOR SPLIT ROCK LIGHTHOUSE STATE PARK

The general goal for all recreational state parks in Minnesota is:

To provide lands throughout Minnesota characterized by natural (as opposed to man-made) resources, which offer a broad range of publicly desirable and appropriate socially oriented recreational opportunities complementing other parts of the state-administered outdoor recreation system.

The specific goal for Split Rock Lighthouse State Park is:

To provide a broad selection of outdoor recreational opportunities for large numbers of people in a natural setting.

The resources within the park will be developed to accommodate a wide variety of recreational activities, while maintaining the natural character of the area. The recreational facilities provided will be related primarily to Lake Superior and the Split Rock River. The overall objectives of resource management will be to reestablish original ecological communities, to avoid or eliminate undesirable ecological impacts, and to maintain the scenic quality of the area.





Resource Management

RESOURCE MANAGEMENT OBJECTIVES

The following general objectives are designed to give direction to the management of all the park's resources. In order to ensure consistent management throughout the state park system, comprehensive objectives have been formulated for all state parks.

They are:

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

ELEVATION AND SLOPE

The topography of the park is the result of continental glaciation over ancient volcanic rock formations. This glacial action scoured out the Lake Superior basin, sheared off shoreline cliffs, and covered the uplands with glacial deposits.

Glacial meltwater flowed down over the volcanic rock cliffs from the uplands into Lake Superior. Cracks and areas of less resistant rock were, through the ages, carved out by this meltwater. As a result streams with high-cliffed cascades and waterfalls flow into Lake Superior all along the North Shore.

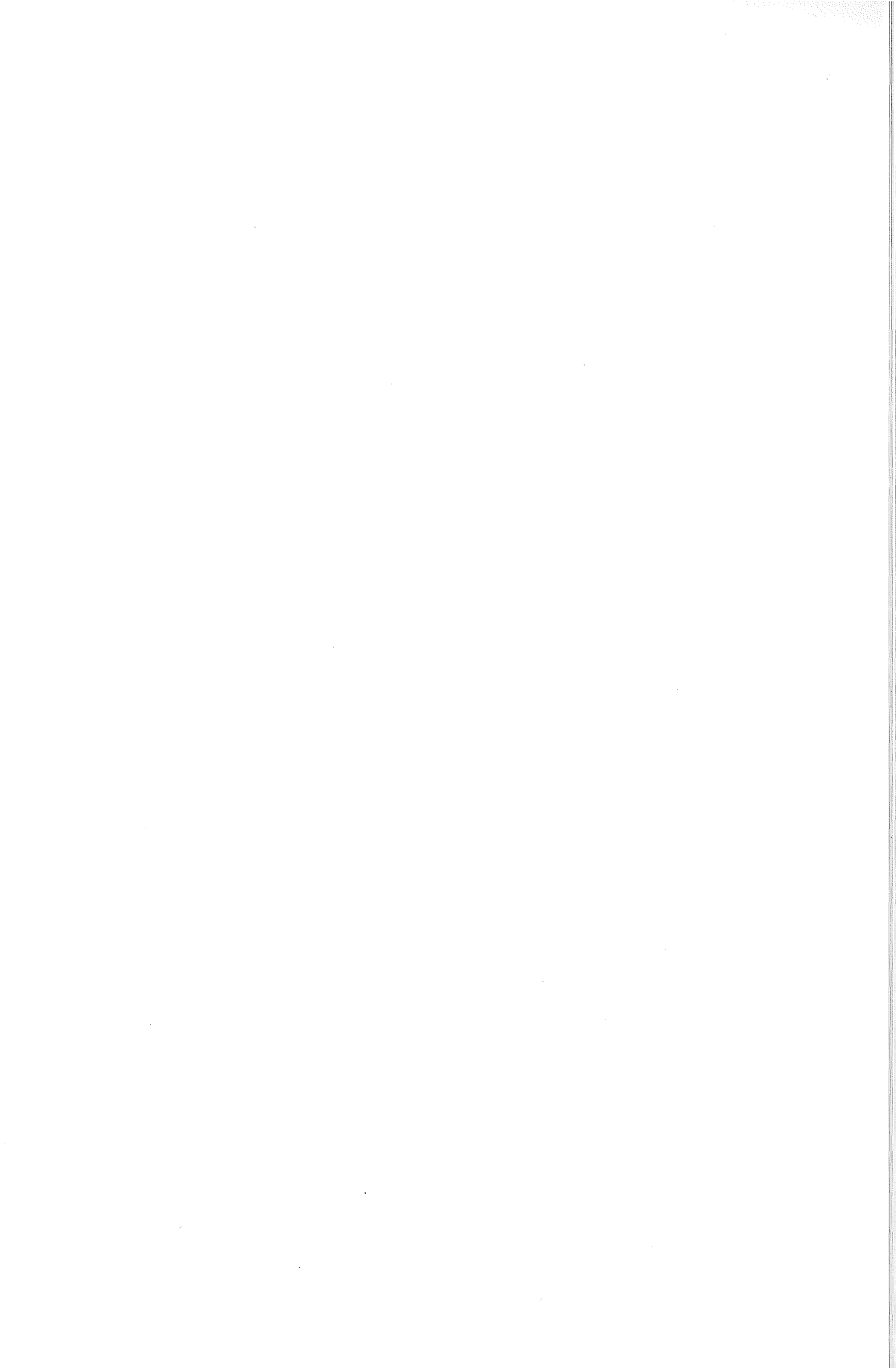
Elevation in the area ranges from 602 ft (189 m) at the lake to over 960 ft (292 m) inland.

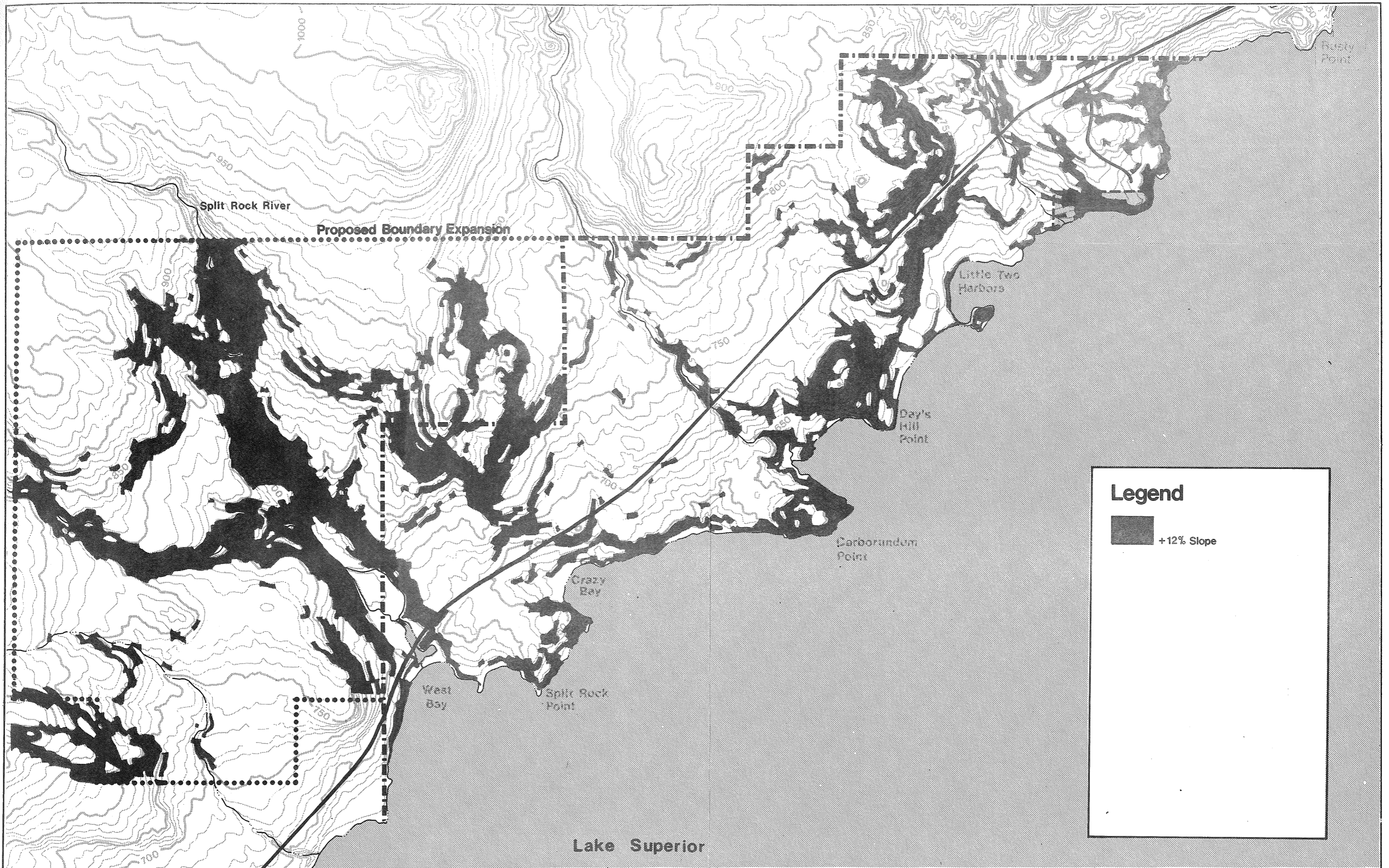
The Slope Map, p 25) illustrates the areas of the park with slope of 12% or above. Development on the steep sloped areas should be confined to hiking trails only.

CLIMATE


Because of the influence of Lake Superior, the park tends to be cooler in the summer and warmer in the winter than the inland areas of the state. Mean July temperatures are 76°F (24.4°C) maximum and 54°F (12.2°C) minimum. January temperatures are 22°F (-5.6°C) maximum and 2°F (-16.7°C) minimum. Average annual precipitation is 28 in. (71.1 cm) with a 70 in. (177.8 cm) of snowfall.

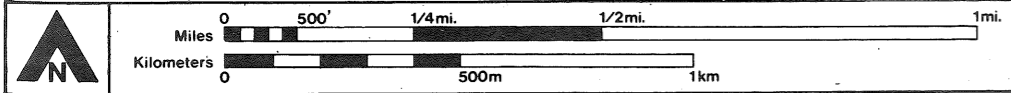
The year-round moderated temperatures and abundance of snowfall in the winter make the area ideal for outdoor recreation throughout the year.





Legend

 +12% Slope



Split Rock Lighthouse State Park

Slope



SOILS

Inventory

The soils in Split Rock Lighthouse State Park were inventoried in 1977 by the United States Department of Agriculture, Soil Conservation Service (SCS). This survey did not include all proposed park lands. Generally, reliable projections about the character of these surveyed soils can be extrapolated from aerial photographs.

The park contains five series of soils. However, often there are small pockets of other soils within the major series. There are also some areas where two or more soils of a series are mixed together. For example, Barto-Mesaba and Quetico are often mixed together. Barto-Mesaba is generally good for most kinds of recreational development, whereas Quetico is poor. For these reasons, it is imperative that site-specific soil analysis be done on all areas which are under consideration for recreational development.

