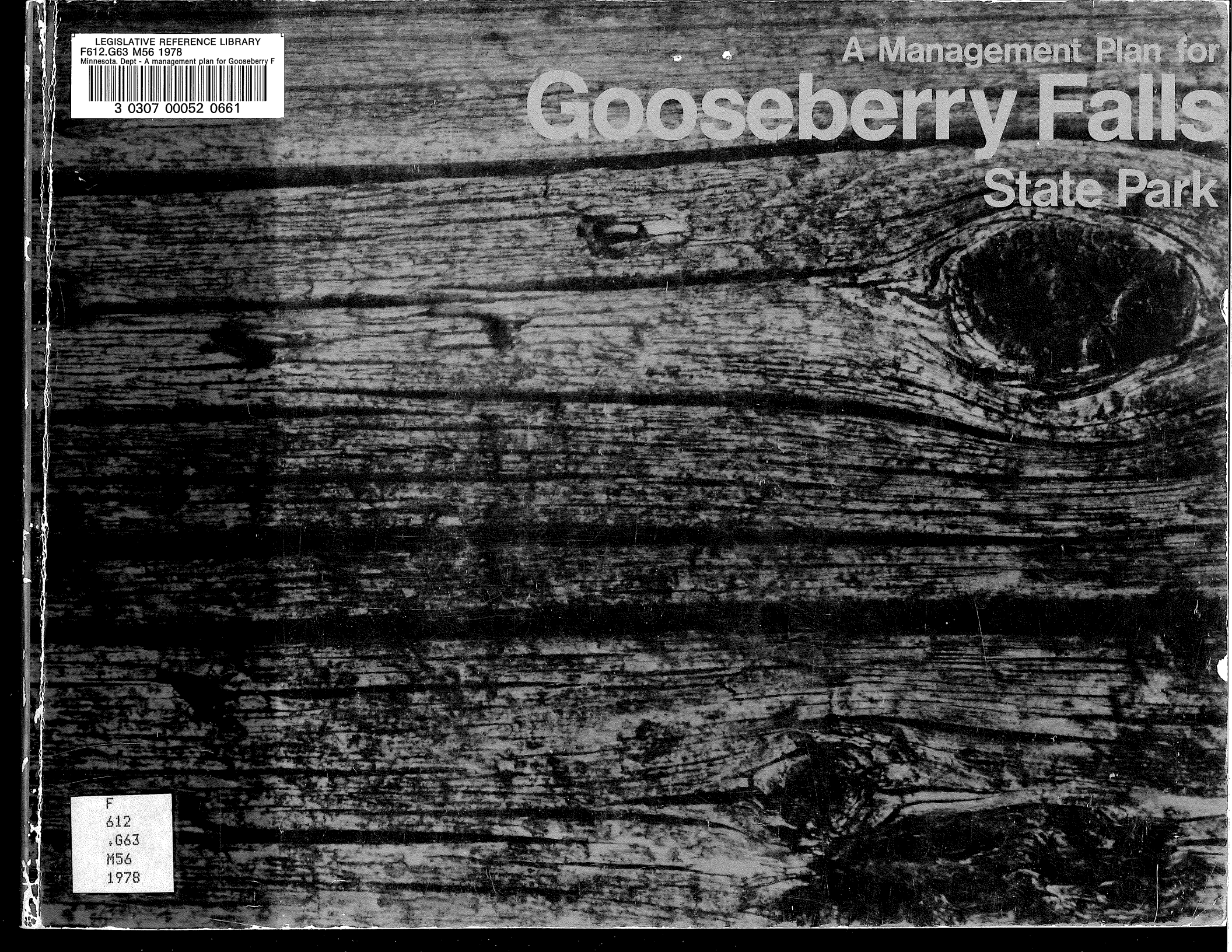
A Management Plan for Gooseberry Falls State Park



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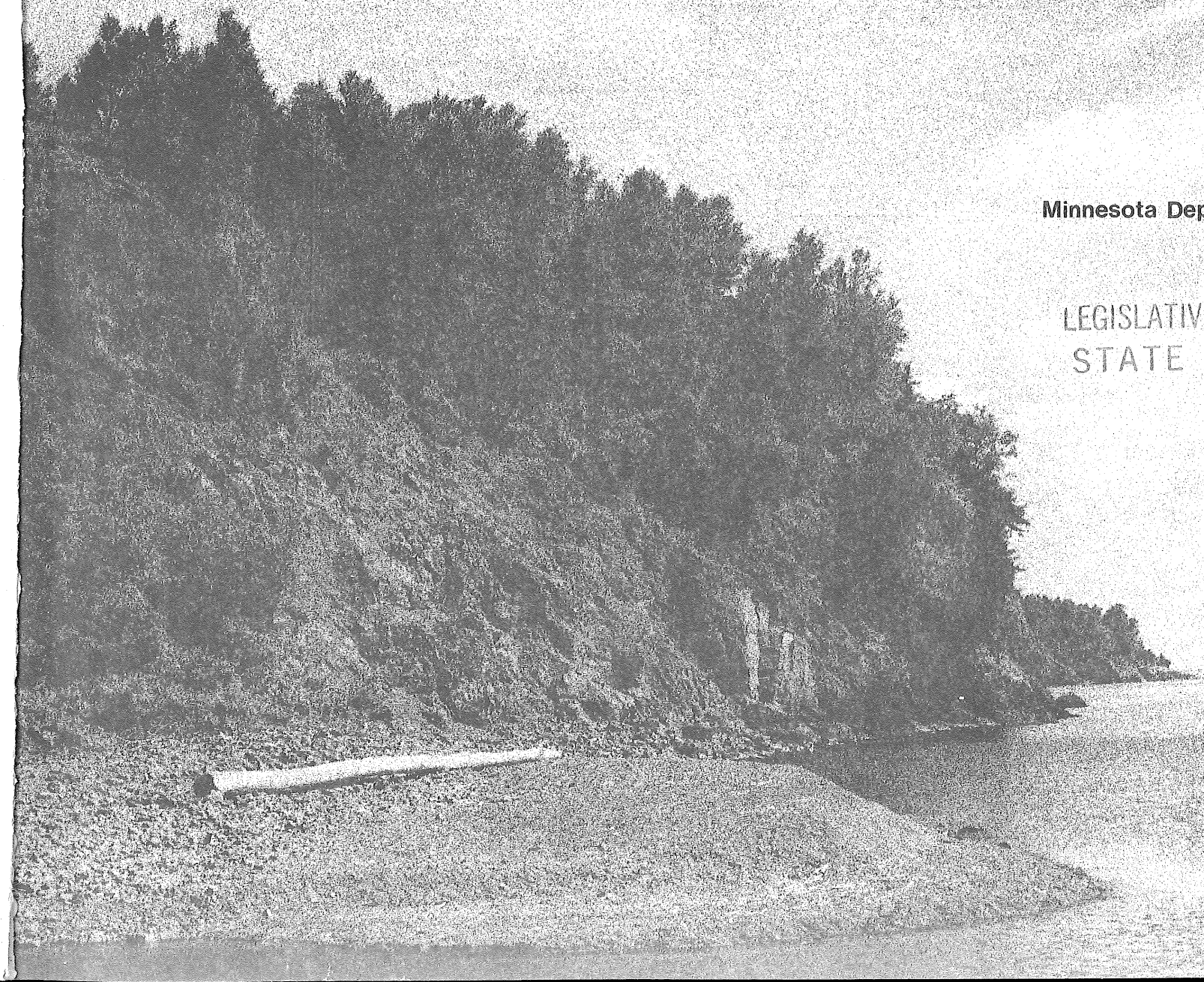

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Credits

Prepared for the citizens of the state of Minnesota under the aegis of the Outdoor Recreation Act of 1975. This plan was prepared by the Division of Parks and Recreation, Park Planning Section.

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All the cost estimates in this plan are based on 1976 dollars.

The appendices to this management plan are available upon request from:

Park Planning
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Purpose of Plan

MANAGEMENT AND DEVELOPMENT PHILOSOPHY

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

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

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

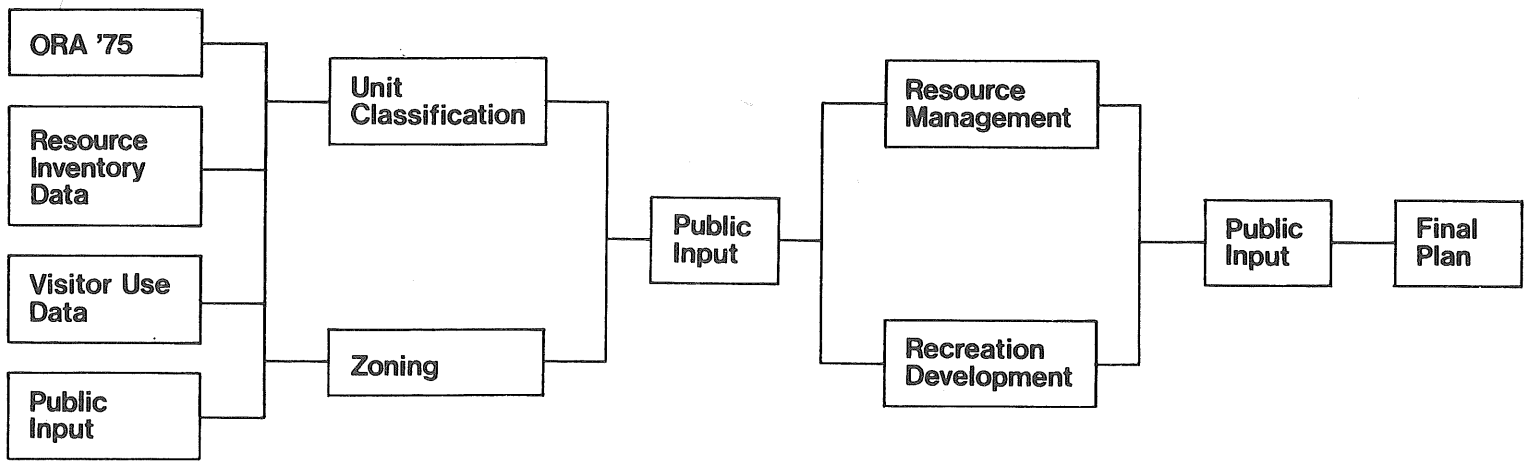
In planning management and development of the various units, the DNR will consider probable future impacts which would affect each unit. In spite of this, unforeseen circumstances are bound to occur. Therefore, each plan should be reviewed periodically to see that it is still relevant in light of current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

OUTDOOR RECREATION ACT REVIEW

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

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

Planning Process Diagram



Summary of Plan

SETTING

Gooseberry Falls State Park is located on the north shore of Lake Superior, 33 miles northeast of Duluth, in the southwest corner of Lake County. It features rugged topography, rock outcrops, cascading waterfalls, and a pine forest. These attributes make it an excellent place for camping, picnicking, fishing, and various trail activities.

CLASSIFICATION

Gooseberry Falls State Park has been recommended for classification as a natural state park.

GOAL

The goal for Gooseberry Falls State Park is to provide the people of Minnesota with a variety of recreational facilities while protecting and perpetuating the natural resources of the park.

OBJECTIVES

To zone Gooseberry Falls State Park to accommodate a variety of recreational uses while protecting the resources

To minimize excessive compaction and erosion of campgrounds, trails, and other use areas

To maintain a natural trout population in Gooseberry River

To reestablish, where possible, original vegetation

To protect and provide for the populations of wildlife, enabling visitors to observe them in their natural habitat

To develop trails, primitive camping, and picnicking opportunities appropriate for a natural state park

To improve orientation and interpretation services

To make the present trails suitable to accommodate current levels of use and to expand the system for day use and interpretation

RESOURCE MANAGEMENT

Water Resources

The surface water in Gooseberry Falls State Park includes Lake Superior, Nelson Creek, and the Gooseberry River. The plan proposes that the quality of groundwater and surface water be protected and that no major development occur along the lake or rivers in the park.

Fisheries

With the present fishing pressure and the lack of spawning areas, the Gooseberry River will not sustain a natural trout population. Habitat will be improved and year-old rainbow trout will be stocked.

Soils

The soils include loams, clays, shallow loams, and gravels over bedrock. Soils management will include: rerouting and surfacing trails, aerating topsoil, adding to topsoil, and closing some sites in the campground.

Vegetation

Vegetation consists of mature pioneer hardwoods and conifers, conifer bogs and swamps, marshes and ponds, alder-willow lowlands, and spruce-fir communities. Management of this vegetation will include planting, harvesting, and fire suppression.

Wildlife

Wildlife includes 142 species of birds, 46 species of mammals, and 10 species of reptiles and amphibians. Wildlife management will consist of habitat improvement, trail realignment, and trapping and relocating animals.

Prehistoric and Historic Sites

A survey conducted in the 1950's by the University of Minnesota did not reveal any prehistoric sites in the park. A field survey for historic sites should be undertaken by the Minnesota Historical Society.

RECREATION MANAGEMENT

The following actions are recommended to enhance the park's attractiveness and improve recreation:

Family Campground

1. Maintain the site and plant trees and shrubs.

Bicycling/Hiking Campsite

1. Develop a bike-in/hike-in campsite near Lake Superior.

Group Camp

1. Develop a walk-in group campground with 3 campsites off the North Shore Access Trail on the north side of the Gooseberry River.

Lake Picnic Area

1. Mark parking spaces in parking lot.
2. Reroof picnic shelter with cedar shingles.
3. Remodel restrooms in picnic shelter to make them handicapped accessible.

River Picnic Area

1. Surface trail from parking lot to picnic area.
2. Construct a fence which will keep people on the stairway which connects the lake area picnic shelter to the river picnic area. The fence will be removed after a planted vegetative barrier has been established.

Waterfall Picnic Area

1. Develop a 25-site picnic area on the north side of the river behind the present trail/interpretive building to provide day-use picnicking at the waterfall area.

Snowmobile Trails

1. Upgrade the snowmobile access trail between the park and the North Shore Trail to corridor trail standards.

Hiking/Skiing Trails

1. Rehabilitate: Upper Falls, Half Way, Gitchi Gummi, and Lower Rim trails, with new surfaces, steps, culverts, and bridges and relocating segments of trail.
2. Use a combination of boardwalks, surfaced trails, and overlooks in the main falls area to provide a safer, more attractive and accessible viewing area. Build a safety railing around the pool below the falls.
3. Develop a trail system north of the Gooseberry River which highlight natural features; are of varying lengths; and loop back to the starting points.
4. Construct a hiking/skiing bridge above the upper falls.

Multi-use Trails

1. If Trunk Highway 61 (TH 61) is rerouted around the park, the old road bed can be used for a multi-use trail.

Bike Trails

1. Add bike trails parallel to, but separate from, existing park roads.
2. Obliterate all unauthorized trails in the park.

Buildings

1. Continue to maintain and use picnic shelters.
2. Convert refectory from its present gift shop function to a multi-use trail/interpretive center.
3. The center should contain an office for the park naturalist, winterized toilet, a display area, a multi-purpose area, a warm-up space, and a place for outdoor activities.
4. Move present contact station and redesign circulation system.
5. Remodel and insulate manager's residence.
6. Build a garage for the manager's residence.
7. Remodel assistant manager's residence.
8. Replace assistant manager's garage.
9. Rewire the main shop building.
10. Install a water line to the shop and add a restroom.
11. Construct a small storage yard behind the main shop building.
12. Continue to use the two naturalist cabins for the seasonal staff.
13. Reroof and remodel the interior of the naturalist cabins.

Roads

1. Remove the highway rest area from the park by closing the roadside parking areas and signing the roadsides for no parking.
2. Close sanitation facilities at the concourse (area including the retaining wall and stairway down to the river along TH 61).
3. Lengthen the entrance road and build a turn-around loop to handle the tremendous amount of traffic that comes into the park.
4. Redesign parking facilities near the trail/interpretive center.
5. Construct an additional parking lot next to the existing lot at the falls.
6. Work with Mn/DOT toward a solution of the park access conflict with TH 61.
7. Relocate the access road to the private cabins along the lakeshore.

Utilities

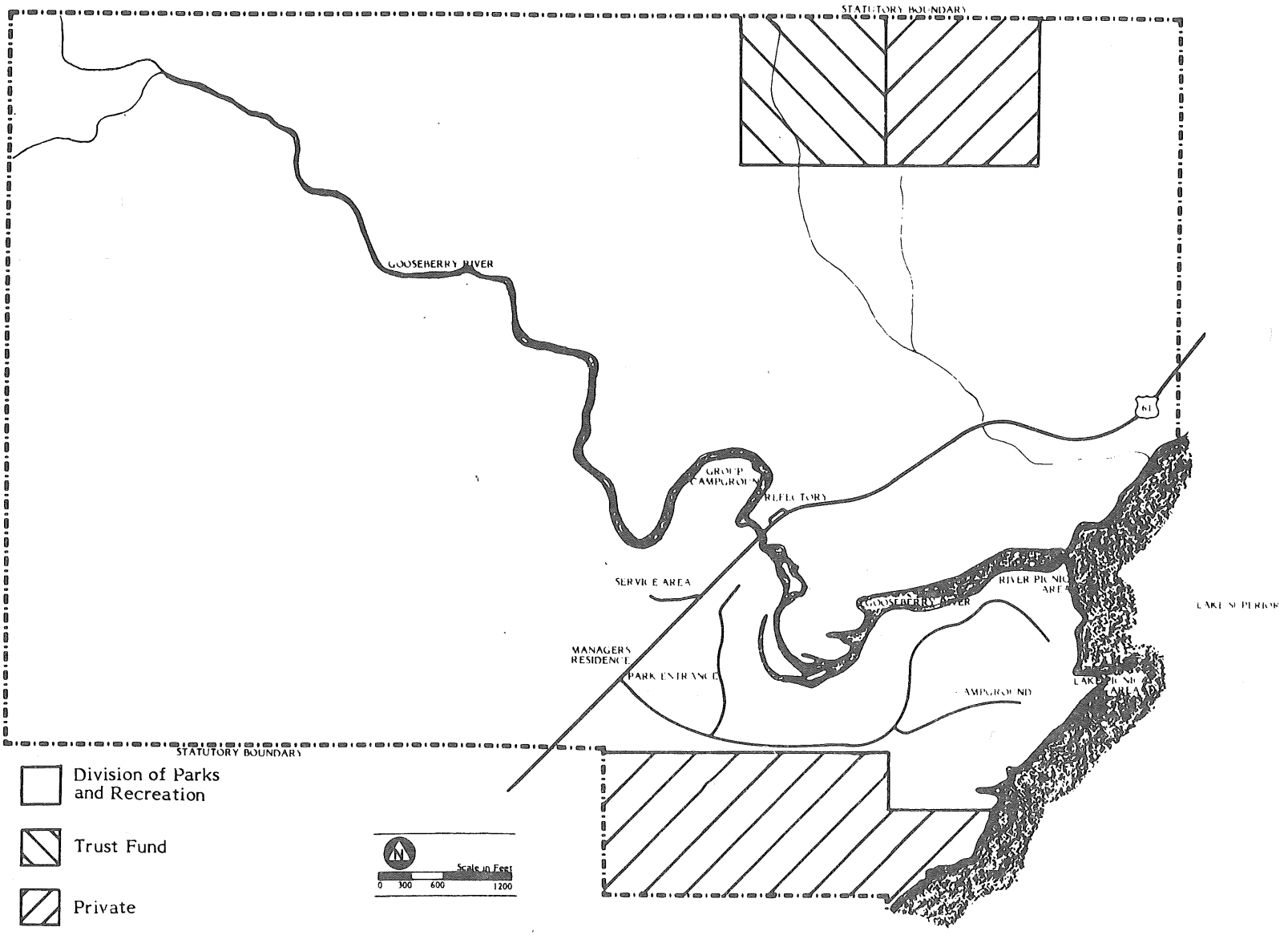
1. Bury all electrical lines within the park.
2. Develop a new sewage system for the entire park.
3. Upgrade the park's water system and drill a new well.
4. Provide a winter water supply in the vehicular campground.

INTERPRETIVE PROGRAM

The current interpretive program consists of seasonal outdoor and indoor presentations in the campgrounds. Converting the refectory into an interpretive center will make the park's interpretive program available to more park users year-round.

BOUNDARY CHANGES AND ACQUISITION

1. The entire boundary should be surveyed, cleared, and posted.
2. The boundary will remain as it is, except for the privately owned parcel, (three acres of land along the south boundary) which will be deleted from the park.



