Split Rock Creek
State Park Management Plan

Draft

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LIST OF MAPS

PREFACE

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

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

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

This document is the General Park Management Plan. All recommendations, both resource management and physical development, are included in this document. Detailed inventory data and specific instructions necessary for implementation of the plan are not included. This information has been compiled into technical appendices, which are on file at: Park Planning
Department of Natural Resources
444 Lafayette
St. Paul, Minnesota 55101

INTRODUCTION

AN OVERVIEW OF SPLIT ROCK CREEK STATE PARK

Split Rock Creek State Park is located in extreme southwestern Minnesota, a few miles east of the Minnesota/South Dakota border. The nearest centers of population are the towns of Ihlen, adjacent to the park, Pipestone, 5 mi (8 km) to the northeast, and Jasper, 5 mi (8 km) to the southwest. State trunk highway 23 (TH 23) provides access to the town of Ihlen and county state aid highway 20 (CSAH 20) provides direct access to the park.

The statutory boundary of the park encloses 228 acres (92 hectares), all of which is state owned.

The landscape in the vicinity of Split Rock Creek is gently rolling. A bedrock of sioux quartzite is covered by a thick layer of glacial till.

Split Rock Lake is the most significant recreational resource in the park. The park was founded in 1937. Shortly thereafter, the dam was constructed to form Split Rock Lake. It provides excellent opportunities for fishing and swimming.

In addition to the recreational opportunities provided by the lake, there is a picnic ground, a primitive campground with 25 campsites, a small primitive group camp, and a short hiking trail. During the winter, the hill adjacent to the water tower is used for sliding.

THE PLANNING PROCESS

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

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

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

The planning process consists of five steps:

1. Compilation of an inventory of natural resources and existing facilities. Task forces of specialists from other DNR divisions and sections are mobilized to assist in collecting pertinent data. At this point the first public workshop is held.

2. Identification of alternatives for park management and development. A second public workshop is held to review these alternatives and invite further public comment. These alternatives are then reviewed by the Division of Parks and Recreation.

3. Classification of park, development of park goal, and writing draft plan. This step culminates in the first interdepartmental review, followed by a 30 day public review. Within this 30 day period, the third public workshop is held.

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

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

SUMMARY

A recreational state park classification is proposed for Split Rock Creek State Park.

The goal for the park can be found in the purpose for all recreational state parks as stated in the ORA '75:

> "A recreational state park shall be established to provide a broad selection of outdoor recreational opportunities in a natural setting which may be used by large numbers of people."

Natural resources management summary:

- Manage shallow water areas for cattail-marsh
- Control cattails
- Provide high value upland nesting cover
- Plant shrubs
- Plant trees
- Maintain maximum abundance of snag trees
- Continue the present fisheries management practices

The major proposed changes to existing park facilities include:

- Removing the shop building and constructing a new one
- Removing the existing bathhouse and constructing a new one with toilet facilities
- Removing the contact station and constructing a new one with office facilities for the park manager
- Developing a foot trail around the perimeter of Split Rock Lake
- Constructing a fish cleaning house
- Upgrading the boat launch and adjacent parking lot
- Remodeling the water tower for use as a trail shelter/visitor center

REGIONAL ANALYSIS

INTRODUCTION

In order to determine a park's potential role in perpetuating natural resources and fulfilling recreational needs, a state park analysis process has been initiated. The analysis is designed to look at a park's interrelationship with the state recreation system; the biocultural region system; and other factors such as: the surrounding area, the park users--existing and potential, and other recreational facilities nearby.

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

The State Recreation System

Minnesota has an abundance of natural, scenic, and historic resources. The state has set aside lands which exemplify these outstanding resources. It is the management goal for all state lands to protect and perpetuate these resources and make them available for the use and enjoyment of the citizens of Minnesota. Many of these state-owned lands have the potential to provide for a wide variety of outdoor recreational activities.* However, there is a delicate balance which must be maintained when recreational facilities are provided for large numbers of people in areas of outstanding, often sensitive resources. Inappropriate development can result in irreparable damage to the resource. To help ensure this recreation/resource balance, the Minnesota state legislature outlined in the Outdoor Recreation Act of 1975 a classification system for all state recreational lands. The components of this system are: natural state park; recreational

*Outdoor recreation is defined in ORA '75 as:

> "any voluntary activity, including hunting, fishing, trapping, boating, hiking, camping, and engaging in winter sports, which is conducted primarily for the purposes of pleasure, rest, or relaxation and is dependent upon or derives its principal benefit from natural surroundings: "Outdoor Recreation" shall also mean any demonstration, structure, exhibit, or activity which is primarily intended to preserve, demonstrate, or explain a significant aspect of the natural and cultural history, and archaeology of Minnesota."

state park; state trail; state scientific and natural areas; state wilderness area; state forests; state wildlife management area; state water access site; state wild, scenic, and recreational rivers; state historic sites; and state rest area. Also included in this legislation are general criteria for planning and management of these units. Each unit is evaluated and classified based on these criteria.

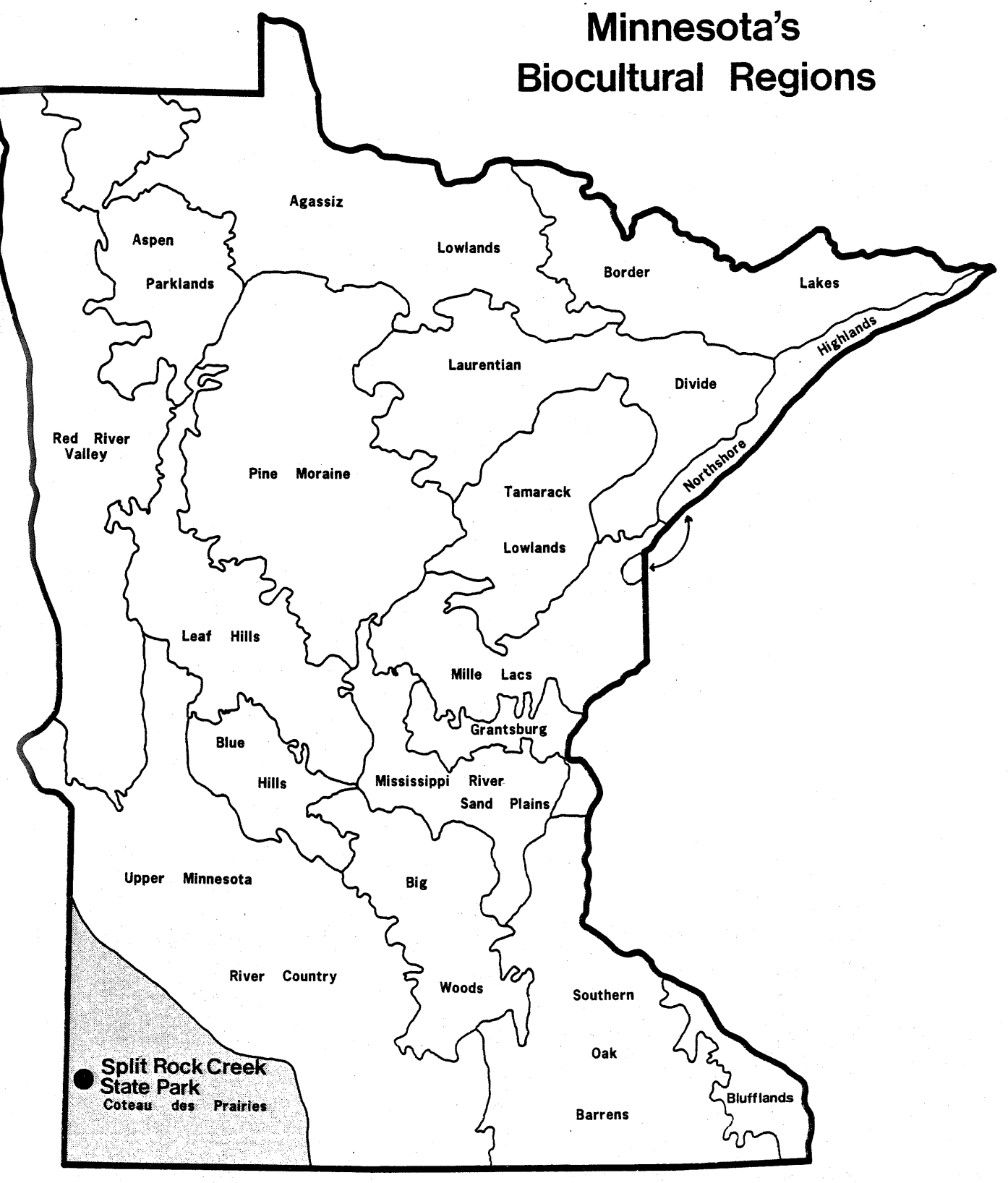
A classification system identifies the role for each recreational unit in the statewide system. (See Classification Section, p10 for further discussion.) The two primary classifications for state parks are natural and recreational. These two, along with other classifications, are considered during the planning process. The most appropriate is recommended for the park. If a state park does not meet the established classification criteria, the DNR will consider the possibility of transferring the area to another managing agency or eliminating it from the state recreation system.

The Biocultural Region System

The biocultural region system divides the state into 18 regions. These regions are differentiated according to the characteristic plant and animal life, landforms, and cultural patterns which existed before, during, and after European settlement. The biocultural region system is a framework which provides valuable information useful in determining the most appropriate classification, management, and development of Minnesota's state parks.

Split Rock Creek State Park is located in the Coteau des Prairie Biocultural Region (see Biocultural Regions Map, M1). This region encompasses 3,039,000 acres (1,230,000 hectares) or about 5.6% of the state.

The Coteau is a relatively flat plateau of land which rises about 650 ft (200 m) above the adjacent Upper Minnesota River Biocultural Region to the northeast. The Coteau is made up of several hundred feet of glacial deposits underlain by sedimentary bedrock. Lake Shetek in Murray County is the only sizable natural lake in the region.


Minnesota's
Biocultural Regions
Agassiz
Aspen
Parklands
Lowlands
Border
Lakes
Highlands
Laurentian
Divide
Red River
Valley
Pine Moraine
Tamarack
Lowlands
Northshore
Leaf Hills
Mille Lacs
Grantsburg
Blue
Hills
Mississippi River
Sand Plains
Upper Minnesota
Big
River Country
Woods
Southern
Oak
Barrens
Blufflands
Split Rock Creek
State Park
Coteau des Prairies

Major rivers in this region are the Rock, Redwood, and Des Moines. Information on presettlement vegetation is sparce, but there are indications that the Coteau was covered mostly by prairie and wet prairie.

Split Rock Lake covers approximately one third of the park acreage. The remainder is grassland which was used for agricultural purposes prior to establishment of the park. Shade trees, primarily ash and oak, are planted in the use areas. The vegetation in the park is not representative of the prairies which once covered the Coteau. However, the small hill between the water tower and the lake does support a number of prairie plant species.

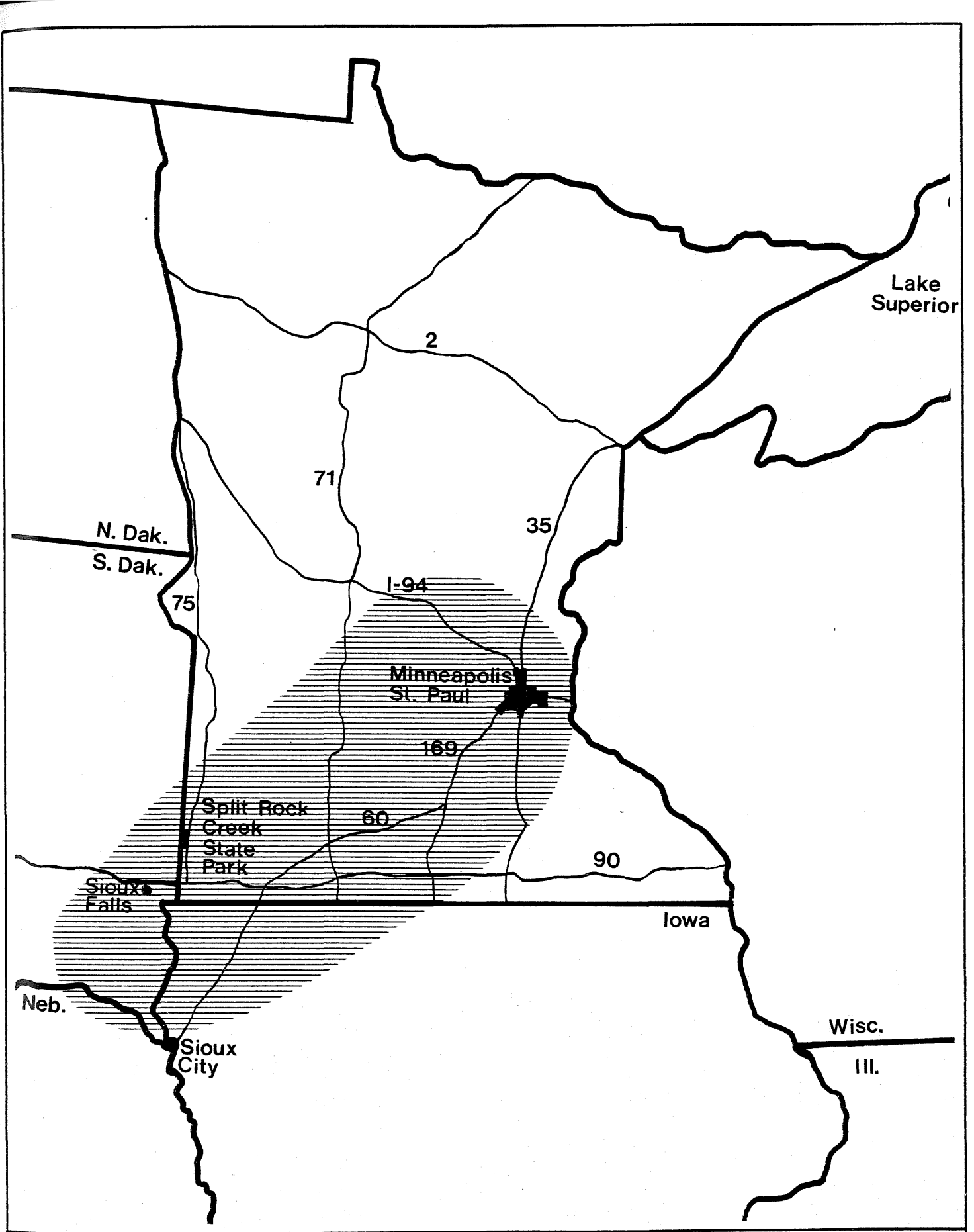
THE SURROUNDING AREA

Statewide and regional factors which may influence or impact recreational use patterns of a state park must be analyzed in order to adequately plan a park. Factors which are being considered in the Split Rock Creek State Park planning process include the park's relationship to population centers, the effects of energy on park use, and an analysis of supply and demand for recreational opportunities in the surrounding area.

Accessibility

The accessibility of Split Rock Creek in terms of time and distance from the population it serves must be evaluated when recreation programs and developments are considered. Alternative methods of transportation need to be considered in light of the energy situation.

