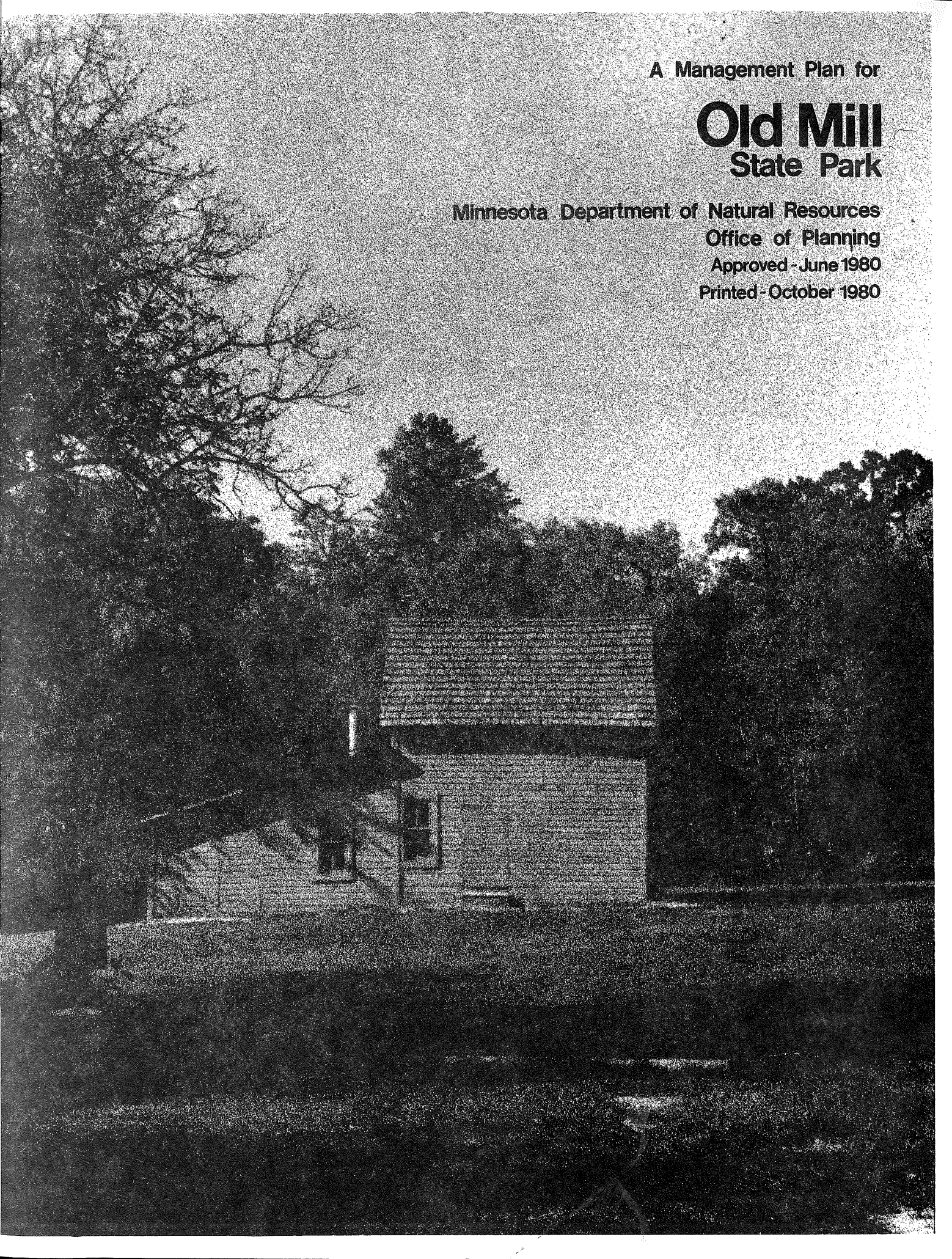
A Management Plan for Old Mill State Park

Minnesota Department of Natural Resources

A Management Plan for

Old Mill State Park

Minnesota Department of Natural Resources
Office of Planning
Approved - June 1980
Printed - October 1980



CREDITS

Department of Natural Resources, St. Paul Staff:

Dennis Thompson, Park Planner
Mike Miller, Park Planner
Otto Christensen, Park Planning Supervisor
John Winter, Park Specialist
Wayland Porter, Park Systems Supervisor
Linda Magozzi, Editor, Graphic Designer
Gail Tracy, Word Processor Technician
Lori Anthonsen, Secretary, Back Up Word Processor
Norm Holmberg, Graphic Specialist
Greg Rosenow, Graphic Specialist
Ted Troolin, Para-Professional

Department of Natural Resources, Field Staff:

Merlyn Wesloh, Region I Administrator
Joe Ludwig, Region I Parks Supervisor
Ardon Belcher, Region I Trails Coordinator
Paul Rundell, Region I Resource Coordinator
Bryce Anderson, Region I Naturalist
Dan Breva, Old Mill State Park Manager
George Davis, Area Wildlife Manager
Steve Morgan, District Forester

Other Agencies that Contributed Through Review or Other Means:

Minnesota Historical Society
USDA, Soil Conservation Service
Minnesota State Planning Agency
Minnesota Department of Transportation

All those individuals and groups who attended the meetings and/or sent comments throughout the planning process.