Management

Objectives:

To use the best soils available for location of proposed development

To minimize any potential negative impact that recreational development might have on park soils

To eliminate any existing erosion or compaction problems

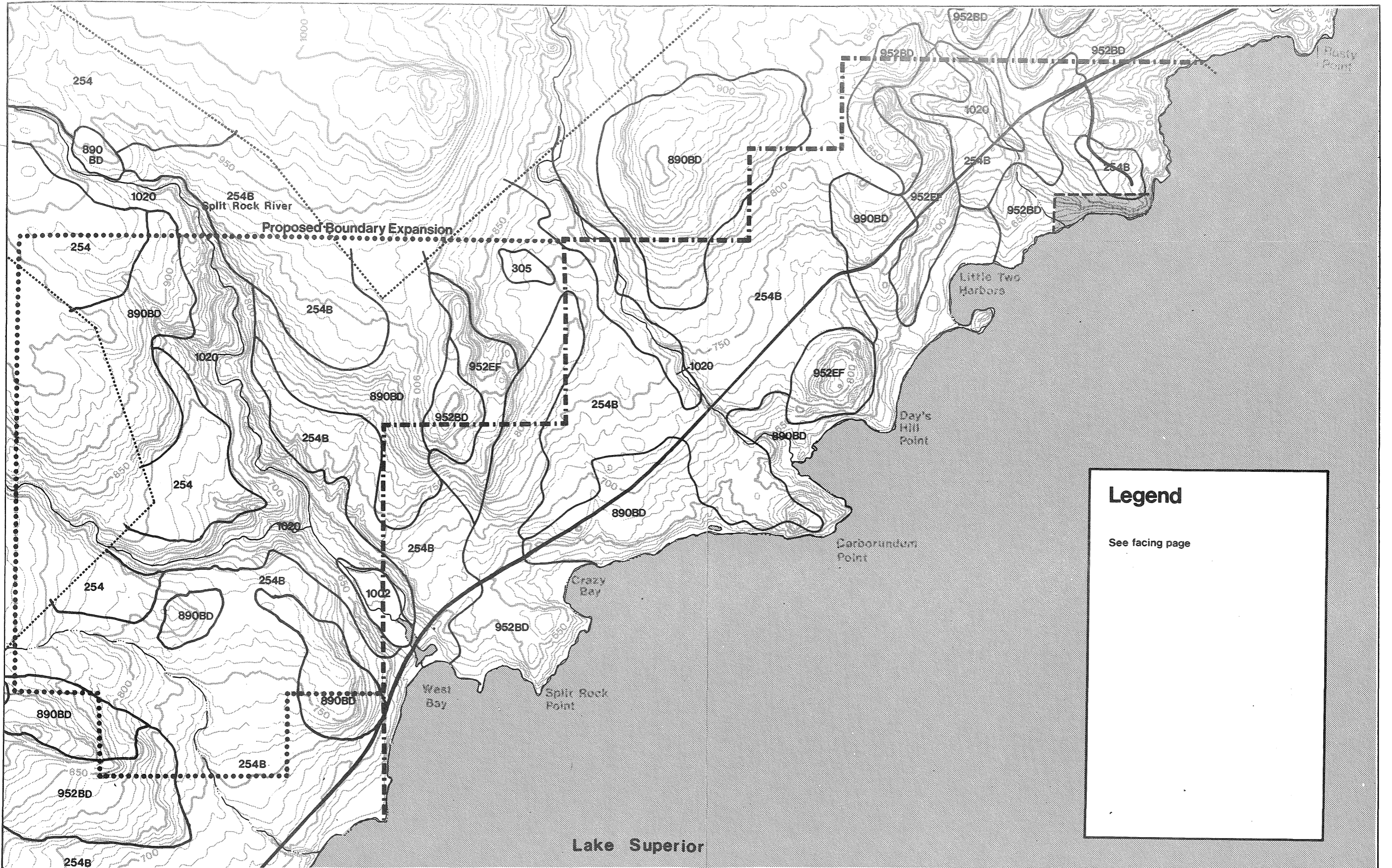
• Detailed Recommendations

Action #1. Do site-specific soil tests on all sites under consideration for recreational development.

SCS soils surveys are generalizations over large areas. When detailed design work is done, site-specific soils information will be needed.

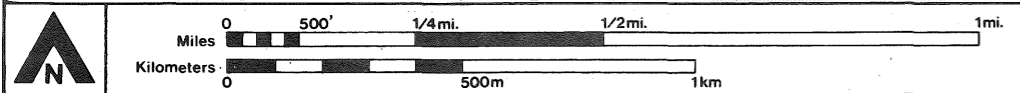
Cost. Included in the cost of each development

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				
Barto-Mesaba gravelly, silt loam	S90ED	2-18%	2"-6"/hr.	Moderate	Unknown	FAIR avoid slopes greater than 8%	FAIR avoid slopes greater than 8%	GOOD	FAIR to POOR site select. important due to shallow depth to bedrock.	POOR shallow depth to bedrock and slope	POOR shallow depth to bedrock. FAIR to GOOD if mound system is used
Fluvaquent, loamy, sandy and gravelly material	1002	Nearly level	Unknown	Unknown	Unknown	VERY POOR frequent flooding	VERY POOR frequent flooding	VERY POOR frequent flooding	VERY POOR frequent flooding	VERY POOR frequent flooding	VERY POOR frequent flooding
Hibbing	254	0-2%	.6"-2"/hr.	Moderate	Moderate	GOOD	POOR, slow percolation	GOOD	POOR low strength high shrink- swell	GOOD	POOR slow perc. FAIR - if granular material is brought in and/or a mound is built
Silt Loam	254B	2-6%	.6"-2"/hr.	Moderate	Moderate	GOOD	POOR slow percolation	GOOD	"	FAIR to GOOD slope	"
Quetico-Rock	952ED	2-18%	.6"-2"/hr.	High	Moderate	POOR large stone	POOR large stone	FAIR large stone	POOR shallow depth to rock	POOR shallow depth to rock and slope	POOR shallow depth to rock
Loam over rock	952EF	18-60%	.6"-2"/hr.	High	Moderate	POOR large stones slope	POOR large stones slope	POOR large stones slope, hik- ing trails only are feasible on 952EF soils	POOR shallow depth to rock and slope	POOR shallow depth to rock and slope	POOR shallow depth to rock and slope
Udorthents clayey sediment	1020	18-45%	Unknown	Moderate	Moderate	POOR slope	POOR slope	POOR slope - hiking trail may be con- structed if laid out carefully	POOR slope	POOR slope	POOR slope



Legend

See facing page



Split Rock Lighthouse State Park

Soils

VEGETATION

Inventory

Most of the lower portion of the North Shore, including Split Rock, was originally covered with Norway and white pine. This was all logged off at the beginning of the twentieth century. The vegetation has regenerated into the six forest types found there today. These types include birch, spruce-fir, ash, upland grass, upland and lowland brush, and marsh. Birch is the dominant species, covering over three-quarters of the park.

The vegetation is in fairly good condition, however, poor soils in some places have resulted in slow growth.

Management

Objectives:

To reestablish some of the original conifer forest

To improve habitat for wildlife

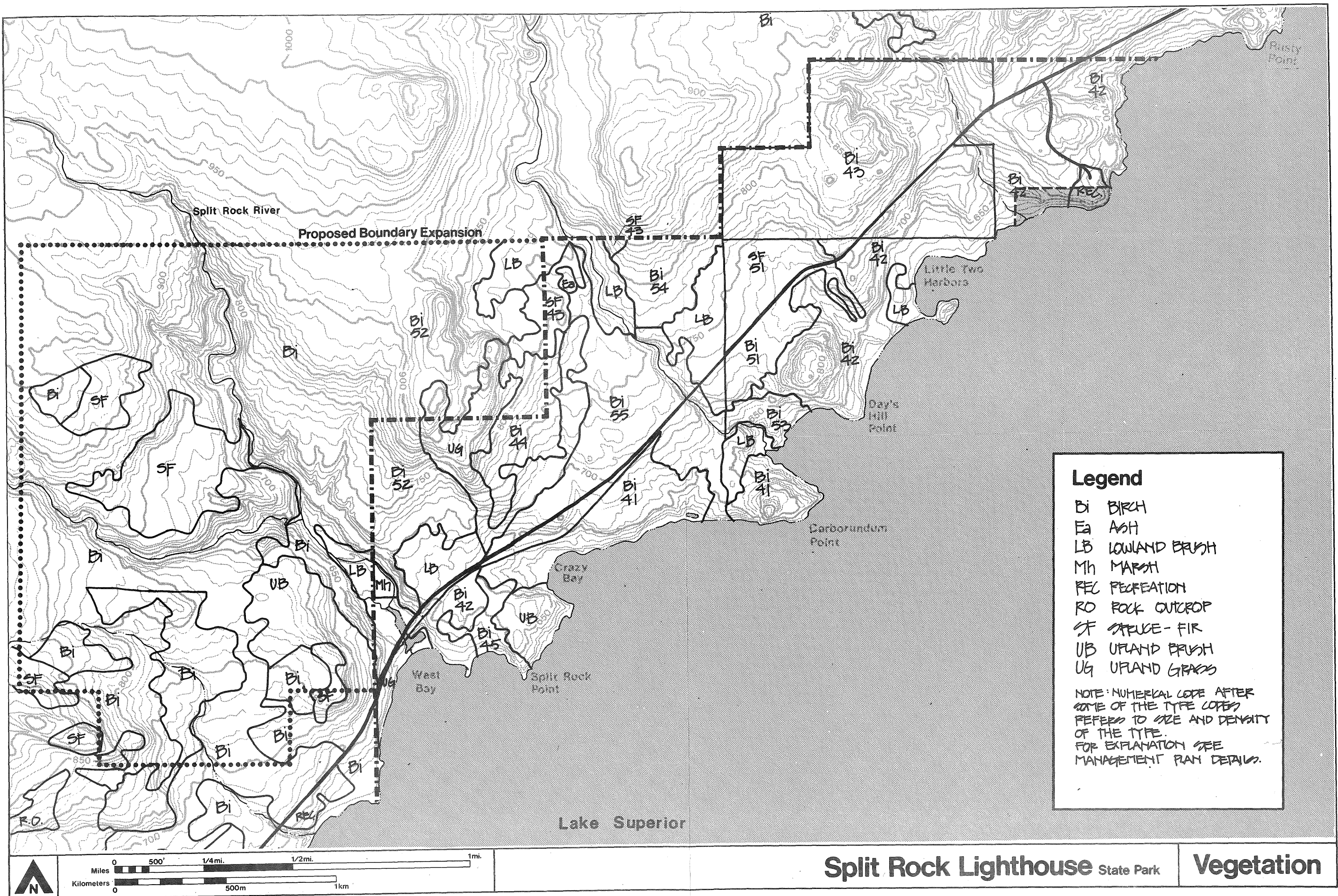
To improve the remaining hardwood stands

• Detailed Recommendations

Management will be directed toward only 22 percent of the park's vegetation. The remainder of the vegetation is either in private ownership or requires no specific management. (See Vegetation Management Map, p 32.)

Action # 1. Reestablish several areas of conifer forest. (Map areas 2b, 2c, 2d, 3b, 3c, 4b, 5, 8b, 9b, 13b, 16b, and 17b).

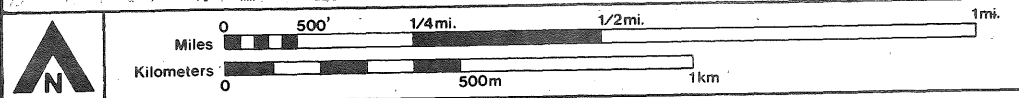
Sites for conifer reestablishment will be prepared by removing existing vegetation and planting a mixture of Norway, white, and jack pine;



Legend

- Bi BIRCH
- Ea ASH
- LB LOWLAND BRUSH
- Mh MARSH
- REC RECREATION
- RO ROCK OUTCROP
- SF SPRUCE-FIR
- UB UPLAND BRUSH
- UG UPLAND GRASS