Split Rock Creek State Park is located in Pipestone County in southwestern Minnesota 5 mi (8 km) southwest of Pipestone. Marshall is located 55 mi (89 km) to the northeast. Slayton is 32 mi (52 km) to the east and Luverne is 15 mi (24 km) to the southeast. Sioux Falls, South Dakota is 40 mi (64 km) southwest of Split Rock Creek. The Twin Cities metropolitan area is approximately 200 mi (320 km) to the northeast.



N

Split Rock Creek State Park

Camper Origins

The park is accessible from the north and south on TH 23. In addition, TH 70 and TH 75 pass through Pipestone. I-90 passes within 23 mi (37 km) of the park providing good access for out-of-state visitors.

The dramatic increases in gasoline prices in the past two years have affected recreation travel patterns. Many people who once traveled longer distances to recreate are now recreating much closer to home. Because there are few comparable recreational facilities available in the vicinity, residents of Pipestone, Ihlen, Edgerton, and other small towns in the area can be expected to continue their substantial use of the park, particularly day visitation. However, future overnight visitation (camping) from people living further away is difficult to predict. Such visitors are affected by higher gasoline prices, but what effect this would have on overall park visitation is difficult to determine.

Another potential result of higher gasoline prices is the increased use of alternative types of transportation. Bicycle access for local residents is poor. State roads and some county roads in the area are hard surfaced, however, they do not have surfaced shoulders. Public transportation is available in the form of bus lines which serve Pipestone from the Twin Cities, Sioux Falls, South Dakota and Sioux City, Iowa on a daily basis. These buses, however, do not stop at or near the park. Visitors traveling by bus would have to arrange some other form of transportation from Pipestone to the park.

Population

The nearby communities of Ihlen and Pipestone have populations of 135 and 5,300 respectively.* These and other small towns in the area have a definite effect on the visitation patterns of the park, particularly for day visitation.

Economy/Land Use

The predominant land use in the area is agricultural. The only exception to this is the land adjacent to the north end of the park where the city of Ihlen is located.

*The Ihlen population is a 1977 estimate. The Pipestone population a 1980 estimate.

THE PARK USER

The Park Users

Day/Overnight Use

In all cases, day visitation to state parks is considerably higher than camping. For those parks with a nearby population center, or which have features that attract day visitors--such as Split Rock Lake--day visitation can account for the vast majority of park visitation.

At Split Rock Creek, day visitation during the last six years has averaged 92 percent of the total park visitation. The proximity of the park to the towns of Pipestone, Ihlen, and Edgerton probably accounts for the substantial day use percentage.

Another contributing factor is the fact that Split Rock Lake is a very popular fishing lake for area residents. A large percentage of summer day use and an even larger percentage of winter day use is due to large numbers of people fishing on the lake.

Though it accounts for a considerably lower percentage of park use, camping is a popular activity at Split Rock Creek. In 1980, about 3,000 people camped in the park. Given the relatively small number of campsites (25) this demonstrates the popularity of the park for camping.

Split Rock Lake is located in an area of the state which is lacking in water based recreational opportunities. This accounts for the popularity of the park. Also, the location of Split Rock Creek so near to Iowa and South Dakota makes the park popular with visitors from these states.

The following chart lists the number of park visitors and the facilities used from 1975 through 1980.

	Primitive Group Camp	Campground	Day Visitors	Total Park Visitors
1975	230	3,312	48,591	52,133
1976	160	4,405	62,433	66,998
1977	169	4,807	52,277	57,253
1978	163	3,715	42,800	46,678
1979	278	3,617	58,905	62,800
1980	314	2,967	65,545	68,826

Camper Profile

Camper registration cards are completed for each campsite which is used by a group of campers. This card contains information on camper name and address, number in party, length of stay, and dates the campsite was used. A sample of these cards for the years 1977 and 1979 was taken. The following information on campers at Split Rock Creek was drawn from this sample.*

Camper Origins

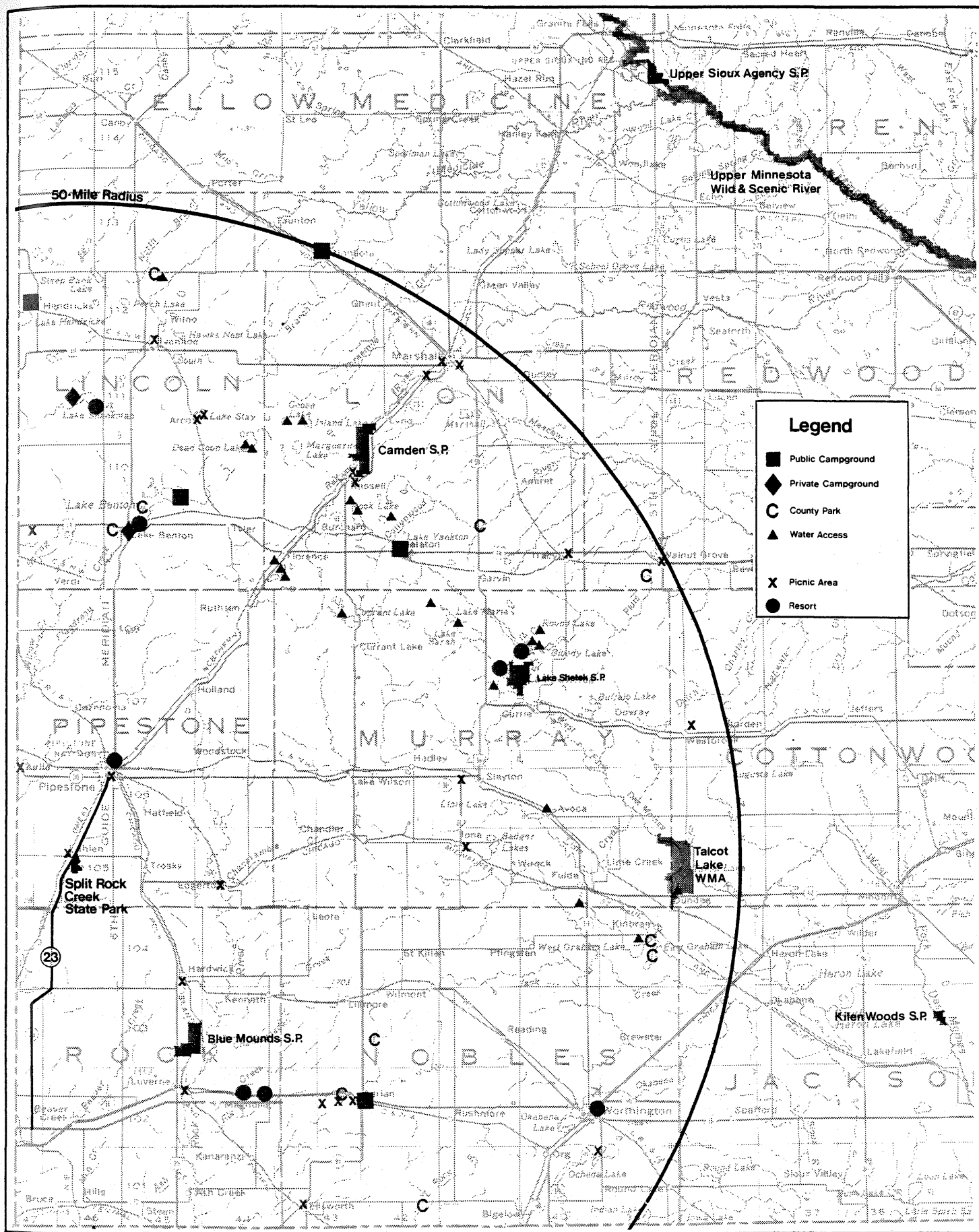
	Percent	
Minnesota	52.8	
Out-of-State	47.2	(Largest out-of-state use is South Dakota at 14.7 percent)

A Camper Origins Map (M 2) was prepared to show the home residence of those who camp at Split Rock Creek. Sixty-five percent of all camping parties in the park came from within the shaded zone (see map). A large number of campers came from outside of the local park area, including several towns in northwestern Iowa, as well as from the metropolitan areas of Sioux Falls and Minneapolis/St. Paul.

Camping Seasons

Each of these figures represents the percent of the total number of camping parties who camped at Split Rock Creek during a particular month. The percentage is averaged for the years 1977 and 1979.

*This information does not necessarily provide data on individual campers. Information gathered is on each group of campers who register for a campsite. In some cases groups may include an entire family. In others, it may actually be a single individual.



Split Rock Creek State Park | Regional Analysis

M3

	Percent
April	.3
May	12.4
June	27.4
July	30.4
August	22.4
September	6.4
October	.7

Number in Camping Party

	Percent
1	3.3
2	35.8
3	12.4
4	21.1
5	12.4
More than 5	7.9
Unreported	7.0

Regional Recreational Facility Supply and Demand

It is important in planning of Split Rock Creek State Park to analyze the potential interrelationship of the park with other recreational units. This is necessary in order to assess the demand for particular activities and how the park might function to fill this demand.

The following mileage figures on a person's willingness to travel to utilize a recreation facility came from information collected by the DNR in the preparation of the State Comprehensive Outdoor Recreation Plan (SCORP '79).*

*SCORP '79 is a 4-year study which identifies recreation patterns and activity preferences on state and region levels.

Activity	Distance willing to travel to participate (for non-metro Minnesotans	
Camping	76 mi	123 km
Picnicking	32 mi	52 km
Hiking	31 mi	50 km
Swimming	16 mi	26 km
Bicycling	14 mi	23 km
Horseback Riding	22 mi	36 km
Ski Touring	32 mi	52 km
Snowmobiling	43 mi	69 km

SCORP '79 also ranked a number of summer and winter recreation activities according to expressed desire by Minnesotans for more recreation opportunities. The activities ranked as follows:

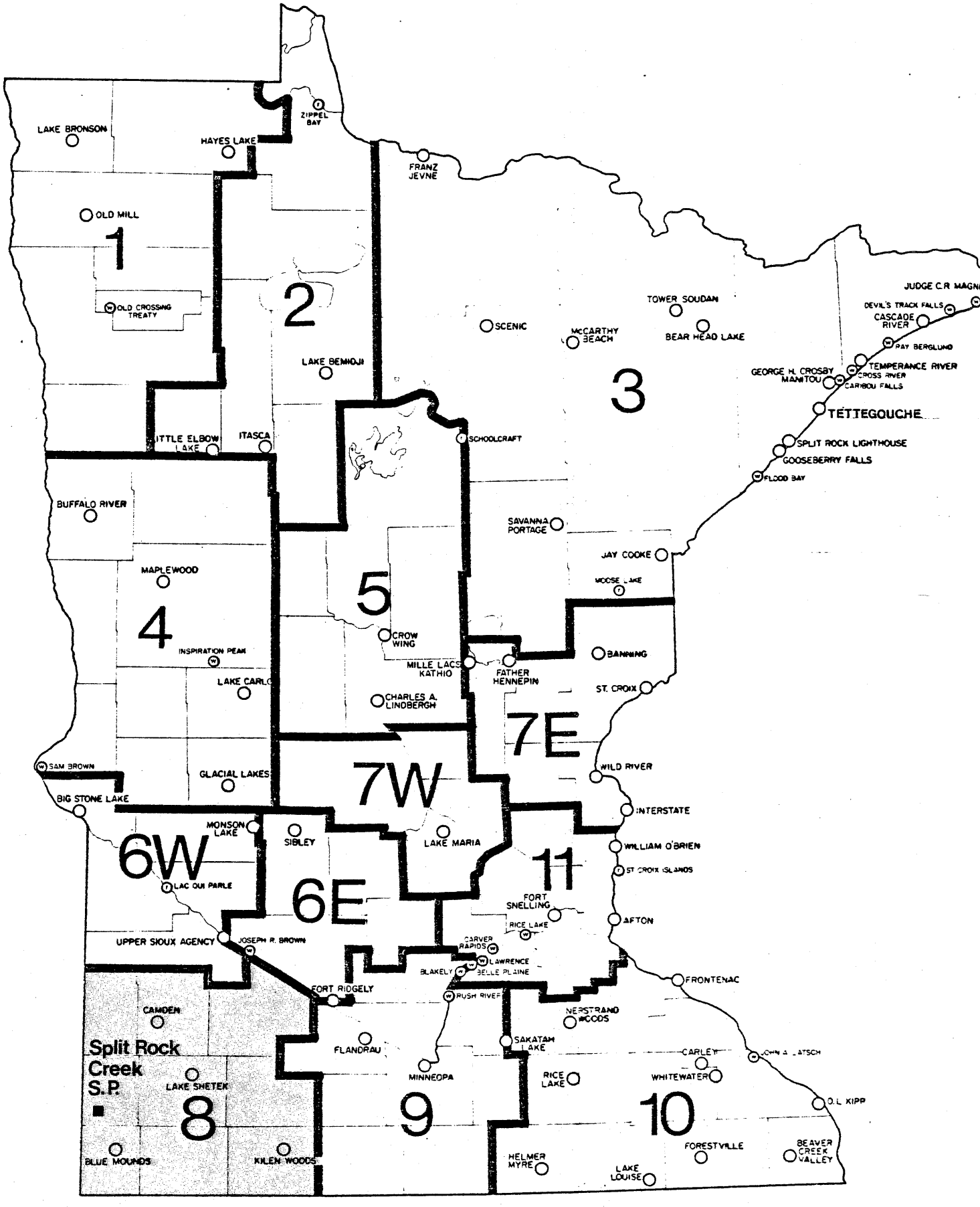
Summer Activities

All Minnesotans	Region 8 Residents*
1. Bicycling	1. Camping
2. Camping	2. Fishing
3. Fishing	3. Bicycling
4. Tennis	4. Swimming
5. Swimming	5. Tennis
6. Hiking	6. Hiking
7. Picnicking	7. Golfing
8. Boating	8. Picnicking
9. Golfing	9. Park Facilities
10. Park Facilities	10. Baseball/Softball
11. Canoeing	11. Boating
12. Horseback Riding	12. Canoeing

Winter Activities

All Minnesotans	Region 8 Residents
1. Hunting	1. Hunting
2. Ski Touring	2. Downhill Skiing
3. Snowmobiling	3. Snowmobiling
4. Downhill Skiing	4. Ski Touring

*SCORP information was collected according to economic development regions. There are a total of 13 of these regions in the state. Split Rock Creek is located in Region 8, which includes the counties of: Rock, Nobles, Jackson, Pipestone, Murray, Cottonwood, Lincoln, Lyon, and Redwood.