See pp. 8 and 90

REGIONAL PERSPECTIVE

The state now owns or holds in trust nearly all of the 1,662 acres within the statutory boundary of Gooseberry Falls State Park. Gooseberry, typical of the North Shore landscape, is in a region famous for its bare rock cliffs and steep stream valleys. Spectacular cascades, such as Gooseberry Falls, were formed as these streams cut through the volcanic rock. The northern half of the North Shore was originally covered by a spruce-fir forest, while the southern half, which includes Gooseberry Falls, was covered by a mixture of pines and northern hardwoods. Because of lumbering, the dominant forest today is aspen and birch regrowth.

TH 61, the major North Shore highway, parallels the shore from Duluth to Canada and passes through Gooseberry Falls State Park. Four roads connect with TH 61 providing access to the park from inland areas: TH 1 from Ely and County State Aid Highways (CSAH) 2, 3, and 4.

Two Harbors and Silver Bay are the nearest towns to Gooseberry Falls State Park. Together they have a population of 8,000, about one-half of the total population of Lake County. Gooseberry is within weekend travel distance of most of Minnesota and several major cities in Wisconsin and Ontario. Gooseberry's accessibility and beauty make the park a major state attraction.

The North Shore area offers a wide variety of recreational facilities, such as state parks, state and national forests, municipal and county parks and campgrounds, private campgrounds, resorts, museums, and trails.

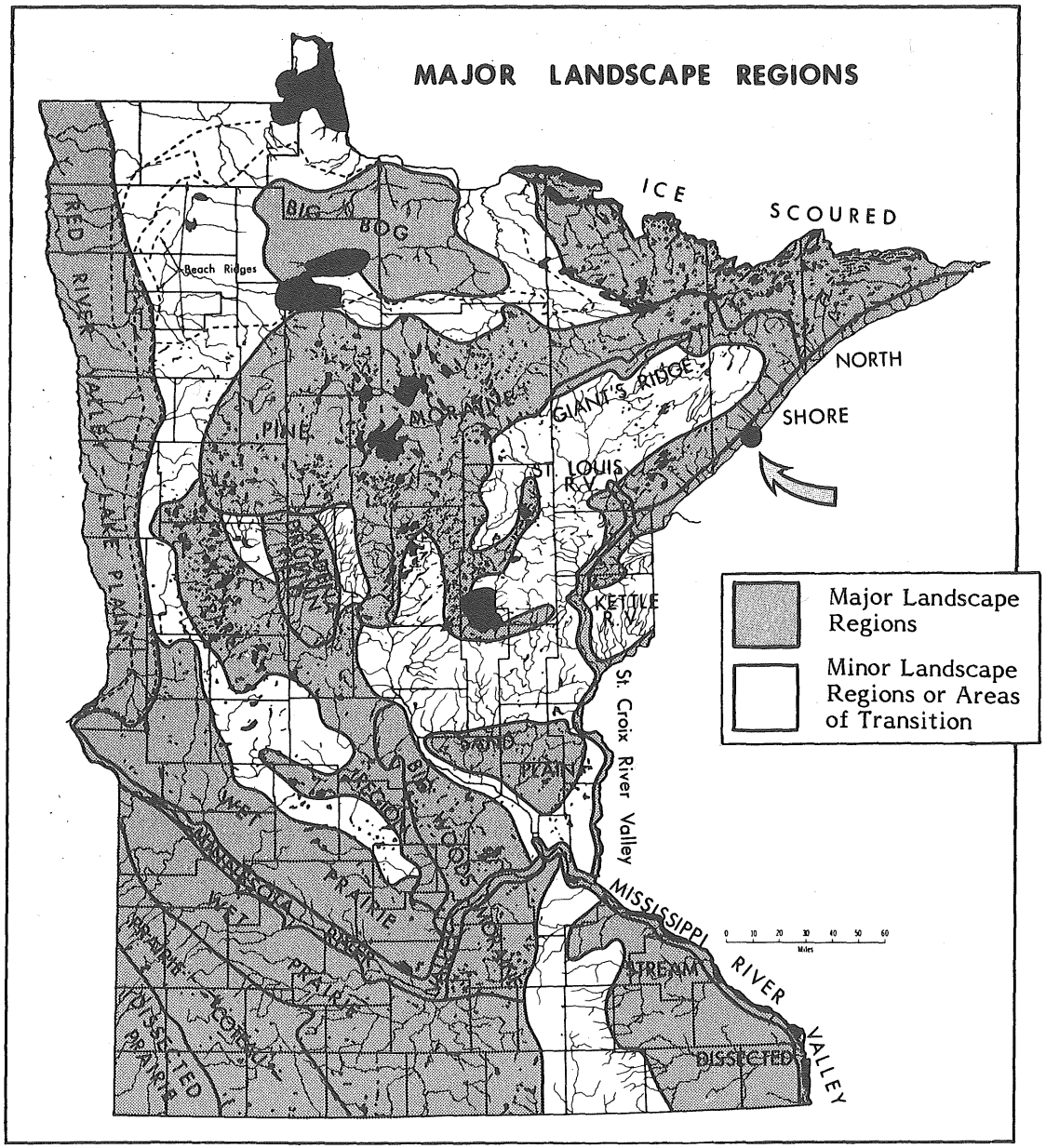
Land in the area is used primarily for timber and pulpwood production, homes and cabins, and recreation. Most small businesses, which include lodges, service stations, restaurants and novelty shops, are located on the shore along TH 61. Although most businesses serve the summer tourist trade, winter trade has increased as more people participate in cold-weather activities.

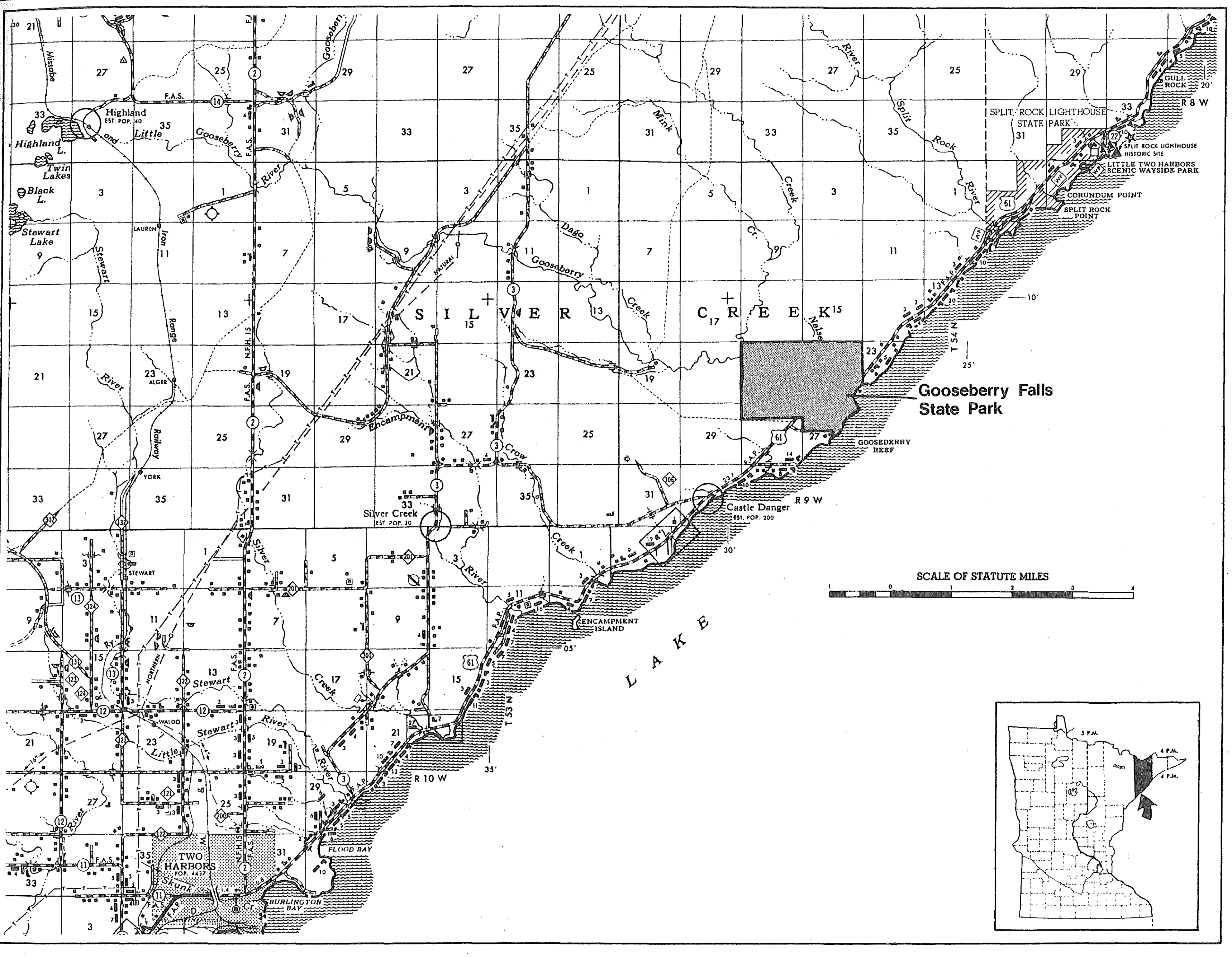
Although the economic impact that an individual state park has on a region is difficult to determine, Gooseberry unquestionably benefits the local economy. Cook County, with 96%, and Lake County with 13.6%, rank first and eighth in the percentage of gross sales attributed to tourist-travel expenditures. (The county average in Minnesota is 3.4%.) When campgrounds at the park are full, tourists are directed to a nearby private campground. Campers staying at Gooseberry often patronize nearby restaurants, stores, and other businesses for supplies or services.

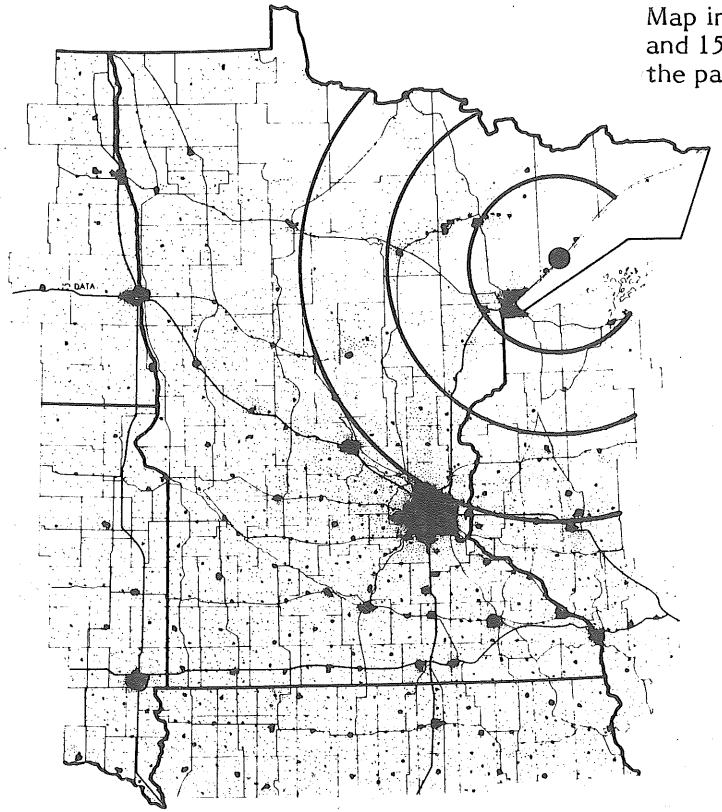
Sources:

Minnesota Department of Natural Resources and State Planning Agency. 1971. Minnesota Resource Potentials in State Outdoor Recreation: Project 80 Staff Report No. 1. Bureau of Planning (DNR) and Environmental Planning Section (SPA). pp. 69. St. Paul.

Department of Economic Development. 1975. The economic distribution of tourist/travel expenditures in Minnesota by regions and counties. St. Paul.


MAJOR LANDSCAPE REGIONS
ICE SCOURED
BIG BOG
Beach Ridges
RED RIVER VALLEY
NORTH SHORE
GIANT'S RIDGE
PINE MORAINE
ST. LOUIS R.
KETTLE R.
St. Croix River Valley
MISSISSIPPI RIVER VALLEY
DISSECTED
STREAM
Major Landscape Regions
Minor Landscape Regions or Areas of Transition
0 10 20 30 40 50 60
Miles


Gooseberry Falls State Park
SILVER CREEK
LAKE
Highland
EST. POP. 40
Highland L.
Twin Lakes
Black L.
Stewart Lake
Little Gooseberry River
Gooseberry River
Split Rock River
Mink Creek
Dago Creek
Nelson Creek
Encampment River
Crow Creek
Silver Creek
Stewart River
Little Stewart River
Skunk Cr.
Missabe and Iron Range Railway
LAUREN
ALGER
YORK
STEWART
WALDO
Silver Creek
EST. POP. 30
Castle Danger
EST. POP. 200
TWO HARBORS
POP. 4437
SPLIT ROCK LIGHTHOUSE STATE PARK
SPLIT ROCK LIGHTHOUSE HISTORIC SITE
LITTLE TWO HARBORS SCENIC WAYSIDE PARK
CORUNDUM POINT
SPLIT ROCK POINT
GULL ROCK
GOOSEBERRY REEF
ENCAMPMENT ISLAND
FLOOD BAY
BURLINGTON BAY
R 8 W
R 9 W
R 10 W
T 54 N
T 53 N
F.A.S.
N.F.H. 15
SCALE OF STATUTE MILES



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

PROXIMITY TO POPULATION CENTERS

Center	* Distance	Travel Time	Approximate Population
Duluth	33 miles	½ Hour	100,578
Twin Cities	180 miles	4 Hours	2,000,000
Counties within 25 miles:			
Lake			13,100
St. Louis			216,800

*Approximate Road Mileage

CLIMATE

Although Gooseberry Falls State Park is subject to the strong continental weather patterns influencing all of Minnesota, the local climate is moderated by Lake Superior. The water temperature of the lake remains fairly constant throughout the year. Gooseberry Falls receives warming breezes off the lake in the winter and cooling breezes in the summer. Generally, temperatures in Gooseberry Falls are 10 degrees F warmer in the winter and 10 degrees F cooler in the summer than inland areas of northeastern Minnesota.

Temperature Variations

Mean January Maximum	22°F
Mean January Minimum	2°F
Mean July Maximum	76°F
Mean July Minimum	53°F

Mean Average Extremes/Frequency

Less than 0°F 55 days/year
More than 90°F 0 days/year

Precipitation

Annual Total	28"
Annual Snowfall	65-70"

Prevailing Winds

Northeast, exceeding 30 m.p.h. an average of 30 days during the small craft season (May through September).

Source:

Kuehnast, Earl L., 1959. Climate of Minnesota. United States Department of Commerce, December.

GEOLOGY

The North Shore from Duluth to the Canadian border is underlaid both by a series of lava flows of the 1.1 billion-year-old North Shore Volcanic Group, and by more recent intrusive flows of a similar composition. The newest rock is from the Keweenawan Age and is part of the same formation found on Keweenaw Point on the south shore of Lake Superior. The flows of the North Shore, including the Gooseberry River watershed, dip gently (three to eight degrees) toward the lake.

The Gooseberry watershed, which has its headwaters about 20 miles inland, drains less than 100 square miles. It drains only a few lakes, bogs, and natural reservoirs, which causes its water level to fluctuate rapidly. The lower reaches may become nearly dry in late summer.

The shore rises rapidly, reaching nearly 400 feet above lake level in the northeastern corner of the park. As the river enters the park, it flows through a series of rapids and waterfalls known as Upper Falls, dropping about 60 feet in a 700-foot stretch. It then tumbles through a series of rapids and pools before reaching Lower Falls.

Lower Falls is a series of falls beginning just above the TH 61 bridge. The river flows over two 30 foot falls, splits around an island, and drops 50 feet over two more falls.

The origin of the falls is perhaps the most interesting feature of the park. Gas bubbles rising in the molten rock collected below a chilled scum at the surface of the flow. The flows then cooled, forming a pitted or vesicular layer beneath a harder, more solid top layer. Running water eroded the soft bottom layer, undercutting the massive top layer, which eventually collapsed, forming a waterfall. The several falls in Gooseberry Falls State Park were formed by separate flows. When the water is low it is easy to observe these rock layers. Potholes were also formed by the whirling water and sediment in the rapids. This sediment settles out and forms a gravel beach near the mouth of the river.

Source:

Schwartz, G. M. 1978. Geology of Gooseberry Falls State Park. Minnesota Conservation Volunteer. January-February.

AREA HISTORY

The Gooseberry River is one of the first Minnesota rivers to appear on a map. It has been on French charts since 1670. It was originally named the Riviere des Groseilliers, for French explorer Medard Chouart, sieur de Groseillers who was on the North Shore in 1660. Major Stephen B. Long, on his 1823 expeditionary map, listed the river by its present name.

David Dale Owen, a surveyor and explorer who led a party of government geologists on the North Shore in the late 1840's, was probably the first person to thoroughly describe the area.

After the explorers came the fishermen. In the late nineteenth century, trout fishing in the North Shore streams was a favorite pastime of the rich.

Logging and railroads came to the shore next. Logging began in earnest in about 1890, although some cutting was done in the preceding decade.

One of the last large pine operations on the Gooseberry was that of the Edward Hines Lumber Company, which began about 1910 and lasted for several years.

In 1917, the Duluth and Iron Range Railroad Company built a track near the edge of the North Shore watershed, with spurs down to the headwaters of the Gooseberry, Split Rock, Beaver, and Baptism rivers. The line, which is still used, is one of the last two logging railroads in Minnesota.

Source:

Nute, Grace Lee. 1947. Gooseberry Falls State Park: Its History and Natural History. Minnesota Conservation Volunteer. May-June, p. 27-30.

PARK DEVELOPMENT HISTORY

In 1933, the state legislature authorized preservation of the area around Gooseberry Falls. The same year the State Conservation Commission and State Highway Department jointly purchased 637.83 acres in this area. Then, in 1934 a Civilian Conservation Corps (CCC) camp was set up in the area. In 1937, the area officially became Gooseberry Falls State Park. The CCC workers completed many projects including: laying out trails; mapping and laying out the campground and the picnic area; and building the refectory, sanitation and other buildings, and a superintendent's house. The CCC camp remained in operation until 1942.

Since the establishment of the park, the legislature has approved boundary expansions to the present 1,662 acres. The park has facilities for hiking, skiing, camping, picnicking, and other activities.

ADJACENT LAND

Nearly all of the land surrounding Gooseberry Falls State Park is forested. The only signs of development other than a few homes or cabins are along TH 61 and the shore of Lake Superior. The only business in a quarter-mile-wide strip all around the park is a restaurant just northeast of the park. The map on page 19 indicates the ownership and use of the land surrounding the park.