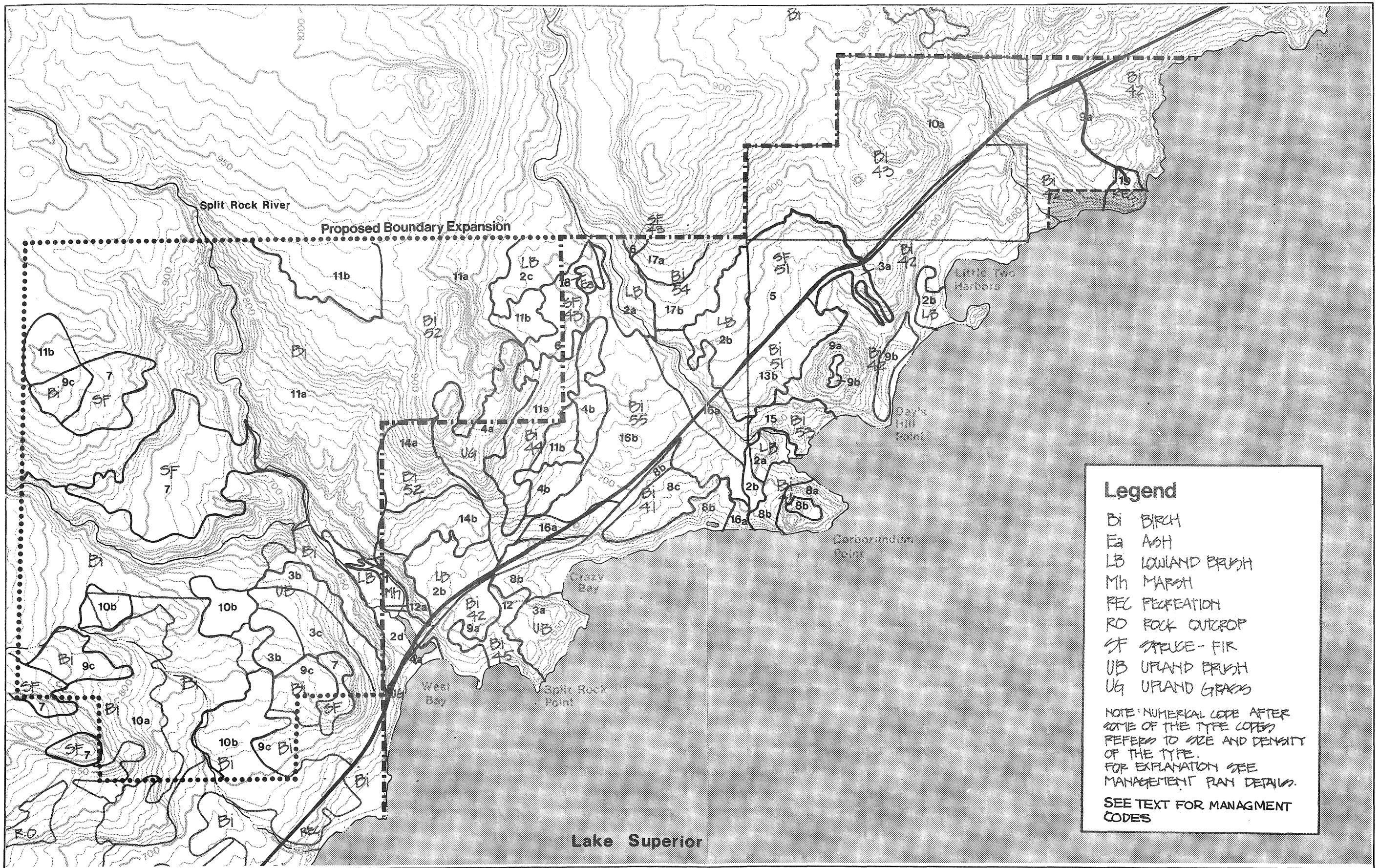
NOTE: NUMERICAL CODE AFTER SOME OF THE TYPE CODES REFERS TO SIZE AND DENSITY OF THE TYPE. FOR EXPLANATION SEE MANAGEMENT PLAN DETAILS.



Split Rock Lighthouse State Park

Vegetation



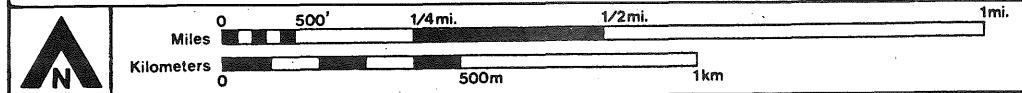


Legend

- Bi BIRCH
- Ea ASH
- LB LOWLAND BRUSH
- Mh MARSH
- REC RECREATION
- RO ROCK OUTCROP
- SF SPRUCE-FIR
- UB UPLAND BRUSH
- UG UPLAND GRASS

NOTE: NUMERICAL CODE AFTER SOME OF THE TYPE CODES REFERS TO SIZE AND DENSITY OF THE TYPE. FOR EXPLANATION SEE MANAGEMENT PLAN DETAILS.

SEE TEXT FOR MANAGEMENT CODES



Split Rock Lighthouse State Park Vegetation Management

white and black spruce; and northern white cedar. The proportions of this mixture will be dependent on specific soil conditions.

Cost: \$80,095

Action # 2. Create wildlife openings. (Map areas 10b, 11b, 14b, 16b, and 17b.)

These openings will be created in several portions of the park because wildlife prefer to inhabit the interface between open meadow and deep woods. These openings will be created by mechanically removing the vegetation on small (less than 5 acre/2 hectare) tracts and maintaining them either by hand cutting or with approved herbicides.

Cost: \$35,600

Action # 3. Enhance native hardwood regeneration. (Map areas 14b, 16b, and 17b.)

Hardwood stand improvement will be accomplished primarily by removing large trees which allows seedlings to survive and suckers to sprout from the stumps and roots of the removed trees. This action will have the secondary effect of improving wildlife habitat by increasing young woody plant growth. These stems provide food for many wildlife species.

Cost: \$23,850

WILDLIFE

Inventory

The wildlife inventory for Gooseberry State Park will be used temporarily in this plan, until Split Rock's inventory can be completed. Even though Gooseberry is a larger park, extending further inland and containing more diverse habitat, it is likely that because of proximity, wildlife in the two parks will be quite similar.

There are several species of wildlife which merit special consideration. The rare Peregrine falcon migrates up the North Shore and likely nested at one time in the Split Rock vicinity. There is a beaver colony on the Split Rock River and deer yard southwest of TH 61. Wildlife monitoring and habitat management will be directed toward these species.

Management

Objectives:

To reestablish wildlife species indigenous to the park area

To protect sensitive species and their habitat

To increase wildlife visibility for park visitors

• Detailed Recommendations

Action # 1. Inventory wildlife species in the park.

The area wildlife manager will be responsible for updating the wildlife inventory tables.

Effective habitat management can not be carried out, especially for rare and endangered species, until an accurate wildlife inventory is

completed. In the meantime, general wildlife habitat management will be directed toward the creation of wildlife openings. (See Vegetation Section, Action #2, p 33.)

Cost. None

Action # 2. Provide public hunting recreation opportunities.

Allow public hunting to continue north of TH 61, except in development areas. Sign the area to inform park users that hunting is permitted.

Hunting is a valuable management tool necessary for controlling the deer population in the area. No major conflicts are expected between hunters and non-hunting park users, however, it will be the responsibility of the DNR, Division of Fish and Wildlife to determine when the seasons should be open and what type of hunting will not conflict with other park uses. Generally hunting season occurs when there is little other park use.

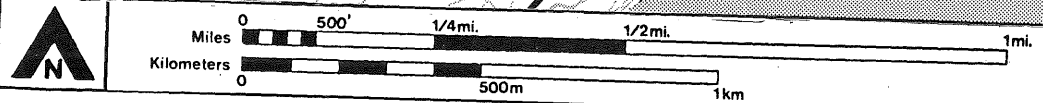
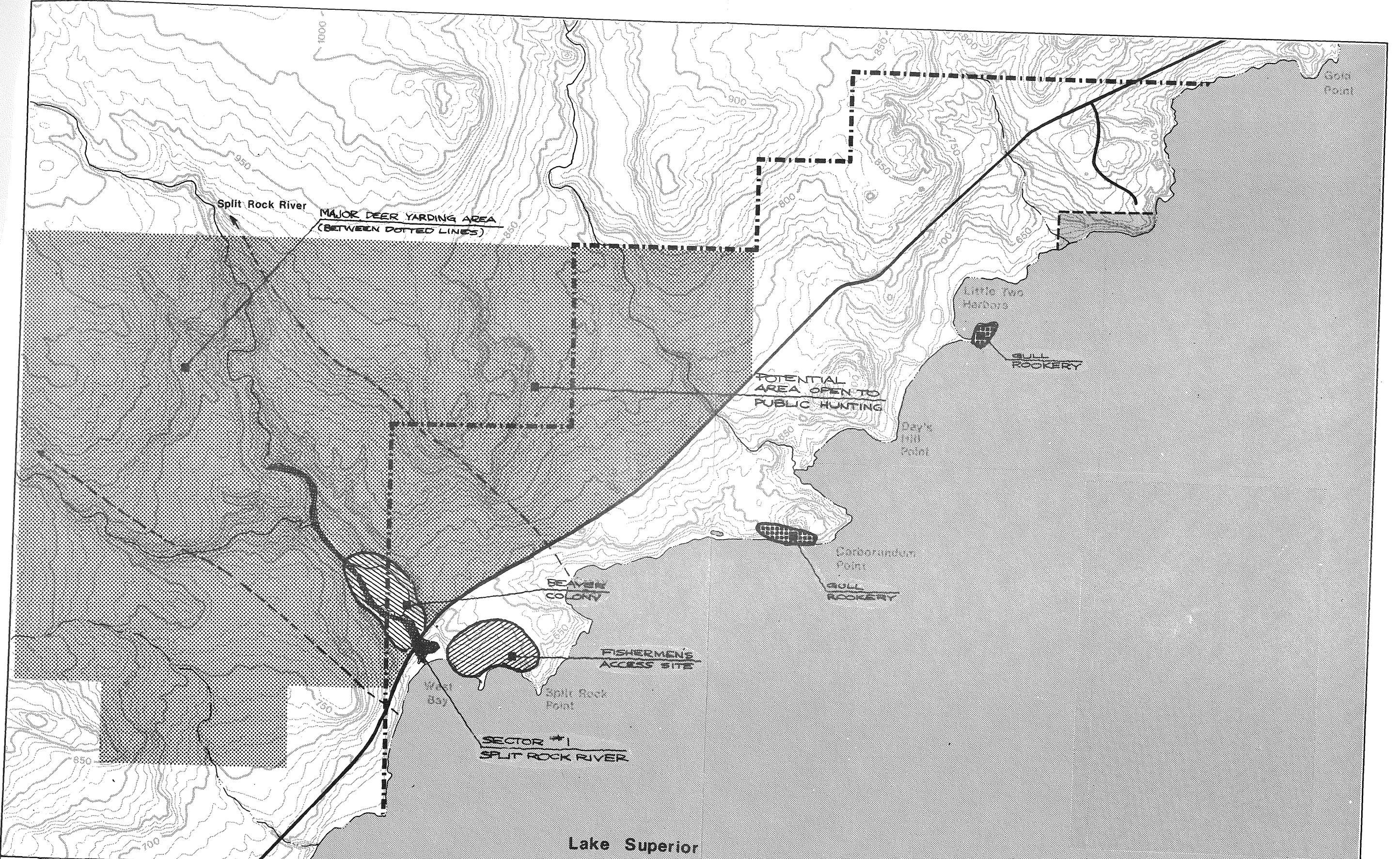
Cost. None

Action # 3. Reduce beaver population on the Split Rock River and maintain at a point where it will not conflict with trout habitat.

Allow trapping of beaver. The highest and best value of the Split Rock River is as a trout stream. To manage it for trout, beaver must be controlled.

Cost. None





FISHERIES

Inventory

The Split Rock River is a designated trout stream. A great deal of stream improvement work has been done on the river by the DNR, Section of Fisheries, but much of the work, particularly on the lower portion of the river, was washed out by high water.

The first tributary to the Split Rock River has been considered for designation as a trout stream, but it does not carry a sufficient flow of water to maintain a viable population naturally. The possibility of artificially maintaining an adequate flow was considered but the cost/benefit ratio did not warrant implementation of the project.

Management

Objectives:

To improve fisheries habitat on the Split Rock River

To continue providing fishermen's accesses on the river and Lake Superior

- Detailed Recommendations

Action # 1. Remove the barrier to fish migration upstream.

Construct a fish ladder on the first falls of the Split Rock River. It is recommended that this facility be developed in conjunction with the fishermen's access. This will require a cooperative effort between the DNR, Division of Parks and Recreation and the DNR, Section of Fisheries.

Cost. DNR, Section of Fisheries

Action # 2. Provide fishermen's access to Lake Superior and the Split Rock River.

Construct a hiking trail paralleling the river on both sides. This trail will be laid out in cooperation with the DNR, Section of Fisheries. Construction of the trail is contingent upon park expansion or acquisition of an easement along the river. Parking and boat access will be provided either in the park or as part of a class II rest area that may be built by Mn/DOT near the mouth of the Split Rock River.

Cost. See Proposed Development, Water Activities, Action #1, p 54.

SURFACE WATERS

Inventory

There are three bodies of water in and adjacent to the park: Lake Superior, the Split Rock River, and a tributary of the Split Rock.