LAKE BRONSON
HAYES LAKE
ZIPPEL BAY
FRANZ JEVNE
OLD MILL
1
OLD CROSSING TREATY
2
SCENIC
McCARTHY BEACH
TOWER SOUDAN
BEAR HEAD LAKE
JUDGE C.R MAGNU
DEVIL'S TRACK FALLS
CASCADE RIVER
PAT BERGLUND
TEMPERANCE RIVER
CROSS RIVER
GEORGE H. CROSBY MANITOU
CARIBOU FALLS
TETTEGOUCHE
SPLIT ROCK LIGHTHOUSE
GOOSEBERRY FALLS
FLOOD BAY
LAKE BEMIDJI
3
ITTLE ELBOW LAKE
ITASCA
SCHOOLCRAFT
BUFFALO RIVER
SAVANNA PORTAGE
JAY COOKE
MOOSE LAKE
MAPLEWOOD
4
5
CROW WING
INSPIRATION PEAK
LAKE CARLO
MILLE LACS KATHIO
FATHER HENNEPIN
BANNING
CHARLES A. LINDBERGH
ST. CROIX
7E
SAM BROWN
GLACIAL LAKES
7W
WILD RIVER
BIG STONE LAKE
INTERSTATE
MONSON LAKE
SIBLEY
LAKE MARIA
WILLIAM O'BRIEN
ST CROIX ISLANDS
6W
11
LAC QUI PARLE
6E
FORT SNELLING
RICE LAKE
AFTON
UPPER SIOUX AGENCY
JOSEPH R. BROWN
CARVER RAPIDS
LAWRENCE
BLAKELY
BELLE PLAINE
FRONTENAC
FORT RIDGELY
RUSH RIVER
CAMDEN
NERSTRAND WOODS
Split Rock Creek S.P.
FLANDRAU
SAKATAH LAKE
CARLEY
JOHN A. LATSCH
LAKE SHETEK
MINNEOPA
RICE LAKE
WHITEWATER
O.L. KIPP
8
9
10
BLUE MOUNDS
KILEN WOODS
HELMER MYRE
FORESTVILLE
BEAVER CREEK VALLEY
LAKE LOUISE

M4

Following is a summary of the supply of each facility type in the area of the park and a brief discussion of the demands for that facility on a regional and statewide basis.

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

The inventory for some of the recreational facilities is done in terms of a 25 mi (40 km) radius. Others are done in terms of a 50 mi (80 km) radius. This is the form in which the current data is available. The determining factor was willingness to travel.

Camping

There are 23 campgrounds within a 50 mi (80 km) radius of Split Rock Creek. This is considerably less than some portions of the state, such as the Brainerd area. However, the smaller population base and fewer tourist attractions in the area will naturally lead to a smaller number of campgrounds.

Administration	Number of Campgrounds	Number of Campsites
State Parks	4	254
County Parks	6	110
City Parks	4	142
Church Organizations	1	30
Private (resorts, campgrounds)	8	357
Total	23	893

Camping is an increasingly popular outdoor activity in Minnesota. According to SCORP '79, 10-year projections (1980-90) predict a 9.4 percent increase in camping occasions statewide and a 5.4 percent increase in Region 8.

It is difficult to predict the future camping trends at Split Rock Creek. Currently, the park receives a moderate amount of use with the majority of the camping occurring on weekends.

Many people who camp at Split Rock Creek are from out-of-state. Quite often, people who are on extended traveling vacations will stop to spend an evening at the park. For these people, the park is a stop along the way rather than their primary destination.

It is possible that, as gasoline prices increase, out-of-state use will decline. However, it would probably take a substantial price increase to significantly reduce out-of-state visitation. This is because many of the campers at Split Rock Creek come from areas, such as South Dakota and Iowa, where outdoor recreation resources are often overused or lacking.

Picnicking

There are a limited number of places to picnic within a 25 mi (40 km) radius of Split Rock Creek. Five of the 12 sites listed below have 3 or less picnic tables and are used more as highway rest areas than for picnicking.

Administration	Number of Parks	Number of Picnic Tables
State Parks	2	68
Dept. of Transportation	5	16
County Parks	1	25
City Parks	4	153
Total	12	262

Swimming

The following swimming facilities lie within a 25 mi (40 km) radius of the park:

Administration	Beach	Pool
State Parks	2	
City Parks		3
Private		
(resorts, campgrounds)	2	1
Total	4	4

Only two of the beaches are available for general public use (state, county, and city parks). One of these is in Split Rock Creek State Park. The other is 20 mi (32 km) away in Blue Mounds State Park. Both of the privately owned resort beaches are located on Lake Benton, about 25 mi (40 km) away.

Trails

Within a 25 mi (40 km) radius of Split Rock Creek, there is one other state park, Blue Mounds. These two parks offer the following trail mileages.*

	Trail Mileages			
	Snowmobiling	Ski Touring	Horseback Riding	Hiking
Blue Mounds	4.5	3.5		8
Split Rock Creek		1		1

There are no grant-in-aid snowmobile trails in this part of southwestern Minnesota.

*All of these mileages do not represent separate trails. For example, most of the hiking trails are also used for snowmobiling or ski touring.

Bicycling

There are no designated bicycle trails in the southwestern part of the state. The development of bicycle trails within the park is not recommended because of its small size. However, bicycle access to the park must be considered. With the current energy situation, cycling trips to the park may increase. These would most likely be day trips by local area residents.

Other recreational facilities in the area which should be mentioned include:

- Pipestone National Monument. Facilities at the monument include a 1 mile hiking trail and a visitor center which focuses on interpretation of the pipestone quarries and the Indian peoples who have made use of them.
- Hole-in-the-Mountain Prairie. This is a 222 acre (90 hectare) prairie preserve owned by the Nature Conservancy. It is located about 1.5 mi (2.5 km) south of the town of Lake Benton. There are no recreation facilities in the preserve other than a short walking trail.
- Hole-in-the-Mountain Park. This park is located in the town of Lake Benton and is operated by Lincoln County. Facilities include a small number of campsites (9), picnicking, athletic fields and 3 mi (5 km) of hiking trails.
- Casey Jones Trail. This is a proposed trail alignment authorized by the state legislature and under the jurisdiction of the DNR, Trails and Waterways Unit. The trail is not open for public use and none of the alignment is yet developed; although most of it is in state ownership. The proposed alignment runs from Lake Shetek State Park to the city of Pipestone, a distance of about 33 mi (53 km). Much of the proposed alignment is along abandoned railroad right-of-way. At present, the state-owned portion of the alignment is being managed for wildlife purposes. No management plan has yet been done for the trail. A statewide trail plan to be completed in 1981 will determine the future uses of the proposed trail.

LASSIFICATION

CLASSIFICATION

PURPOSE

The purpose of the classification process as stated in the Outdoor Recreation Act of 1975 (ORA '75) is to establish "an outdoor recreation system which will (1) preserve an accurate representation of Minnesota's natural and historical heritage for public understanding and enjoyment and (2) provide an adequate supply of scenic, accessible and usable lands and waters to accommodate the outdoor recreational needs of Minnesota's citizens.

PROCESS

Each state park is managed and developed according to the nature of its natural resources and their ability to tolerate visitor use. The classification alternatives considered for Split Rock Creek State Park were recreational state park, natural state park, or the transfer of the park to Pipestone County.

The criteria in ORA '75 for a natural state park are as follows:

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

Split Rock Creek is located in the Coteau des Prairie Biocultural Region. Prior to European settlement this region was covered almost entirely by tall grass prairie with wooded areas near the rivers and lakes. The park does not exemplify the major characteristics of its biocultural region. The lake was created by the construction of the dam on Split Rock Creek. Tree cover, though it is not dense, is much heavier than in presettlement times. Many of these trees are not native to the prairie and were planted at the time the lake was developed. It would take a major restoration project spanning a period of many years to return the park land to a condition representative of presettlement prairie.

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

Split Rock Creek State Park draws visitors from southwestern Minnesota and surrounding states. However, the natural resources of the park are not significant enough to attract large numbers of visitors. Attendance is due to the park's location on Split Rock Lake, one of the few water-based recreational facilities in the area.

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

Split Rock Creek is one of the smallest of Minnesota's state parks, only 230 acres (93 hectares) in size. Split Rock Lake occupies 85 of these acres (34 hectares). Most of the acreage not covered by water has park development on it such as the campground and picnic ground. Because of its size, the park cannot support a variety of native plants and animals in their natural habitat.

The criteria in ORA '75 for a recreational state park are as follows:

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

Because the park contains Split Rock Lake, it can accommodate water-based recreation activities. However, it is questionable whether the lake provides outstanding recreation opportunities. The popularity of the lake is due more to its location in the state. Lakes are sparse in southwestern Minnesota, particularly those that can support a variety of recreational activities. For this reason people from southwestern Minnesota as well as out-of-state visitors from Iowa and South Dakota travel to Split Rock Creek to recreate. The vast majority of visitation is from the local area. Over the six year period from 1975-1980, day visitation accounted for approximately 92% of total park visitation. For most state parks, day visitors come from the local area. Campers

accounted for 8% of total visitation during the same time period. Some of these campers, however, were from the local area. Others used Split Rock Creek as a stop-over on their way to another destination. Thus the number of visitors attracted to the park from beyond the local area is rather small.

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

Though small in size, the park receives a substantial number of visitors. Yearly attendance figures have averaged well over 50,000 for the last five years. In spite of these high attendance figures, the park resources have suffered no irreparable damage.

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

There are few recreational facilities within a 25 mi (40 km) radius of the park. They include one other state park, two county parks and six city parks. The state park is the only one which provides a variety of recreational facilities in a natural setting. The others are typical of city and county parks providing such things as picnic tables, playgrounds, and, in some cases a swimming pool. One county park has a few campsites and a short hiking trail. None of these parks provides the kind of water-based recreational opportunities that Split Rock Creek does, supplemented by a campground and picnic ground.

There is no question that Split Rock Creek is located in an area that is deficient in public outdoor recreation facilities. However, because the vast majority of visitation to the park is from the local area, there is some question as to whether the park merits a state park classification. In other areas of the state there are parks operated by counties or municipalities which provide similar recreation facilities. These parks may be significant on a regional basis but not a statewide basis. This appears to be the case with Split Rock Creek.

RECOMMENDED CLASSIFICATION

Split Rock Creek does not meet the criteria for a natural state park. It may meet the criteria for a recreational state park, but only marginally. Because of its recreational resources and visitation patterns, the park functions more on a regional basis serving people in extreme southwestern Minnesota and adjacent areas in Iowa and South Dakota. For the present time, the park should be classified as a recreational state park. Developments should be implemented as recommended in this plan. However, if Pipestone County expresses a desire to operate the park, or park visitation becomes even more regional in nature, the DNR, Division of Parks and Recreation should attempt to transfer title of the park to Pipestone County. Development should proceed as is recommended in this plan because the proposed facilities are badly needed. In addition, improving the recreational and administrative/support facilities could enhance the possibility that the county would be interested in the operation of Split Rock Creek.

Goal For The Park

The goal for Split Rock Creek State Park can be found in the purpose for all recreational state parks as stated in the Outdoor Recreation Act of 1975 (ORA '75):

> "A recreational state park shall be established to provide a broad selection of outdoor recreation opportunities in a natural setting which may be used by large numbers of people."

PARK RESOURCES

CLIMATE

Average summer temperatures in Minnesota vary only a few degrees from north to south. The only exception to this is the North Shore of Lake Superior where temperatures are generally from 10 to 15 degrees Fahrenheit (5.5° to 8°C) cooler than southern Minnesota.

Average temperatures for the month of July in the Split Rock Creek area vary from a high of 84°F (29°C) to an average low of 60°F (16°C). This is similar to temperatures in north central Minnesota (in the Bemidji area) which experience average highs of 80°F (27°C) and average lows of 56°F (13°C).

During the winter there is a greater variation in temperature within the state. Average temperatures in January for the area surrounding Split Rock Creek vary from an average high of 22°F (6°C) to an average low of 2°F (17°C). This is about 10°warmer than average temperatures for January in north central Minnesota.

Information on annual precipitation in the Split Rock Creek area comes from a weather recording station in Pipestone. There the total annual precipitation (rain and snow) is about 24 in. (61 cm). During the winter of 1977-78 total snowfall was between 30–40 in. This accumulation of snow provides an adequate base for winter recreational activities such as ski-touring and snowmobiling. However, the area is subject to considerable blowing and drifting which would tend to have a negative effect on trails located in open areas. The lack of ground vegetation in the Split Rock Creek area makes this problem more critical. Also, the warmer average winter temperatures result in a shorter winter recreation season than areas in northern Minnesota.

GEOLOGY

The terrain in the Split Rock Creek area was formed by three major ice movements during the last glacial period about 10,000 years ago. As these glaciers melted, they deposited a slightly irregular blanket of glacial till over the entire area. These deposits descend on a gentle slope from west to east across the southwestern portion of the state.

Outcroppings of Sioux quartzite occur frequently in this portion of Minnesota. Prominent exposures of this rock can be seen near the town of Pipestone and in Blue Mounds State Park. At the Pipestone site, deposits of pipestone, or catlinite, are found interspersed with the quartzite. Pipestone is a relatively soft stone which for centuries has been quarried by American Indians to fashion into pipes and other religious and decorative articles. To preserve this historically significant site, the Congress established the Pipestone National Monument, just north of Pipestone, Minnesota.

The land in the Split Rock Creek area is a part of a vast geological formation known as the Coteau des Prairie. The Coteau is a high plateau of land consisting of several hundred feet of glacial material underlain by sedimentary rock. The Coteau extends for several hundred miles from northwestern Iowa to near the South Dakota–North Dakota border. In some areas, particularly on the western edge of the Coteau the change in elevation is quite dramatic. This change in elevation has resulted in a different drainage pattern for the Coteau than for the rest of southwestern Minnesota. A major drainage divide which runs roughly from Worthington to Lake Benton lies about fifteen miles east of the park. From this divide, the Mississippi River drainage flows to the northeast, while the Missouri River drainage flows to the south and southwest.

SOILS

Silty clay loams of the Moody-Trent-Whitewood association make up the majority of soils within Split Rock Creek State Park. These soils combine to form a layer of loess (fine grained particles deposited by the wind) underlain by glacial till and a bedrock of Sioux quartzite.

The Moody series in this area is a well-drained upland soil, with a gentle slope of less than 4 percent. The hazard of erosion is slight, and potential for recreational development is good. The Trent series is a moderately well-drained, upland soil with a gentle slope of less than 3 percent. The hazard of erosion is not severe, and recreational development potential is fair. The Whitewood series is a somewhat poorly drained soil, usually found on wet flats and drainageways. Because of poor drainage, Whitewood soils are less desirable for recreational development.

The eastern shore of Split Rock Lake is composed of soils of the Lamoure series. Severe wetness limitations exist with the Lamoure series because of its poor drainage properties. Other significant soils within Split Rock Creek State Park include the Brookings, Buse-Sioux, Ihlen, Rauville, and Vienna series.