TABLE OF CONTENTS

LIST OF MAPS

LIST OF ABBREVIATIONS

mi - miles
km - kilometers
in. - inches
cm - centimeters
ft - feet
m - meters
kg - kilogram
l - liter
cfs - cubic feet per second
cms - cubic meters per second
gpm - gallons per minute
l/m - liters per minute
mg/l - milligrams per liter
DNR - Department of Natural Resources
GPMP - General Park Management Plan
MPD - Management Plan Details
ORA '75 - Outdoor Recreation Act of 1975
SPA - State Planning Agency
MHS - Minnesota Historical Society
SCORP - Statewide Comprehensive Recreation Plan
CSAH - County State Aid Highway
TH - Trunk Highway
I - Interstate
Mn/DOT - Minnesota Department of Transportation
p - page
pp - pages

PREFACE

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

1. DNR reviewers of the whole planning process
2. DNR reviewers whose main concern is one specific part 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 available upon request from:

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

Introduction

AN OVERVIEW OF OLD MILL STATE PARK

Old Mill State Park is located in northwestern Minnesota in the western half of Marshall county approximately 25 mi (40 km) east of the Red River. The nearest centers of population are Argyle, 15 mi (24 km) to the west and Newfolden, 14 mi (22 km) to the east. Thief River Falls is located 30 mi (48 km) to the southeast.

Old Mill was originally known as Middle River State Park. The land was purchased in 1937. Many of the stone and wood buildings, including the picnic shelter and the water tower, were constructed by Work Projects Administration (WPA) work crews in the late 1930's.

The statutory boundary of the park encloses 287 acres (116 hectares), all of which is state owned.

The landscape of Old Mill is typical of other areas of the Red River Valley. This valley is situated on the ancient lake bed of the once vast glacial Lake Agassiz. In general, the area is flat with a few minor rises in elevation. These rises are the remnants of the beach ridges formed by the wave action of the lake. Several small rivers, including the Middle River, drain the valley watershed. Many large marshes once existed. Most of them have been drained for agricultural purposes.

The Middle River is the only natural surface water resource in the park. It originates a few miles northwest of Mud Lake in the eastern portion of Marshall County. The river flows in a westerly direction, passes through the park, and eventually empties into the Snake River. Shortly thereafter the Snake River empties into the Red River.

The upland vegetation in Old Mill is a mixture of wooded areas, dominated by aspen with some bur oak, and open grassy areas. The areas adjacent to the Middle River are heavily wooded with lowland hardwoods such as oak, ash, maple, and boxelder.

There are several sites of historical significance in the park. One of these is the Larson Mill. It was one of the earlier operations in the state. It is listed on the Minnesota State Registry of Historic Sites.

The park offers a variety of activities for both day visitors and campers. Recreation facilities include a picnic ground, a swimming beach, a modern campground with 24 sites, a primitive group camp, and 5.5 mi (8.8 km) of trails used for hiking in the summer and ski touring and snowmobiling in the winter. Sliding on the hill adjacent to the picnic ground is also a popular winter activity. Interpretive programs are offered during the summer.

THE PLANNING PROCESS

The outstanding natural, cultural, and historical resources of Minnesota provide abundant opportunities for outdoor recreation and education. These opportunities should be available to all citizens of Minnesota now and in the future. In order to ensure that 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. Through this plan each park will be classified in recognition of its resources and its role in the statewide park 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. The 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 with a state historic site is proposed for Old Mill State Park.

The goal for the 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 recreational opportunities in a natural setting which may be used by large numbers of people."

Vegetation management will emphasize the enhancement of the scenic qualities of the park, the reestablishment of a portion of the park as a tall-grass prairie, and the eventual establishment of examples of oak savanna vegetation.

A diverse wildlife population will be maintained by managing for a variety of vegetation types.

The major proposed changes to existing park facilities will be to:

-Construct four to six walk-in campsites

-Remodel the bathhouse

-Remodel picnic ground toilet building

-Remodel the swimming pool water level control structure

-Provide barrier-free access to park facilities

-Remove and relocate the mill area parking lot

-Construct overlooks along the trail system

-Construct a surfaced, barrier-free trail between the campground and the swimming beach

-Remodel the contact station

-Construct an unheated storage building

Park quality land has been identified northeast of the park. A total of 295 acres (119 hectares)of private land and 190 acres (77 hectares)of state trust fund lands are recommended for inclusion into the park's statutory boundary. A park's statutory boundary is the limit of park expansion which is set by the state legislature. Most of this land is forested river bottom which has excellent potential for the development of trails for hiking and ski touring. This area also encompasses a portion of the Red River Oxcart Trail, including the site where this historic trail crossed the Middle River.