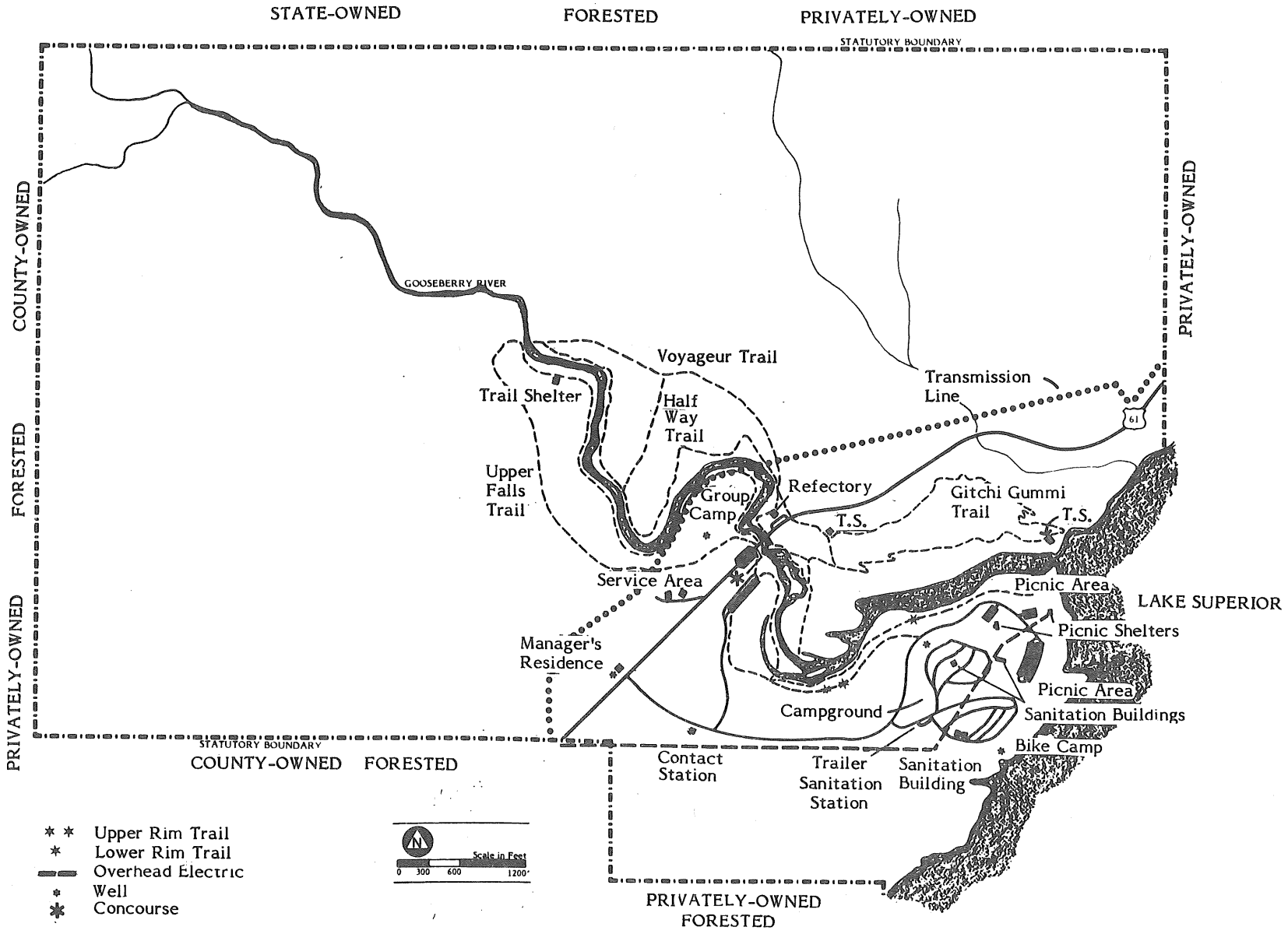
USE AND DEMAND

Present Use

Since 1954, use of Gooseberry Falls State Park has increased over two and a half times (225,000 in 1954 to 587,446 in 1976). Yearly attendance records have shown Gooseberry to be consistently among the five most popular Minnesota state parks.

Although late summer has traditionally been the busiest time, recent statistics indicate that use is becoming more uniform throughout the year.

Day use of Gooseberry has increased, but camping has decreased. This is due to recent park policy rather than slackening demand. Twenty campsites were closed in 1976. In addition, campers are no longer allowed to camp between campsites. So, while the number of campers has dropped from 57,670 in 1970 to 52,870 in 1976, the campground has been filled and campers have been turned away during the peak of the season.


STATE-OWNED
FORESTED
PRIVATELY-OWNED
STATUTORY BOUNDARY
COUNTY-OWNED
FORESTED
PRIVATELY-OWNED
GOOSEBERRY RIVER
Voyageur Trail
Trail Shelter
Half Way Trail
Transmission Line
61
Upper Falls Trail
Group Camp
Refectory
T.S.
Gitchi Gummi Trail
T.S.
Service Area
Picnic Area
LAKE SUPERIOR
Picnic Shelters
Manager's Residence
Picnic Area
Campground
Sanitation Buildings
Bike Camp
STATUTORY BOUNDARY
COUNTY-OWNED
FORESTED
Contact Station
Trailer Sanitation Station
Sanitation Building
PRIVATELY-OWNED
FORESTED
Upper Rim Trail
Lower Rim Trail
Overhead Electric
Well
Concourse
N
Scale in Feet
0 300 600 1200'

See p. 17

Future Use

Use is expected to increase if past annual attendance trends continue. The North Shore Corridor Trail, which was improved and renamed in 1977, will probably boost winter and summer use, especially when the access trail to the park and the trail center are opened.

However, the removal of the highway rest area near Gooseberry Falls will probably mitigate the increase, at least temporarily. (This plan and the North Shore Recreation Study recommend that the rest area be closed because it is hazardous to drivers and pedestrians.) While visitors can now stop at the TH 61 bridge and view the falls, future sightseers will have to enter the park and purchase a park sticker. Paying to see the falls will probably deter some visitors who are now included in the attendance figures.

Camping in Gooseberry will not increase because the campground cannot accommodate more people without serious resource damage. The demand for camping will probably continue to increase on the North Shore. Consequently, managing agencies, including the DNR, should provide additional camping facilities in other areas or encourage their development by private enterprise.

INTRODUCTION

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

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

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

Objectives:

To determine the most suitable management direction for a given unit based on its natural resources and recreational potential

To develop a statewide recreation system which will meet the recreational needs of our society without harming natural resources

RECOMMENDED CLASSIFICATION

Gooseberry Falls State Park has been recommended for classification as a natural state park.

UNIT CONSIDERATIONS

ORA '75 states that to qualify as a natural state park, a park has to fulfill the following criteria:

> "Exemplifies the natural characteristics of the major landscape regions of the state, as shown by accepted classification, 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."

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

"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."

Gooseberry Falls fulfills these criteria. It is an excellent example of the North Shore landscape. The falls are some of the most spectacular of the many falls along the North Shore. The park also contains one of the area's largest estuaries as well as excellent examples of the Lake Superior shoreline.

Gooseberry Falls has a wide spread reputation as a scenic highlight in the state and consistently ranks in the top five most popular parks in the state.

The requirement that a natural park be of sufficient size to protect its resources is the most difficult criteria for Gooseberry Falls State Park to meet. The park attracts so many visitors that the natural character of the park could become impaired. However, astute management directed toward maintaining park resources should protect the park. Development is concentrated in a small area (about 100 acres), which helps protect the resources in the remaining 1,562 acres.

PARK GOAL

The goal for Gooseberry Falls State Park is to maintain its natural character and to provide recreational facilities which will enhance enjoyment of the park.

ZONING

Introduction

Before the specific management of Gooseberry Falls State Park can be considered, a zoning concept must be established to evaluate the various management alternatives. General management strategies can then be determined and expressed by zoning the park for its prime management objectives.

Objectives:

To establish a zoning system which formally recognizes the various features of a park

To identify those areas suitable for specific uses and establish management requirements necessary to provide for recreational needs while protecting the park's resources

Management Zoning

A land classification system utilizing six major management zones was adopted which will permit effective, economical management of the park's resources, centralize legitimate park development and use and protect delicate resources within the park.

Land Classification Zones

To aid in understanding the final zoning concept map, each of the six potential zones have been defined with a description of their prime management objectives.

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

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

Primitive Zone - The primitive zone includes extensive areas of land and water remote from high-density use areas and major developments within the park. Development will be restricted to hiking/skiing trails, primitive walk-in campsites, and appropriate interpretive facilities. Resource management will be directed toward restoring and perpetuating the natural environment and the aesthetic character of that environment.

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

Historical and Cultural Zone - The historical and cultural zone includes those sites which help to illustrate the historical and archeological heritage of the area that would be preserved or restored. Activities should emphasize the interpretive values of the site. Recreational development will be restricted to activities hiking/skiing trails, small picnic areas, interpretive facilities, and parking. Activities and improvements should be limited to those which will not detrimentally affect the preservation and restoration of these sites and should be reviewed with the Minnesota Historical Society. All historical or cultural sites should be surrounded by sufficient natural buffers to minimize encroachment from other activities. Natural resource management activities should maintain and perpetuate historical and cultural values while insuring regeneration of native or historically compatible plant and animal species.

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

Potential Zones

Ecological Protection Zone, p. 24 - Three major areas in the park should be zoned for ecological protection because of their sensitive nature and their potential to be damaged by major development: the gorge of the Gooseberry River, a major deer yarding area in the southwest corner, and the shore of Lake Superior.

Any development in the gorge could seriously impair its rugged beauty as well as erode fragile soils, damage plants, disturb nesting birds, and contribute to siltation of the Gooseberry River.

Also, the conifer swamp in the southwest corner of the park, a major wintering area for local deer herds, is also sensitive to development. It is important that no major development competes with deer for space, or forces the deer to move during times of stress.

Finally, the shore of Lake Superior should be protected from development to maintain both its natural character and to be consistent with the requirements of the Shorelands Management Act of 1969.

Outstanding Natural Feature Zone, p. 25 - Most of the Gooseberry River, from the Upper Falls to its mouth, should be zoned as outstanding natural features. This overlaps considerably with the ecological protection zone. The lower Gooseberry River is among the top attractions of the North Shore and one of the best examples of the landscape that typifies the area. The falls are the major attraction of the park.

Development Zone, p. 25 - Most soils in Gooseberry pose severe limitations to development, though some areas can be utilized with only moderate limitations. The Potential Development Zone Map on page 30 highlights areas with both moderate and severe development limitations.

Established Zones

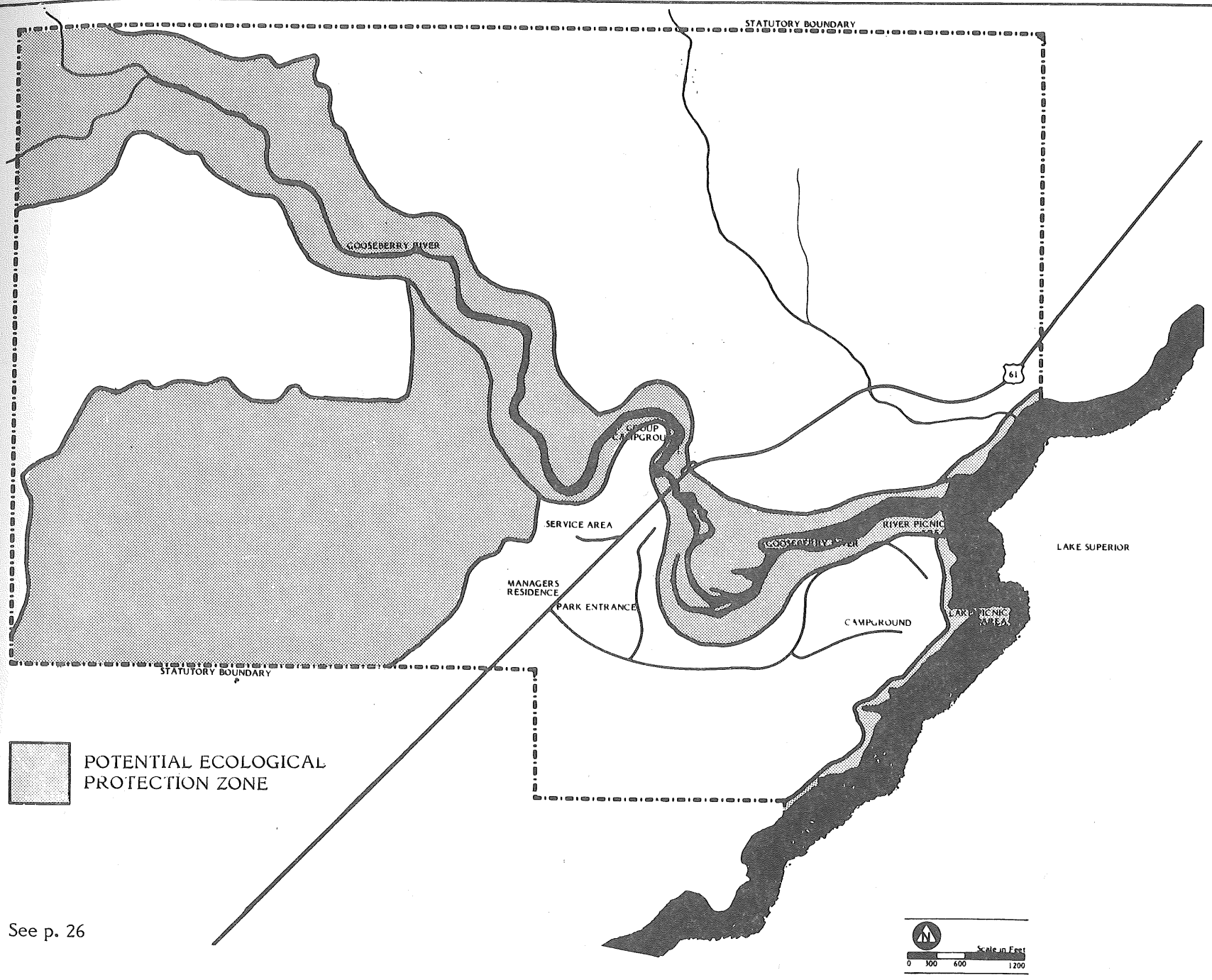
The final zoning map (p. 31) is a composite of all the potential zones. Where an area qualified for more than one zoning designation, the zone with the most restrictive management was usually chosen. This final zoning map will be used to guide resource and recreation management decisions.

Zone 1 - Ecological Protection Zones - Three areas are in ecological protection zones: the conifer swamp in the southwestern part of the park, the lakeshore, and the river gorge. A short section of the gorge and small part of the shore, however, were placed in the outstanding natural feature zone.

Zone 2 - Outstanding Natural Feature Zones - Two areas were placed in outstanding natural feature zones. The first area is the series of waterfalls by TH 61, perhaps the most spectacular falls in the state. The other area includes the river mouth, the picnic area, and the nearby shoreline. The river mouth area is the second most popular park feature. The area is unique both because of its accessibility and its combination of rock outcroppings, water, and vegetation. Although both the gorge and the river mouth could have been put in the more restrictive ecological protection zone, they were zoned as outstanding natural features. Since the falls and shore are the main attractions in the park, people will visit these areas regardless of how they are classified. Therefore, it was decided that the preservation of these areas and the goal of the park plan could best be accomplished by accepting the fact that people use these areas.

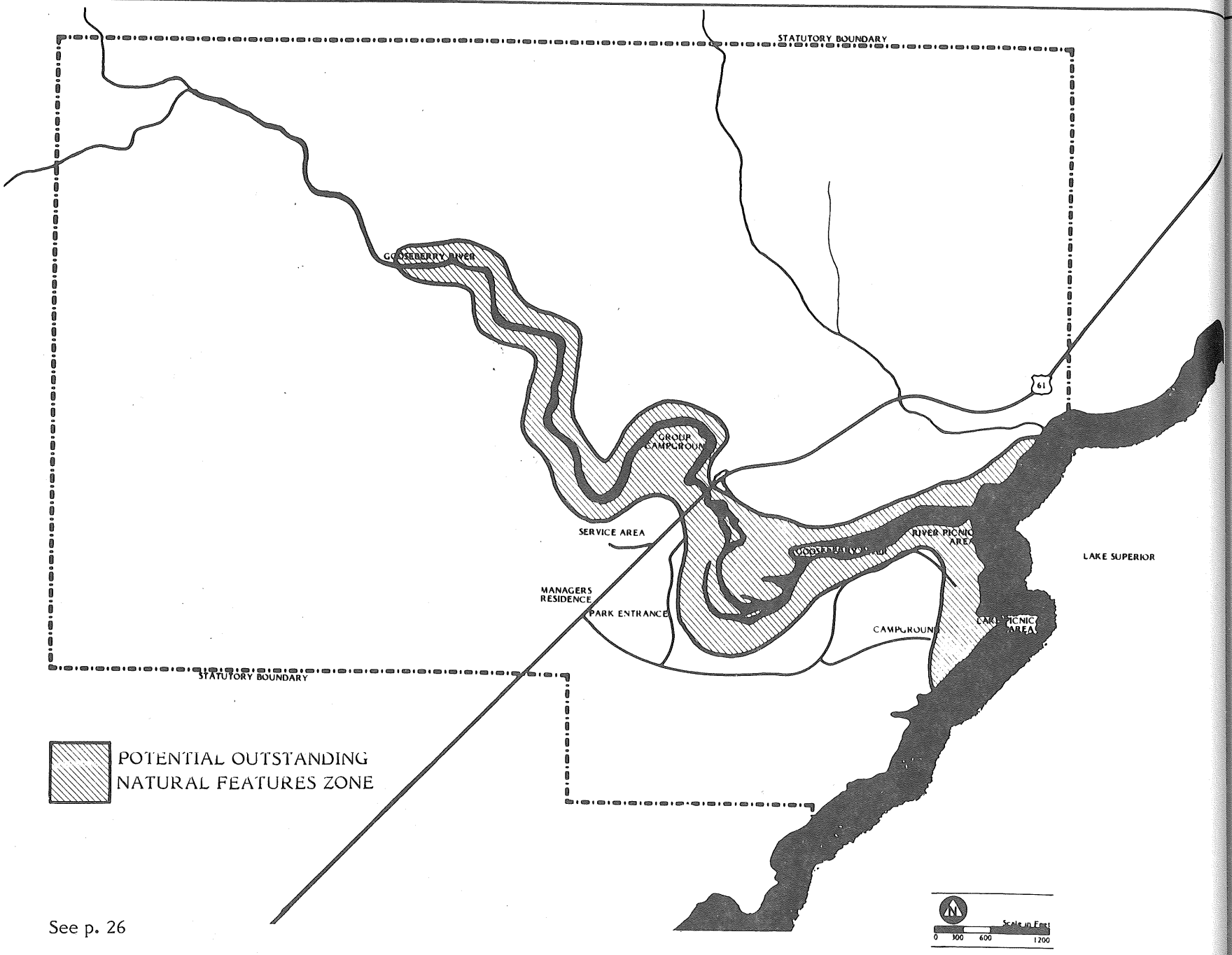
Zone 4 - General Environment Zones - This zone includes the remainder of the park. Some land in this zone could have been classified into a more restrictive zone, but the parcels were not large enough to justify this action.

Zone 6 - Development Zones - Although no area of Gooseberry is well-suited to development, much of the park can be developed if precautions are taken. Five areas have been designated as development zones. Four of these areas have already been developed to some degree including: the present campground area, the contact station area, the shop and concourse area, and the area immediately surrounding the refectory. These sites should continue to be used, since actions have been taken to overcome soil limitations. This plan also proposes an expansion northwest of the refectory, which will include a parking lot and picnic area. This new area is near the northwest corner of the park, where a new group camp is also proposed.