Management

Objectives:

To collect in-depth soils data where necessary

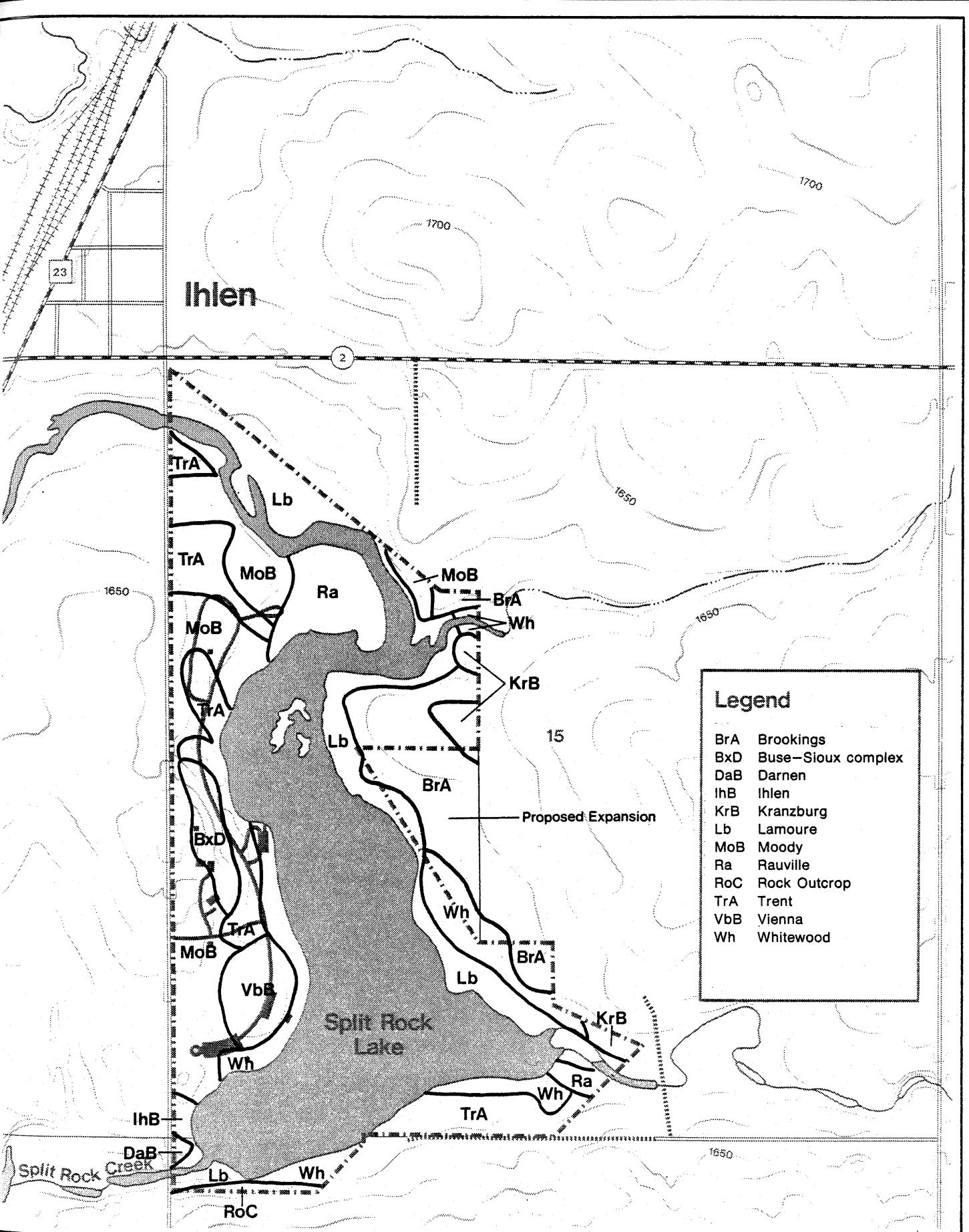
To locate development on soils that are suitable for the intended use

Detailed Recommendations

Action #1. Conduct a detailed soil analysis on all proposed development sites before development begins.

There are twelve soil types within the 150 acre (61 hectare) land surface in Split Rock Creek. Not all soil types are suitable for development. The diversity of soils represents a continuum of development suitability, from well-drained suitable soils to poorly-drained unsuitable soils. One of the primary concerns in relation to soils in recreational development is that of finding soils suitable for safe sewage disposal. The Moody series has some of the best drainage soils in the area. Both the manager's residence and main campground are now located on this type of soil.

Cost: $4,000



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Split Rock Creek State Park | Soils

WATER RESOURCES

Inventory and Analysis

Surface Waters

Recreational activities at Split Rock Creek focus on the 85 acre (34 hectare) Split Rock Lake which was created in 1938 by the construction of a dam on Split Rock Creek. The lake has a maximum depth of 20 ft (6 m) and an average depth of about six feet.

Split Rock Lake lies within the physiographic region titled "Coteau des Prairie, Inner Part" mapped by Wright (1972). This region is characterized by a well-developed drainage system and an absence of wetland depressions (Mann 1979). The Minnesota State Waters Inventory identifies only two type 5 wetlands (totaling 94 acres/38 hectares) and one type 4 wetland (totaling 18 acres/7 hectares) in the region.*

Agriculture is the dominant land use of the surrounding area. Eighty-six percent of Pipestone County is cropland and 12 percent open land. Sixty-one percent of the cropland is in row crops, 25 percent in small grians, and 14 percent in hay. (Minn. Agri. Stats. 1974-1978)

Split Rock Creek is part of the Missouri-Des Moines drainage basin. The Minnesota Pollution Control Agency (1978) identified the following water quality problems in this basin:

1. Sediment - Upland erosion is the primary contributor. Streambank erosion accounts for most of the rest.

*Type 4 wetland: Inland deep fresh marshes. The soil is covered with 6 in. to 3 ft (15 cm to 1 m) or more of water during the growing season.

Type 5 wetland: Inland open freshwater. Water is usually less than 10 ft (3 m) deep and is fringed by a border of emergent vegetation.

The Minnesota State Waters Inventory only identifies wetlands greater than 10 acres (4 hectares) in unincorporated and 2½ acres (1 hectare) in incorporated areas.

2. Nutrients - Nurtient levels are high. Upland agricultural sources are large contributors. Phosphorus application rates are high in Pipestone County. Feedlots and animals pastured with access to streams are also important sources. Atmospheric and sediment loading may be a significant factor in nutrient levels of shallow lakes in the area.
3. Oxygen consuming and fecal materials - Same situation as nutrients.

No water quality data is available on Split Rock Lake. Summer algal blooms have been reported in the past. A 1948 Minnesota Department of Conservation waterfowl and furbearer study suggested turbidity may be the limiting factor for submergent plant growth.

Turbidity can be the result of a number of factors. These include: 1) erosion in the watershed, 2) algal growth, and 3) rough fish action. An increase in turbidity changes the numbers and kinds of organisms in water. It decreases the amount of light available to plants and can lead to a decrease in the amount of food available for waterfowl, fish, and other organisms. (Minn. Pollution Control Agency 1978)

Large populations of bullheads can cause turbidity problems. Bullheads are bottom feeders and can disrupt flocculent bottom sediments. They can also increase nutrient levels in the water through excretion of soluble phosphorus, ammonia, and nitrates. Greater availability of these nutrients may increase algal growth resulting in greater turbidity. (John Skrypek, MN/DNR, Fisheries Section, personal communications)

The catchment area of the lake is 41 sq mi (106 sq km). (WPA report, serial #4-1766, 1938.) Most of the precipitation occurs as heavy rain in the spring and summer. Lake level records, monthly precipitation data, and predicted fall soil moisture values since 1941 indicate the lake fills to capacity in the spring. A slight lowering might occur during summer, fall, and winter, but generally the lake level is constant. Water levels have dropped 1 to 3 ft .3 to 1 m) during dry years when summer losses were not replaced. Severe drought conditions can result in very low water levels. In 1976 local residents reported the lake level 4 to 5 ft (1.2 to 1.6 m) below normal. However, spring levels for 1976 and 1977 were not low.

Groundwater

The thickness of glacial drift in the vicinity of the park varies from 0-200 ft (0-61 m). This is underlain by a bedrock of Sioux quartzite. The average depth to quartzite in wells in Rock and Pipestone counties is about 110 ft (34 m), with a maximum depth reported of 496 ft (151 m). The Sioux quartzite aquifer provides the best water quality in the area. Where the drift is thin, however, the aquifer is susceptible to contamination from the surface.

Because of the nature of the Sioux quartzite aquifer, wells are often drilled to depths of several hundred feet. Records from several municipalities in the area indicate a range in well depth of 241 to 596 ft (72 to 179 m). The nearby community of Ihlen, Minnesota drilled its well to a depth of 406 ft (122 m).

Although high nitrate levels frequently occur in this portion of the Missouri River basin, water quality testing in the park well indicates a safe, reliable source of water. The Minnesota Department of Health suggests 10 mg/l as a maximum contaminant level for nitrates. The park well contains less than .4 mg/l. Current test results for the municipal well at Ihlen, however, indicate the level of nitrates to be 18 mg/l. The city of Ihlen has expressed a desire to explore the possibility of tapping into the park well.

Management

Objectives:

Maintain or restore the water quality of Split Rock Lake to its highest potential level

Detailed Recommendations

Action #1. Test the water quality of the lake.

This information would: a) document present water quality conditions and identify any current problems; if problems are identified, management alternatives should be explored; and b) provide a data base with

which future management programs could be evaluated. For example, what would the effect of a temporary drawdown be on nutrient concentrations of the water; or, what effect would rough fish control have on water quality?

Cost: To be included in Fisheries, Action #2, p35.

Action #2. Conduct necessary repairs on Split Rock Dam.

The dam is in stable condition but is in need of repair and maintenance work including tuck pointing, repair of embankment riprapping, repair of embankment erosion at the abutments, and repair of the water level control gate.

Cost: $50,000

Action #3. Maintain lake water records, to include water levels, secchi disc measurements and algal bloom occurrences.

Water levels at the dam should be recorded at least on May 1, September 1, and freeze-up. Water clarity should be measured with a secchi disc. Fisheries personnel should be consulted to establish a standrad operation procedure and schedule of readings. Algal bloom occurrences should be recorded.

Cost: No development cost. Will be done by park staff.

FISHERIES

Split Rock Lake is the only lake in Pipestone County. The creation of the lake and the subsequent stocking program which began in 1945 has resulted in the only viable fishing resource in the area. Fishing occurs year-round and is one of the most popular activities in the park. Split Rock Lake is classified as a warmwater-gamefish lake and is presently stocked with walleye, northern pike, largemouth bass, and panfish. This is primarily a maintenance stocking program. There is probably some natural reproduction of panfish and largemouth bass. It is hoped that the aeration system will improve fish survival and reproduction, thus lowering the intensity of stocking (area fisheries manager, personal communication). Local fishermen also report taking yellow perch and bullheads.

During the winter of 1976, Pipestone County installed an aeration system in Split Rock Lake. Prior to 1976, the lake had low oxygen levels and subsequent winterkill. This condition was especially severe during the years with large amounts of snowcover. Since the installation of the aeration system, winterkill has not been apparent even during years of deep snowfall. The helixer design aeration system creates an open water area that picks up oxygen through natural wave action. This system also increases the oxygen level by forcing air directly into the water.

Management

Objectives:

To provide year-round fishing opportunities for park visitors and residents

Action #1. Continue existing fish stocking program.

Over the past 35 years, management of Split Rock Lake has included an ongoing stocking program. To ensure the diverse fish population that visitors have enjoyed in the past, continuation of the current stocking program is recommended.

Cost: To be done by DNR, Division of Fish and Wildlife, Fisheries Section.

Action #2. Conduct an investigation of the present fishery and lake water quality.

This investigation would provide a general description of the lake's fishery and water quality (see Water Resources, Action #1, p 32). Special attention should be given to rough fish populations and species which could be affected by a temporary drawdown.

Cost: To be done by DNR, Division of Fish and Wildlife, Fisheries Section.

WILDLIFE

No formal records of wildlife abundance or occurrence have been kept for the park. Most of the information must be extrapolated from county or regional surveys. Wildlife habitat in the surrounding area is very limited for many species. The dominant land use in Pipestone County is agriculture. Eighty-six percent of the total land surface is cropland and 12 percent is pasture. Marsh habitat is particularly lacking on the Inner Coteau (see Water Resources, p 30).

DNR Roadside Wildlife Censuses

The following table presents results from the 1980 roadside wildlife censuses conducted by the DNR, Section of Wildlife. This is an indication of both regional and county populations of selected wildlife species. Deer, ~~fox,~~ and skunk are not sampled well by present censusing methods. All of these censused species could be expected to occur in the park.

1980 Roadside Census Results For Selected Farmland Wildlife Species*

Area		Wildlife Species						
		Ring necked Pheasant	Gray Partridge	Cotton-tail	White tailed Jackrabbit	Mourning Dove	White tailed Deer	Striped Skunk
Southwest Agricultural Region (a)	May '80	14.5	28.4	11.1	----	----	1.80	4.44
	August '80	30.2	105.8	7.1	9.1	422	3.6	----
Pipestone County	May '80	6	58	14	26	----	2	0
	August '80	40	246	4	4	724	2	0

Values are $\frac{\text{total animals seen}}{\text{total miles driven}} \times 100$

(a) Includes Lincoln, Lyon, Pipestone, Murray, Rock, Nobles, Cottonwood, Watonwan, Martin, and Faribault counties.

*Compiled from "Status of Wildlife Populations Fall 1980 and 1972-1979 Hunting and Trapping Harvest Statistics, MN/DNR Section of Wildlife (Table 1, 7); and 1980 Breeding Population Status of Wildlife Species in the Farmland Zone, MN/DNR Farmland Wildlife Populations and Research Unit (Tables 1 & 2).

Muskrats in the southwestern one-third of Minnesota have been increasing dramatically since the 1974 drought. Presently there are numerous houses on Split Rock Lake.

County Non-Game Mammal Records

A list of non-game mammals of Pipestone County is provided in the Management Plan Details (MPD). Included are small mammals commonly associated with grasslands and marshes. The coyote is also recorded occurring in the county. Any records of the following species should be reported to the non-game specialist, DNR Section of Wildlife, and the Minnesota Natural Heritage Program:

Least weasel
Plains pocket gopher
Western harvest mouse
Prairie vole

The western harvest mouse (Reithrodontomys megalotis) is known to occur in the park. The Minnesota Natural Heritage Program identifies this species as "rare" in Minnesota. It was found in the prairie on the eastern slope below the water tower. (Minn. Natural Heritage Program records)

Birds

A list of birds known to or probably occurring in the park is included in the MPD. One could expect to see a variety of prairie and grassland birds, wetland birds, raptors, and cosmopolitan species. The trees in the park provide habitat for tree nesting and cavity nesting species. The opportunity to observe marsh birdlife is not locally available elsewhere. A short-eared owl was reported in the park January, 1981. This species is identified as "threatened" by the Minnesota Natural Heritage Program. It is occasionally seen during the winter in this part of the state.

Reptiles and Amphibians

Four species have been recorded in the county. Any sightings of Blanchard's cricket frog should be reported to the non-game specialist and the Minnesota Natural Heritage Program.

VEGETATION

Original Vegetation

The presettlement vegetation of the park was a prairie consisting of a mixture of tall and mid grasses on medium to fine textured, well-drained soils. Big bluestem, little bluestem, Indiangrass, greenneedle grass, and porcupine grass were dominant. On steeper slopes little bluestem, big bluestem, needle and thread, and side oats grama dominated. The dominant grasses on wetter sites included bluejoint, prairie cordgrass, northern reedgrass, switchgrass, and prairie sand reed. (SCS 1976, Marschner's 1930, Trygg 1963)

European settlers plower parts of what is now the park and mowed or pastured the rest. After the establishment of Split Rock Creek Recreation Area in 1938, plowed fields within the boundaries were seeded to a brome grass mixture and green ash trees were planted in recreational areas.

Present Vegetation

Plant communities were delineated from 1980 color slides taken by the Agricultural Stabilization Conservation Service (ASCS). The vegetative composition of these communities was described by a general field survey done in December 1980. Seven communities were identified.

Map
Code

OF Old Field. This community is dominated by grasses and forbs occupying abandoned agricultural fields. Smooth brome grass (Bromus inermis) dominates. Also present are Timothy grass (Phleum pratense), quack grass (Agropyron sp.), foxtail (Setaria sp.), and a number of forbs: goldenrods (solidego), asters (Aster), Russian thistle (Cirsium arvense) and milkweed (Asclepias syriaca cf.).