Regional Analysis

SURROUNDING LAND USE

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

The map, p13 shows that most of the land use surrounding the park is agricultural. However, the land along the Middle River northeast and west of Old Mill is primarily wooded and is an aesthetic complement to the park. A proposed expansion would include a portion of this wooded area for future trail development. (See the Park Boundary Section, p 93 for further discussion.)

The high percentage of agricultural land in the vicinity affects the park in several ways. Herbicide spray drift has occasionally damaged vegetation in the park. This has been noted primarily on the southern park boundary. Also, flooding in the park has increased as drainage ditches on nearby farms have been improved. The existing culverts under park roads are not large enough to handle the amount of runoff that enters the park. This water occasionally backs up on nearby farm land. During the winter, deer move into the park and the river valley near the park because of the lack of cover on the surrounding farm land.

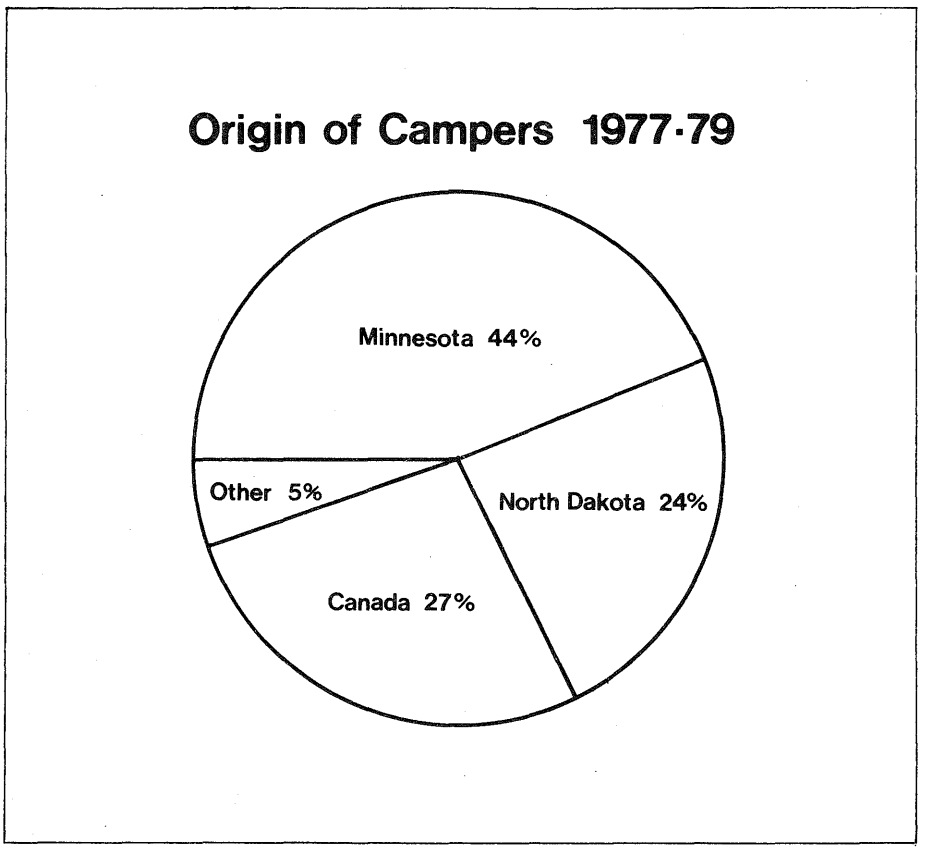
Old Mill State Park

Surrounding Land Use

STATE PARK USE PATTERNS

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

In 1979, 31,690 day users and 2,562 campers visited Old Mill. Of the campers, slightly less than one-half were from Minnesota. The chart below demonstrates the substantial use Old Mill receives from out-of-state campers. The percentages were derived from an analysis of camper origins over the three year period from 1977 through 1979. (See Camper Origin Map, p 23.)



REGIONAL ACTIVITY/FACILITY ANALYSIS

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

Recreational facilities within the vicinity of 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, picnicking is a recreational activity which state parks accommodate. Municipal and county parks located within the vicinity of a state park may also offer picnicking. However, some people will consistently travel to the state park because of the type of experience it offers, namely, picnicking in a natural setting augmented by other recreational opportunities such as hiking and wildlife observation. While picnicking facilities may be duplicated elsewhere, the total activity experience is not.

The relationship between the activities and experiences people desire and the type and number of facilities available can be determined through the process of regional analysis. The connection can best be analyzed by identifying the recreational facilities available in a park, the experiences people seek by using these facilities, and the identification of complementing facilities in the park's influence zone.