Existing surface water data concern sector I of the Split Rock River. (Sector I is the portion of the river from the mouth up to the first barrier falls.) It ranges in depth up to 6 ft (12 m) in pools. The shoreline is heavily wooded with alder and dogwood in the lower areas and hardwoods and conifers upstream. Some fisheries habitat improvements (such as deflectors and channel blocks) were built in past years, but they have been washed out. There are no pollution problems on the river.

Management

Objective:

To maintain surface waters according to the Pollution Control Agency's (PCA) recreational fisheries standards

- Detailed Recommendations

See the Fisheries Section for recommendations on the management of Sector I of the Split Rock River.

Management of Lake Superior is beyond the scope of this plan.

The tributary of the river is an intermittent stream and does not require management at this time.

GROUNDWATER

Inventory

An informal account of drilling the park well is the only source of data on the park's groundwater. The well was drilled 220 ft (67 m) at a 41° angle. A 4 in. (10 cm) casing was grouted into a 6 in. (15 cm) hole down to 180 ft (35 m). The explanation for this unusual drilling is that the bedrock (which provides the water) folds downward along the shore. Drilling at an angle was necessary to get between the rock layers to the water pockets.

Management

Objectives:

To ensure a high quality water supply for park users

- Detailed Recommendations

Action # 1. Institute and maintain a procedure to monitor the quality of groundwater in the park.

The Department of Health no longer tests water quality in state parks.

Cost. None

HISTORY/ARCHAEOLOGY

Inventory

The major features of historical significance are located within the Split Rock Lighthouse Historic Site. But, there are four other sites in the park which should be protected. The first site is the logging campsite operated by the Merrill-Ring Logging Company at the mouth of Split Rock River. The second site is an area on Carborundum Point where the North Shore Abrasive Company quarried its raw material. The third site is the fishing village at Little Two Harbors. The fourth site is the old North Shore Trail which roughly parallels TH 61. If additional sites are discovered, they should also be identified and interpreted.

Management

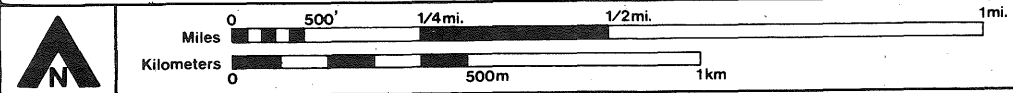
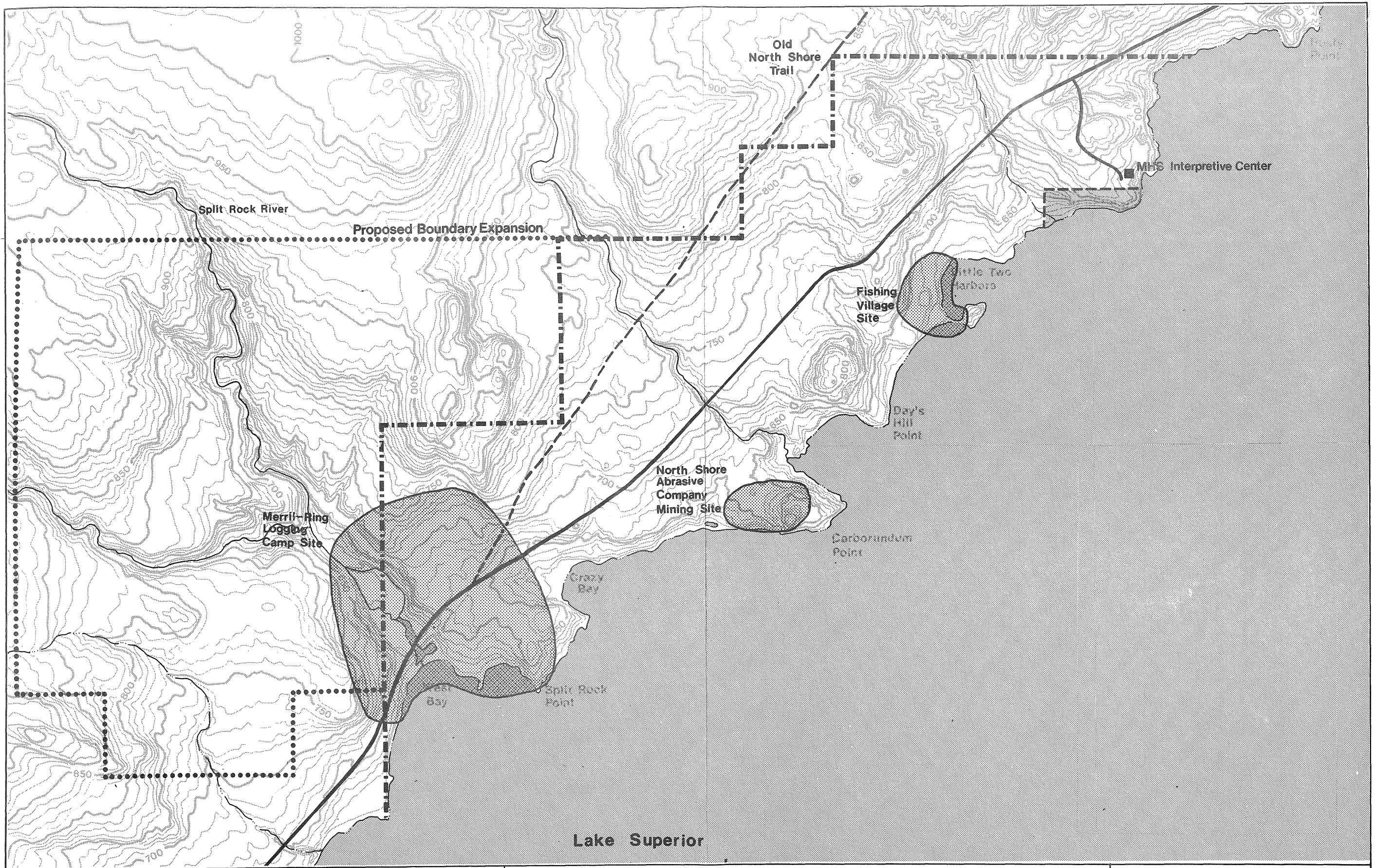
Objectives:

To promote cooperative management of both the Split Rock Lighthouse Historic Site and the Split Rock Lighthouse State Park

To identify, protect, and interpret all historical and archaeological sites within the park

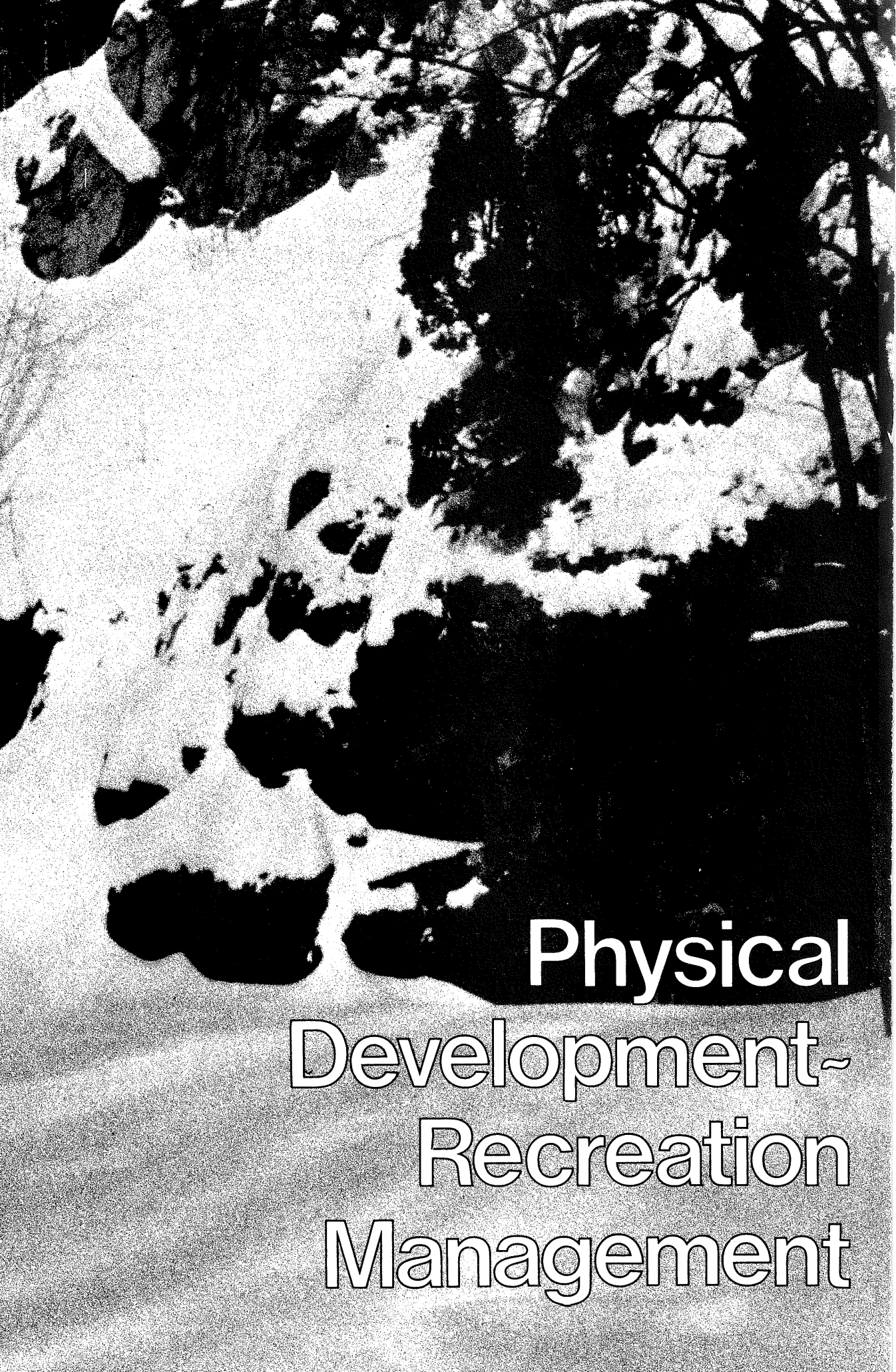
• Detailed Recommendations

The known sites have potential for restoration, but the cost of restoration and operation is prohibitive. Interpretation of the sites should be integrated into the Minnesota Historical Society's interpretive program with signs marking the actual location.



Split Rock Lighthouse State Park

Historical Overview



Physical
Development-
Recreation
Management

EXISTING DEVELOPMENT

The only existing development within the park is associated with the Split Rock Lighthouse Historic Site managed by the Minnesota Historical Society. It contains the lighthouse building, the fog-signal building, an oil storage house, three lighthouse keeper's residences, and two garages. Adjacent to the historic site, the DNR maintains a vault sanitation building, a multi-purpose maintenance building, and a 100 car parking lot. The park also has a contact station that controls the entrance to the park and the historic site. Other development includes several picnic sites adjacent to the parking lot, a one mi (1.6 km) hiking trail, and approximately one mi (1.6 km) of privately maintained snowmobile club trails.