STATUTORY BOUNDARY
GOOSEBERRY RIVER
61
SERVICE AREA
MANAGERS
RESIDENCE
PARK ENTRANCE
RIVER PICNIC
CAMPGROUND
LAKE SUPERIOR
STATUTORY BOUNDARY
POTENTIAL ECOLOGICAL
PROTECTION ZONE
Scale in Feet
0 300 600 1200

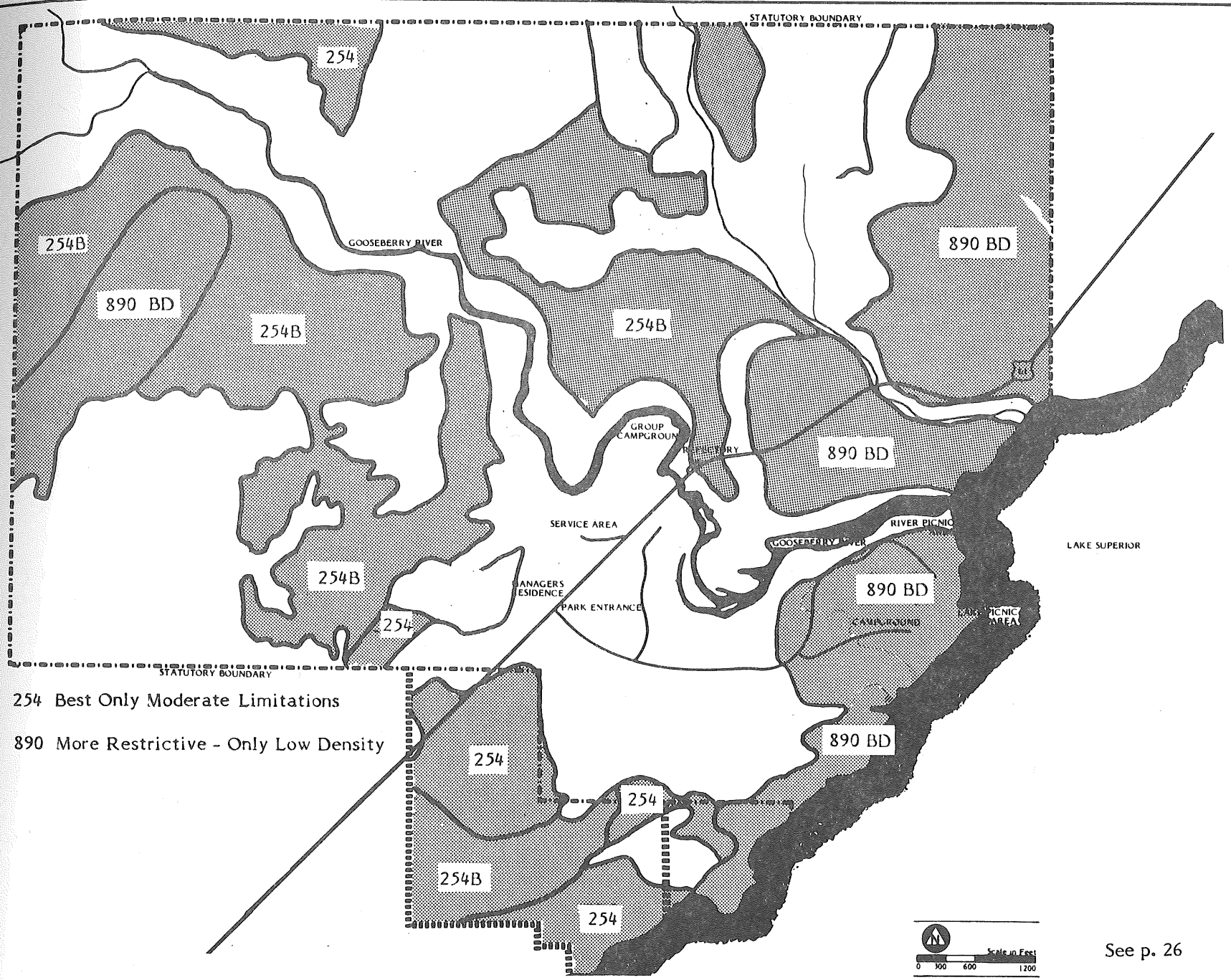
See p. 26

POTENTIAL OUTSTANDING NATURAL FEATURES ZONE



See p. 26

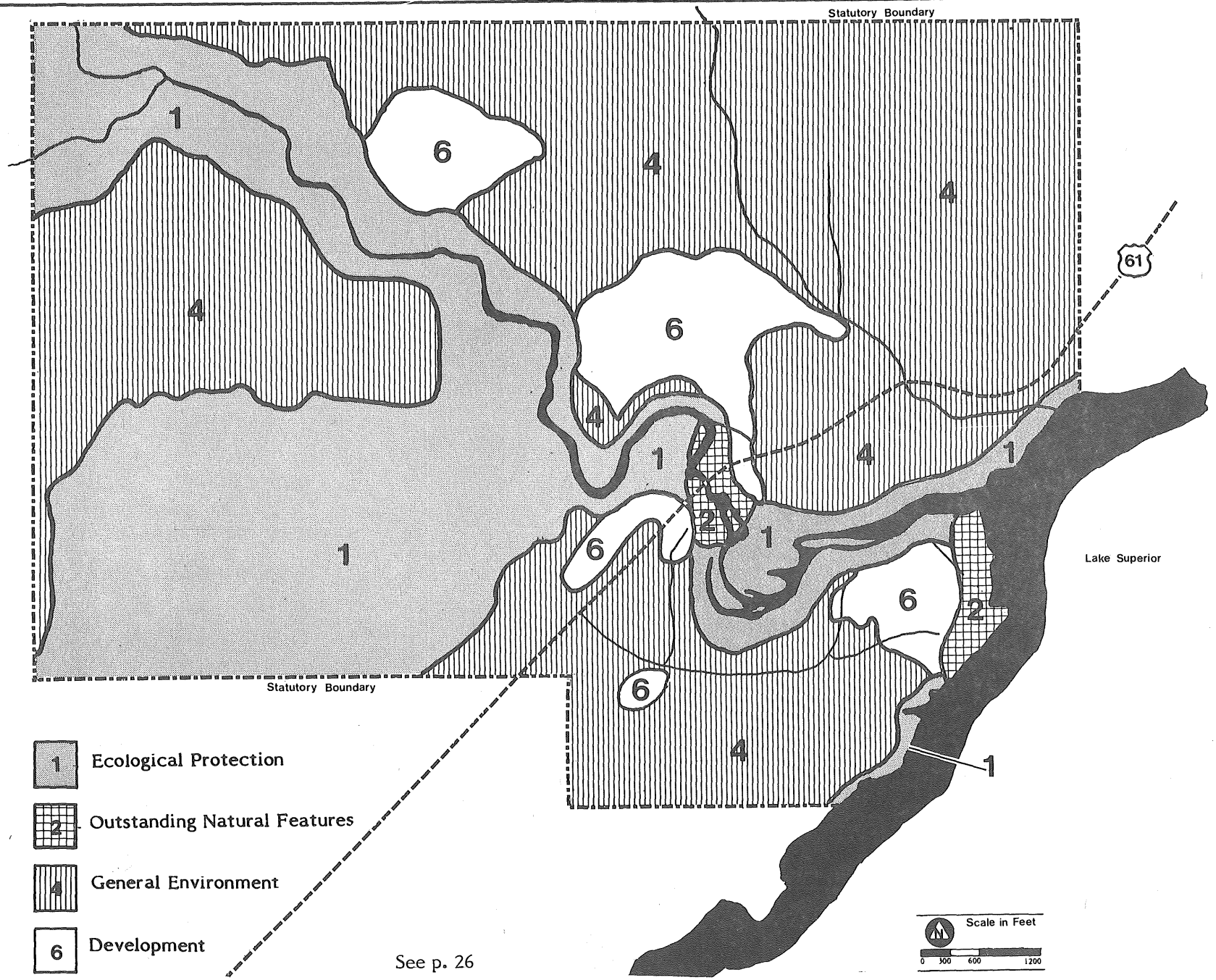
POTENTIAL DEVELOPMENT ZONES



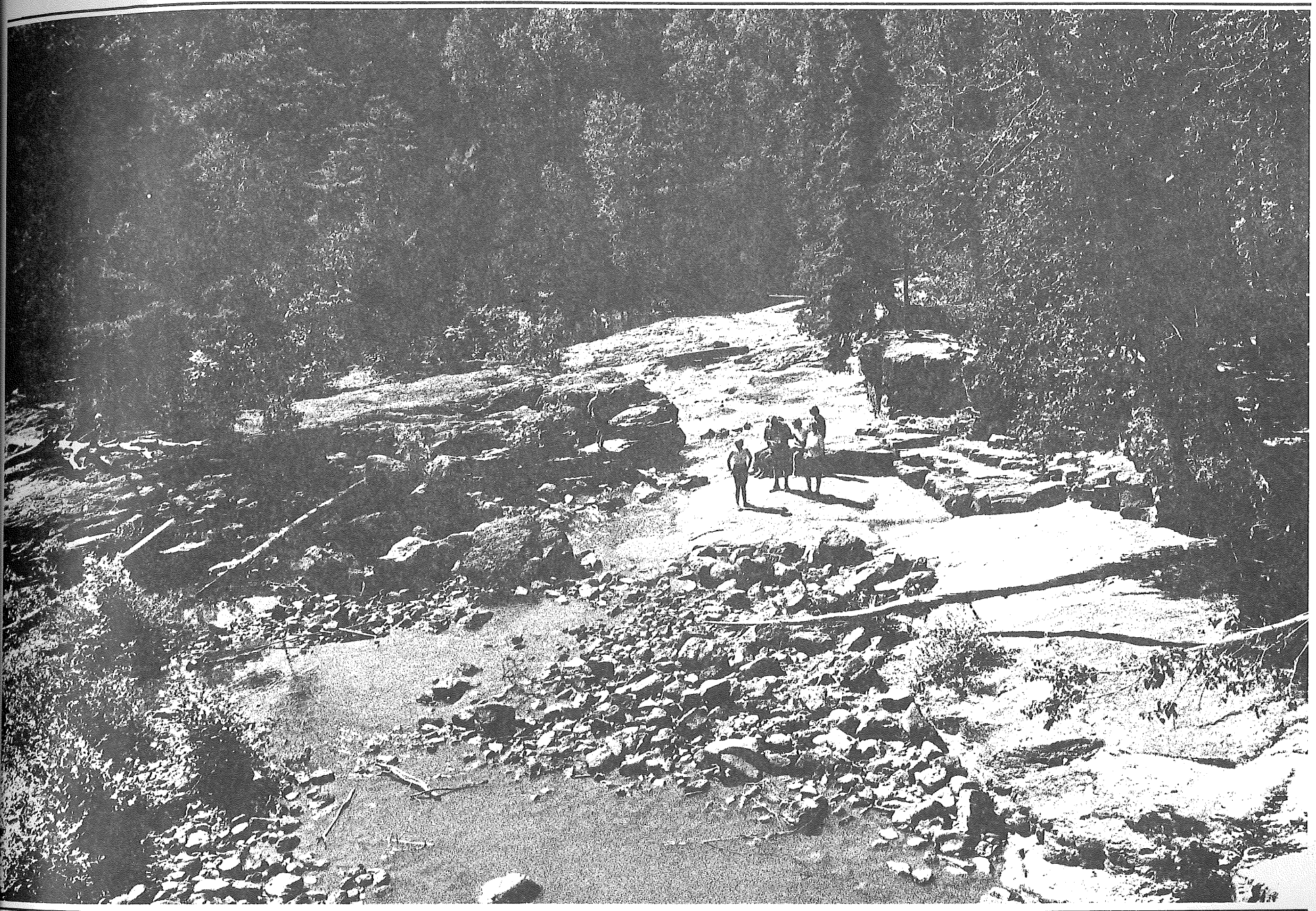
254 Best Only Moderate Limitations

890 More Restrictive - Only Low Density

See p. 26


Statutory Boundary
Statutory Boundary
61
Lake Superior
1 Ecological Protection
2 Outstanding Natural Features
4 General Environment
6 Development
Scale in Feet
0 300 600 1200

See p. 26



WATERS

Introduction

No single element plays a more important role in the total environment and its component life support systems than water. Besides nourishing vegetation and wildlife, water provides aesthetic and recreational experiences for park users.

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

Inventory - Groundwater Hydrology

There is little groundwater information available for Gooseberry Falls. The well information in the table below , however, gives some idea of the underground hydrology.

The well depths and large drawdown from small volume pumps indicate that the sources of these wells are fractures in the bedrock. These wells generally have a smaller volume than wells in glacial till because of slower recharge. Bedrock aquifers are recharged by slow percolation from above or underground streams flowing in the fractures. In addition, a well may tap an underground reservoir which, for practical purposes, is not recharged at all. If the aquifer is recharged by underground streams, the recharge area is in the inland hills.

Limited water quality data are available at present, however, the Department of Health checks the wells every year and would close them if they were below standard..

The locations of these wells are shown on the Existing Development - Adjacent Land Map, page 19.

Well Log

Well	Depth	Static Water Level	Volume	Drawdown
Group Camp	235'	22'	12 gpm	58'
Campground	500'	59.6'	10 gpm	20'
Manager's Residence	400'	46'	4 gpm	60'

Surface Water Inventory

Gooseberry Falls State Park borders or includes three bodies of water: Lake Superior, the Gooseberry River, and Nelson Creek. The management of Lake Superior is beyond the scope of this study and no information is available for Nelson Creek.

The Minnesota Conservation Department (now the DNR) conducted a 1963 stream survey of the Gooseberry from its mouth to the Lower Falls at TH 61.

The first 3,000 feet is an estuary averaging 110.2 feet wide, with the remaining 1,000 feet to the falls averaging 32.8 feet. The average depth for the whole section is 31.6 inches but the upper 1,000 feet averages only 19.25 inches. The upper 1,000 feet has an average gradient of 1.8 feet per 100 feet and a ratio of 37.5% pool to 62.5% riffles.

The bottom types for the whole sector of the river consist of silt or muck (68.7%), boulders (16.3%), rubble (7.6%), and gravel (3.7%).

Streamflow varies considerably both seasonally and annually.

The mouth tends to become silt clogged during low water. However, the only permanent barriers are the falls. Beavers built a dam across the river in 1975, but it was washed out during the next spring run-off.

The Gooseberry River has no tributaries inside the park boundary. But it is classified a 1B, 2A, and 3B river by the Minnesota Pollution Control Agency (PCA). The 1B standards apply to drinking water, 2A to recreation, and 3B to commercial use. According to the PCA, Gooseberry River meets the standards of all three catagories.

The water temperature ranges from a low of $32^{o}F$ to a high of $72^{o}F$. The average temperature for the warm months (April through September) is $54.5^{o}F$. The river has dissolved oxygen ranging from 6.8 parts per million (ppm) to 16.1 ppm with an average of 12.1 ppm. The fecal coliform count and $CaCO_3$ levels (hardness), lead, cadmium, zinc, arsenic, and selenium were all below minimum tolerance levels. Copper and mercury were above tolerance levels only twice and once respectively. Iron is the only element with levels above acceptable tolerances nearly all the time. The tolerance levels, however, for all the metals except copper were for class 1A water. The copper tolerance level was based on the 2A class.

Management

Objectives:

To maintain high quality groundwater

To maintain the quality of surface water at PCA recreational-fisheries standards

- Specific Management

The aquifers in this park are in the bedrock. Therefore, all development within the park should be placed to avoid degradation of these underground water resources. The DNR should work with county and local governments to ensure that land uses outside the park boundaries do not adversely affect the groundwater.

Gooseberry River and Nelson Creek have little surface use because neither stream is navigable, except by canoe or kayak during high water. Shoreline use, however, could affect the streams. This plan recommends that no potentially damaging recreation development be placed along either of these streams.

FISHERIES

Introduction

Fishing is one of the most popular sports in Minnesota. Each year more than 1.5 million Minnesotans, as well as thousands of out–of–state tourists, fish the state's lakes and streams. With this tremendous pressure on fish populations, every effort should be made to maintain or improve them.

The primary goal of fisheries management programs is to maintain the optimal natural fish population that a water body can support. This optimum, which is usually defined as the greatest number of naturally reproducing, catchable-sized fish, is determined by such factors as water fertility, oxygen supply, and water temperature. Periodic fishery surveys are conducted to determine species diversity, size, and condition of fish populations. The results of these surveys determine the classification and specific management goals for a lake or stream.

Inventory

With the present fishing pressure and the lack of spawning areas, the Gooseberry River will not sustain a population of any trout species. Habitat improvement, however, might enable various trout species to reproduce in numbers sufficient to sustain populations.

The Gooseberry River, the only water body in the park that has been studied for fisheries, was surveyed by the DNR, Division of Fisheries in 1963.

The fish species found in the river during the survey were rainbow and brown trout. There were 527 young–of–the–year rainbows below the east falls, mostly concentrated in the pool immediately below the falls. There were no young–of–the–year below the west falls. No size or number data were available for brown trout.

The vegetation in the river is limited to scattered pondweeds, bur-reeds, and red algae. The spawning areas in the Gooseberry are poor and are confined to the pools below the falls.

The river was fished intensively during the early 1960s. Fishing for rainbows was good, but few browns were caught.

The river has been stocked with brown trout since 1906, and with rainbows and browns since 1916. Coho salmon were stocked in the river above the park in 1974.

Management

Objective:

To manage the Gooseberry River as a self-sustaining trout stream

- Specific Management

The Gooseberry River is divided into two management units.

Unit one is from the mouth of the river to Lower Falls at TH 61. This stretch of river includes a 3,000-foot estuary. Fish habitat improvement will be accomplished by removing the gravel bar at the mouth of the river. This will keep the water cool and well-aerated, making the river more suitable for spawning. It will also prevent the fish from being trapped in the estuary during low water.

Cost: $100 annually

Unit two is from Lower Falls to Upper Falls in the center of the park. This section of the river is managed for rainbow trout. The management practices recommended for this unit are: annually stocking rainbow yearlings or fry, maintaining the present stream habitat, and placing additional habitat structures such as felled trees or rock piles in the stream to improve natural reproduction. These structures may increase natural reproduction and make stocking unnecessary. The area fisheries manager will determine whether stocking is necessary.

Cost: $2,000 annually

Both units are monitored regularly. The fisheries manager, in consultation with the park manager and park planning staff, will decide if other species should be stocked.

Cost: Included in budget of the Section of Fisheries

SOILS

Introduction

The soils of a state park are one of its most important basic resources. Soil structure, type, and fertility play an important role in dictating what types of vegetation will be found in the park or which plant communities might logically be reintroduced to approximate those communities which exerted a dominant influence in the formation of that soil type.

Soils data must also be considered when locating park roads, recreational buildings, intensive use areas (e.g., campgrounds and picnic areas), and sewage lagoons and septic tank filter fields. Consequently, the development of a park management plan depends heavily upon detailed soil surveys of a park. Through the use of such surveys, environmentally sound, intelligent resource management decisions can be made.

Inventory

Nearly all the soils in Gooseberry Falls State Park have some limitations for intensive recreational development. The soils are either loams, clays, or shallow loams and gravels over bedrock. The map on page 39 shows the locations of soils in Gooseberry Falls State Park. The table on page 40 describes the limitations and characteristics of each soil.

One soils complex, the Barto-Quetico, consists of a combination of soils and slopes that is difficult to map precisely. Areas on the soils map that have these soils have been labeled according to the dominant soil, without regard for slope.

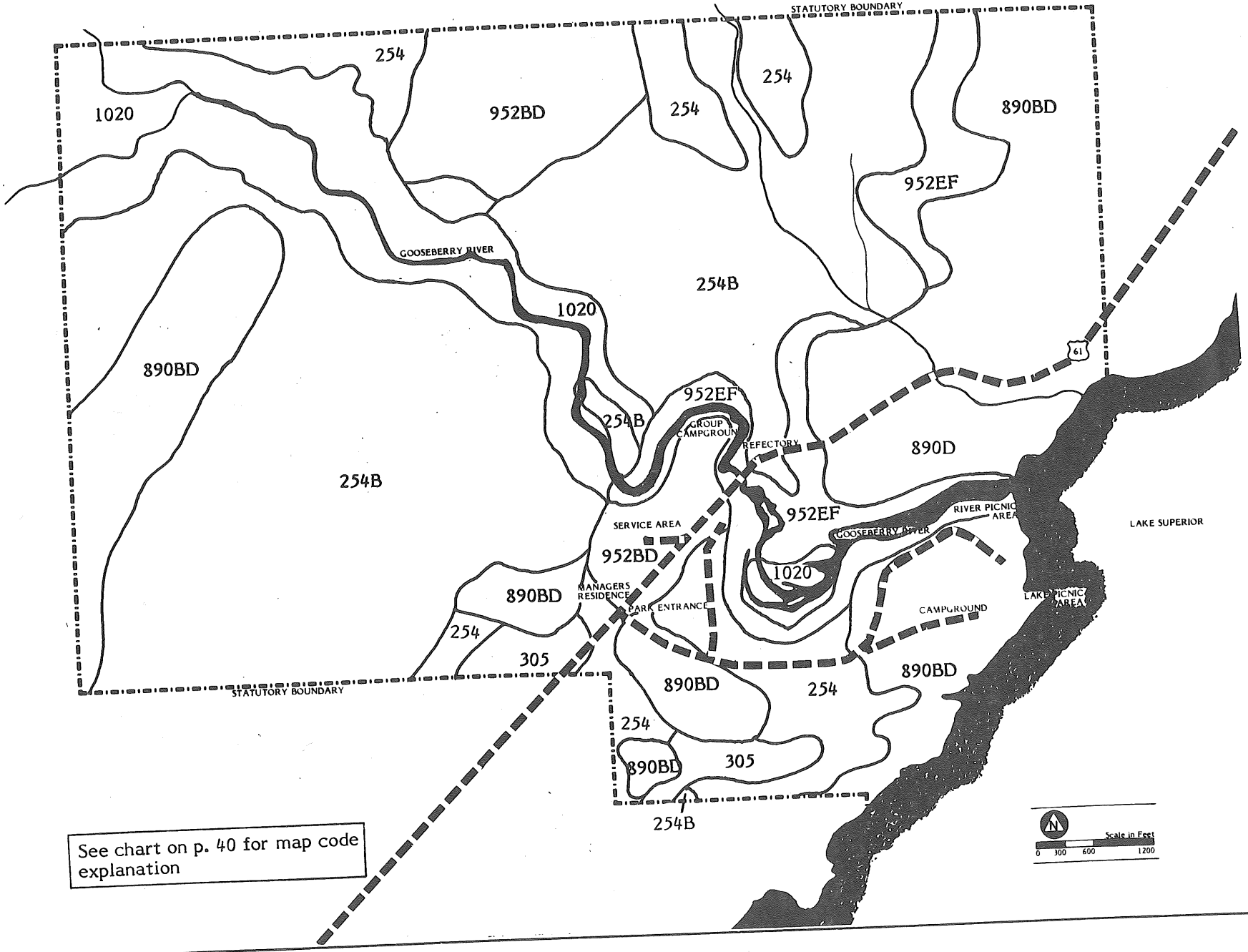
Management

Objective:

To alleviate or avoid compaction and erosion at campgrounds, trails, and other use areas

•Specific Management

Development and heavy use areas will be located on gentle slopes of Hibbing loam over clay, a soil adequate for recreational development. However, even this series has slow permeability, which means wet, muddy surfaces after rain. Consequently, heavy use without some surface modification may lead to surface ponding or erosion. The other soils generally are not suitable for development except trails.