The park manager estimates that the zone of greatest influence shown on the Regional Analysis Map, p 17 , best illustrates communities most likely to frequent Old Mill on a regular basis. In addition, the map highlights area recreational facilities which may complement and benefit from state park facilities and services.

In order to adequately assess the role of Old Mill in providing recreational opportunities for the public, an activity/facility analysis was conducted. This analysis includes a description of activities and facilities available in the park and an analysis of the demand for these activities on a statewide, regional, and influence zone level.

C A N A D A

NORTH DAKOTA

KITTSON

ROSEAU

MARSHALL

PENNINGTON

RED LAKE

POLK

NORMAN

MAHNOMEN

CLEARWATER

WHITE EARTH INDIAN RESERVATION

Roseau River Wildlife Area

Hayes Lake State Park

Lake Bronson State Park

Twin Lakes Wildlife Area

East Park W.M.A.

Florian W.M.A.

Old Mill State Park

Thief Lake Wildlife Area

Agassiz National Wildlife Refuge

Old Treaty Crossing State Wayside

Hallock

Warren

Thief River Falls

Red Lake Falls

Crookston

East Grand Forks

ZONE OF GREATEST INFLUENCE

50 MILE RADIUS

15TH STANDARD PARALLEL

Legend

- Public Campground
- Private Campground
- County Park
- Water Access
- Principal Community
- Picnic Area
- Resort
- Zone of Greatest Influence
- Wildlife Management Area

Old Mill State Park | Regional Analysis

In the following narrative, Old Mill activities and services are described and the demand for these activities is analyzed.

Picnicking

Activity Description

Eighty-seven percent of the state population picnics at least once a year. According to the Old Mill State Park manager, approximately 90 percent of the day users picnic. People enjoy picnicking in the park because the activity is complemented by the scenic environment. Other pursuits such as swimming, hiking, sightseeing, and visiting the Old Mill historic site heighten the picnicking experience.

Activity Demand Analysis

With the exception of a few Minnesota Department of Transportation (Mn/DOT) rest areas and Old Treaty Crossing State Wayside, no other state facilities have picnicking facilities in the Old Mill influence zone. There are county and municipal picnicking facilities within the zone, such as the Florian Recreation Area in Florian and the Boy Scout Municipal Park in Thief River Falls. Although other picnicking opportunities exist within the influence zone, the combined picnicking/activity experience of Old Mill is not duplicated elsewhere.

Swimming

Activity Description

According to the park manager, approximately 90 percent of the summer day use visitors at Old Mill come to swim. They come from towns such as Argyle and Warren, Minnesota and Grand Forks, North Dakota. The swimming experience is enhanced by the opportunity to participate in other activities, such as picnicking and hiking.

Activity Demand Analysis

Although there are swimming pools within Old Mill's influence zone, the park provides day users with one of only three swimming beach facilities within this zone. The swimming facility at Old Mill is different than pools constructed of concrete because it is a man-made pond with a sand bottom and beach. The pool is supplied by well water and has an outlet into the Middle River. Other area beaches include those in the Florian Recreation Area, approximately 10 mi (16 km) north of Old Mill, and the Tindolph Municipal Beach located north of Thief River Falls, approximately 25 mi (40 km) southeast of the park. According to the State Comprehensive Outdoor Recreation Plan for 1979 (SCORP '79)*, projections for development statewide and in Development Region One indicate that swimming will continue to be one of the most requested activities during the summer season. Swimming ranks fifth behind bicycling, camping, fishing, and tennis statewide and third behind camping and fishing as the activity most desired in Development Region One.

Because of the high demand and limited facilities for swimming in the influence zone, the park swimming beach will continue to be an important day use facility. The other facilities in the influence zone will continue to have their own user draw.