PROPOSED DEVELOPMENT

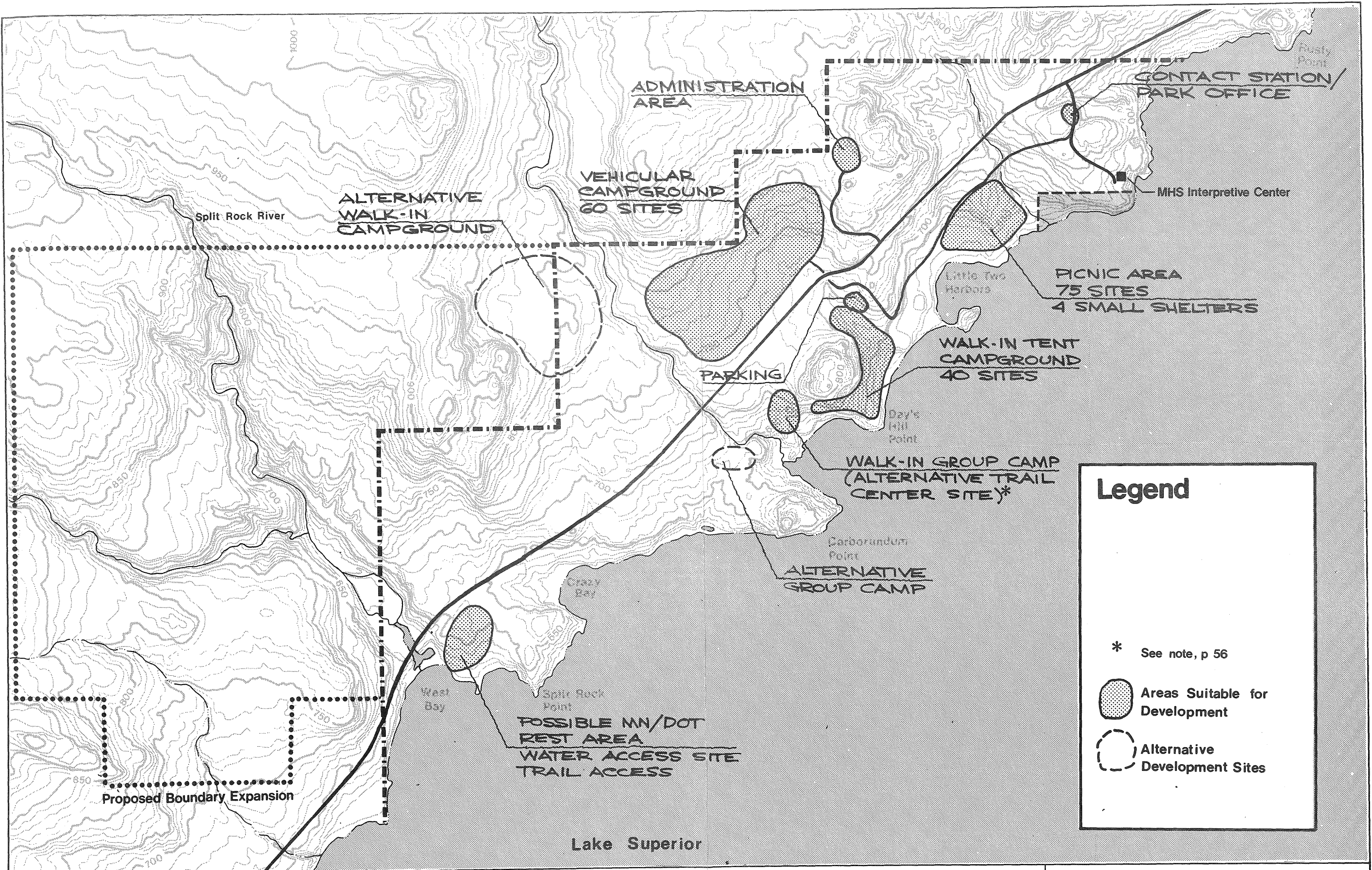
Objectives:

To provide a broad selection of outdoor activities consistent with maintaining a pleasing natural environment



To provide only those facilities necessary for appropriate use and enjoyment of the resources

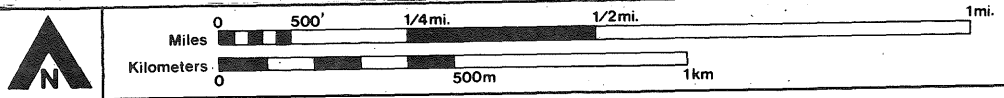
Overview

Proposed new development includes: a combination park office and contact station, an administrative site, a picnic area, a walk-in campground, a semi-modern campground, a walk-in group camp, backpack campsites, and a system of trails. For the most part, development will be oriented toward Lake Superior. Proposed classification for Split Rock is recreational, therefore, a wide variety of recreational facilities will be provided, on a year-round basis.



Legend

- * See note, p 56
-  Areas Suitable for Development
-  Alternative Development Sites



Split Rock Lighthouse State Park

Proposed Development



Roads

Objective:

To provide vehicular access to all major recreational facilities in the park

Action #1. Build a two way road from the existing park entrance to the proposed family campground. (See Action #1, p 48.)

The park is expected to receive heavy, year-round use. The proposed road will provide access to all main use areas and disperse use along the shoreline. This will help prevent overuse of any one particular area. The road should be paved, designed for year-round use, and screened from view from the lighthouse.

Cost: \$105,000

Action #2. Build an underpass for the park road under TH 61.

The park road must cross TH 61 to provide access to the proposed family campground. The only safe method is to use a grade separation (underpass) to avoid a conflict between highway and park traffic.

Cost: \$300,000

Camping

Objectives:

To provide park visitors an opportunity to enjoy the park on a 24-hour-basis

To minimize the contact between individual campsites

To maximize contact with the park environment

Family Campground

Action #1. Develop a semi-modern family campground west of TH 61.

Additional campsites are needed to relieve the camping pressure on Gooseberry Falls State Park. Split Rock has the most potential for the development of a campground of all parks on the North Shore.

The site should be able to accommodate a maximum of 80 campsites with a minimal amount of resource disturbance. The sites should include a fire ring, tent pad, table, and a 50 ft (15 m) long parking spur. The campground should be equipped with two sanitation buildings with showers designed for year-round use. The campsites should be dispersed over the entire development area, with a maximum density of no more than 2 sites per acre (5 sites per hectare).

Cost: \$250,000

Action #2. Develop a walk-in tent campground east of Day's Hill Point.

Each of the 40 sites in this campground should have a tent pad, a table, and a fire ring. Modern toilet facilities with running water and showers should also be provided. Parking should be located adjacent to the park road with no direct vehicle access to the campsites.

Cost: \$110,000

Note: In both proposed campgrounds, sewage will be handled similar to the newly designed facilities under development at Gooseberry Falls. This will more than likely be use of a lagoon, but vault and trickle filters are also possible.

Group Camping

Action #3. Develop a walk-in group camp west of Day's Hill.

There is a demand for group camping facilities which cannot be met in the family campground. Family campgrounds are not designed for use

by large groups. Attempting to mix family campers with large groups of campers usually results in conflicts.

Provide three individual group campsites each with a 50 camper capacity. The individual campsites should include tent pads, picnic tables, fire rings, drinking water, vault toilets, and a parking area large enough to accommodate 10 cars.

Cost: \$25,000

Back Pack Camping

Action #4. Develop approximately six backpack campsites along the Split Rock River.

Walk-in camping is becoming very popular. It is an excellent method of dispersing campers throughout the park.

Each site should contain a fire ring, table, tent pad, and a wilderness style toilet. Water will be available at rest areas and at the contact station. Garbage will be handled on a pack in - pack out basis. The sites should be located along proposed hiking trails for accessibility.

Cost: \$3,000

Picnicking

Objective:

To provide day use activity areas adjacent to Lake Superior, which allow short term park users access to Lake Superior

Action #1. Develop a picnic area near the Split Rock Lighthouse Historic Site.

Since the primary attraction to the park is the lighthouse, major emphasis should be placed on providing day-use facilities near the historic site.

The picnic area should contain a total of 75 sites. The area should be developed with small clusters of picnic sites to reduce the perceived density of development. Each picnic site should be designed with a minimum of resource disturbance and should include only a picnic table and cooking grill. Drinking water, garbage cans, and vault toilets should be provided in central locations.

Cost: \$150,000

Action #2. Provide at least four small picnic shelters in the lighthouse picnic area.

The weather conditions along the North Shore are very unpredictable. These shelters will provide protection during bad weather. They should be designed to provide protection from both wind and rain, and should include a fireplace and several tables. They should be designed so they can be entirely enclosed for year-round use.

Cost: \$40,000

Trails

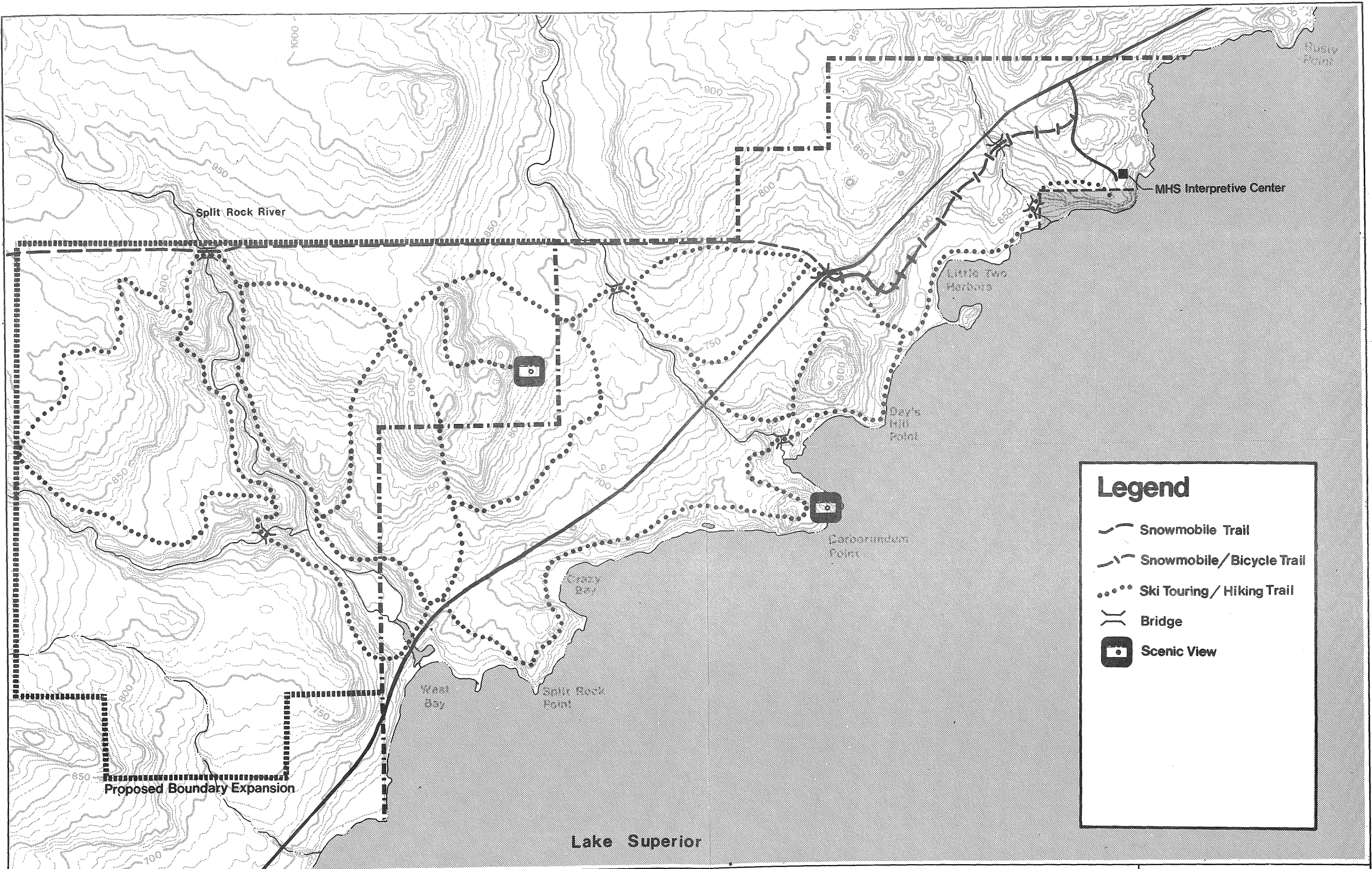
Objective:

To provide access to a variety of areas within the park along alignments chosen for their scenic views, points of interest, linkage of use areas, avoidance of sensitive areas, and separation of conflicting use






Snowmobile Trails

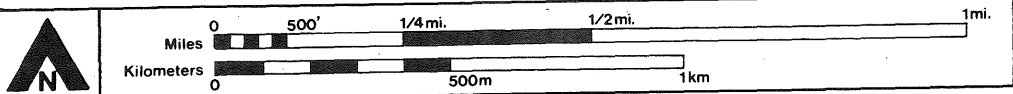
Action #1. Develop a snowmobile access trail from the lighthouse site to the extreme western boundary. At the park boundary it will tie into the North Shore Corridor Trail.

This link will also provide access to Gooseberry Falls State Park. The proposed alignment provides snowmobile access to all park facilities, all major areas of the park, and to surrounding trails.