See chart on p. 40 for map code explanation

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	890BD	0-15	2-6	Slight	Low[D]	Moderate[1,2]	Moderate[2]	Slight	Severe[D-3]	Severe[3]	Severe[3]
		15-18	2-6	Slight	Low[D]	Severe[1,2]	Severe[2,1]	Moderate[1]	Severe[B-3]	Severe[3]	Severe[3]
Bergland	305	0-2	.06-.2	Slight	No Data	Severe[2,7]	Severe[6,2,7]	Severe[7,2]	Severe[C-10,7]	Severe[D,7]	Severe[6,27]
Clayey Eutrochrepts	1020	25-60	<.06-.2	Severe	Moderate	Very Severe[1]	Very Severe[1]	Severe[1]	Severe[C-1]	Severe[1]	Severe[1]
Hibbing	254	0-8	.06-2	Slight	High[D]	Slight	Moderate[6]	Slight	Severe[B-10]	Slt.-Mod.[1]	Severe[6]
	254B	8-15	.06-2	Slight	High[D]	Moderate[1]	Moderate[1,6]	Slight	Severe[B-10]	Severe[1]	Severe[6]
		15-24	.06-2	Moderate	High[D]	Severe[1]	Severe[1]	Moderate[1]	Severe[B-1]	Severe[1]	Severe[1,6]
Quetico	952BD	0-15	.6-2	Severe	Low[D]	Severe[2]	Severe[2]	Moderate[2]	Severe[3]	Severe[3,1]	Severe[3]
		15-25	.6-2	Severe	Low[D]	Severe[1,2]	Severe[1,2]	Moderate[1,2]	Severe[3,1]	Severe[3,1]	Severe[3,1]
	952EF	25+	.6-2	Severe	Low[D]	Severe[1,2]	Severe[1,2]	Severe[1,2]	Severe[3,1]	Severe[3,1]	Severe[3,1]

Slight - Limitations for a stated use are minor and can be overcome easily.

Moderate - Limitations for a stated use can be overcome by special planning, design, or maintenance.

Severe - Limitations for a stated use generally require a major soil reclamation, special design, or intensive maintenance.

[A] Permeability measured in inches per hour

[B] Based on buildings without basements

[C] Based on buildings with a basement or foundation

[D] Estimated from available data

[1] Slope
[2] Surface Texture
[3] Depth to Bedrock
[4] Flooding (Duration & Frequency)
[5] Pollution Potential
[6] Permeability
[7] Water Table
[8] Frost Action
[9] Drainage
[10] Shrink-Swell

Erosion problems now exist in the park. There are many sections of trails where erosion and compaction has either formed small depressions in the trail or obliterated the trail entirely. Corrective measures will include: rerouting portions of trails and surfacing with gravel, woodchips, crushed rock conglomerate, or paving.

Cost: See Recreation Management, pp. 71-86 for specific actions and costs.

Another erosion problem exists at the mouth of the Gooseberry River where wave action has eroded the bank so deeply that the old pumphouse will fall into Lake Superior if action is not taken soon. The pumphouse is no longer used and should be removed.

Cost: No development cost anticipated.

The campground has serious soil compaction problems. Methods of alleviating these problems include aerating topsoil, adding topsoil, and closing some sites.

VEGETATION

Introduction

To rapidly inventory the vegetation component of a park, a system was devised which would not only categorize vegetation, but would also recognize those species of wildlife normally associated with specific plant communities. The system used to describe vegetation/wildlife associations is called the ecological community system. In designing the system, several factors were considered including: existing land use patterns, soil wetness, plant species composition, physical appearance (i.e., grassy, brush, forest, or bare), and the habitat choices of the various species of wildlife commonly found in Minnesota. An inventory process which allowed a relatively high degree of reliability (80%) and did not require intensive field work was required. The method chosen for the inventory process was the use of 9 x 9 stereoscopic aerial photographs.

Original Vegetation

Gooseberry's original vegetation was a mixture of pine and northern hardwoods. Detailed maps of the original vegetation are not available, however, many huge stumps still can be seen where pine stands once grew.

Existing Ecological Communities

The predominant ecological communities now in the park include: mature pioneer hardwoods and conifers, conifer bogs and swamps, marshes and ponds, alder-willow lowlands, and spruce fir communities. These communities are shown on the map page 44.

Major Ecological Communities

Mature Pioneer Hardwoods - Mature pioneer hardwoods communities interspersed with conifers generally cover most of the park. These second-growth communities replaced the pine that was logged during the early 1900s. They are generally dominated by either aspen or paper birch. Pioneer hardwood species are relatively shortlived and are replaced by species that do well in shade. Replacement species include white spruce, balsam fir, and white pine.

Dominant Tree Species

Quaking aspen
Big-tooth aspen
Paper birch

Dominant Shrub Species

Red osier dogwood
Mountain maple
Beaked hazel

Dominant Ground Cover Species

Big-leaf aster
Bunchberry
Thimbleberry
Wild strawberry
Bracken fern
Horsetail
Mosses and lichens

Conifer Bogs and Swamps - Conifer bogs and swamps occupy the low-lying areas in the park, where relatively dense stands of black spruce and northern white cedar predominate. Deer browsing on northern white cedar is moderate to heavy. Little of the cedar is left where deer can reach. The understory, red osier dogwood and mountain maple, is also browsed.

Dominant Tree Species

Black spruce
Balsam fir
Northern white cedar

Dominant Shrub Species

Red osier dogwood
Alder
Mountain maple

Dominant Ground Cover

Same as for mature pioneer hardwood communities, except Labrador tea is very abundant.

Scenic Communities

The rugged topography, rock outcrops, waterfalls, and Lake Superior combined with pale-colored aspen and birch, huge pine, and other conifers form an interesting, highly scenic landscape.

Diseased or Damaged, Mature, or Overmature Stands

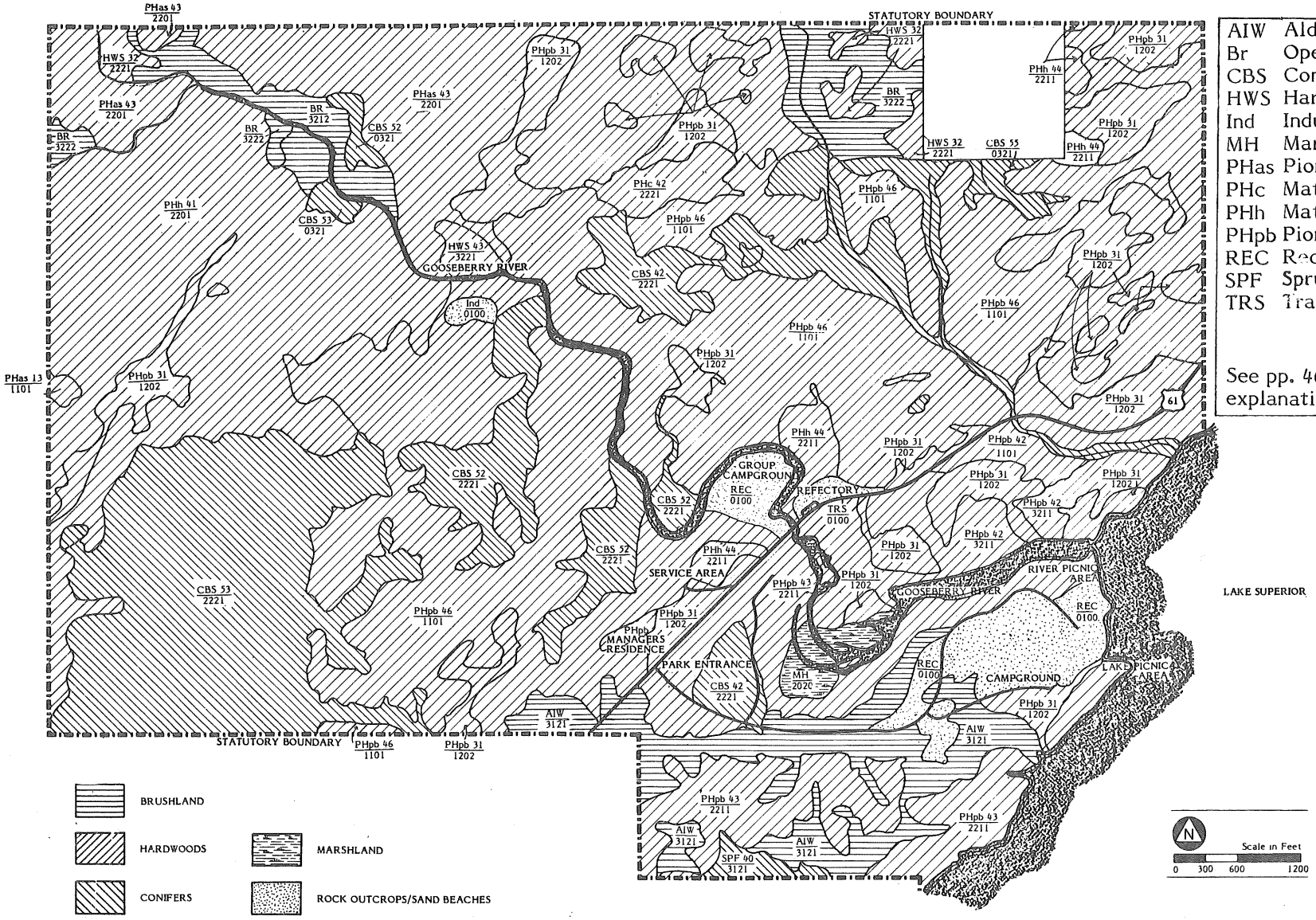
Trees and other plants have suffered in heavy use areas. People have compacted soils, girdled birch trees, cut trees for firewood, and pounded nails into trees.

Some trees suffer from disease or overmaturity. Some white pine in the north-central part of the park is affected by white pine blister rust. Balm of Gilead and birch in the north-central part and aspen in most of the northern portion are deteriorating because of age. Balsam fir in the southwest corner of the park is dying as a result of spruce budworm attacks. Cedar, as in much of northern Minnesota, is not regenerating for unknown reasons.

The U.S. Forest Service, North Central Forest Experiment Station, should be asked to study these diseases and insect problems and to determine a practical method for controlling them.

Wildlife/Vegetation Relationships

The vegetation throughout the park is valuable as wildlife habitat. Shrubs and trees, especially red osier dogwood and northern white cedar, are heavily browsed by deer, and the conifer bog and swamp communities serve as deer yarding areas. Beaver feed on the aspen near the river.



AIW	Alder-Willow
Br	Open Brush
CBS	Conifer Bogs and Swamps
HWS	Hardwood Swamps
Ind	Industrial
MH	Marsh
PHas	Pioneer Hardwood/Aspen
PHc	Mature Pioneer Hardwood/Con
PHh	Mature Pioneer Hardwoods
PHpb	Pioneer Hardwoods/Paper Birch
REC	Recreation
SPF	Spruce-Fir
TRS	Transportation

See pp. 46-47 for map code explanation

Overstory Size and Density Code

	Size				
	1	2	3	4	5
Density	Seedlings (0-1"dbh) Trees/Acres	Saplings (1"-5" dbh) Trees/Acres	Poles (5"-9" dbh) Trees/Acres	Small Saw Timber (9"-15" dbh) Trees/Acres	Large Saw Timber (15"+ dbh) Trees/Acres
0	*	*	0-30	0-19	9-5
1	0-500	0-250	31-90	11-40	6-20
2	500-1,000	251-500	91-150	41-60	21-30
3	1,001-2,000	501-1,000	151-210	61-80	31-45
4	2,001-5,000	1,001-2,500	211-270	81-100	46-60
5	5,001-10,000	2,501-5,000	271-330	101-130	61-75
6	10,000-20,000	5,001-10,000	331-390	131-150	76-90
7	20,001-30,000	10,001-15,000	391-450	151-180	91-105
8	**	**	451-510	181-200	**
9	**	**	511+	201+	**

* dbh - diameter/breast height
** Not a valid density code for these size classes

Succession Code

Letters in parentheses indicate which ecological community will most likely replace the existing one barring fire or wind damage.

Example: Pioneer Hardwood-aspen community - with an understory northern hardwoods component would be described as PHas 36 (NoH)

Shrub Density; Woody plant material usually greater than 4' tall.

0 None; Brush layer absent, may have been removed by artificial means.

1 Light; High visibility within stand even when leaves are out; no difficulty encountered in walking through stand.

2 Moderate; Some visual obstruction by small to large brush pockets. Walking may be hindered to some degree by brush.

3 Heavy; Visual obstruction severe, visibility limited to less than 100', walking is extremely difficult.

Ground Cover Density; Herbaceous plant material usually less than 6' tall.

0 None; Litter layer absent, native ground cover absent or heavily disturbed by use.

1 Light; Litter layer readily visible, low growing plants widely scattered or in small clusters.

2 Moderate; Litter layer somewhat obscured by low growing plants; occasional extensive areas without plants may occur.

3 Heavy; Litter layer obscured by low growing plants.

Fire Susceptibility; Ease with which the plant community can carry a fire during the normal seasonal fire period.

0 None; fuel is sparse or absent.

1 Low; adequate fuel to carry a fire is present in scattered patches.

2 Moderate; fuel is present in sufficient amounts to carry a fire for some distance.

3 High; large accumulations of fuel. Potential for extensive, damaging fire is great.

Example: Pioneer Hardwood-aspen community with dense hazel and ground cover (with a moderate fire susceptibility would be expressed as: $\frac{PH_{as}36}{332}$

Management

Objectives:

To reestablish the vegetation communities that existed in the park prior to settlement by Europeans

To manage vegetation to enhance diversity and scenic quality and to control erosion

To manage deer food and cover species to curb road kills

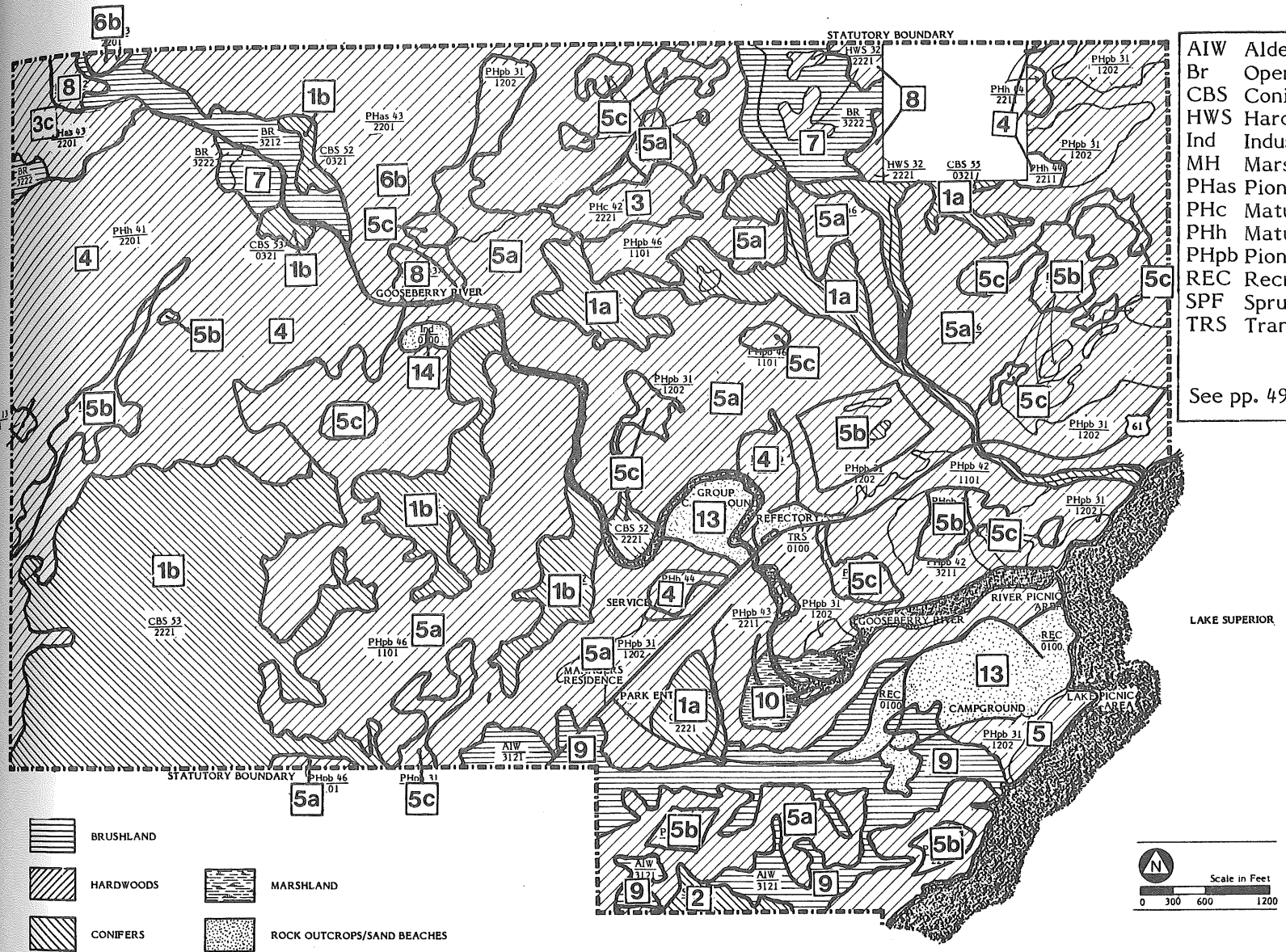
(Further discussion of vegetation management proposals that would benefit wildlife are in the Wildlife Section.)

- Specific Management:

The following table discusses management practices on specific areas within the park:

Vegetation Management Table

Map Code	Ecological Community	Management Practice	Specific Management	Estimated Cost
1a	Conifer Bogs and Swamps (CBS 55 and 42) 65 acres	Passive Management	Fire suppression will be the only active management.	None
1b	Conifer Bogs and Swamps (CBS 53 and 52) 201 acres	Timber Removal Reforestation	A long-term program should be started to regenerate spruce, balsam, and cedar. In 1978 3-5 small tracts (2-5 acres) in these areas should be selected to serve as test plots for white cedar regeneration. A research project should be carried out on these tracts to determine the best method of cedar regeneration. If regeneration is successful, more tracts should be selected in 1988. One method is to remove the large timber and large brush from the tract and then burn the tract to clear the litter. Once prepared, the site should be planted. The timber should be cut by park workers or by issuing firewood permits to the public. If a seed source is available, some tracts should be left for natural reproduction.	Cutting $250/acre $1,500-$6,500/10 yrs. Burning $60/acre $360-1,500/10 yrs. Planting $25/acre $150-$625/10 yrs.