MP Mesic Prairie. This community only occurs in a few small areas. These areas have either never been plowed or have been reinvaded by prairie species. The dominant grasses are big bluestem (Andropogon gerardi) and Indian grass (Sorghastrum nutans). On the upper slopes side oats grama (Bouteloua curtipendula) is common. Some of the forbs include blazing star (Liatris sp.), wild onion (Allium cernuum cf.), prairie coneflower (Ratibida sp.), and rose (Rosa sp.). A number of weedy species occur on the edges of this community, including Russian thistle (Cirsium arvense) and goosefoot (Chenopodium sp.). The area below the water tower has been managed with occasional burns and is listed in the Minnesota Natural Heritage Program's inventory.

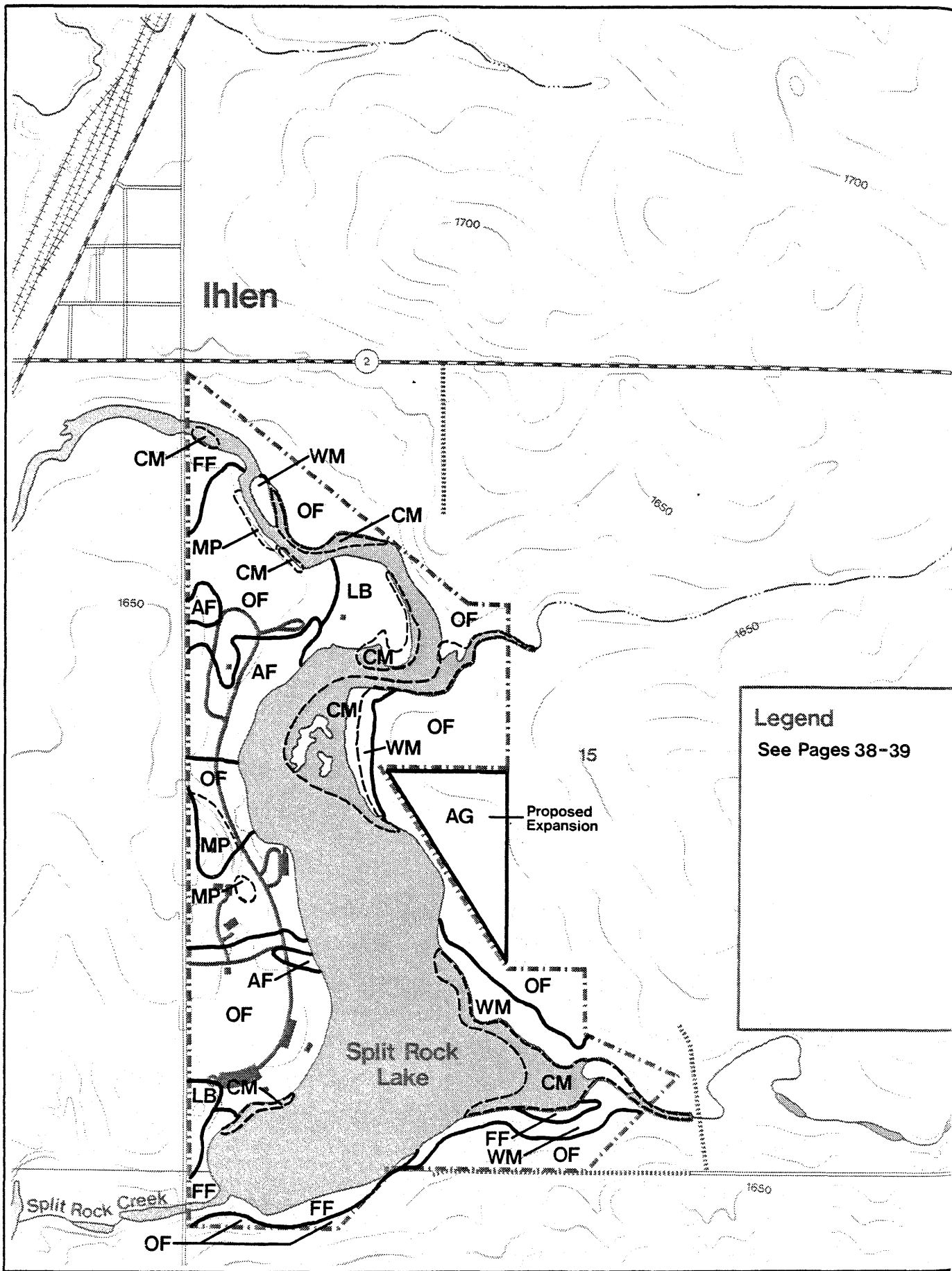
AF Planted Ash Forest. This community is characterized by even-aged green ash (Fraxinus pennsylvanica). They were planted to provide shade for park users. The areas receiving low user pressure have an understory of honeysuckle (Lonicera sp.), elderberry (Sambucus pubens cf.), and other shrubs.

FF Floodplain Forest. Tree species include green ash (Fraxinus pennsylvanica), American elm (Ulmus americana), cottonwood (Populus deltoides), silver maple (Acer saccharinum), and box elder (Acer negundo). Dutch elm disease has killed a number of the elms.

LS Lowland Shrub. The dominant shrub species are sandbar willow (Salix interior cf.) and American currant (Ribes americanum). False indigo-bush (Amorpha fruiticosa) occurs occasionally. The ground layer is dominated by reed canary grass (Phalaris arundinaceae).

CM Cattail Marsh. Cattail (Typha latifolia) is the dominant species. It occurs in dense to open stands along with some cane (Phragmites communis) and three-square (Scirpus americanus).

WM Wet Meadow. This community is dominated by reed canary grass (Phalaris arundinaceae).



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Split Rock Creek State Park

Vegetati

M6

Vegetation and Wildlife Management

Objectives:

To raise to optimum levels the kinds, range, amount and quality of wildlife and wildlands-oriented recreation*

To ensure the survival in a natural state of any element identified by the Minnesota Natural Heritage Program**

Wetland Management

Objectives

To manage wetland areas for a maximum abundance and diversity of wildlife

To identify and resolve conflicts among park users who fish, swim, and boat

Considerations:

Wetlands are important habitat for many wildlife species. Wetland conditions which limit wildlife abundance and diversity in Split Rock Lake include 1) extent of cattail-marsh coverage, 2) stand density of emergent vegetation, and 3) water turbidity. (see Water Resources)

Water levels appear to be the single most important factor affecting cattail growth. They grow best in water levels ranging from saturated soils to 1.5 ft (45 cm) (Beule 1979). Spring and early summer mudflat conditions are optimal for germination. Cattails also spread by rhizomes (Linde 1976). Stand densities decline and eventually are eliminated through constant flooding (Harris and Marshal1963, Beule 1979).

*Quality refers to level of enjoyment and/or satisfaction from the visitor's total experience which may extend beyond the duration of a visit. Wildlife and wildlands-oriented recreation refers to all the activities by which people can enjoy wildlife and wildlands. This recreation is derived from the park and its resources.

**An element is a natural feature of particular interest because it is exemplary, unique, threatened, or endangered on a national or statewide basis (MNHP informational brochure).

Cattail marsh vegetation can be stimulated most readily via temporary drawdown of water levels to allow seed germination on exposed mudflats (Weller 1978). Well-established cattail in deepwater zones (greater than 30 in.76 cm) will remain several years after reflooding. Deepflooded cattails furnish good nest sites for overwater nesting birds and good brood cover for ducks and coots. Cattails growing in 12-30 in. (30-76 cm) of water are very important for marshbird production. This zone should be managed to maintain an interspersion of small, irregular shaped areas of openwater and cattail (Beuel 1979).

A good interspersion of emergent vegetative cover and water provides the greatest bird species richness and density (Weller and Fredrickson 1974). A dense stand of cattail may naturally reopen due to flotation, muskrat activity (Weller 1978), or high water. Beule (1979) and Linde (1969) review some artificial techniques for thinning dense cattail stands (see MPD). These techniques could also be used to control or eliminate cattail in certain areas where it hinders picnicking, shorefishing, or swimming.

Cattail-marsh vegetation provides valuable winter cover for deer and pheasants.

The effects of a temporary drawdown on fisheries depends on the amount of lake surface lost, timing of the drawdown in relation to spawning, interactions between fish species present, and oxygen supply (Bennett 1970).

Oxygen is probably the biggest fisheries concern in Split Rock Lake (Regional Fisheries Supervisor, personal communication). A likely drawdown program would lower the water level in early spring and keep it down through the summer. The lake would probably not be filled until spring runoff and rains came the following year (see Water Resources Section for discussion of natural water levels). Oxygen stores of water in winter is related to total water volume. If water levels were lower than normal due to a drawdown, oxygen stores would be less and the possibility of oxygen being depleted would be greater than in a normal year. The artificial aeration system in the lake, however, adds oxygen to the water throughout the winter. This might offset oxygen depletion due to the smaller water volume.

Proposed Management Program

Action #1. Determine whether a drawdown could increase wildlife habitat without seriously impacting other park uses. This process should be coordinated by the regional resource coordinator.

Steps		Who should be consulted
a.	Prepare a lake bottom map	Area or regional fisheries personnel
b.	Determine what kind of drawdown schedule would be required to maintain optimal cattail-marsh coverage	Area and regional wildlife personnel
c.	Predict how the drawdown schedule would affect the lake's fisheries	Area and regional fisheries personnel
d.	Predict how the drawdown would affect swimming and boating	Park Manager
e.	Recommend an appropriate draw-down schedule	Regional resource coordinator
f.	Apply for w-54 permit* with the regional hydrologist	Regional resource coordinator

Cost: No development cost

Grassland Management

Objectives:

To manage grassland areas for optimal wildlife use, and for preservation and restoration of native prairie

Considerations:

Mixed grass prairie provides excellent habitat for upland nesting waterfowl, upland game birds, and many non-game birds. Prairies

*A W-54 permit is required for any change in cross-section of a water body. The process is as follows: 1) application submitted to regional hydrologist, 2) sent out for review by local Soil and Water Conservation District (SWCD), local wildlife manager, local fisheries manager, and the county zoning administrator, 3) regional hydrologist makes recommendation to the DNR, Division of Waters, 4) Waters reviews application and grants or rejects the permit.

managed by prescribed burns support higher nesting use by upland nesting ducks, upland gamebirds, shorebirds, and wading birds than in undisturbed or grazed prairies (Kirsch 1978). Fire improves the vigor, height, and density of certain grasses and thus improves nesting cover (Minnesota DNR 1973). The majority of grassland mammals respond favorably to changes created by controlled fire (Vogl 1974). Block areas of upland grass habitat provide better cover and nesting success than strip areas (Minn. DNR 1973). Increasing the acreage of undisturbed upland cover in the park would probably benefit upland grass nesting birds (area wildlife manager, personal communications).

A few small prairie remnants presently occur in the park. These can provide a seed source for any restoration efforts. In grassland areas where prairie restoration is not practical shrub plantings can increase wildlife use. Shrubs can provide valuable escape and nesting cover, food sources, and winter cover for birds, small mammals, and sometimes deer.

Proposed Management Program

Action #1. Maintain the present prairie remnants within the park.

These areas can provide a seed source for future prairie restoration of grasslands.

Cost: $3,000 in three phases

Action #2. Restore grasslands to prairie on the northwest and east side of the lake.

Use low-intensity, long-term methods. For example, establish small scattered prairie plots and then manage entire area for prairie rather than an intensive, immediate reseeding of the total area. This low-intensity approach depends on small areas of prairie expanding into surrounding non-native grasslands. A fire plan must be developed for grassland management in the park.

Prairie management of the east and northwest side of the lake will increase this area's value as upland nesting cover for waterfowl and other birds. This is consistent with the wetland management objective of expanding cattail-marsh habitat for increased wildlife use.

Cost: $3,000 in three phases

Action #3. Expand park boundary on east side of park to provide more upland cover (see Boundary Modifications, p66).

This expansion will: a) increase the total available upland nesting cover for upland nesting ducks, shore birds, wading birds, and upland grassland birds; b) provide a better "block" shaped area of habitat which should be more attractive to birds and other wildlife; and c) facilitate implementation of a fire management program on the east side of the lake.

Cost: see Boundary Modifications, Action #1, p74 (No development cost)

Action #4. Plant thickets of native shrubs in grasslands on the west side of the lake where other park activities or features would conflict with prairie management.

Shrub plantings should also be situated to function as screening between 1) the park and CSAH 20, 2) campsites (Camping, Action #1), and 3) buildings and use areas. These plantings will increase opportunities of park visitors to see wildlife in and around the primary use areas and provide valuable visual screening. Recommended species include: wild plum (Prunus americana), chokecherry (Prunus virginiana), silver buffaloberry (Sheperada argentea), hawthorne (Crataegus spp.), and rose (Rosa spp.).

Cost: $8,000 in two phases

Forest Management

Objectives:

To manage forests for the increased enjoyment of park visitors and high wildlife habitat value

Considerations:

Except for the Buse-Sioux complex, upland soils on the east side of the park have few characteristics that are detrimental to the growth and survival of common trees and shrubs (SCS 1976). These soils have high or very high available water capacity. They hold enough water to permit trees to survive during short periods of drought. The Buse-Sioux complex is less suitable for trees. Available water capacity is low (see MPD for SCS windbreak suitability descriptions and recommendations). The Soil Conservation Service gives no recommendations for tree planting on the Lamoure soil series in the east side of the park. This soil is frequently subject to flooding.

Trees in the park are necessary to provide shade, visual enclosure, and "harbor quality" (the ability to invite or attract use). These characteristics are most important in the campgrounds, swimming beach area, picnic grounds, around buildings, along lakeshore, and along the road (CSAH 20).

Trees are also important to wildlife. In extensive agricultural lands, especially near lakes or rivers narrow belts of trees and shrubs provide nesting cover for insectivorus birds. Many species nest in substantially higher densities in these conditions (Vesner 1975). An important feature of forest wildlife use is the abundance of snag trees. Species richness and density are influenced by the quality and quantity of available snags (Evans and Conner 1979). They provide cavities for cavity nesters (Zeedyle and Evans 1975) and insects for foraging birds (Evans and Conners 1979).

Proposed Management Program

Action #1. Plant trees.

Areas where plantings should be done are: a) along CSAH 20, b) near the contact station, c) in and around the camping area, and d) along the east shore of the lake. The location and configurations of the plantings should be determined by their eventual effect on

the visual quality from these sites. Straight row planting following the county road should be avoided. The western and eastern vista from the water tower should not be obstructed. Clumps of trees along the east shore will provide shade for trail users (see Proposed Trails, Action #1) and increase the enclosure and harbor quality of the lake. Recommended species include: bur oak (Quercus macrocarpa), cottonwood (Populus deltoides), basswood (Tilia americana), and green ash (Fraxinus pennsylvanica), black willow (Salix nigra), silver maple (Acer saccharinum), and box elder (Acer negundo).