Legend

-  Snowmobile Trail
-  Snowmobile/Bicycle Trail
-  Ski Touring/Hiking Trail
-  Bridge
-  Scenic View



Split Rock Lighthouse State Park

Proposed Trails



The trail should be designed to meet state corridor trail standards. (See proposed alignment on the Proposed Trails Map, p 51 .) Existing trail alignments should be used whenever possible.

Cost: \$3,000

Multi-Use Bridges

Action #2. Construct a bridge over the Split Rock River. (See Proposed Trails Map, p 51.)

The bridge will link Split Rock Lighthouse State Park to the North Shore Corridor Trail. It should be designed for year-round use and should be wide enough to accommodate large trail groomers.

Cost: \$3,000

Bike Trails

Action #3. Provide bike access to all park facilities.

Since bicycles are becoming a major form of transportation within the state parks, bike lanes should be provided along all park roads. This should be accomplished either with an independent alignment or by painting bike lanes on roads.

Cost: \$30,000

Action #4. Provide bike access off TH 61.

Pave the snowmobile trail along park road east of TH 61 to serve as a summer bike trail. This access will tie into the park trail system and will keep bicycles off TH 61.

Cost: None

Hiking/Skiing Trails

Action #5. Develop a year-round multi-use hiking/skiing trail system.

Hiking is one of the most popular activities in state parks. Since there is no existing trail system in the park, an integrated hiking/skiing trail system can be designed for year-round use. The system should provide access to all portions of the park as illustrated on the Proposed Development and Trails Map, p 57.

Cost: \$25,000

Foot Trail Bridges

Action #6. Construct four foot bridges over creeks, (see Proposed Trails Map, p 51).

Because of the rugged topography and the rapid changes in water levels, bridges are the only practical method of crossing ravines. The bridges should be designed to accommodate hikers, skiers, and maintenance equipment.

Cost: \$40,000

Interpretive Facilities

At the present time, there is no DNR interpretive program in the park. Split Rock Lighthouse Historic Site has an extensive interpretive program proposed which will be conducted by the Minnesota Historical Society (MHS). The MHS has proposed developing a major interpretive center at the site with a program which covers the history of the lighthouse site and how the historic site relates to the natural resources of northeastern Minnesota.

Gooseberry Falls State Park has been proposed for classification as a natural state park. It will have a major interpretive program based on the natural resources of the area, therefore, an extensive interpretive program will not be developed at Split Rock.

The proposed interpretive activities for the park will include self-guided interpretive trails, an area in the visitor center for special presentations, and evening interpretive programs in the campground.

Water Activities

Boat Landing (To be constructed only if Mn/DOT does not develop a rest area at the river)

Objective:

To provide a safe access for lake and river fishermen

Action #1. Develop a boat landing and fishermen's access near the mouth of the Split Rock River.

There is a demand for a public access at the mouth of the river. This type of development is compatible with the park's recreational classification.

The landing should be sheltered from northeast storm winds. It should include a boat ramp, boat trailer parking, parking for river fishermen, and sanitation facilities. The site may also be used as a group camp area for fishermen during the smelt run. Access to the site will be directly from TH 61. The site should be gated and closed at 10:00 pm each evening.

Cost: \$25,000

Administrative/Support Facilities

Objective:

To ensure effective, efficient operation of the park

To avoid unnecessary administrative and maintenance duplication by utilizing facilities located at Gooseberry Falls

Action #1. Develop a combination contact station/park office near the existing contact station.

The existing contact station is suitable for its present limited use, but will no longer be suitable when the entire park is developed. Therefore, it will be removed. A combination park office/contact station will eliminate duplication of office space, save energy, and centralize park administration. The building should be designed according to the park's architectural theme and should accommodate both the park manager's office and the contact station functions.

Cost: \$75,000

Action #2. Remove existing shop building.

The building was originally designed as a combination gift shop and residence. According to the master plan for Split Rock Lighthouse Historic Site, it "represents an intrusion upon the historic site." The building should either be dismantled and the lumber re-used or it should be sold and removed.

Cost: \$2,000

Action #3. Construct a new administration area. (See Proposed Development and Trails Map, p 57.)

The proposed administration buildings are essential to operation of the park and should be constructed before any other facilities are open to the public.

The complex should include a basic shop building, an unheated storage building, a wood storage building, a gasoline storage building, and the manager's residence and garage. The shop building should be at least 1,500 sq ft (135 sq m). It should include parking space for maintenance vehicles with at least one large heated stall for winter vehicle maintenance. The workshop portion should be heated, have hot water available, and it should include a flush type toilet. The other service buildings should all be unheated and should have the following minimum sizes; unheated storage - 1,500 sq ft (135 sq m), wood storage - 1,500 sq ft (135 sq m), and gasoline and oil storage. The manager's residence, with a double garage, should be designed to accommodate an average sized family.

All buildings will be designed according to the architectural theme. All heated buildings should be designed for energy efficiency with a primary wood fueled heating system.

Cost: \$280,000

Action #4. Pave entire service court and service access road.

The soils in the park are very erodable and have little bearing strength. Asphalt paving will overcome this problem.

Cost: \$25,000

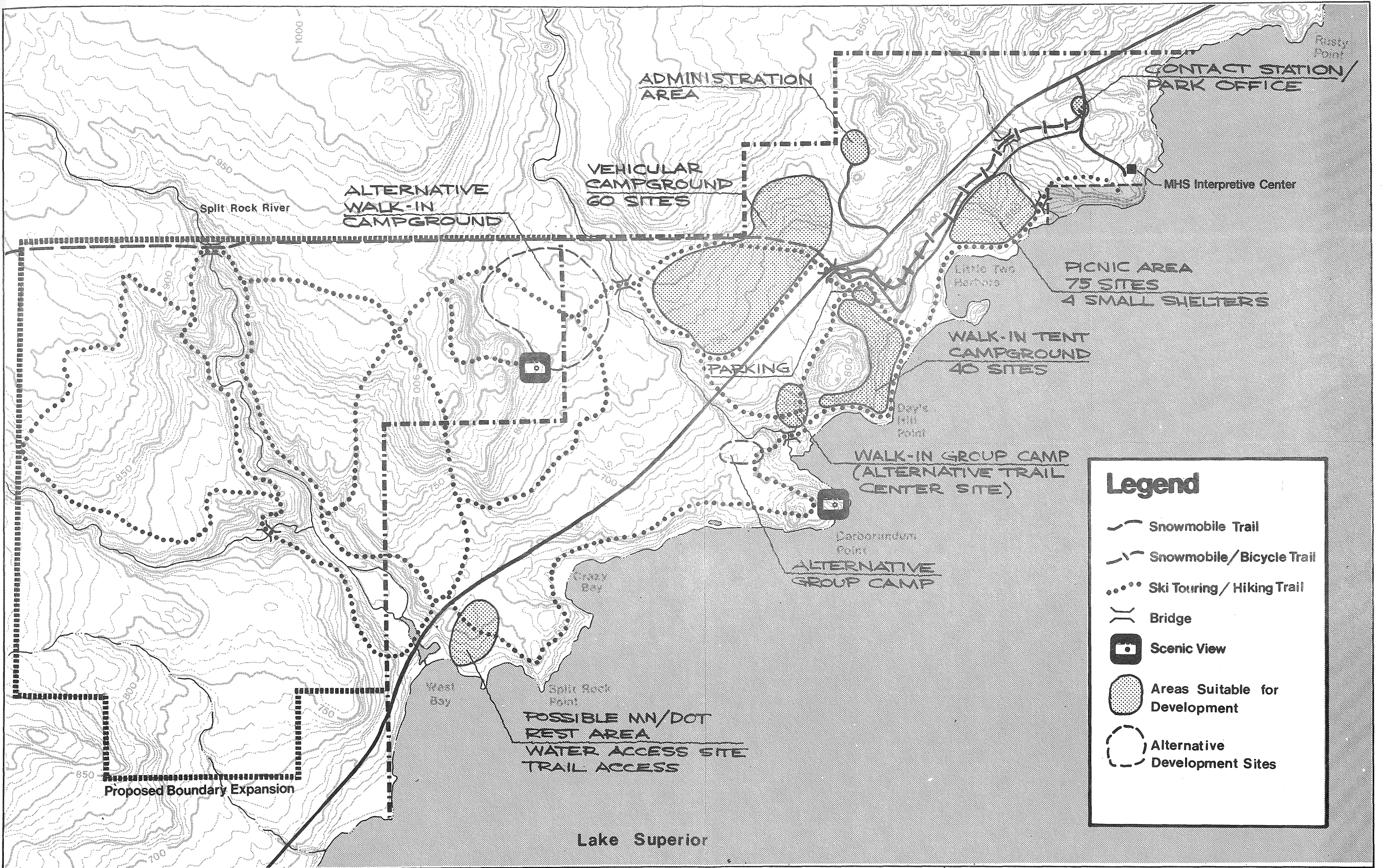
Action #5. Bury all utility lines needed to serve park facilities.

Overhead lines are unsightly and detract from the natural character of the park.

Cost: Covered as part of construction cost for each facility.

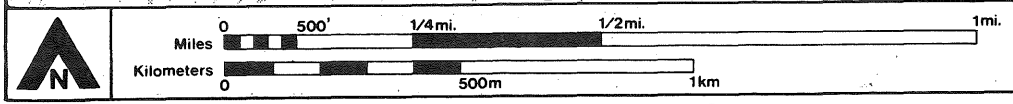
NOTE: A trail center/access site (includes warm-up facilities and toilets) is proposed to be developed at the Mn/DOT rest area near the Split Rock River. If Mn/DOT does not choose to provide trail facilities, or if locating the center at the rest area creates access problems for park users, the trail center should be built at the alternative site located on the Proposed Trails Map, p 51.

Cost: \$175,000



Legend

- Snowmobile Trail
- Snowmobile/Bicycle Trail
- Ski Touring/Hiking Trail
- Bridge
- Scenic View
- Areas Suitable for Development
- Alternative Development Sites



Split Rock Lighthouse State Park

Proposed Development & Trails



ARCHITECTURAL THEME

The parks and secondary units of the North Shore actually function as components in a North Shore recreation system. To a park visitor who is touring the North Shore, the present collection of park buildings appears to be a hodge podge of architectural styles. They do not present a unified or organized system.

A consultant architect should be hired to develop an architectural theme that can be used throughout the North Shore parks. The theme should reflect the landscape elements of the North Shore, including native stone, wood, and color. Building design should be modern, but should be compatible with the Civilian Conservation corps (CCC) style buildings. The design should maintain the low profile, simplistic form, rustic and massive character of the old style buildings. A common color scheme and signing system should be used throughout the North Shore for all parks and secondary units. The signing system should be consistent with the statewide signing system.

Buildings specifically designed for Split Rock Lighthouse State Park and Historic Site should be integrated into the site. If possible, they should not be visible from the lighthouse and they should not replicate the building style or materials used for the lighthouse station.

SECONDARY UNITS

Highway Rest Areas

Presently there are three highway rest areas located within the statutory boundaries of Split Rock Lighthouse State Park. They are Split Rock River, Day's Hill, and Split Rock Overlook. Closing of Day's Hill and Split Rock Overlook has been proposed because of traffic safety problems and site constraints to facility improvement. The site at the Split Rock River is very small and has a fishermen's access. It can not be enlarged to a class II rest area because of the surrounding rough topography. If a new class II rest area is built east of the Split Rock River on Lake Superior, the existing wayside should be closed. If the rest area is built, it should contain parking for stream fishermen, a boat landing, North Shore visitor information, and trail access facilities for the North Shore Corridor Trail.

Historic Site

The Split Rock Lighthouse Historic Site is managed as a secondary unit within Split Rock Lighthouse State Park. The site consists of the light station buildings and grounds. The actual site should continue to be managed by the MHS, although it should be enlarged to encompass the adjacent support facilities which are presently being managed by the DNR, and to accommodate proposed development of the MHS.



Boundary Adjustments

BOUNDARY ADJUSTMENTS

There are four reasons for reviewing the park boundary in this management plan. 1) Several private residences have been included within the statutory boundary of the park and the owners of the property have requested they be removed; 2) the boundary of the Split Rock Historic Site is not large enough to accommodate the entire operation and support facilities; 3) there has been a proposal to develop a class II rest area near the Split Rock River; and 4) at the first public information meeting there was a suggestion made by several individuals to expand the park boundary to include all of Section 1 and the north half of Section 12, T55N R9W.