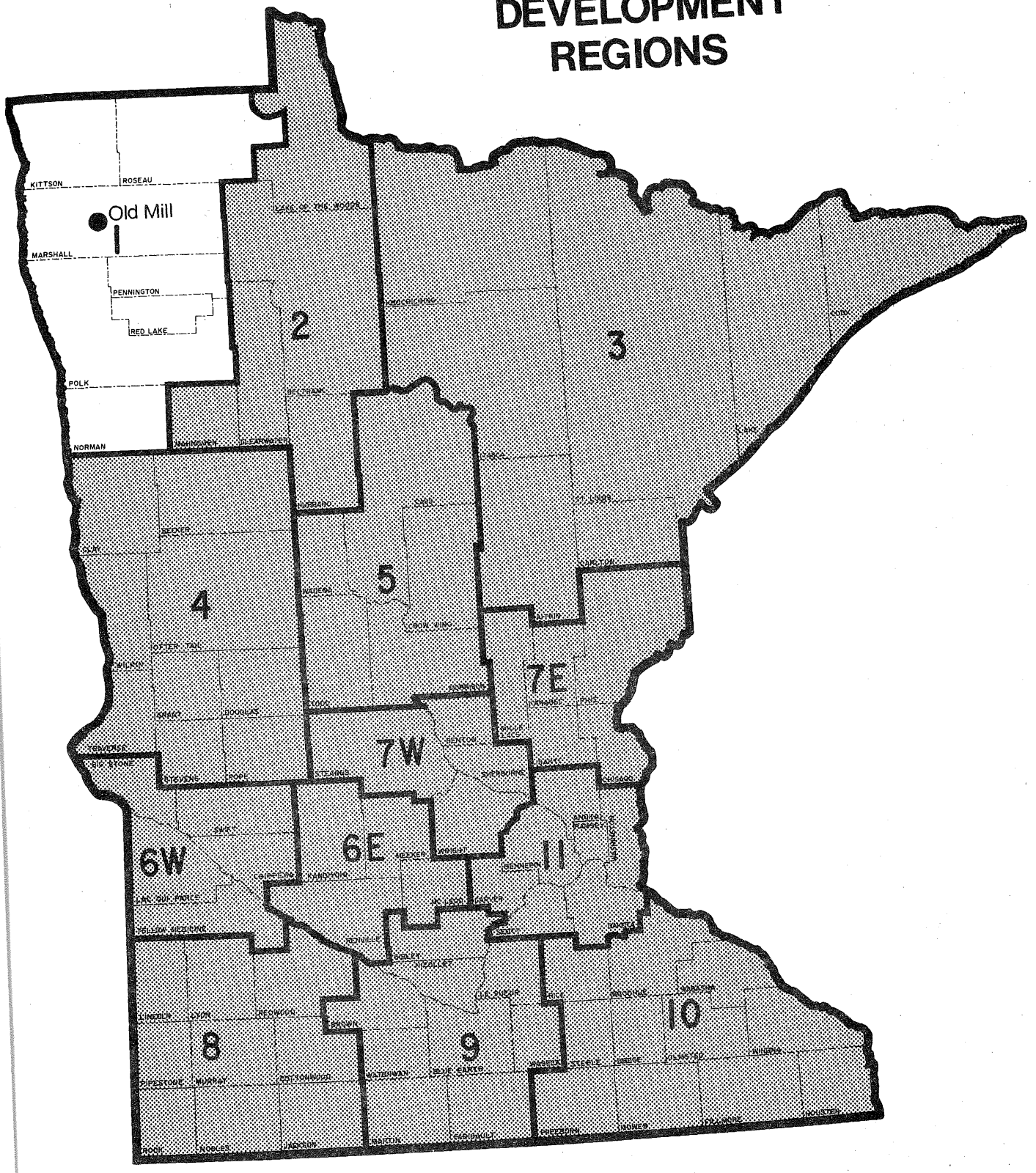
Hiking

Activity Description

Park visitors enjoy hiking the 6 mi (10 km) of trails in Old Mill primarily because of the attractive resources of the park. The wooded environment, wildlife such as deer and beaver, and the meandering Middle River are principal attractions to park hikers.

*SCORP '79 development projections are based on data derived from interviews and survey work on the statewide and regional levels.