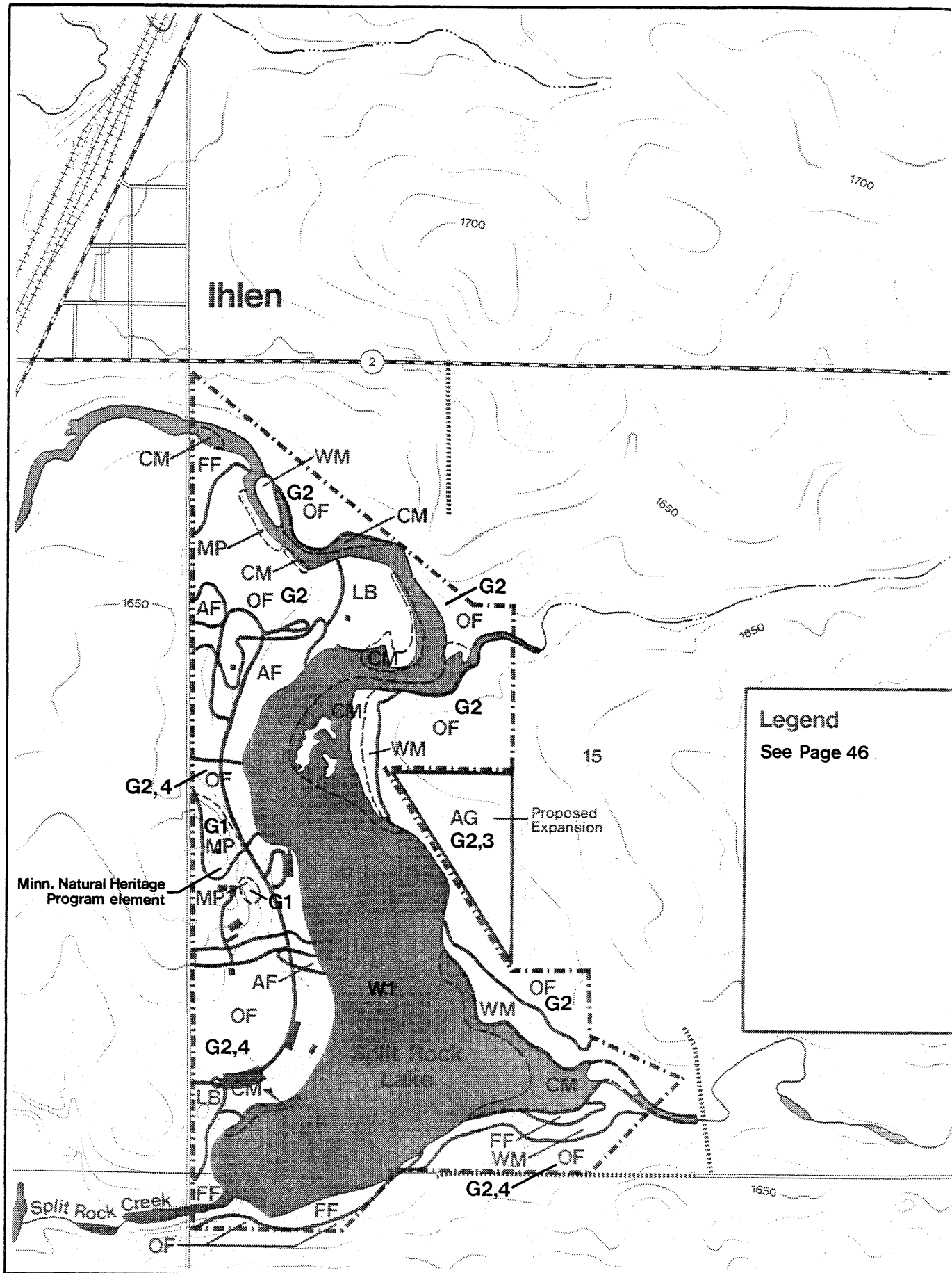
Cost: $10,000

Action #2. Maintain a maximum abundance of snags.

Leave all downed and dead standing trees unless they pose safety hazards or physical obstruction (e.g., along trails, roads, and campgrounds).

Cost: No development cost

Map Code	
W	Wetland Management
	1. Periodic drawdown to maintain marsh vegetation
G	Grassland Management
	1. Maintain prairie remnants
	2. Convert to prairie
	3. Expand boundary
	4. Plant shrub thickets
see text	Forest Management
	1. Plant trees
	2. Maintain snag abundance



N

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Split Rock Creek State Park

Vegetation Manageme

M7

HISTORY/ARCHAEOLOGY

Prehistory in the southwestern corner of Minnesota focuses on the Sioux quartzite quarry within Pipestone National Monument. Located approximately 8 mi (13 km) north of the park, Pipestone National Monument was established by the Congress in 1937.

For centuries, Indians of many tribes traveled as far as 1000 mi (1600 km) to the quarry to gather chunks of rough pipestone. From these pieces they carved peace pipes and other ceremonial objects. Traditionally this was a sacred place where all Indians could come and quarry in peace, but by 1836 the Yankton-Dakota gained control over the area and prevented other tribes from obtaining the stone except through trade. The highly valued pipestone attracted Indians from all directions. There is no doubt that visiting tribes passed through the Split Rock Creek region on their way to and from the quarry. There is the possibility that these tribes camped within or near the Split Rock Creek area.

There have been no archaeological surveys in Split Rock Creek State Park. The Rock River drainage area, which begins 6 mi (9.6 km) east of the park, was surveyed by the Minnesota Historical Society (MHS) during 1979. Twenty-four sites and various "find spots" were located within the drainage area. Several of these are within 8 mi (12.8 km) of the park. Most artifacts were located on hills overlooking creekbeds. The rises overlooking what is now Split Rock Lake may very well hold similar finds. In addition, at least 20 archaeological sites have been identified within Pipestone National Monument just north of the park. These sites exist mainly in the form of pipestone quarries, Indian mounds, and short term occupation sites.

The sacred pipestone quarries were famous throughout the Minnesota Territory. Visitors to the area included George Catlin in 1836 and Joseph Nicollet in 1838. Abundant open lands and rich agricultural soils attracted white settlers to the area. By 1888, the Willmar and Sioux Falls Railroad established one of its four Pipestone County stations at the residence of Carl Ihlen. This was the beginning of the city of Ihlen, located on the northern boundary of the park.

Recognizing a need for both water conservation and water-based recreational activities in the Pipestone County area, the Department of Natural Resources (then the Department of Conservation) established Split Rock Creek State Recreation Reserve in 1937. At that time, a dam was constructed on Split Rock Creek, creating 85-acre (34-hectare) Split Rock Lake. Today the park provides several recreational facilities found nowhere else in the county.

Objective:

To preserve and protect all historic and prehistoric sites in the park

Action #1. Field check all proposed development sites for the presence of prehistoric and historic remains before any work is done.

With the creation of Split Rock Lake in 1938, any remnants of Indian campsites along the creek bed were flooded. The possibility does exist, however, that campsites are still located within the park boundary. If remains are found on a proposed development site, an assessment will be made of the size and importance of the find. When necessary, the site will be excavated before any construction is begun. All excavation work must have the approval of the state historic preservation officer. Artifacts removed will become the property of the DNR. Construction of the development in another location will be considered if the site proves to be significant.

Cost.: $1,000

Action #2. Allow archaeological excavation of a site where:

- the significance of the site makes excavation desirable
- the site is located in an area being considered for development

Only those excavations authorized by the state historic preservation officer and the state archaeologist will be allowed. If any excavations occur, steps must be taken to ensure visitor safety in the site area.

Current information on human prehistory in Minnesota is by no means complete. It is quite possible that archaeological sites in Split Rock Creek could further contribute to this body of information.

Giving visitors an opportunity to observe an archaeological excavation in progress can be a very effective interpretive experience. The visitor not only receives first hand information on the site being excavated, but also can observe the techniques used by archaeologists to gather data.

Cost. No development cost.

PHYSICAL DEVELOPMENT AND RECREATION MANAGEMENT

RECREATION MANAGEMENT OBJECTIVES

These recreation management objectives are intended to guide the development of recreational facilities in all recreational state parks.

To coordinate park development with other private and public facilities and resources in the vicinity

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

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

To ensure physical accessibility and program usability of new developments by special populations (i.e., persons with physical disabilities, the elderly, and the very young)

EXISTING DEVELOPMENT

Campground

25 campsites

Sanitation building with vault toilets and wash basins

Primitive Group Camp

1 pit toilet

Picnic Grounds

Picnic shelter

Picnic tables

Gravel surfaced parking lot

Swimming Beach

Bathhouse (with changing rooms)

Sand beach

Boat Launch

Gravel launch ramp with steel grating

Gravel parking lot

Administrative Facilities

Contact station

Manager's residence

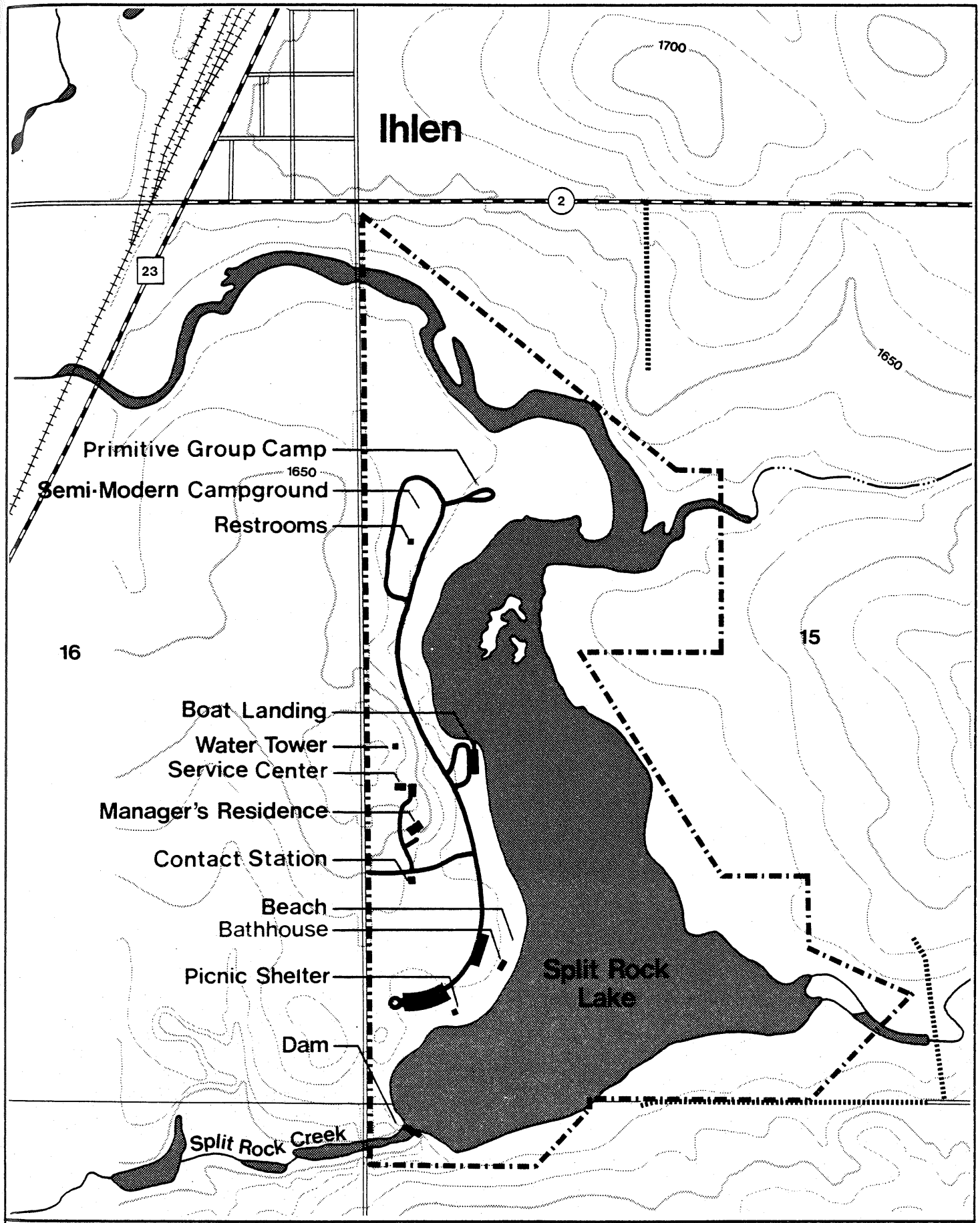
Shop building (includes manager's office)

Water tower (not used for water storage)

Trails

Short hiking trail from picnic grounds to campground

Split Rock Dam



Split Rock Creek State Park

Existing Development

M 8

PROPOSED DEVELOPMENT

Camping

Objective:

To provide quality camping facilities for families and groups that allow the public to enjoy the park resources 24 hours a day

Action #1. Plant trees and shrubs in the campground.

See Grassland Management, Action #4, and Forestry Management, Action #1.

Action #2. Construct an addition on the campground toilet building which will provide shower facilities for campers.

At present the toilet building has vault toilets and wash basins, but no showers. The park manager has reported that campers often make requests for showers and, in some cases, do not camp at the park because of the lack of shower facilities.

Construction of this facility is dependent on the availability of suitable soils nearby for a drain field (see Soils, Action #1, p28). Suitable soils for the disposal of the waste water may not be available in the vicinity. This will require a much more costly option. If this is the case, the construction of the shower addition should be reconsidered.

Cost.: $20,000

Picnicking

Objectives:

To provide an adequate number of high quality picnic sites to serve present and future user levels

To provide the complementary facilities needed for a pleasant picnicking experience

Action #1. Install electrical lights and outlets in the picnic shelter.

The installation of electricity would be appreciated by picnickers, particularly large groups. It is a service the DNR provides at many state parks. In addition, the building could be used by the park naturalist for evening audio-visual programs.

Cost.: $2,000

Trails

Objectives:

To provide trail access to a variety of areas within the park along alignments chosen for slight gradient, scenic views, avoidance of sensitive areas, and separation of conflicting uses

Action #1. Develop a trail which provides access to the east side of the lake.

At present the park has only one hiking trail. It runs from the dam to the primitive group camp, paralleling the west shore of the lake. There have been many requests by the public to provide access to the east shore. This would increase the amount of shoreline that could be used for fishing. The trail would also provide increased trail mileage for hikers and skiers.

There are two development options for this trail. The first is to provide access to the east shore by developing a trail around the north end of the lake. The second is to construct a trail around the entire lake.

In order to implement the first option, the following actions would be necessary:

- Arrangement of a trail easement with the landowner at the north end of the park. There is one point where his property runs to the water line.

- Construction of a wooden walkway across the northeast inlet. The walkway would be about 100 ft (30 m) long.
- Crossing the CSAH 20 bridge near the north end of the park. This, however, presents no problem as a pedestrian sidewalk is already provided on the bridge.

Implementation of the second option would require all those actions for the first option plus the following:

- Construction of a wooden walkway across the southeast inlet. This walkway would be about 200 ft (60 m) long.
- Construction of a small footbridge across the river in the low area between the dam and CSAH 20. This bridge would be about 40 ft (12 m) long.
- Arrangement of a fee title purchase or trail easement with the landowner on the south end of the lake. There is one point where his property runs to the water line.