Objectives:

To establish a park boundary which will provide a sufficient area to protect and perpetuate the natural resources

To provide the necessary recreational facilities to enjoy these resources without including areas that are unnecessary or unreasonable to purchase

Detailed Recommendations

Action #1. Make boundary adjustments according to the Boundary Adjustments Map, p 63.

Priority for Action.

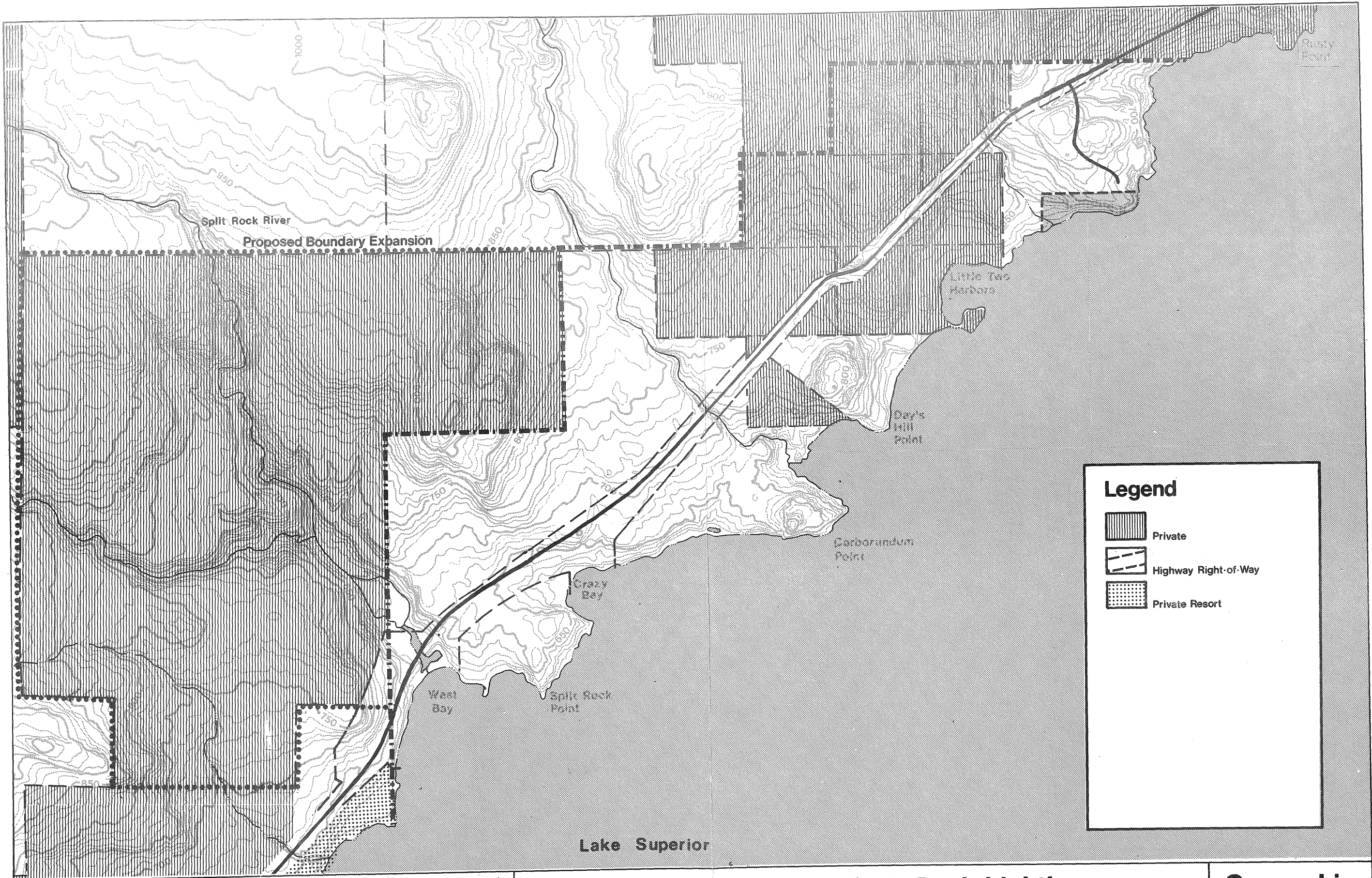
Parcel # 1, remove from boundary

Parcel # 2, add to boundary




Parcel # 3, change administration to MHS

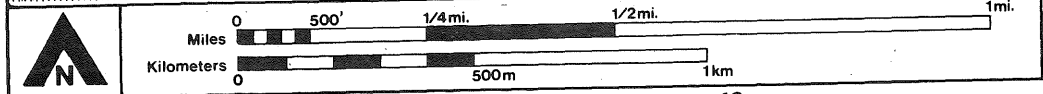
Parcel # 4, change administration to Mn/DOT (if the site remains suitable for rest area development, after TH 61 is upgraded)

Parcel # 1 contains three permanent homes and one seasonal home. The land is not needed for park purposes.



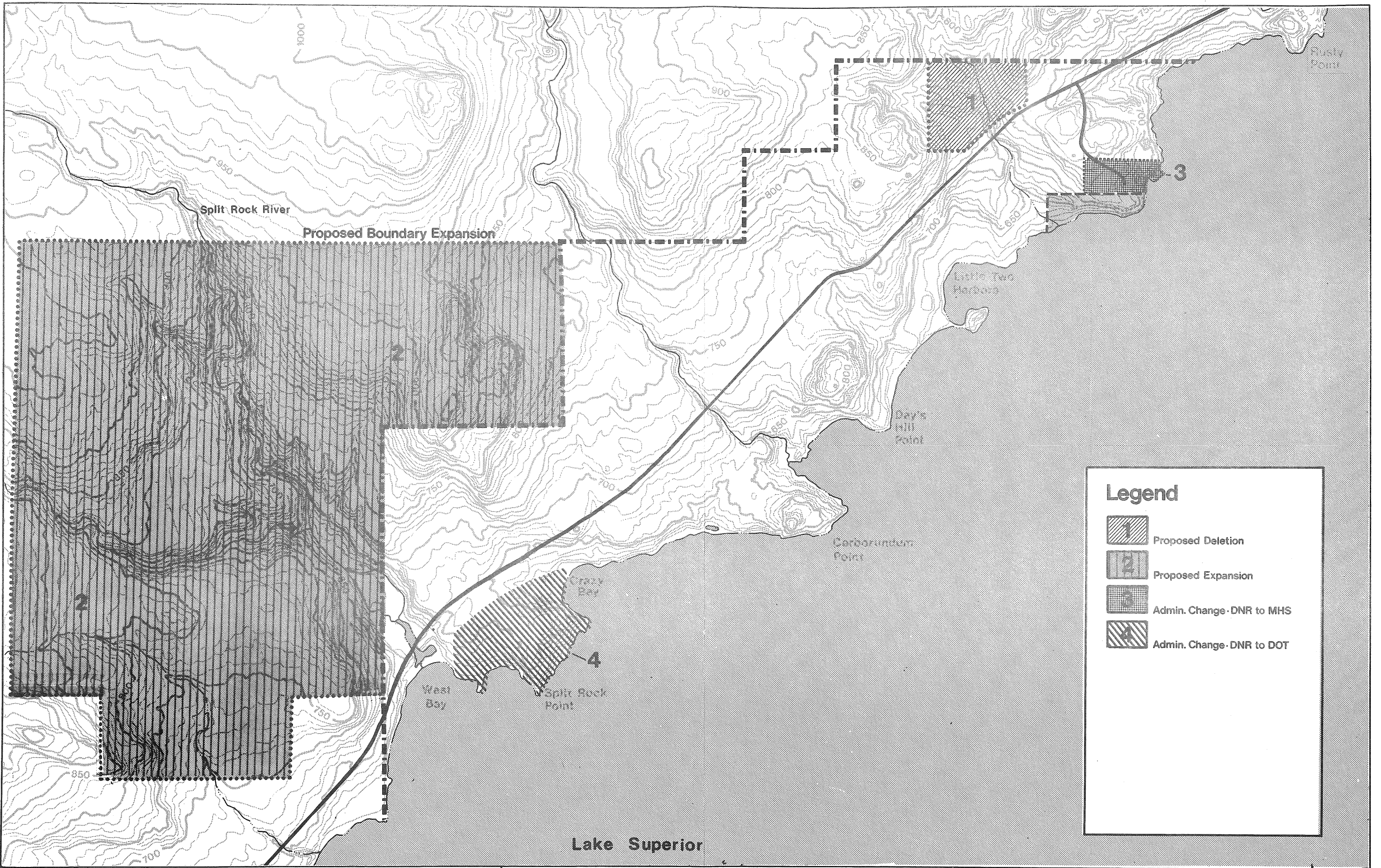
Legend

-  Private
-  Highway Right-of-Way
-  Private Resort







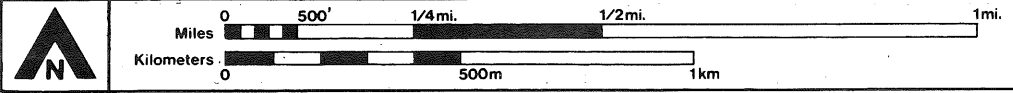
Split Rock Lighthouse State Park

Ownership



Legend

-  Proposed Deletion
-  Proposed Expansion
-  Admin. Change - DNR to MHS
-  Admin. Change - DNR to DOT



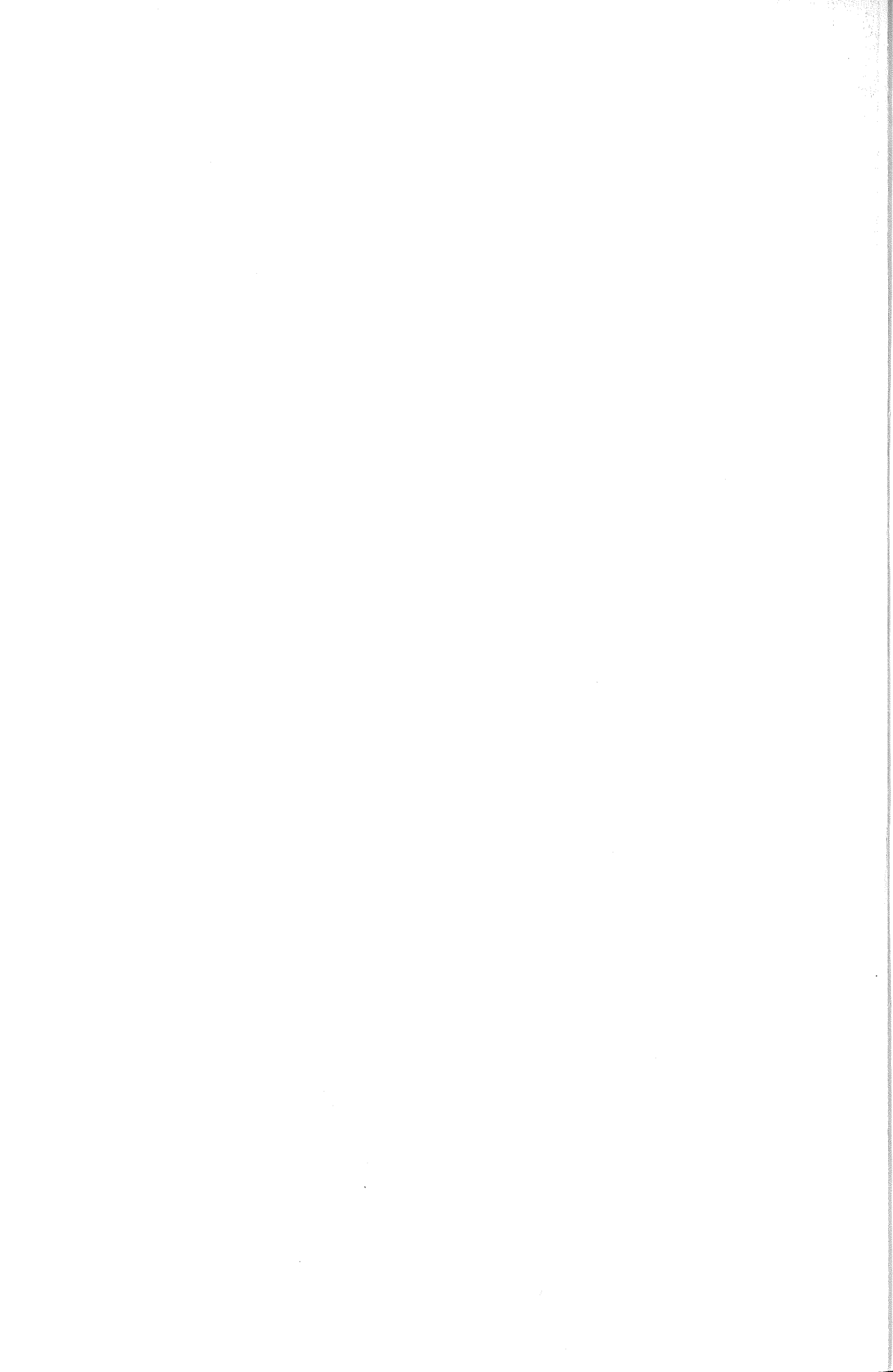
Split Rock Lighthouse State Park

Boundary Adjustments

Parcel # 2 has no development, no highway access, and the topography is very rugged, limiting development. The parcel is presently used extensively for recreational purposes, however, it may not always be available to the public. Public ownership would ensure its availability for recreational purposes and would eliminate the potential trespass problem. Addition of the river valley would protect the scenic quality and the extremely valuable fish and wildlife habitat.