DEVELOPMENT REGIONS



Activity Demand Analysis

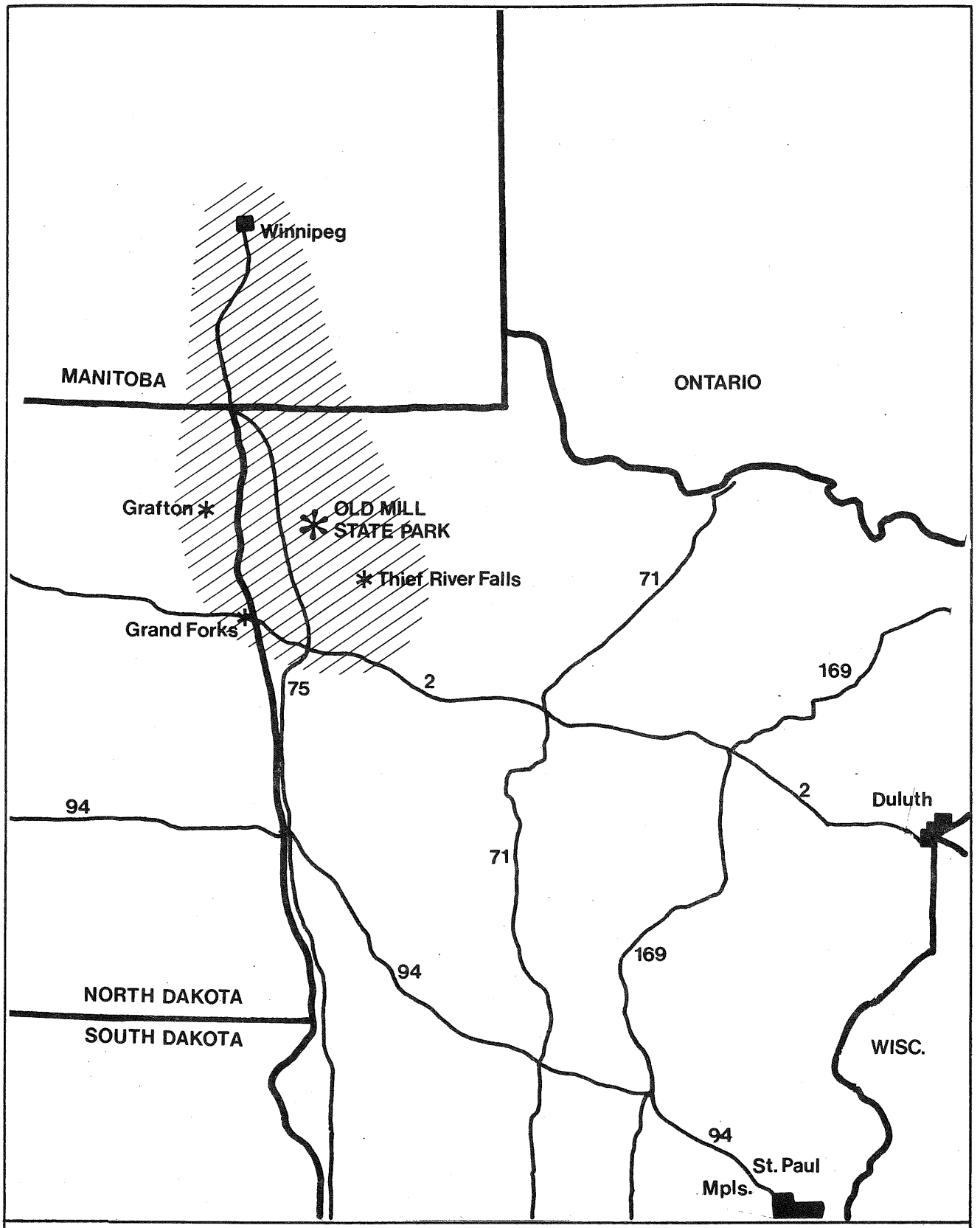
According to SCORP '79, there are only approximately 3 mi (5 km) of hiking trails in county and municipal recreation areas in the Old Mill influence zone. Old Crossing Treaty State Wayside has approximately 1 mi (1.6 km) of hiking trails and is the only state hiking facility in the park influence zone. The Agassiz National Wildlife Area located outside the influence zone (approximately 35 mi (56 km) east of Old Mill provides 1-2 mi (1.5 to 3 km) of hiking trails.

In Development Region One, hiking ranks sixth in priority for facilities that people would like to see increased. In Old Mill, hiking ranks behind only swimming and picnicking in popularity of all day use activities in the park.

Camping

Activity Description

Camping has consistently been a popular activity for Minnesotans. In Old Mill State Park, the park manager estimates that 83 percent of weekend and 25 percent of midweek campers choose Old Mill as their principal destination. Most camping occurs during the months of June, July, and August, with weekend camping being the most popular. The facilities occasionally fill to capacity and are usually filled 50 to 75 percent of capacity. Weekday use is considerably less, seldom reaching 25 percent of capacity. Because of the natural resources and convenient location of Old Mill, the park is a destination for people from northwestern Minnesota, eastern North Dakota, and southern Manitoba. The Camper Origin Map, p 23 , shows the area of Minnesota, North Dakota, and Manitoba from which most of the campers in Old Mill originate. It also highlights four cities which are particularly high in camper origins. Over a three year period (1977-79), 71 percent of all campsites used in Old Mill were occupied by people living in the area highlighted on this map.



N

Old Mill State Park | **Camper Origin**

Activity Demand Analysis

Lake Bronson State Park, the closest state facility to Old Mill which has camping facilities, is located 37 mi (60 km) north of the park. Old Mill and Lake Bronson attract clientele from similar locations in Minnesota, North Dakota, and Canada. However, each park has its own user draw and complements the other in resource and recreation opportunities. Destination campers have indicated their preference to camp at Lake Bronson because of the attractiveness of the Lake Bronson reservoir and the swimming, boating, water skiing, and fishing opportunities the reservoir provides. Lake Bronson has 206 campsites, 13 of which have electricity. A trailer dump station is also provided.

Old Mill has 24 campsites and gives park visitors a different experience. The Old Mill historic site, the Middle River, and the swimming pool are attractions which draw destination campers to Old Mill.