AIW	Alder-Willow
Br	Open Brush
CBS	Conifer Bogs and Swamps
HWS	Hardwood Swamps
Ind	Industrial
MH	Marsh
PHas	Pioneer Hardwood/Aspen
PHc	Mature Pioneer Hardwood/Conifer
PHh	Mature Pioneer Hardwoods
PHpb	Pioneer Hardwoods/Paper Birch
REC	Recreation
SPF	Spruce-Fir
TRS	Transportation

See pp. 49-54 for map code references

Map Code	Ecological Community	Management Practice	Specific Management	Estimated Cost
2	Spruce-Fir (SPF 40) 11 acres	Passive Management	Fire suppression will be the only active management.	None
3	Mature Pioneer Hardwoods/ Conifers (PHc 42) 11 acres	Passive Management	Fire suppression will be the only active management.	None
4	Mature Pioneer Hardwoods (PHh 41 and 44) 208 acres	Passive Management	Fire suppression will be the only active management. Though these stands are mature, they are expected to remain in good condition beyond the ten-year projection of this plan.	None
5a	Pioneer Hardwoods/ Paper Birch (PHpb 31, 42, 43, 46) 637 acres	Passive Management	Fire suppression and sanitation cutting will be the only active management.	None
5b	Pioneer Hardwoods/ Paper Brich (PHpb 31, 42, 43, 46) 36 acres	Timber Removal, Reforestation	These areas will be planted with conifers to reestablish examples of the large pine that once grew in the park area. A three-step process will be used to make the conversion from birch to conifer. The first step in 1978, will be to selectively cut half of the standing birch to open the canopy. Issuance of firewood permits or park workers may be used to remove the timber. A mixture of white pine, Norway pine, and white spruce seedlings should be randomly planted at a rate of 700 trees an acre. Three to five years later (depending on how well the seedlings are doing) the remaining canopy should be removed, again by park workers or issuance of firewood	Cutting Step 1 and 3 $250/acre $9,000/10 yr. Planting Step 2 $25/acre $1,525/10 yrs.

Map Code	Ecological Community	Management Practice	Specific Management	Estimated Cost
			permits. If this technique is successful, then another set of tracts should be cut in ten years.	
5c	Pioneer Hardwoods/ Paper Birch (PHpb 31 and 46) 58 acres	Timber Harvest, Wildlife Openings	These areas should be opened and maintained as woodland meadows. In most PHpb 31 stands there are openings already and only a widening or removal of the remaining trees will be necessary to create the desired effect. Timber removal can be accomplished by issuing firewood permits, if the areas are accessible. If the areas are not accessible, then park workers should cut the timber. Approved chemicals should be used to maintain the openings. Nine acres should be opened in 1978-79, ten acres each year 1980-83, and nine acres in 1986.	Cutting $250/acre $14,500/10 yr. Burning $60/acre $3,480/10 yrs. Chemical $5/acre $435/10 yrs.
6a	Pioneer Hardwoods/ Aspen (PHas 13) 2 acres	Passive Management	Fire suppression will be the only active management. This stand is young and in excellent condition.	None
6b	Pioneer Hardwoods/ Aspen (PHas 43) 122 acres	Timber Removal	The majority of this stand is in good condition. There are areas, however, where the aspen is deteriorating. Therefore, it should be cut and allowed to regenerate. A forester should select two five-acre tracts per year for clearcutting starting in 1983. The tracts should be those most in need of cutting each year. If the tracts can be reached with equipment, logging contracts should be used, otherwise issuance of firewood permits or park personnel should be used to remove the timber. The slash should be knocked down but left on the site.	Cutting $250/acre $2,500/yr. $12,500/5 yrs.

Map Code	Ecological Community	Management Practice	Specific Management	Estimated Cost
6c	Pioneer Hardwoods/ Aspen (PHas 43) 20 acres	Timber Removal	This stand is deteriorating rapidly and should be clearcut. The stand should be removed with ten acres cut in 1978 and the other 10 acres in 1983. A commercial logging company should be contracted to remove timber, if a market for aspen pulp develops. Otherwise, park personnel with a bulldozer may be used. Firewood permits may be issued to clean up the slash.	Cutting $250/acre $2,500/yr. $5,000/10 yrs.
7	Open Brush (BR) 45 acres	Passive Management	No active management except for fire suppression.	None
8	Hardwood Swamp (HWS 32, 43) 16 acres	Passive Management	No active management except fire suppression.	None
9	Alder-Willow (AlW) 65 acres	Passive Management	No active management except fire suppression.	None
10	Marsh (MH) 15 acres	Passive Management	No active management except fire suppression.	None
11	Streams Rivers (STR) 29 acres	No Management		None

Map Code	Ecological Community	Management Practice	Specific Management	Estimated Cost
12	Transportation (TRS) 34 acres	Passive Management	These areas consist of roads, parking lots, and power line rights-of-way. Only the rights-of-way can be managed. They are ready-made wildlife openings. The power company should be encouraged to use mechanical means to keep them clear so that grasses and forbes will survive and provide wildlife feed.	None
13	Recreation (REC) 43 acres	Reforestation	These areas include the group camp, campground, and picnic areas. The picnic area is in good condition. The campground contains a deteriorating birch stand caused primarily by soil compaction at the roots. Discontinuance of mowing is helping some areas, but aeration and the addition of topsoil will be needed on some sites. The group camp has large patches of dogwood that are deteriorating for unknown reasons. It should be sheared back to enhance root sprouting. This area will be considered for future conifer reforestation if the plots listed in 5b are successful.	Cost is covered in the Recreation Section

Discussion

There are few existing or potential vegetative problems in Gooseberry Falls that are not specifically mentioned in the table: overbrowsing by deer, spruce budworm, and white pine blister rust.

Because deer are concentrated in the park during the winter, a tremendous strain is placed on their favorite browse species -- cedar and dogwood. The management practices discussed in the table should increase the cedar and dogwood. The Wildlife Section, on page 65 discusses other solutions to this problem.

The spruce budworm problem is not serious enough to require immediate action. However, should the problem worsen, active management will be needed. Management techniques such as those mentioned in 1b in the Vegetation Management Table may correct the problem.

White pine blister rust may become a problem when the conifer planting program gets started. By planting a higher percentage of white pine on shoreline plots, where incidence of the disease tends to be lower, blister rust should be minimized. If this technique is successful, a large scale planting program will be initiated.

Natural succession and active management projects will be monitored, reevaluated, and changed as conditions warrant.

WILDLIFE MANAGEMENT

Introduction

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

In order to provide such an experience for park users, detailed inventories of park wildlife are needed so that managers are better able to manage habitat to attract certain species or protect habitat which will ensure the continued presence of existing species.

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

Inventory

Gooseberry Falls State Park has a fairly diverse vegetative cover which provides habitat for a wide variety of wildlife. Also, since the park is along the North Shore flyways, many migratory bird species may be seen in the park. Past records show that 142 species of birds nest in or visit the park. Forty–six species of mammals and 10 species of reptiles or amphibians also live in the park. The checklists on pages **59** to **63** show the known species.

Certain wildlife species occurring within a park are especially noteworthy because special precautions are required in their management or protection, or because they can damage vegetation, property, or harm park visitors. Potential management problems with these species are discussed below.

Endangered, Threatened, or Rare Species

The peregrine falcon is the only species now seen in the Gooseberry area that can be considered endangered, threatened, or rare. The peregrine, which was never common in Minnesota, once nested in the cliffs along the lower Mississippi and the North Shore. Although there are no longer any nesting sites in Minnesota, a few are seen each year during the fall hawk migrations along the North Shore.

Species of Special Interest

Species in this group include those that are uncommon or found only locally in Minnesota. While they are not now threatened or endangered, they might become so. Also included are species that are not now in any particular difficulty, but should be closely watched because they are of special public interest, or because their habitat is especially vulnerable. Special management may be required.

Birds

Seasonal Residents

Common loon

Migrants

Cooper's hawk
Marsh hawk
Osprey
Great blue heron

Permanent Residents

Pileated woodpecker

Mammals

Bobcat
Canada lynx
Eastern timber wolf

Reptiles and Amphibians

Snapping turtle
Red-backed salamander

Troublesome Species

Troublesome species are those that might become nuisances to either the natural resources of a park, park property or park visitors.

Birds

Species	Potential Problems
Herring gull	Disturbs visitors Nuisance

Mammals

Species	Potential Problems
Little brown bats	Get tangled in park visitors' hair
Red bats	Disturb visitors
Beaver	Destroy vegetation
Porcupine	Destroy vegetation
Black bear	Nuisance
Raccoon	Nuisance
Striped skunk	Nuisance
White-tailed deer	Destroy vegetation

Sensitivity to Humans

Species in this group are unusually sensitive to disturbance by human activity. Disturbance during a given season may result in nest or den abandonment, a decrease in territorial size, or a shift in territorial movement. Such disturbance might be detrimental to the survival of the species in the park.

Birds

Connecticut warbler

Mammals

Timber wolf

Source:

Moyle, John B. 1975. The Uncommon Ones. Minnesota Department of Natural Resources.

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

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

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

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

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

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

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

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

REPTILE AND AMPHIBIAN CHECKLIST

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

Management

Objectives:

To increase the species diversity within the park

To protect sensitive species and their habitat in the park

To reduce the number of deer kills that occur in the park

- Specific Management

The wildlife diversity in Gooseberry Falls will be increased primarily through habitat improvement, which will occur as a result of vegetation management. The reestablishment of the pine community will provide habitat for species that were originally in the park but left when the pine was logged off.

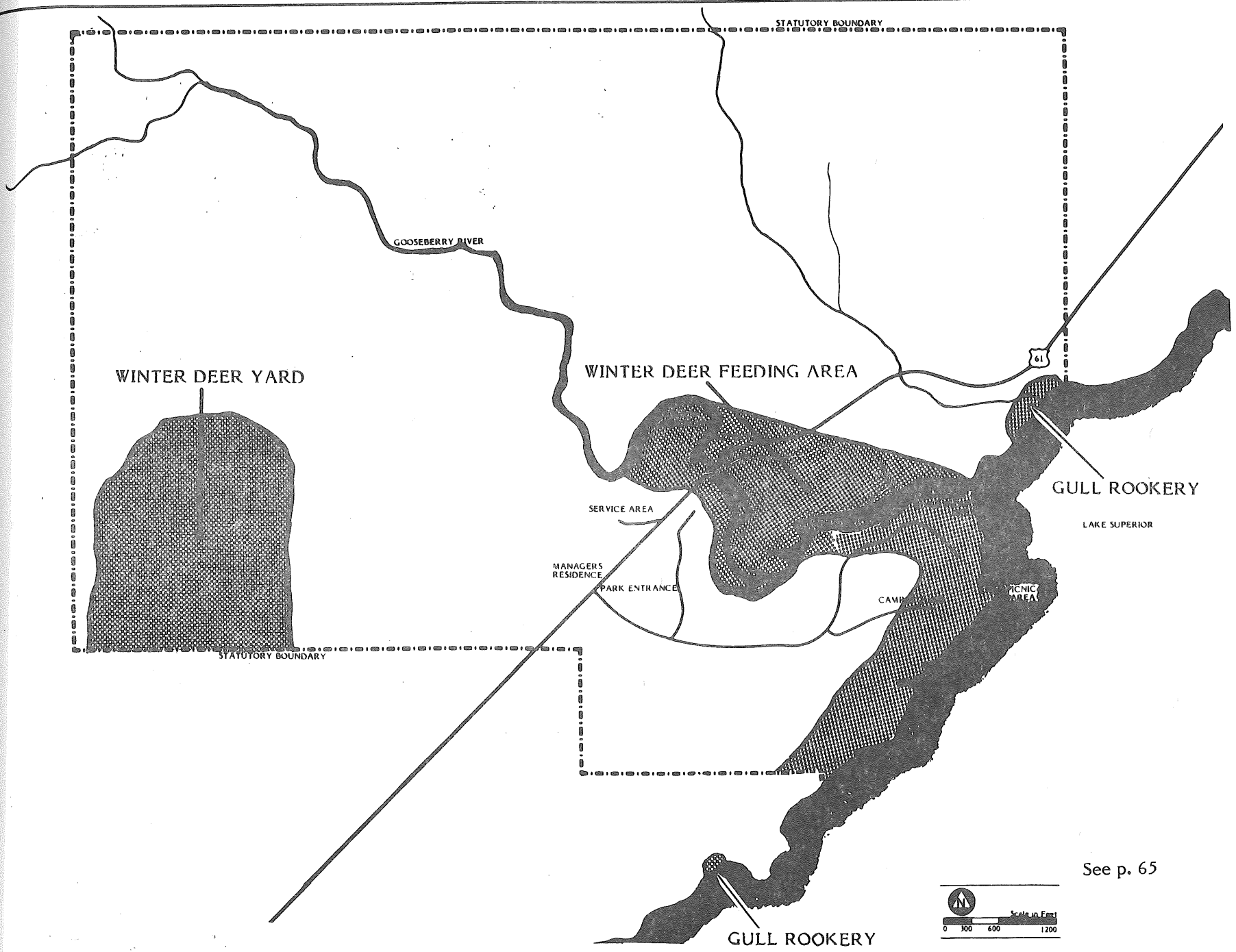
Every fall deer from the inland areas move towards the shore, concentrating in specific areas or "yards." One of these yards is in the conifer area in the southwest part of the park. Though an exact census has not been taken, the wildlife manager estimates that between 50 and 100 deer come into the area every year. The major wildlife problem in Gooseberry Falls is the high number of deer road kills which result when deer cross TH 61 from yarding areas to feed along the estuary of the Gooseberry River and the lakeshore. An average of nine deer are killed each year.

The best solution is to reroute the highway northwest of the park. Since highway relocation will take years, other more immediate solutions are recommended. First, by improving the food supply west of the highway, the deer may be entice into remaining there. Second, by planting pine-spruce stands, and providing shelter areas, the deer will not need to cross the highway.

Also of special concern are the gull rookeries immediately north of the Gooseberry River on Lake Superior. A hiking-skiing-interpretive trail is proposed for development near the rookery. It will allow park visitors to observe the birds without disturbing them.

New trail alignment proposals should be reviewed by the park naturalist to avoid the nesting areas of the Connecticut warbler.

If beaver or porcupine populations become a problem, they should be live-trapped and removed. In some cases, skunks must be removed by live-trapping. Frequent garbage pick up will eliminate most of the skunk and bear problems.


STATUTORY BOUNDARY
GOOSEBERRY RIVER
WINTER DEER YARD
WINTER DEER FEEDING AREA
61
GULL ROOKERY
LAKE SUPERIOR
SERVICE AREA
MANAGERS RESIDENCE
PARK ENTRANCE
CAMP
PICNIC AREA
STATUTORY BOUNDARY
GULL ROOKERY
N
Scale in Feet
0 300 600 1200

See p. 65

PREHISTORIC AND HISTORIC SITES

Introduction

The location of prehistoric and historic sites in a state park must be documented for two reasons: first, to prevent the inadvertent destruction of historically significant areas; and second, to enable the exploration, analysis, and interpretation of important sites.

Inventory

No sites were found when Gooseberry was surveyed for prehistoric sites in the 1950's by the University of Minnesota.

Management

No field surveys for historic sites have been conducted, though a literature search by the Minnesota Historical Society in 1976 revealed a number of documented visits by explorers and adventurers. This information, in addition to the history of logging in the area, indicate the possible presence of historic sites. A field study is needed to determine if any evidence of historic sites still exist.

Objective:

To locate significant historic sites in Gooseberry and to include them in the park interpretive program

Specific Management

The Historical Society should conduct a preliminary (Phase 1) survey. Further management will depend on the results of the survey.

Estimated Cost: $1,700

RESOURCE MANAGEMENT

Management Practice	78-79	80-81	82-83	84-85	86-87	Total
Fisheries						
River Mouth Dredging	$ 200	$ 200	$ 200	$ 200	$ 200	$ 1,000
Habitat Improvement	4,000	4,000	4,000	4,000	4,000	20,000
Vegetation						
Burn	2,040	1,200	1,200		540	4,980
Timber removal	15,500	9,500	10,000	5,000	250	40,250
Chemical Treatment		450	50	145	195	840
Planting/Seeding	2,150					2,150
Prehistoric/Historic						
Survey	1,700	*	*	*	*	1,700
TOTAL	$25,590	$15,350	$15,450	$9,345	$5,185	$70,920

*Future biennal costs will be dependent on the results of the survey.

USER ANALYSIS

Introduction

Careful consideration must be given to future needs of the park user. Although a great deal of data exist concerning disparate elements of the subject, no comprehensive authoritative study on recreational tourism demand within Minnesota is currently available. Trends in travel patterns are now discernible, but estimates of the time period over which this demand develops and of its magnitude are only speculative at this time. Furthermore, published data largely documents what people have done in the past. Only if it is assumed that these trends will continue can valid conclusions be drawn.

Obviously, these data are not sensitive to any unpredictable technological changes or political events. For example, the oil embargo created an "energy crisis" overnight. This development and its implications have had a direct impact upon travel patterns.

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

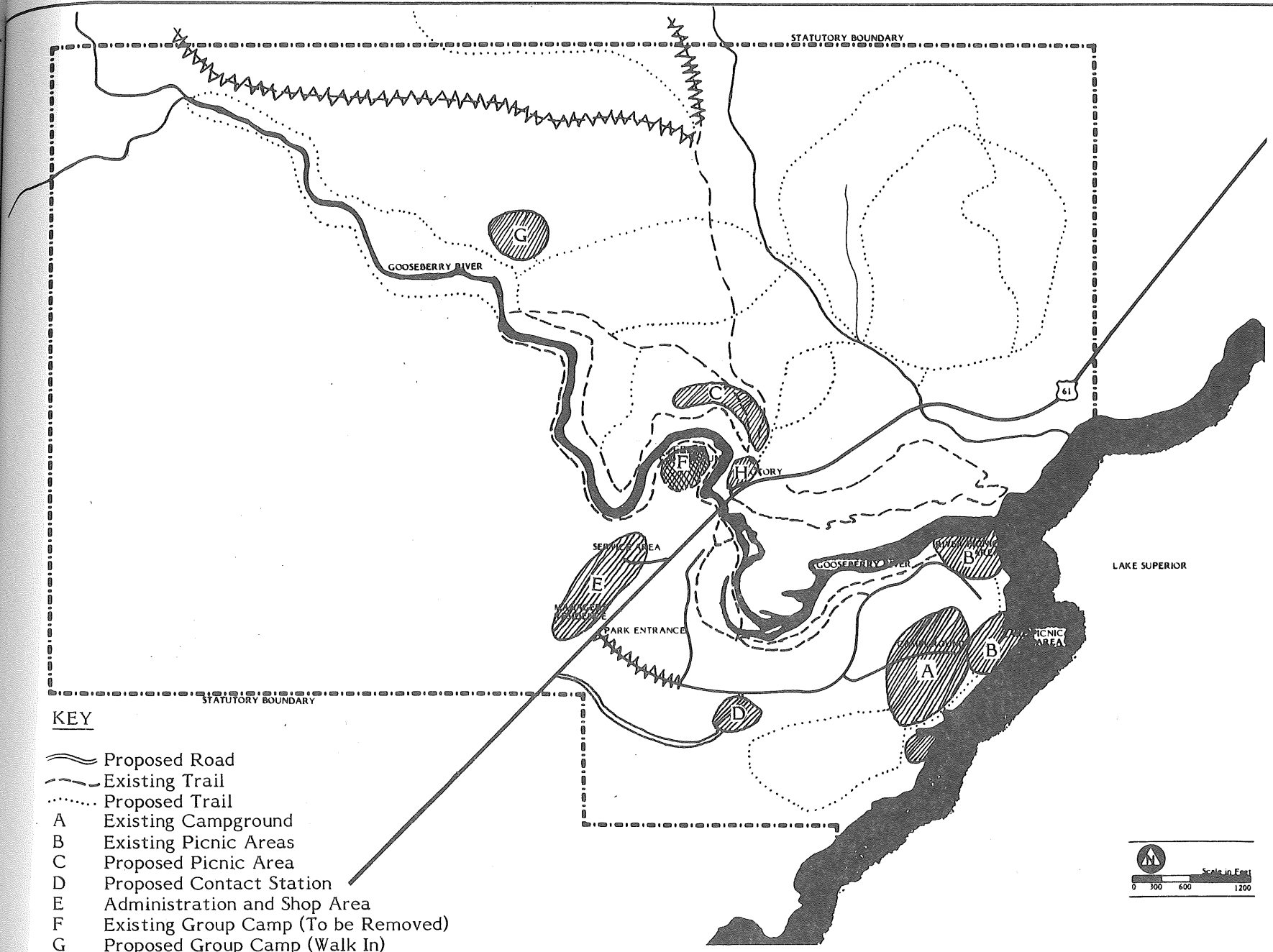
In the planning for the use and development of state parks, an attempt has been made to anticipate the recreational needs of the public by providing increased recreational opportunities while protecting the park's natural resources.

This section of the plan will evaluate Gooseberry's past use and future anticipated use as well as make appropriate recommendations concerning the parks recreational facilities.

Regional Analysis

Gooseberry Falls State Park is extremely popular. In 1976, the total visitor count was 587,440, the highest for any park in the state. This total may increase, however, in the near future because of the increasing interest in winter camping and ski touring. The planned connection between the park to the North Shore Corridor Trail will also tend to increase park attendance.