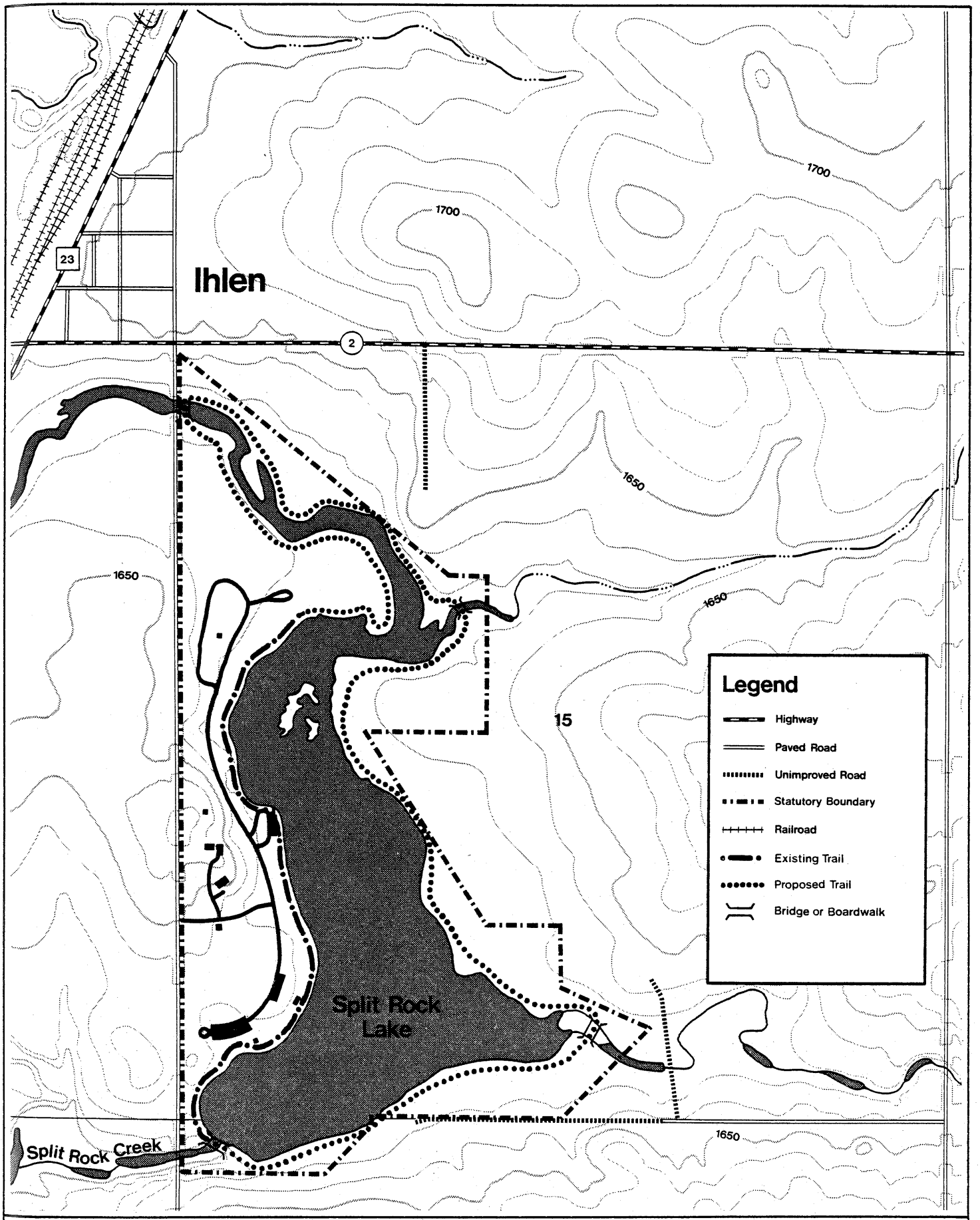
The development of a trail around the entire lake is recommended. However, this option, as well as the first option, is dependent on whether funds are available for the trail easements and the construction.

Cost: $40,000 to $110,000 depending on alternative selected. Does not include cost of trail easement or fee title purchase.

Action #2. Remodel the water tower for use as a winter warming shelter/visitor center.

At present there is no warming shelter in the park. During the winter, the park is used for sledding, ski touring, and ice fishing. Such wintertime use of the park would be enhanced by the availability of a warming shelter. The water tower is in an excellent location for this purpose. It is situated at the top of the hill that is used for sledding, it is easily accessible for skiers, and is only a short walk from the lake.

The water tower is a two story structure. The ground floor is built of stone and divided into two small rooms. The upper story is wood framed, about 12 ft (3.7 m) square, and contains a 5000 gallon metal tank once used for water storage.



Split Rock Creek State Park

Existing/Proposed Trails

Actions necessary for remodeling the structure would include:

- Removal of the large metal tank. (Approximate diameter 9 ft/2.7 m). This would probably require removal of the roof and the use of a crane.
- Installation of a heating system. A wood burning stove would be sufficient.
- Installation of a stairway to provide access to the second floor.
- Installation of windows on the second floor to provide a view of the park and surrounding area.
- Installation of seating.
- Installation of lighting on the second floor.

The small size of the building makes it impractical as a site for presenting interpretive programs to audiences. The picnic shelter is more suited to that type of activity. However, the installation of wall mounted plaques or displays in the second floor viewing area could do much to tell the interpretive story of the park. Displays of this type would not interfere with the structure's use as a shelter and would not require any additional remodeling work. (Cost covered in ~~Visitor~~ Interpretive Services, Action #2, p62.) Also, the city of Ihlen is exploring the possibility of drawing their municipal water supply from the park well located beneath the water tower. If this occurs, it would not be necessary to use the building to house any machinery and would cause no conflict with the use of the structure as a shelter.

Cost: $10,000

Water Activities

Objectives:

To provide an enjoyable swimming experience

To provide a variety of summer and winter fishing experiences

Action #1. Remove the existing bathhouse and construct a new one.

The existing structure is about twenty years old. It consists of a concrete block building with wooden changing rooms attached on either side. Much of the wood planking in the changing rooms is rotten. There are large cracks in the concrete block walls. The building was not designed to include toilets. Remodeling the structure to include them would be costly and might be difficult to construct. Rather than invest money in the existing structure, it would be more feasible to build a new one.

The new bathhouse should be located in approximately the same location and contain the following:

- Changing facilities
- Toilet facilities
- Outdoor cold water "rinse-off" showers

The type of toilet facilities provided will be dependent on the results of a soils analysis. (See Soils, Action #1, p28.) If the soils are suitable for the development of a drain field, then a flush system could be provided. If not, then a vault toilet system would be developed.

Cost: $80,000 to $100,000 dependent on type of toilet facilities provided.

Action #2. Upgrade the boat launch and adjacent parking lot.

The existing facility includes a small gravel parking lot and a graveled launch ramp reinforced by a meshed steel mat. Frequently, the lot is over-crowded, making it difficult to park and launch boats. This problem is aggravated by the fact that there is no parking pattern. Cars and cars with boat trailers attached are parked wherever space can be found and oriented in whatever direction is convenient. To solve this problem the lot should be enlarged and some established method of parking specified. This could be done with signs or by asphalt surfacing the lot and painting on striped parking guides.

Also, the launch ramp should be improved by installing a concrete plank ramp to replace the present gravel and steel mesh ramp. Concrete plank ramps can withstand more intensive use and require less maintenance.

Cost: $8,000

Action #3. Construct a fish cleaning house.

Split Rock Creek presently has no such facility and it has been requested by many park visitors. A good location for a fish cleaning house would be on the small piece of land between the park road and the boat launch parking lot. However, final placement of the building is dependent on the suitability of soils. (See Soils, Action #1, p28.) This is a concern because the construction of fish cleaning houses usually include the development of a drain field. Placement of the building in another location may be necessary if soils prove to be unsuitable.

Cost: $13,000

Administrative/Support Facilities

Objectives:

To provide facilities which will ensure effective, efficient management of the park

To alleviate current equipment storage problems

Action #1. Remove the existing contact station and build a new structure in the same location which will serve as both a contact station and manager's office.

The contact station and the park office are now located in two buildings. Limited funds for staffing makes off-season operation of the contact station difficult. As a result, there are many times when control of the park entrance is inadequate. Vehicles can enter without purchasing a permit and it is difficult to know how many visitors are in the

park. In addition, visitors needing assistance have a difficult time locating park staff. The new facility will permit the manager or other staff member to do office work and still operate the contact station. Costs for energy, maintenance, and staffing will be kept at a minimum while maintaining better control of the park entrance.

Cost: $50,000

Action #2. Remove the existing shop building and construct a new building with sufficient storage and work space.

The existing shop is too small to provide much equipment or vehicle storage. As a result, things which should be stored indoors must be left outside. This is not only hard on equipment, but also makes the service court look cluttered. Half of the shop building was used as the manager's residence before the present residence was built. This portion of the building now houses the manager's office and is also used for storage.

Several remodeling measures would be needed to upgrade the shop building, including a new heating system, a new garage door, and the installation of a ceiling. In addition, some remodeling of the area now housing the manager's office would be needed to better utilize the area for storage.

Rather than put substantial money into remodeling an old building (the shop is well over 30 years old), it would be better to remove the structure and build a building large enough to provide a shop and an unheated storage area. The building should also include toilet facilities for park employees.

Cost: $75,000

Action #3. Construct a small building for gas and oil storage.

A separate gas and oil storage building is needed to meet Occupational Safety and Health Administration (OSHA) safety regulations. This could be located near the proposed shop building.

Cost: $11,000

Action #4. Construct a two car garage for the manager and his family.

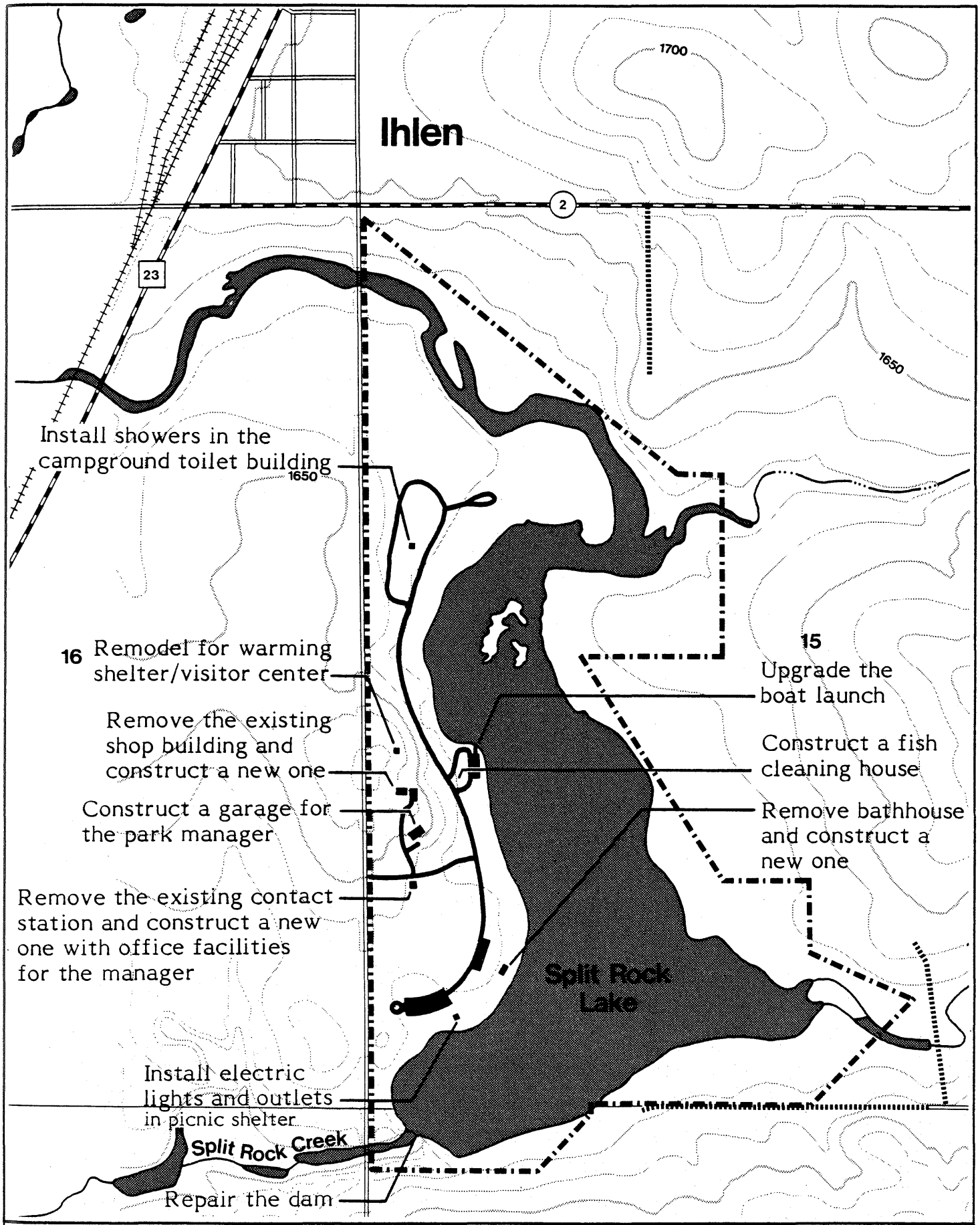
At present there is no garage to house the manager's private vehicle and other belongings. Such a building should be provided.

Cost: $13,000

Action #5. Place all park electrical lines underground.

Above-ground electrical lines disrupt the visual character of the park. In addition they are more succeptible to damage. Existing above-ground lines run from the county road to the bathhouse, the road to the shop building, the road to the water tower, and between the shop and the water tower.

Cost: $1,500



Split Rock Creek State Park

Proposed Development

M10

INTERPRETIVE SERVICES

Objectives:

To provide interpretive exhibits and information that will increase the park visitor's awareness, appreciation and understanding of the biological, cultural and recreational features within Split Rock Creek State Park and the Minnesota State Park System

The small size of the park and limited variety of natural resources places some limitations on interpretation. However, the park does contain several interesting interpretive themes. In 1938 the Work Project Administration (WPA) constructed the dam that formed Split Rock Lake, planted the elm and ash trees in the park and constructed some of the recreation facilities. Today, people still enjoy the benefits of these projects. Here the opportunity to interpret the philosophy, objectives, goals and history of the conservation movement are presented.

Split Rock Lake is the only lake in Pipestone County. With the addition of a winter aeration system and game fish stocking program, Split Rock Lake provides excellent fishing recreation year round. Interpretive opportunities on the subjects of fisheries, artificial lake management, watersheds and land use are readily available.

Within the park are open meadows, prairie and wetland that provide habitat for a variety of native prairie wildlife. Here opportunities are present for interpretive programs on habitat requirements, food sources, species identification, management techniques, wildlife values and importance.

At present there is no structured naturalist program, designed facilities, or brochures interpreting Split Rock Creek State Park. A volunteer naturalist does present some programs during the summer months, usually on weekends. Funding for interpretive staff is limited. Nearby Blue Mounds State Park (25 mi/40 km to the southeast) provides a better resource base and has about the same number of visitors annually (although Blue Mounds has considerably more campers).

The close proximity of Blue Mounds with its established interpretive program makes the provision of a salaried interpretive position at Split Rock Creek unjustifyable. However, several interpretive facilities and programs can still be provided.

Action #1. Develop a self-guiding interpretive trail with corresponding trail brochure. (This action is dependent on the development of a loop trail around the lake. See Trails, Action #1, p54).

This trail would be an important part of the park interpretive program. Final theme and design of the trail will be determined by the regional naturalist.

Cost: $2,000

Action #2. Provide interpretive information in the second story of the proposed winter warming shelter/visitor center (see Trails, Action #2, p55).