Changing administration of parcel #3 from DNR to MHS would give the society complete control of the entire historic site and would provide sufficient area for all proposed site developments and improvements.

If TH 61 remains on the existing alignment change of administrative control of parcel # 4 from DNR to Mn/DOT would allow development of a class II rest area which would include day use recreational facilities at the mouth of the Split Rock River.





Operations and Staffing

OPERATIONS

Maintenance is an essential responsibility of the DNR, Division of Parks and Recreation. It is responsibility that often goes unnoticed by the park visitor in comparison with new developments. Yet, the park and the DNR are continually judged by the appearance of the park and its facilities.

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

There are four basic aspects to maintenance and operations:

1. Maintaining resources
2. Maintaining facilities
3. Providing services to the park visitors
4. Enforcing rules and regulations which protect park visitors, resources, and facilities

One of the major maintenance problems of parks is the heavy impact of large numbers of people concentrated in specific locations. These areas include: campsites, trails, lakeshores, river banks, areas 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. A regular maintenance program with adequate personnel, supplies, and equipment controls damage, thereby, avoiding future reconstruction expenditures.

STAFFING

One of the staffing problems in all state parks is the heavy reliance on federally funded work programs, such as the Comprehensive Employment and Training Act (CETA), the Neighborhood Youth Corps (NYC), and Green Thumb. The low cost personnel provided by these programs makes 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 trained personnel for major public service and maintenance programs. Temporary employees should only be hired for minor maintenance and special projects.

The following chart summarizes the existing staff in Split Rock Lighthouse State Park. Because of the seasonal nature of park operations, the positions in each staffing category have been grouped into total "staff years." Staff years is a common denominator which reflects the amount of time spent in each area of park maintenance and operations.

Existing Staff

	Staff Years (in months)
<u>Management</u>	
One 9 month technician	9
<u>Maintenance</u>	
One 9 month laborer	9
<u>Contact Station</u>	
Two 5-month park workers	10

Future Staffing Needs

Most actions proposed in the plan, when implemented, will require additional park staff. Other actions may allow for the reduction of staff, because staff time can be used more effectively. Some of the most significant potential staff changes are as follows:

Management

Extend the 9 month technician position to a full time park manager.

Trails


New trail development will require additional maintenance and grooming staff. No trails should be developed until staff has been hired to maintain them.

Contact Station/Park Office

By combining the contact station and the park office, staff time can be saved. But, as visitor use increases, the office should be open from 8:00 a.m. to 10:00 p.m. during the busy season requiring two shifts. Camping facilities, a picnic area, and increased day use require additional office personnel.

Campground, Group Camp, and Picnic Area

Adding a campground and a picnic area will increase the amount of additional maintenance. If the existing staff cannot handle the increased workload, additional staff should be hired.



Costs and
Phasing
Summary

The following cost estimates were generated in January, 1979. These cost estimates are based on current prices and available information. As new information is made available and as new or modified programs are initiated, revised cost estimates will be prepared to more realistically represent costs at that time. This plan is intended to be implemented in ten years. The phases noted suggest the level of funding to be requested each biennium. But there is no guarantee that this amount of funding would be received from the Legislature. Therefore, some change to these phases can be expected.

Action	1	2	Phase 3	4	5	Total
<u>SOILS</u>						
No development cost						
<u>VEGETATION</u>						
Action #1 Reestablish several areas of conifer forest	\$ 19,700	\$ 9,865	\$ 11,345	\$ 11,345	\$ 27,840	\$ 80,095
Action #2 Create wildlife openings	25		15,100	20,425	50	35,600
Action #3 Selectively cut mature hardwoods	4,000		8,650	7,200	4,000	23,850
<u>WILDLIFE</u>						
Action #1 Inventory wildlife species in park	No development cost					
Action #2 Provide public hunting recreation opportunities	No development cost					
Action #3 Reduce beaver population on Split Rock River	No development cost					
<u>FISHERIES</u>						
Action #1 Remove barrier to fish migration	Cost will be covered by DNR, Section of Fisheries					
Action #2 Provide fishermen's access to Lake Superior and the Split Rock River	See Water Activities, Action #1, p 72.					

	1	2	Phase 3	4	5	Total
<u>SURFACE WATERS</u>						
Action #1 Monitor groundwater quality			No development cost			

PHYSICAL DEVELOPMENT

Roads

Action #1 Build a two-way road from existing park entrance to proposed family campground	105,000					105,000
Action #2 Develop an underpass under TH 61	300,000					300,000

Camping

Action #1 Develop a semi-modern family campground		250,000				250,000
Action #2 Develop a walk-in campground east of Day's Hill		110,000				110,000
Action #3 Develop group camp, west of Day's Hill				25,000		25,000
Action #4 Develop backpack camping on the Split Rock River		3,000				3,000

Picnicking

Action #1 Develop a picnic area near the lighthouse	150,000					150,000
Action #2 Build four small picnic shelters in picnic area	40,000					40,000

Trails

Action #1 Develop a snowmobile access trail			3,000			3,000
Action #2 Construct a multi-use trail bridge over the Split Rock River			3,000			3,000

	1	2	Phase 3	4	5	Total
Action #3 Provide bike access to all park facilities			30,000			30,000
Action #4 Provide bike access off TH 61	No cost					
Action #5 Develop a year-round hiking/skiing trail system	25,000					25,000
Action #6 Construct four foot bridges over creeks	40,000					40,000
<u>Trail/Visitor Center</u>						
Action #1 Construct multi-purpose building (only if trail access is not provided at the Mn/DOT rest area.				175,000		175,000
<u>Water Activities</u>						
Action #1 Develop a boat landing and fishermen's access.	25,000					25,000
<u>Administrative and Support Facilities</u>						
Action #1 Develop a combination contact station/park office			75,000			75,000
Action #2 Remove existing shop building	2,000					2,000
Action #3 Construct a new administration area						
-Shop building		10,000				10,000
-Unheated storage building		60,000				60,000
-Wood storage building		10,000				10,000
-Gasoline storage building		10,000				10,000
-Manager's residence and garage					90,000	90,000
Action #4 Pave entire service court		25,000				25,000
Action #5 Bury all utility lines		Included in the cost of each development				
TOTAL	\$ 710,725	\$ 487,865	\$ 233,095	\$ 238,970	\$ 121,890	\$1,792,545



Implementation

AUTHORITY

Division of Parks and Recreation

Once a management plan has been completed and approved, it will become the responsibility of the director of the Division of Parks and Recreation (hereafter referred to as the director) to ensure proper implementation of the recommendations of 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 ensure that the plan is implemented correctly.

In order to ensure the accomplishment of this cooperative planning and implementation effort, the following responsibilities have been established.

The director and staff will:

- 1) Coordinate and administer field operations as delegated by the deputy commissioner.
- 2) Develop and administer 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 of Parks and Recreation (hereafter referred to as 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 this plan (e.g., responsibilities related to letting contracts and initiating force account projects).
- 4) 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 DNR, 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 the DNR's federal grant specialists 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 major modifications to the recommendations of an approved plan will be processed through the Office of Planning. 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 cannot come to an agreement on the requested change, the director will then submit the request to the commissioner's Planning and Environmental Review Team (PERT) which will formulate the final recommendation to be submitted to the commissioner's executive council. If a recommended modification is minor and follows the intent of the plan, the director has the discretion to make the change without following these procedures, provided informal written agreement is reached with the Park Planning section.
- 9) Assign responsibilities and funding for implementation of the development program to BOE for letting contracts and to the regional staff for initiating 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 in summary form to the Office of Planning so that the progress of implementation can be monitored.

Regional Office

The regional park supervisor will supervise the physical implementation programs as recommended in this plan.

The regional park supervisor will:

- 1) Coordinate with the regional administrator and other discipline supervisors to obtain qualified staff to 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) Supervise and direct the park manager to ensure that the management plan is implemented correctly.
- 3) Regularly field inspect all development in the park.
- 4) Submit written reports on the progress of development programs to the director with copies to the regional administrator.
- 5) Submit information to facilitate plan updates and changes. All recommendations for change will be submitted in writing to the director. Rationale and analyses of the impact a requested change might have on the plan must be included in this request.
- 6) Submit project proposals to the director for review and approval. The director and staff will review all project proposals verifying compliance with the intent of the plan.

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

Park Manager

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.

The park manager will:

- 1) Seek the assistance of the regional park supervisor in the resolution of any major implementation problems.
- 2) Consult with the regional park supervisor if there is uncertainty, concern, or opposition to a recommendation of this plan.
- 3) Assist and give direction to park field personnel.
- 4) Maintain records on the progress of development projects to ensure 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

The Office of Planning and Research will evaluate implementation of the management plan and make recommendations to the director if it appears revisions are necessary.

The Office of Planning will:

- 1) Review BOE requisitions.
- 2) Process all modifications to the approved management plan.
- 3) Provide additional information and justification for specific recommendations of this plan when requested by the division.
- 4) Maintain contact with the public, local officials, legislators, and DNR staff regarding the updating of the plan.

IMPLEMENTATION OF RESOURCE MANAGEMENT PROJECTS

There are two procedures for the division to follow in the implementation of resource management projects: contract and force account.

Contract

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

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

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

Director supervises and monitors the program.

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

Director approves the completed project.

Force Account

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

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

Director assigns funds to the regional park supervisor.

Regional park supervisor and resource staff prepare a detailed resource management program.

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

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

Assign the park manager and field personnel to implement the program

Prepare contracts to be let to local contractors or consultants

Regional staff supervises project.

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

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

IMPLEMENTATION OF DEVELOPMENT PROJECTS

There are two procedures for the division to follow in the implementation of development projects: contract and force accounts.

Contract

Director initiates project by preparing a development program which complies with this plan.

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

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

Force Account

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

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

Director assigns funds to the regional park supervisor.

BOE submits drawings and specifications to the director.

Director approves drawings and specifications, ensuring compliance with the objectives and goals of this plan.

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.

Regional park supervisor may:

Request that 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, in cooperation with the regional staff, to let bids to local contractors

Regional, divisional, or BOE staff will supervise the project depending on the complexity of the specific project.

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

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

MAINTENANCE AND OPERATIONS

The division will provide the regional staff with necessary direction to maintain and operate state parks in a statewide system. Training courses and policy 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.

General Procedures

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

The regional park supervisors will follow the policies, guidelines, and statewide procedures of the division, as well as commissioner's orders.

The regional park supervisor will supervise and direct the park managers to ensure that park maintenance and operation policies, guidelines, and procedures are followed.

The park manager, under the supervision of the regional park supervisor, will maintain and operate all park facilities.

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