However, there will probably be a decrease in the number of day users. Currently they stop in the rest area at TH 61 bridge to see the falls. Because the plan recommends relocating TH 61 around the park, visitors will enter the park via a contact station and must purchase a park sticker. Therefore, day use is expected to decline.



KEY

- Proposed Road
- Existing Trail
- Proposed Trail
- A Existing Campground
- B Existing Picnic Areas
- C Proposed Picnic Area
- D Proposed Contact Station
- E Administration and Shop Area
- F Existing Group Camp (To be Removed)
- G Proposed Group Camp (Walk In)
- H Proposed Trail/Interpretive Center
- I Biker/Hiker Camp

Note: All trails will be designed for hiking and cross country skiing unless noted.

See p. 71

EXISTING DEVELOPMENT

The present recreational facilities in Gooseberry Falls State Park include: a group camp for 175 people, a family campground with a total of 100 sites, modern sanitation facilities (including a trailer dumping station), a bike-in/hike-in camping area, two picnic areas (with enclosed shelters), and a refectory. The park also has 1.5 miles of nature trail, 6 miles of hiking trail (with 3 Adirondack shelters), and 0.5 miles of snowmobile trail.

PROPOSED DEVELOPMENT

Introduction

Physical developments within Gooseberry Falls State Park should be limited to those which are necessary for adequate management and appropriate use and enjoyment. Moreover, all facilities should be developed with carefully controlled safeguards against unregulated and indiscriminate use, ensuring the least damage to park resources. To the highest practicable degree, location, design, and materials for facilities should be consistent with the objectives of preserving and enhancing the natural features of the North Shore Landscape Region.

All future park buildings and facilities will be accessible and in compliance with the Minnesota State Building Code, Chapter 55. An attempt will be made to upgrade existing park facilities to provide accessibility for all individuals including the handicapped and elderly, where it is not detrimental to the natural resources. The architectural theme of all park buildings will be styled after the old CCC buildings.

Specific Recommendations

I. Campgrounds

Objective:

To satisfy some of the heavy demand for camping in a natural setting along the North Shore without negatively impacting the natural resources

A. Family Camping

Objective:

To provide for vehicular camping in a natural setting and to reduce wear on campsites

1) Proposed Action: Remove 25 campsites.

Rationale: The camping density is too high to fit the character of a natural state park. The combination of high density and heavy use is damaging the campsites.

Cost: $25,000

2) Proposed Action: Rehabilitate the remaining 75 campsites, surface roads, and level spurs.

Rationale: The existing campground and its road system is poorly organized resulting in excessive resource damage.

Cost: $100,000

3) Proposed Action: Remodel two sanitation buildings, originally built by the CCC in the 1930s.

Rationale: Even with good general maintenance, these buildings have deteriorated. The buildings are extremely attractive, however, and contribute significantly to the beauty of the park. Therefore, the buildings will be repaired and not replaced.

Cost: $40,000

4) Proposed Action: Remove the sanitation building built in 1967.

Rationale: With the reduction of sites, three sanitation buildings will not be necessary for this campground. The building is poorly designed, too small, has maintenance problems, and does not fit the park's architectural theme.

Cost: $2,500

B. Bike-in/Hike-in Campsites

Objective:

To officially designate and manage a camping area for bicyclists and hikers so they will not have to compete with auto campers for space

1) Proposed Action: Designate the Davis Scout Camp as a bike-in/hike-in campground and plant trees and shrubs.

Rationale: In the past, hikers and bicyclists had to camp in the family campground that was designed for vehicular camping, and they were required to pay the standard $3 camping fee. As a result many camped illegally in the woods.

Cost: $5,000

C. Group Camp

Objective:

To meet the demand for group camp facilities along the North Shore in an area that will offer privacy, withstand use, and not interfer with other park users

1) Proposed Action: Develop a hike-in group campground off the North Shore Access Trail on the north side of the Gooseberry River. The campground should have three individual sites. The campers will park their vehicles at the waterfall picnic area.

Rationale: The present group camp is too close to the falls for privacy and does not have the natural quality expected in a natural state park.

Cost: $25,000

II. Picnicking

Objective:

To maintain or improve areas and facilities that are needed to satisfy the heavy demand for picnicking and other day use activities at Gooseberry

A. Lake Picnic Area

1) Proposed Action: Mark the parking spaces in the parking lot.

Rationale: The picnic area now functions well. However, because parking stalls are not marked, users tend to park randomly and the lot is not used to its fullest capacity at busy times.

Cost: $5,000

2) Proposed Action: Reroof the picnic shelter with cedar shingles.

Rationale: The shelter's bright green roof detracts from the appearance of the building. All other buildings in the park have cedar shingles, and the shelter should have the same type to provide continuity of architectural style.

Cost: $5,000

3) Proposed Action: Remodel the restrooms in the picnic shelter to make them handicapped accessible and to minimize maintenance costs.

Rationale: Public buildings should be made handicapped accessible.

Cost: $10,000

B. River Picnic Area

1) Proposed Action: Surface the trail from the parking lot to the picnic area.

Rationale: The present picnic area could be made accessible to all users simply by improving the trail. The present surface is rocky, irregular, and very difficult to negotiate if a user is handicapped.

Cost: $8,000

2) Proposed Action: Plant a vegetation barrier to direct pedestrian traffic down the stairway from the Lake picnic area to the River picnic area, using a temporary fence while vegetation is establishing itself.

Cost: $2,000

C. Waterfall Picnic Area

1) Proposed Action: Develop a 25-site picnic area on the north side of the river behind the present trail/interpretive building.

Rationale: There is a need to provide picnic facilities near the waterfalls. Presently, the lawn in front of the refectory building is used because no other facilities have been provided. This picnic area should not be developed until TH 61 is moved, because picnic parking would increase congestion along the highway. The proposed picnic area is easily accessible from the refectory parking lot, which will be expanded when the refectory is converted to a trail/interpretive center.

Cost: $35,000

III. Trails

Objective:

To upgrade existing trails to accommodate current levels of use and to expand the system for day use and interpretation

A. Snowmobile Trails

1) Proposed Action: There is a snowmobile access trail to the main park area from the North Shore Corridor Trail. It will continue to be used and will be upgraded to corridor trail standards. All other unauthorized snowmobile trails should be closed and obliterated. Snowmobiling in the park should be permitted only on the access trail.

Rationale: The park maintenance area is the headquarters for North Shore Corridor Trail grooming. The park is a logical place for a trail access point because the facilities already exist. However, Gooseberry Falls is a natural state park and snowmobiles are in direct conflict with the natural qualities being preserved. (The grooming equipment may be stored at Split Rock Lighthouse Recreational State Park when facilities are developed.)

Cost: Covered by corridor trail funding

B. Hiking-Skiing Trails

1) Proposed Action: Rehabilitate Upper Falls, Half Way, Gitchi Gummi, and Lower Rim trails by constructing new surfaces, steps, culverts, and bridges, and relocating segments to prevent erosion.

Rationale: The present system is damaged because of poor design and maintenance. The trails should be brought up to standard because they are receiving more use every year. Without repair and proper maintenance they will continue to deteriorate, be more expensive to repair, and do increasing damage to the resources. Because of deteriorated surfaces, the present trails are hazardous for small children, senior citizens, and the handicapped.

Cost: $40,000

2) Proposed Action: Develop trails north of the Gooseberry River, many of which were proposed in the original National Park Service plan. The new trails system, which would consist of trails for the naturalist program and for hikers and skiers, should highlight the natural features of the park such as the falls, estuary, lakeshore, deer yarding areas, gull rookery, and inland ridges. The trails should be of varying lengths and should loop back to their starting points.

Rationale: The park is suited for hiking and skiing trails, if they are carefully placed. With its great diversity of geological features and ecosystems, the park can provide a variety of experiences in a relatively small area, especially if trails head inland rather than along the river as they do now.

Cost: $20,000

3) Proposed Action: Construct a hiking-skiing bridge across the river, above the upper falls.

Rationale: Presently, the only crossing of the river in the park is the TH 61 bridge. An additional crossing would provide a needed link in the trail system.

Cost: $65,000

C. Multi-Use Trails

1) Proposed Action: When TH 61 is upgraded, a multi-use through trail should be constructed following the existing roadway.

Rationale: There is a need to provide a route for trail users through the park.

Cost: None anticipated

D. Waterfall Walkways

1) Proposed Action: Use a combination of boardwalks, surfaced trails, and overlooks in the main falls area to provide a safer, more attractive, and accessible viewing area. Build a safety railing around the pool which is located below the falls.

Rationale: The trail system in the area of the falls is deteriorating rapidly. It is environmentally unsound, unattractive, dangerous, and it is not accessible to all park users. Cliff diving is hazardous and there have been several injuries.

Cost: $40,000

E. Bike Trails

1) Proposed Action: Construct bike trails parallel along park roads. Trail alignments should be separated from park roads wherever possible for aesthetic and safety reasons.

Rationale: Bicycle use is becoming more popular in Gooseberry Falls State Park. Designated lanes would reduce conflicts between auto and bicycle traffic.

Cost: $40,000

F. Elimination of Trails

1) Proposed Action: Obliterate the unauthorized trails in the park.

Rationale: The trails do not conform to the goals of this plan.

Cost: $10,000

IV. Interpretive Facilities

Objective:

To expand interpretive facilities for year-round use

A. Picnic Shelters

1) Proposed Action: Continue present use.

Rationale: The shelters provide good places to hold evening programs and are within walking distance of campers.

Cost: None

B. Trail-Interpretive Center

1) Proposed Action: Convert the refectory from its present gift shop function to a multi-use trail-interpretive center. The center should contain an office for the park naturalist, winterized restrooms, display area, a multi-purpose area that will serve also as a media presentation area and as a warm-up space for winter months, and a place for outdoor activities. The center will be open only during the day, except for authorized evening programs.

Rationale: Since trail and interpretive activities are compatible and require similar interior space, a combination building can be built that will house both activities. Most people who come to Gooseberry are interested in the resources of the area. Providing an opportunity for users to enjoy recreational activities while learning about the park will make their experience much more rewarding. The center can easily handle both trail and interpretive activities. The primary use of the center would be for interpretive programs during summer months and as a trail center during the winter, eliminating the need for two separate facilities.

Cost: $100,000

V. Administration/Service Area

Objective:

To improve public relations, traffic circulation, and park employees' working conditions

To upgrade utilities and reduce their visual impact on the park

A. Contact Station Area

1) Proposed Action: Redesign the traffic circulation system, and move and remodel the present contact station.

Rationale: The present road is very unsightly. It is also dangerous because it is so short that on busy days, cars entering the park are backed onto TH 61.

Redesigning the road will require moving the contact station. Once the contact station is moved, the furnace and duct work should be remodeled.

Cost: $50,000

B. Manager's Residence

1) Proposed Action: Remodel and insulate the manager's residence.

Rationale: The house was built originally with a tuck-under garage. The garage, however, is too small, energy inefficient, and allows gas fumes to enter the living area.

Cost: $10,000

2) Proposed Action: Construct a garage.

Rationale: The present manager has built his own storage building, which will be removed when he leaves.

Cost: $5,000

C. Assistant Manager's Residence

1) Proposed Action: Remodel the residence.

Rationale: The residence, which was built in 1936, needs general repair. The plumbing and heating are in poor condition.

Cost: $10,000

2) Proposed Action: Construct a garage.

D. Main Shop Building and Area

1) Proposed Action: Rewire the shop building for 200-volt service.

Rationale: The present system is out-dated and short-circuits are frequent.

Cost: $2,500

2) Proposed Action: Install a water line to the shop and add a restroom.

Rationale: Water has to be hauled in whenever it is required for a job, which is costly and time consuming.

Cost: $8,500

3) Proposed Action: Construct a small storage yard behind the main shop building. The area would be gravel surfaced and less than one-half acre in size.

Rationale: There are many items that must be stored outside, but when stored in the maintenance area are unsightly.

Cost: $2,000

E. Naturalist Cabins

1) Proposed Action: Replace roofs and do some minor remodeling.

Rationale: The buildings are old and need repairs to make them livable. There is little temporary housing in the area and it is difficult to attract summer help without providing housing.

Cost: $15,000

VI. Roads and Traffic Control

Objective:

To provide a safe, efficient road system throughout the park which will eliminate conflicts between park users and through traffic and between park users and private landowners

A. TH 61 Corridor

1) Proposed Action: Remove the highway rest area from the park by closing the roadside parking areas and signing the roadsides no parking.

Rationale: The present situation endangers the visitor who wants to stop and view the falls. The North Shore Recreation Study recommended moving the rest area function to the Split Rock River.

Cost: Mn/DOT

2) Proposed Action: Close the sanitation facilities at the concourse.

Rationale: The facilities are in poor condition and not worth repairing. The refectory will provide sanitation facilities for the area.

Cost: $1,000

3) Proposed Action: Redesign and reconstruct parking facilities near the trail/interpretive center.

Rationale: The existing facility is inadequate and does not circulate traffic efficiently.

Cost: $15,000

4) Proposed Action: Add on to the present, or construct an additional parking lot next to the existing in-park lot at the falls. The Bureau of Engineering should design the entire parking system after a final decision is made regarding realignment of TH 61.

Rationale: With the elimination of the roadside parking, more people will drive into the park to view the falls. The existing lot does not provide enough spaces.

Cost: $15,000

5) Proposed Action: Work with Mn/DOT toward a solution of the park conflict with TH 61. (Final decision about re-routing the highway will be made in 1980-81.)

Rationale: Even with the rest area removed and the speed limit lowered, there is a safety hazard. The present situation also makes controlled entrance to the park impossible.

Cost: None

B. Interior Park Roads

1) Proposed Action: Lengthen the entrance road and build a turnaround loop to handle the tremendous amount of traffic that comes into the park.

Rationale: The entrance road is old and was not designed to handle the large volume of traffic it now receives. Cars frequently back up onto TH 61. A turnaround loop will alleviate the circulation problems.

Cost: $50,000

C. Access Road to Private Land Along Southern Boundary

1) Proposed Action: Relocate the access road to the private cabins along the lakeshore, from within the boundary to just outside the southern boundary. The road will be 3/4 mile long.

Rationale: The road runs through the park and could lead to conflict between park users and private landowners. Placing it along the boundary not only reduces the possibility of conflict but also makes it more definable and visible.

Cost: $35,000

VII. Utilities

A. Proposed Action: Bury all electrical lines in the park.

Rationale: Overhead lines and the necessary right-of-way cuts are unslightly and are not compatible with the natural character of a park.

Cost: $15,000

B. Proposed Action: Develop a new sewage system for the entire park. It should be partially or completely self-contained to compensate for the area's poor soils. If possible the system should be set up as a demonstration to illustrate how sewage systems can be developed on unsuitable soils. Alternative systems include oil recirculating systems, sewage lagoons, peat filters, and aerobic decomposition (composting) systems. The old system and a lagoon system will probably be used, although the DNR Bureau of Engineering should study all possibilities.

Analysis: The oil recirculating system would work well in Gooseberry Falls because the only requirement is an area for disposing of the sink, shower, and toilet waste water. The disadvantage of the system is the initial cost for the special fixtures.

The sewage lagoon system has more limitations in location. An area south of the present contact station and an area west of the service area have been considered for possible locations. The disadvantage again is the initial cost of the lagoon and pumping stations.

The peat filter system is not as restrictive as the sewage lagoon, but it does need level ground and a fairly large area. The initial cost may not be as much as for the first two systems, but operating costs are higher.

The compost system will probably not work in a state park, particularly in a campground where the water volume to solid waste ratio is much too high. It may work, however, in some remote spots where facilities are needed and pit toilets cannot be used.

Any of these systems, except the last one, could work in Gooseberry Falls State Park.

Rationale: The present system is old and is in such poor shape that the Pollution Control Agency has threatened to shut down the park if something is not done. Since the soils are inadequate for conventional sewage systems, alternatives must be considered.

Cost: $450,000

C. Proposed Action: Upgrade the water system.

Rationale: The present system is old and needs many repairs. In the past, proper funds have not been provided for its maintenance, and consequently, it has deteriorated.

Cost: $50,000

D. Proposed Action: Drill a new well for the park's water system which will provide year-round water supply and will be determined by the Bureau of Engineering.

Rationale: The well is needed to adequately meet water needs of the park.

Cost: $15,000

RECREATION MANAGEMENT BUDGET

Action	78-79	80-81	82-83	84-85	86-87	Total
I. Campground						$ 197,500
A. Family Camping						
1. Remove 25 sites	$ 25,000					
2. Rehabilitate and redesign 75 sites		$ 100,000				
3. Remodel 2 CCC sanitation buildings	40,000					
4. Remove newer sanitation building		2,500				
B. Bike/Hike Camp				$ 5,000		
C. Group Camp				25,000		
II. Picnicking						$ 65,000
A. Lake Picnicking Area						
1. Mark parking lot spaces			$ 5,000			
2. Reroof picnic shelter	$ 5,000					
3. Remodel picnic shelter for handicapped accessibility		$ 10,000				
B. River Picnic Area						
1. Surface access trail		8,000				
2. Plant vegetation barrier		2,000				
C. Waterfall Picnic area						
1. Develop new area					$ 35,000	

Action			78-79	80-81	82-83	84-85	86-87	Total
III.	Trails							$ 215,000
	A.	Snowmobile Trails						
		1. Access trail		Cost covered in the budget of Trails Section/DNR				
	B.	Hiking/Skiing Trails						
		1. Rehabilitate existing trails	$ 20,000	$ 20,000				
		2. Develop new trails					$ 20,000	
		3. Construct bridge				$ 65,000		
	C.	Multi-Use Trails		No cost anticipated				
	D.	Waterfall Walkways		40,000				
	E.	Bike Trails			$ 40,000			
	F.	Elimination of Trails		10,000				
IV.	Interpretive Facilities							$ 100,000
	A.	Picnic Shelter						
	B.	Trail/Interpretive Center			$ 100,000			
V.	Administration/Service Area							$ 108,000
	A.	Contact Station Area				$ 50,000		
	B.	Manager's Residence						
		1. Remodel residence			$ 10,000			
		2. Construct garage			5,000			
	C.	Assistant Manager's Residence						
		1. Remodel residence			10,000			
		2. Construct garage			5,000			
	D.	Shop Area						
		1. Rewire shop building	$ 2,500					
		2. Install water and add restroom	8,500					
		3. Construct a storage yard		$ 2,000				
	E.	Naturalist Cabins						
		1. Remodel and reroof		15,000				

Action			78-79	80-81	82-83	84-85	86-87	Total
IV.	Roads							$ 116,000
	A.	TH 61 Corridor						
		1. Remove highway rest area		Mn/DOT				
		2. Close concourse toilets	$ 1,000					
		3. Redesign and reconstruct interpretive center parking lot					$ 15,000	
		4. Add falls parking lot					15,000	
	B.	Interior Park Roads						
		1. Lengthen entrance road and construct turnaround loop			$ 50,000			
	C.	Access Road						
		1. Relocate access road to private property					35,000	
VII.	Utilities							$ 530,000
	A.	Bury electric lines			$ 15,000			
	B.	Install sewer system	$ 450,000					
	C.	Upgrade water lines				$ 50,000		
	D.	Drill new well				15,000		
TOTAL			$ 552,000	$ 209,500	$ 240,000	$ 210,000	$ 120,000	$1,331,500

Interpretive Program

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

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

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

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

4. Explaining the mission of the Department of Natural Resources' interdisciplinary park management practices and the importance of public participation and support in the operation of this agency.