The observation area on the second floor will provide good panoramic views. A number of plaques or wall mounted displays could provide much interpretive information on the park. Interpretive information could address such topics as prairie management, fisheries management, wildlife habitat requirements, and glacial geology. Final determination of topics and design of plaques will be made by the regional naturalist.

Cost: $2,000

Action #3. Provide information on other interpretive facilities and programs in the area.

Interpretive information should be provided to the public at some easily accessible location such as the contact station. Other interpretive opportunities in the area include the Pipestone National Monument, the Pipestone County Historical Society, and Blue Mounds State Park.

Cost: No development cost

ARCHITECTURAL THEME

At present there is no architectural theme for the buildings in Split Rock Creek. The most distinctive structures are the water tower and the dam. The water tower was built in the late 1930's and is typical of state park buildings constructed by the Works Progress Administration (WPA). The first floor of the building is stone; the second floor is wood frame.

Because three significant buildings--the contact station, bathhouse, and shop--will be removed and replaced, the opportunity now exists to establish an architectural theme for the park. New structures should be integrated into the landscape. They should be low in profile and exposed surfaces should be covered with naturally textured materials; wood, stone, textured concrete or block, and left natural or stained or painted with earth tone colors. All heated buildings will be designed for energy efficiency and should integrate some of the following energy conservation features: proper sun/wind orientation, maximum insulation, earth sheltering, passive and active solar space and water heating applications, and the use of supplemental wood heat.

BOUNDARY MODIFICATION

BOUNDARY MODIFICATIONS

Objectives:

To provide sufficient park acreage to protect and perpetuate the natural resources and provide the necessary recreational facilities to interpret and enjoy these resources, without including acreage that would be unreasonable to purchase.

Split Rock Creek State Park was established in 1937. The park statutory boundary includes 228 acres (92 hectares) in the W½ of Section 15, 105N, 46W. All the land within the statutory boundary is owned by the state of Minnesota.

The DNR, Division of Parks and Recreation can only purchase land or easements within a park statutory boundary. The state legislature analyzes a proposed park or park expansion and sets an expansion limit, or a statutory boundary. The status of land within this statutory boundary does not change. It simply permits the division to talk to an individual landowner and negotiate for the purchase of that portion of land within the statutory boundary in which the division is interested.

Action #1. Expand the statutory boundary of the park at the three points shown on the Boundary Modifications Map, (M II).

There are three areas adjacent to the park where a statutory boundary expansion is being recommended (see Boundary Modifications Map, M II). Two of these areas (Numbers 1 and 2 on the Boundary Modifications Map) are points where private land ownership extends to the edge of the lake. This situation prohibits the development of a perimeter trail around the lake as proposed in the Trails Section, Action #1, p 54 . At present both affected land owners tolerate park visitors using their land along the lakeshore in order to reach other portions of the park. However, this is an inconvenience for the landowners and presents certain legal access problems which should be corrected. For both Area #1 and Area #2, the boundary expansion and trail easement or fee title purchase would be very small, perhaps only a few hundred square feet.

Individuals responsible for maintaining Pipestone County's lake aeration system have requested that the DNR consider a small boundary expansion on the western portion of the southern park boundary. This would be for the purpose of providing road access to the building housing the aeration pumps. The building must be checked every day during the winter. At present the person in charge of checking the building must park along CSAH 20 and walk in. Development costs for an access road would include the expense of a road easement or land purchase, and the construction of a service road. In addition, there would be annual costs for maintenance including snow removal. A less costly solution would be to have the park manager responsible for the daily checking of the building. He could do this using the park snowmobile. This arrangement is not feasible at present because budget restrictions made it necessary to decrease the manager's position from twelve months to nine months a year. This situation, along with other wintertime management problems the park now has (see Operations and Staffing, p.70) help to justify reestablishment of the position on a twelve-month-a-year basis. Until such time, the county should continue with the maintenance arrangements they now have.

Area #3 (see map) is a triangular piece of land 12½ acres (5 hectares) in size. It is presently used for crop production. This acreage would be of definite value in providing additional wildlife habitat and facilitating the proposed grassland management program (see Wildlife Section p.44). Improved wildlife habitat would enhance the park experience of those visitors who wish to observe wildlife in a natural setting. In addition, purchase of this land would allow placement of the proposed trail on a soils type which is more suitable for recreation development. The area would be a scenic buffer between the park and adjacent farm fields. This screen could be further enhanced if a few trees were planted along the shore on the east side of the lake.

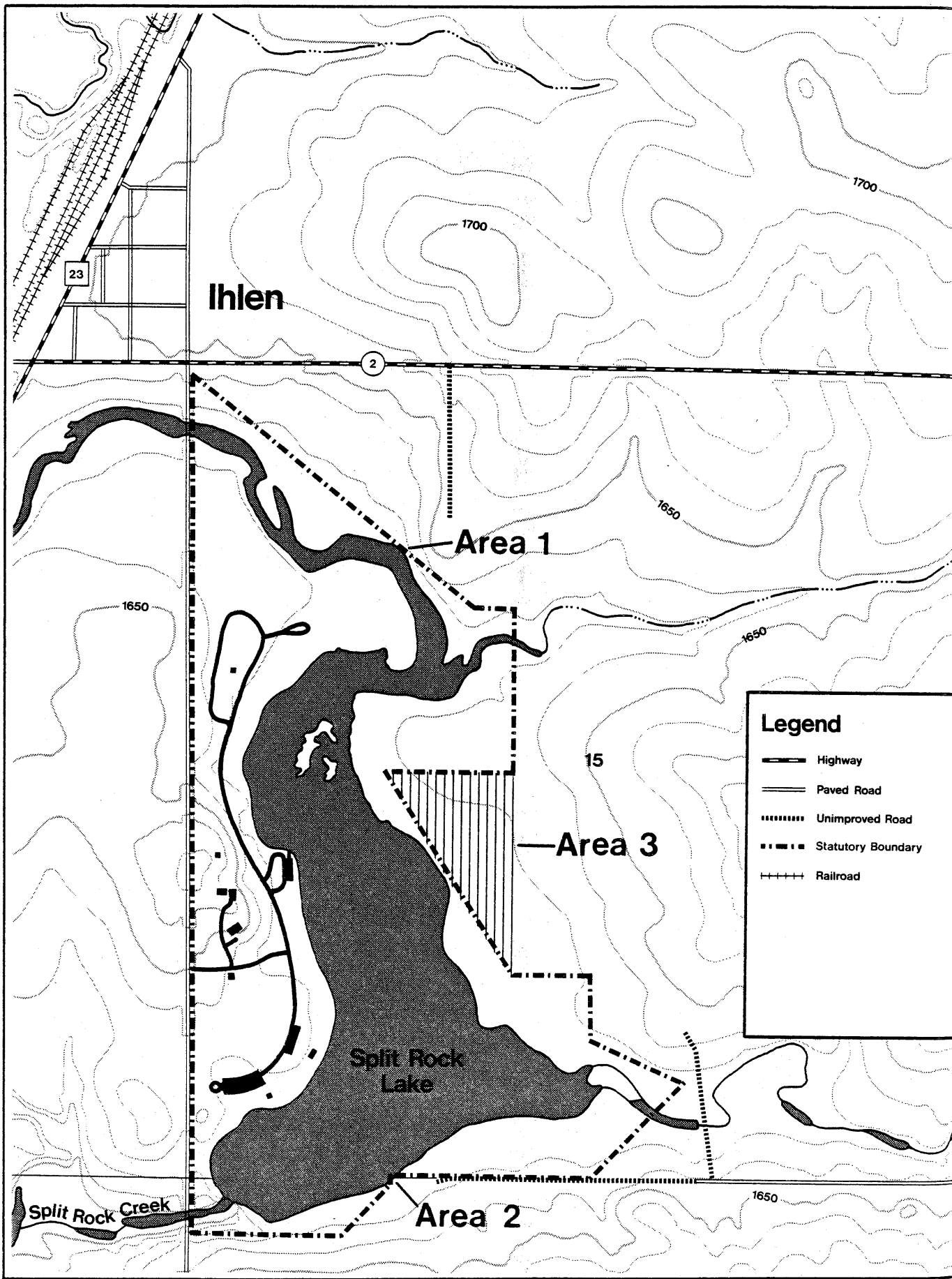
During the public meeting phase of the planning process, several local individuals suggested other, larger boundary expansions to provide more trails in the park. Most of these individuals were interested in the development of horseback riding trails. A few others saw

potential for the reestablishment of prairie plants in the areas suggested for expansion. The main area suggested is a 150 acre (61 hectare) piece of land adjacent to the southern boundary of the park. Also suggested for expansion was some land to the southwest of the park along Split Rock Creek. Both of these areas are now used for cattle grazing. The land has no tree cover and parts of it are strewn with boulders and bedrock outcroppings. Except near the creek and the south end of the lake, the land is flat. Although it would be desirable to provide more park acreage for trails, these two areas are not park quality land. Providing any type of trails would require the removal of a fair amount of rock. In addition, any trails used for winter activities such as ski touring would be difficult to maintain because of inconsistent snow cover resulting from drifting. The land does have some potential for prairie reestablishment. In fact much of the land has never been plowed and is still inhabited by native prairie species. However, Blue Mounds State Park, located about 15 mi (24 km) from Split Rock Creek, already has an extensive prairie management program underway. This park is close enough for those individuals in the area who wish to observe or hike in an area of reestablished prairie. Several other areas managed as native or reestablished prairie can also be found in the area including the prairie acreage at the Pipestone National Monument and the Hole-in-the-Mountain Prairie managed by the Nature Conservancy near the town of Lake Benton.

Action #2. Correctly fence and sign the southern boundary of the park.

The fence line now marking the southern boundary of the park near CSAH 20 is incorrectly placed. A small piece of private land is now included within the park's fenced boundary. This should be corrected.

Cost: $2,000



Split Rock Creek State Park | Boundary Adjustmer

M11

OPERATIONS, AND STAFFING

OPERATIONS AND MAINTENANCE

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

The task of providing services to the public and security for park facilities and resources 24 hours a day, 12 months a year is monumental. During the busy season, parks must be open 98 hours per week (8:00 a.m. to 10:00 p.m., seven days a week). During this period, park managers and other staff spend most of their time providing the necessary support services for park visitors. In other seasons, parks are open the same hours although staff people may not be on duty the entire time. Maintenance, equipment repair, and security tasks are performed during the off-season. If all of these responsibilities are to be met, competent, trained personnel are essential.

There are four basic aspects to maintenance and operations:

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

One of the major maintenance problems of parks is the heavy impact of large numbers of people concentrated in specific locations. These areas include: campsites, trails, lakeshores, river banks, areas around buildings, and scenic points of interest. This overuse affects the groundcover and frequently exposes tree roots to damage from foot traffic. The eventual result may be erosion slides, disfigured sites, and even danger to park visitors. A regular maintenance program with adequate personnel, supplies, and equipment controls damage, thereby avoiding future reconstruction expenditures.

STAFFING

One of the staffing problems in all state parks is the heavy reliance on federally funded work programs, such as the Comprehensive Employment and Training Act (CETA), the Neighborhood Youth Corps (NYC), and Green Thumb. The low cost personnel provided by these programs makes it possible for parks to offer programs and services which would otherwise be impossible. However, these employees are hired on a short-term basis, usually 8 to 10 weeks and often do not have the training and experience necessary to provide needed services without constant supervision in already understaffed parks. To avoid these problems, funding should be made available to hire trained personnel for major public service and maintenance programs. Temporary employees should only be hired for minor maintenance and special projects.

A problem exists with the current staffing of Split Rock Creek. Due to staffing and operations budget restraints, DNR, Division of Parks and Recreation found it necessary to reduce the manager's position at Split Rock Creek from a full-time 12 month position to a 9 month seasonal position. The manager is currently off duty during the winter months. This creates a safety and control problem because of the popularity of the park for winter activities (see Regional Analysis, Day Visitation, p12). Split Rock Lake receives substantial ice fishing use. During the winter of 1980-81 over 80 fish houses were counted on the lake at one time. In addition the hill adjacent to the water tower is used for sliding and many people use the park for ski touring. With all this winter visitation, the potential for accidents or inappropriate use of facilities is a very real possibility. The fact that the manager is off duty during this busy time makes the problem particularly serious. For these reasons, it is recommended that the manager's position at Split Rock Creek be returned to a full-time 12 month status.

COST AND PHASING SUMMARY

Action	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Total
Soils Management						
Action #1. Conduct a detailed soils analysis.		$ 4,000				$ 4,000
Water Resources Management						
Action #1. Test the water quality of the lake.	Cost covered in Fisheries, Action #2.					
Action #2. Repair the dam.	$ 50,000					50,000
Action #3. Maintain lake water records.	No development cost.					
Fisheries Management						
Action #1. Continue fish stocking program.	No development cost.					
Action #2. Conduct an investigation of the fishery and lake water quality.	To be done by DNR, Division of Fish & Wildlife, Fisheries Section.					
Vegetation and Wildlife Management						
Wetland Management						
Action #1. Determine whether a lake drawdown is feasible.	No development cost.					
Grassland Management						
Action #1. Maintain prairie remnants.		1,000	$ 1,000		$ 1,000	3,000
Action #2. Restore grasslands on east and northwest sides of lake to prairie.		1,000	1,000		1,000	3,000
Action #3. Expand park boundary on east side of lake.	See Boundary Modifications.					
Action #4. Plant thickets of native shrubs.		6,000	2,000			8,000
Forest Management						
Action #1. Plant trees.		10,000				10,000
Action #2. Maintain tree snags.	No development cost.					

Action	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Total
History/Archaeology						
Action #1. Field check all proposed development sites.		1,000				1,000
Action #2. Allow archaeological excavation by qualified agencies.	No development cost.					
Proposed Development						
Camping						
Action #1. Plant trees and shrubs in the campground.	Covered in Vegetation Management.					
Action #2. Provide showers in the campground.			20,000			20,000
Picnicking						
Action #1. Install electric lights and outlets in the picnic shelter.			2,000			2,000
Trails						
Action #1. Develop a trail that provides access to the east side of the lake.	Cost is conditional. Dependent on alternative selected. (estimate between $40,000 and $110,000)					
Action #2. Remodel the water tower.		10,000				10,000
Water Activities						
Action #1. Construct a new bathhouse.		80,000 (possible more depending on facilities provided)				80,000
Action #2. Upgrade the boat launch.			8,000			8,000
Action #3. Construct a fish cleaning house.		13,000				13,000
Administrative/Support Facilities						
Action #1. Construct a new contact station/manager's office.		50,000				50,000
Action #2. Construct a new shop building.			75,000			75,000
Action #3. Construct a gas and oil storage building.			11,000			11,000

Action		Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Total
Action #4.	Construct a garage for the manager.			13,000			13,000
Action #5.	Place all electrical lines underground.			1,500			1,500
Interpretive Services							
Action #1.	Develop a self-guiding trail and brochure.			2,000			2,000
Action #2.	Provide interpretive information in the warming shelter/visitor center.			2,000			2,000
Action #3.	Provide information on other area interpretive facilities.	No development cost.					
Boundary Modifications							
Action #1.	Expand the statutory boundary.	No development cost.					
Action #2.	Correct the southern boundary fence line.	2,000					2,000
Tentative Total Development Costs:		$ 52,000	$ 176,000	138,500		$ 2,000	$ 368,500

This total does not include the cost of trail to be developed around a portion of all of the lake (estimated cost $40,000 to $110,000).