Other camping facilities within the Old Mill influence zone include Florian Recreation Area which has 150 sites with electrical hook-ups and a trailer dump station. The Warren Holiday Municipal Park in Warren has 25 sites and River Side Municipal Park in Thief River Falls has 16 sites.

Although there are other camping opportunities available in the park influence zone, the unique camping/activity experience at Old Mill is not duplicated.

Bicycling

Activity Description

Several of the roads in the vicinity of the park are suitable for bicycling, particularly County State Aid Highway 39 (CSAH 39).

Activity Demand Analysis

Very few park visitors ride bicycles to the park. Although the surrounding roads provide good access, there are no nearby population concentrations. Therefore, although a few people can be expected to bicycle to the park in the future, it is doubtful that this will be a significant percentage of the total park use.

Ski Touring

Activity Description

People come to Old Mill to ski because of the varied and scenic terrain and the lack of better skiing areas in the immediate vicinity of the park.

Activity Demand Analysis

Old Mill maintains 2 mi (3 km) of groomed ski touring trails. The park trails are the only groomed ski trails in Marshall County. Observations by the park manager indicate a slow but steady increase in ski touring over the last four years. During the winter 1979-80, approximately 290 skiers used park trails. That is about 40 percent of the total winter users in 1978. SCORP '79 projections for Development Region One indicate ski touring will have the second largest increase in participation of all winter activities over the next 10 years (1980-90).

Snowmobiling

Activity Description

The park snowmobile trails offer snowmobilers a brief, yet scenic ride through the park.

Activity Demand Analysis

According to the park manager approximately 20 percent of winter park users are snowmobilers. This is compared to 40 percent who are ski tourers and 40 percent who come to slide. The 3 mi (5 km) of snowmobile trails in the park are the only state funded trails in Marshall County, although there is a 64 mi (102.4 km) grant-in-aid trail in Pennington County. Snowmobiles often use the road ditches in traveling to the park.

During the past three years (1977-79), snowmobile use in Old Mill has shown a slow decline (park manager's observation). This decline is attributed to the small size of the park (287 acres/116 hectares) and the short time it takes to travel the park trails (approximately 15 minutes to travel the 3 mi/4.8 km of park trails).

Although snowmobile use in Old Mill has been declining, SCORP '79 states that snowmobiling is the winter activity most requested by the people of Development Region One. Because of the regionwide demand and lack of an extensive snowmobile trail system in the region, snowmobilers will occasionally travel to another region (Development Region Two primarily) for snowmobiling facilities. However, most snowmobilers who live in Development Region One, snowmobile there.

At present, the park serves as a destination point for snowmobilers who use the park's warming facility and short trail system. This service will continue. However, due to the limited acreage, the park cannot provide any trails of substantial length. Construction of trails outside the boundary of the park must be done with private or county funds or state grant-in-aid trail funds. If designated trails are developed to the park, the use of the warming facility and the trail system will increase. However, such an increase is not likely to exceed the capacity of the existing park facilities.

Snow Sliding

Activity Description

There are very few good hills for sliding in the region. The hill in the picnic ground is a popular sliding hill during the winter. The park manager indicates that approximately 40 percent of winter use in Old Mill is sliding.

Activity Demand Analysis

According to sliding enthusiasts who use Old Mill, it is the only location in Marshall County which has the topography necessary for sliding.

Special Events/Organized Group Activities

Old Mill provides resource and recreational opportunities not otherwise found in that region. For example, the park fills a need for large group activities. Boy Scouts, Girl Scouts, and 4 H Clubs are among the organized groups that consistently use the park for recreational activities. Old Mill fills a special need in providing a convenient and scenic location for family reunions and church picnics. The park also provides an important service for local schools which use the swimming beach for swimming lessons.

Classification

THE STATE RECREATION SYSTEM

Minnesotans are fortunate to live in a state with such a wide variety of natural, scenic, and historic resources. To ensure public access and to prevent inappropriate development, the state has set aside lands which exemplify outstanding resources. It is the management goal for all state recreational lands, including state parks, to protect and perpetuate resources for the use of the citizens of Minnesota.

There is a delicate balance which must be maintained when recreational facilities are provided for large numbers of people in areas of outstanding and often sensitive resources. Inappropriate development can result in irreparable damage to the resource. To help ensure this recreation/resource balance is maintained, the Minnesota State Legislature established, through the Outdoor Recreation Act of 1975 (ORA '75), a classification process whereby each unit in the state recreation system can be identified as one (or more) component in the system. These components are: natural state park; recreational state park; state trail; state scientific and natural area; state wilderness area; state forest and state forest sub-area; state wildlife management area; state water access site; state wild, scenic, and recreational rivers; state historic site; and state rest area. Included in this legislation are general criteria for classifying, planning, and managing each of these components.

Through this classification system, the role for each recreational unit in the state system is identified. 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 eliminating the park from the state recreational 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,

before, during, and after European settlement. The biocultural region system is a framework which provides information valuable in the planning of Minnesota's state parks.