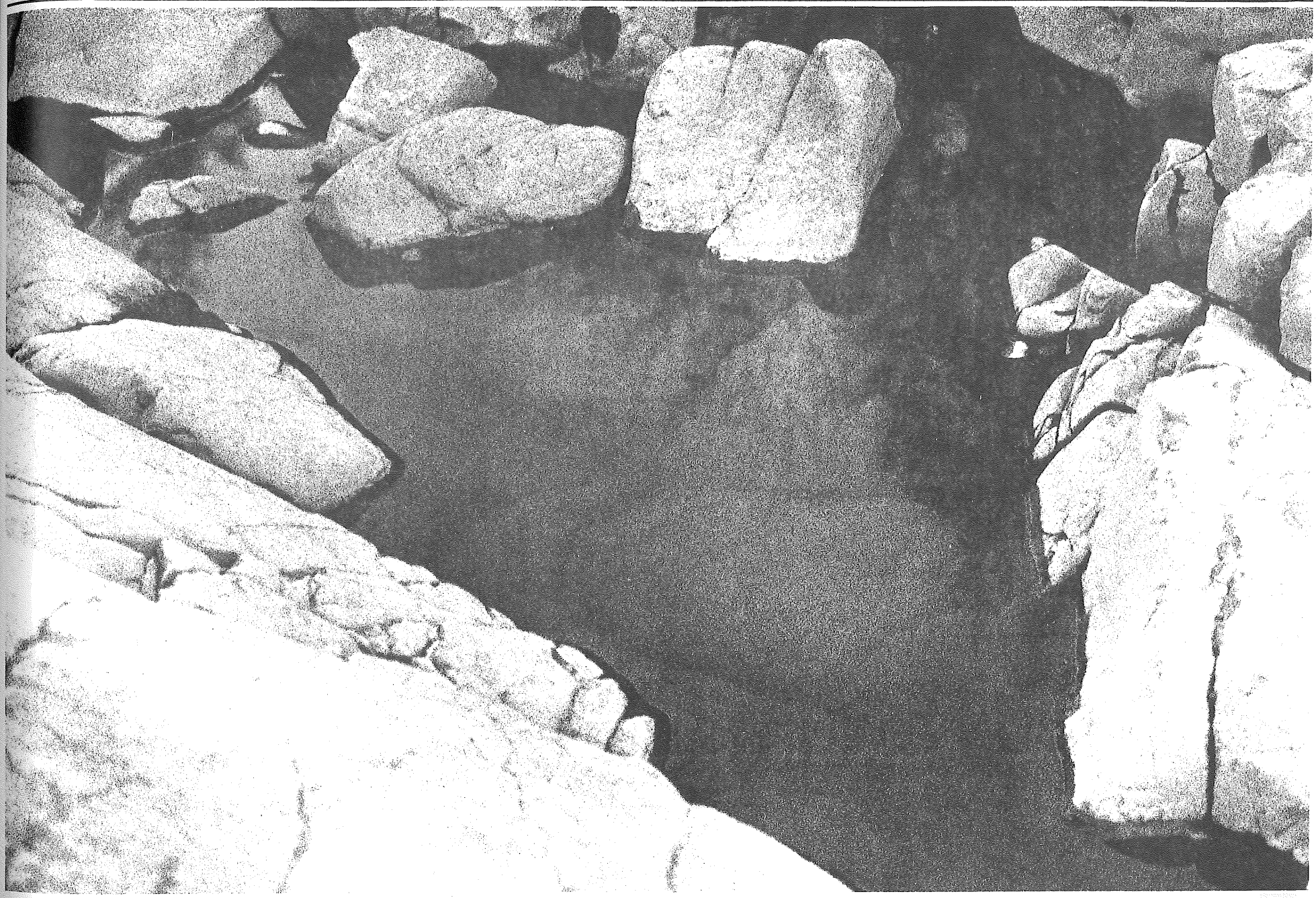
Interpretive services will be developed in recognition of the following:

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

2. People are a natural and necessary element in the park, free to enjoy the environment in non-destructive ways.

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

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



Existing Program

The interpretive program at Gooseberry Falls State Park is focused on the park's various ecological communities, the falls, and the rugged gorge of the Gooseberry River. It is run three months a year, seven days a week by a park naturalist and a volunteer-in-park (VIP) naturalist. The program is directed primarily toward campers rather than day users. Local school districts also use the park for their environmental education programs.

Proposed Program

Objective: To involve day users as well as longer term park visitors in the interpretive program

Closing the highway rest area will bring more day users into the park. The new trail/interpretive center will be easily accessible to all park visitors and will be the focal area for interpretive programs. Short-range radio programs with short interpretive messages, the naturalist's schedule for the day's activities, and other information on park facilities and activities will be produced as a part of the park's interpretive program. The program will be made more available to day users and will be extended to year-round scheduling to benefit the ever increasing number of winter park users.

Personnel

The proposed program will require the addition of a full-time naturalist and one more summer volunteer-in-park.

The full-time naturalist will direct the interpretive programming from May to October. During the winter, duties will include environmental education programs, trail maintenance, and running the trail/interpretive center.

Equipment

The following equipment is needed to conduct programs and make other public presentations:

Two AF-2 Ektagraphic projectors
Dissolve unit for slide projectors
Slide-tape synchronization system
Public address system for visitor center
Short-range radio system
16 mm movie projector

BOUNDARY MODIFICATION

Introduction

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

To study all present and future state parks to determine if they have sufficient acreage to preserve and prepetuate their natural resources and still provide areas for the necessary recreational facilities and activities. In the same light, however, only acreage that is necessary and would be reasonable to purchase should be included.

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

Because it would be fiscally and physically impossible to achieve these goals overnight, this plan will establish priorities that will work toward them. The following framework will be used in developing adjustment and acquisition priorities:

1. Land needed for preservation or prepetuation of park resources or values.
2. Land needed for development of facilities.
3. Unimproved buffer land needed to prevent threatened development or use which would be compatible with existing or potential park purposes.

• Specific Recommendations

A three-acre parcel of land along the south boundary is the only private land in the park. All other land within the statutory boundary is either optioned or state owned. In addition, all land within the boundary is manageable and no additional land is necessary to act as a buffer zone. Consequently, this plan recommends that the boundary of the park remain as it is except for the privately owned parcel which will be deleted from the park.

Proposed Action: The entire boundary should be surveyed, cleared, and posted.

Rationale: To legally enforce park regulations the park boundary should be posted. It appears that there is a cabin on state land within the boundary of the park. If the survey proves this to be true, the cabin will be removed. The relocation of the road along the southern boundary of the park (see p.82) will also be dependent on this survey.

Cost: $30,000

STAFFING AND EQUIPMENT

Introduction

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

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

To maintain the park properly and minimize costs, a trained staff, sufficient supplies, and proper equipment are needed.

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 operations are necessary 98 hours per week (8:00 to 10:00 p.m., seven days a week). The remaining hours are covered by a night patrol and the resident manager. During other seasons, only part-time operations are provided 98 hours per week, however, maintenance, repair, and park security accounts for many extra man-hours. If these responsibilities are to be met, competent trained personnel are necessary.

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

1. an extreme shortage of adequate personnel,
2. that because of procedures necessary in hiring seasonal workers, high cost labor employees are used for jobs more appropriate for other job classifications, and
3. that a high percentage of work-hours are related to direct services to the public.

These factors limit the personnel available for proper maintenance. Because extensive development has occured since the Natural Resources Act of 1963 was passed, the gap between maintenance and development has widened. Standards based on the work load study can be established to determine work-hour operating requirements for future facilities as they are proposed for development so that sufficient personnel and supplies can be provided. Facilities must be properly designed to meet the needs of the public, while being operational with the minimum amount of personnel and cost.

Another contributing factor to the current park operations problem 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.

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

One of the major maintenance problems of recreation areas is the extreme 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 ground cover and frequently exposes tree roots to damage from foot traffic. The eventual result may be erosion, slides, disfigured sites, and even danger to the visitors. Regular maintenance programs with adequate personnel, supplies, and equipment would reduce the damage and consequently prevent major reconstruction expenditures. It will also preserve the aesthetic character of the park by preventing unsightly scars or exposed areas.

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

Objective:

To ensure that there is adequate staff and equipment to efficiently and effectively operate Gooseberry Falls State Park

Park Management/Administration

The park manager and full-time assistant at Gooseberry will administer the total park maintenance and operations programs and implement appropriate segments of the development program under the direct supervision of the regional park supervisor. They will supervise park employees and public services, provide law enforcement, provide for interpretive services -- conducting them when necessary, maintain sound public relations, recruit employees and volunteers, and assist in all park operations. These responsibilities limit the time available for actual participation in maintenance and operations, especially during the high-use season. Additional personnel, as specified in the following pages, are necessary to provide adequate public services and proper maintenance and to fully implement this plan.

Contact station personnel (park workers) meet people at the park entrance and provide information. They also sell vehicle permits, register campers, and sell wood and ice at the entrance to the lake side of the park.

Interpretive services personnel conduct seasonal outdoor and indoor programs for visitors primarily in the campgrounds. This park has the potential for winter interpretation for snowmobilers and cross country skiers as use increases. (See Interpretive Program, p. 87.)

Maintenance personnel (laborers, park workers, and student workers) perform a broad range of services, including maintaining park buildings and equipment, conducting night patrol, and providing semi-skilled labor for rehabilitation and development projects. CETA and other programs can be of valuable assistance when available, although they require close supervision by qualified park employees.

Staffing Requirements

Because of increasing winter activity, heavy summer use, and the extensive, continual maintenance required for the old utilities and buildings, the following staff additions are recommended:

1. General Repairman - Full-time, to supervise the maintenance program and staff during weekdays, year-round.

2. Technician - 10 months, to provide 24-hour management and supervision on weekends and weekdays from spring to fall.

3. Clerk - Reclassify existing refectory clerk position to clerk typist and extend from 6 1/2 months to 10 months to handle the increasing volume of paper work.

4. Park Worker - Extend one position by one month to provide public services during the month of December.

5. Naturalist - Add a second three-month summer position to accommodate the large volume of visitors.

6. Laborers - Extend the three laborer's positions, one month each for additional fall maintenance.

Operating Seasons

Spring - Trout fishing season, beginning March 1 upstream from Lower Falls. Smelt season in late April brings the first rush of park visitors. The concession/information building is in full operation, 8 a.m. to 10 p.m. by Memorial Day with weekend operation 9 a.m. to 5 p.m. beginning in mid–May.

Camping is minimal before Memorial Day, except for the smelting season and some weekends. Sightseeing is the predominant visitor activity during this season. Maintenance and preparation for the coming summer is the major personnel activity. Sanitation facilities are opened about May 1, weather permitting.

Summer - Memorial Day to Labor Day is the major visitor season requiring total operations. The campground is at full capacity on weekends during much of June and daily during all of July and August. Most of the day use is at the bridge and concession building along TH 61 where permits are not required.

Fall - Camping declines after Labor Day; however, it is at capacity most weekends in early October for the enjoyment of fall colors and sightseeing. The concession building is operated daily from 9 a.m. to 5 p.m. until mid-October as determined by the use. Maintenance and improvement projects are accomplished mostly in the fall.

Winter - Ski touring is fast becoming a major activity, usually lasting from December 15 to March 15. Camping and shelter facilities are provided in the campground where wood and water are available. Maintenance personnel repair and paint tables and equipment, manage vegetation, and maintain ski touring and snowmobile trails.

Operation Problems

Current operations at the refectory include a lunchcounter, the sale of souvenirs, film, and post cards. Even though this operation has major revenues (about $70,000 annually), it is in competition with local private enterprise, requires major expenditures in operating personnel, and including overhead is only marginally profitable.

Recommendation:

By 1978, eliminate all sales except appropriate books, post cards, stamps, and film. This building has tremendous potential for interpretive services and a trail shelter with minimal renovating costs. It has ample room for a visitor information booth, display room, audio-visual room, naturalist's office, and restrooms. The building also has potential for a 24-hour winter shelter facility. To fully utilize, the building a new sewer system, heating equipment, and insulation are necessary. Sewage is now carried through an exposed pipe under the bridge. Daily operation as an interpretive-information center would be desirable, only during day light hours in the summer and as needed during the off–season. The park interpretive staff would be responsible for supervision of this trail/interpretive center.

Contact station hours are from 8 a.m. to 10 p.m. daily between April 15 through October 15. During smelting, operations are required 24 hours per day for three days on three separate weekends. From Memorial Day to Labor day two shifts are necessary week days and three shifts (24 hours) on weekends. Twenty-four hour operation is desirable in this park because of the constant traffic along TH 61 and to assist late night travelers.

Recommendation:

The two park workers no longer required for sales operations at the refectory will provide adequate personnel for the contact station.

Rock climbing at the mouth of the river is hazardous. When climbers are unable to continue, they must be rescued.

Recommendation:

Permanent park personnel must be trained and have proper equipment to perform prompt rescue.

Swimming has been a traditional activity at the Upper Falls.

Recommendation:

Continue to allow swimming, but prohibit jumping from the rock ledges by constructing a safety railing and barrier. Lifeguard services will not be provided and the area will be signed informing visitors they are swimming at their own risk.

Smelting is a major problem from about April 15 through May 7, when large crowds congregate and camp for short periods of time.

Recommendation:

Restrict camping and parking to the limit of sites and parking spaces. Operate the contact station 24 hours a day on weekends. Enforce fire, litter, and other park rules necessary to prevent damage to the area.

The North Shore Corridor Trail and the connecting link through the park are groomed with an SW 300 Skidozer kept in the park.

Recommendation:

A truck should be provided for regional equipment for transportation of the groomer to extend the range of its use.

Solid waste is now collected twice daily with park vehicles during July and August, once daily during June, and other times as needed. Disposal is at the county landfill, 2 1/2 miles away.

Recommendation:

Negotiate with private contractor to perform this function. This will free the park staff and equipment for maintenance duties.

Snow removal is currently done with a Dodge power wagon.

Recommendation:

Continue this method. Repair or replace the vehicle as needed.

The existing communications system by telephone and CB radio are inadequate.

Recommendation:

A high-band radio system should be installed between the office and contact station, visitor center, registration booth, and two vehicles. It should include three hand units for emergencies, such as a fire or rock climbing accident.

Insufficient staff to patrol the refectory and concourse area after 10:00 p.m.

Recommendation:

Cooperative enforcement procedure should be established with park officers, county officials, and state patrol personnel, to control this area.

Firewood for campfires is now sold at 85¢ per bundle on a self-bundling basis. Slabwood is purchased from nearby sawmills and split wood is provided from park sources when possible.

Recommendation:

Continue this method until bundled wood is available commercially.

Two residences at the refectory currently provide housing for interpretive personnel.

Recommendation:

These buildings should be retained for this purpose until maintenance is no longer practicable. Occupants (except volunteers) will be charged appropriate rent.

Rehabilitation of the CCC rock work in the park is a continuing maintenance problem.

Recommendation:

Funds for this rock rehabilitation work should be included in the on-going maintenance budget of the Division of Parks and Recreation.

Summary and Costs

Existing and Needed Staff: The chart shows the existing staff and staff needed to adequately accomplish current maintenance and operations. These needs are based on a workload analysis that identified present park tasks and work hours necessary to accomplish those tasks.

Staffing Chart

	Existing 1976-77		Needs	
Administrative Personnel:				
Park Manager	12 mo.	$ 13,060	12 mo.	$ 13,060
Assistant	12 mo.	10,750	12 mo.	10,750
Technician			8½ mo.	8,090
Clerk II	7½ mo.	4,700	8½ mo.	5,320
Public Services Personnel:				
Naturalist	3 mo.	2,680	3 mo.	2,680
Naturalist			3 mo.	2,680
1 Park Worker	7½ mo.	3,940	8½ mo.	4,550
3 Park Workers	6½ mo. ea.	11,800	6½ mo. ea.	11,800
1 Park Worker	6 mo.	3,640	6 mo.	3,640
3 Park Workers	5½ mo. ea.	9,600	5½ mo. ea.	9,600
2 Park Workers	5 mo. ea.	5,850	5 mo. ea.	5,850
Maintenance Personnel:				
General Repair Worker			12 mo.	12,880
3 Laborers	8 mo. ea.	25,500	9 mo. ea.	28,000
TOTAL		$ 91,520		$ 118,900

CETA and other programs should be used to supplement maintenance and cleanup duties. Student workers funds would provide additional maintenance and needed jobs for students.

Future Staff Requirements: As new facilities are developed, new responsibilities are needed and more services required. Following is the estimated additonal staff needed to meet the demands.

(1) Expansion of ski trails by 1979 will require additional labor for grooming. Estimated annual cost is $3,000.

(2) Development of trail shelter by 1981 will require additional maintenance at an estimated annual cost of $2,000.

Equipment: The equipment listed below, when replaced regularly, is considered essential for the operation of this park, although the needs may change during the 10-year projection. Heavy equipment and specialized equipment not listed should be obtained through the regional office. Equipment of the proper size and type must be selected on a park-by-park basis to match the conditions and job being accomplished. Proper, up-to-date equipment will reduce the personnel needs, the cost of repairs on old equipment, and the cost of maintenance and improvement projects.

1978-1987 Projected Equipment Replacement Schedule

Unit	Existing	1978-79	80-81	1982-83	1984-85	1986-87	TOTAL
Sedan	*1972						
½-Ton	1966	$ 4,400			$ 5,800		$ 10,200
3/4-Ton	1972	4,750		$ 5,700			10,450
3/4-Ton	1974		$ 5,200			$ 6,900	12,100
4-Wheel Drive	1949	5,500			8,000		13,500
Dump	*1953						
Tractor	None	9,000					9,000
Groomer	1976	Skidozer(Trails Section)					
Snowmobile	1974		1,400		1,650		3,050
Snowmobile	1967	1,300		1,500		1,800	4,600
Small (mowers) etc.		4,000	4,200	4,400	4,600	4,800	22,000
Others - Radios			5,000				5,000
TOTAL		$ 28,950	$ 15,800	$ 11,600	$ 20,050	$ 13,500	$ 89,900

*Replace from regional equipment trade-ins.

Future replacement will be based upon the following criteria:

Light maintenance and administrative vehicles: 5 years or 70,000 miles.

Heavy maintenance equipment: With the limited use received, this equipment should last a long time and be replaced on an individual item basis when necessary. It can also be exchanged through the region for other improved vehicles.

Small equipment: Mowers and chain saws need regular replacement with the consistent use received.

Other motorized equipment will be purchased and replaced as needed.

Other equipment: Interpretive, furniture and fixtures will be purchased as needed.

Maintenance and Operations Summary

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

	Biennium				
	78-79	80-81	82-83	84-85	86-87
PERSONNEL:					
Existing 76-77 $183,000					
Actual Needs (for current operations based on staffing chart)	$ 238,000				
*Personnel Costs (from previous biennium)		$ 261,800	$ 294,500	$ 328,350	$ 361,150
**Additional Personnel Needs (to operate new facilities) (See page 99.)		6,000(1)	4,000(2)		
Sub Total	238,000	267,800	298,500	328,350	361,150
*10% Salary Inflation	23,800	26,700	29,850	32,800	36,100
*TOTAL BIENNIAL PERSONNEL COSTS	261,800	294,500	328,350	361,150	397,250
*SUPPLIES: Administrative Overhead and Expenses (20% of personnel costs)	52,360	58,900	65,670	72,230	79,450
Equipment: (from equipment schedule)	28,950	15,800	11,600	20,050	13,500
TOTAL PROJECTED BIENNIAL MAINTENANCE AND OPERATIONS COSTS	$ 343,110	$ 369,200	$ 405,620	$ 453,430	$ 490,200
ANNUAL COST BREAKDOWN	$ 171,550	$ 184,600	$ 202,800	$ 226,700	$ 245,100

TOTAL 10 YEAR COST PROJECTION: $2,061,560

*Rounded figures

Gooseberry State Park Management Budget Summary

Management Practice	Biennium 78-79	80-81	82-83	84-85	86-87	Total
Resource Management	$ 25,590	$ 15,350	$ 15,450	$ 9,345	$ 5,185	$ 70,920
Recreation Management	522,000	209,500	235,000	215,000	120,000	1,331,500
Boundary Modification		30,000				30,000
Maintenance and Operations	343,100	369,200	405,620	453,430	490,200	2,061,560
TOTAL	$890,700	$624,050	$656,070	$677,776	$615,385	$3,463,980

Implementation

OVERALL AUTHORITIES

DIVISION OF PARKS AND RECREATION

General

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

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

Specific Requirements

The director and staff will:

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

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

REGIONAL OFFICE

General

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

Specific Requirements

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

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

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

PARK MANAGER

General

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

Specific Requirements

The park manager will:

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

OFFICE OF PLANNING AND RESEARCH

General

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

Specific Requirements

The Office of Planning and Research will:

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

PROCEDURES

DEVELOPMENT

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

Contract

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

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

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

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

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

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

Force Account

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

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

Director assigns funds to regional administrator.

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

Regional park supervisor may:

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

Assign the park manager to complete the project with field personnel

Assign park manager, in cooperation with the regional staff, to let bids to local contractors

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.

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

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

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

RESOURCE MANAGEMENT

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

Contract

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

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

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

Force Account

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

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

Director assigns funds to regional administrator.

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

Director supervises and monitors the program.

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

Director approves the completed project.

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

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

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

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

Regional staff supervises project.

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

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

MAINTENANCE AND OPERATIONS

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

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

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

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

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

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