Old Mill is located in the Red River Valley Biocultural Region. The rich clay and silty soils of this region once comprised the bottom of glacial Lake Agassiz. Prior to European settlement it was seemingly endless sea of prairie grasses and wild flowers. To accommodate row crop agriculture, native vegetation was plowed under in virtually all of this region including sections of Old Mill. Less than one-tenth of one percent of the prairie biome remains.

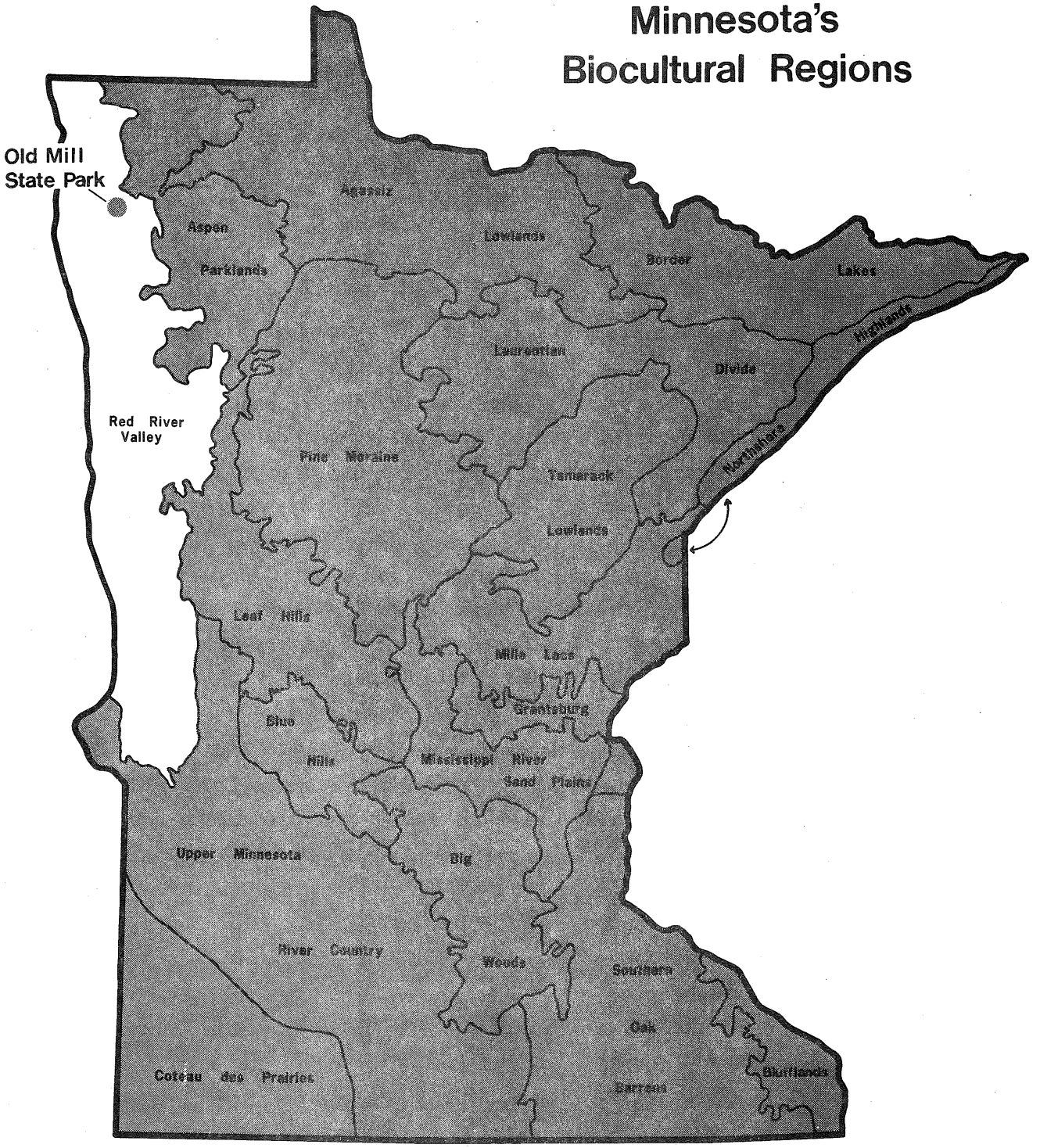
CLASSIFICATION PROCESS

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."

In accordance with the ORA '75, the park planning staff has reviewed the classification of each park under study this biennium. After the park resource inventory was completed for each unit, the planning staff determined:

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

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


Minnesota's
Biocultural Regions
Old Mill
State Park
Agassiz
Lowlands
Aspen
Parklands
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
Coteau des Prairies
Blufflands

The classification alternatives considered for Old Mill State Park were natural or recreational state park, or state historic site sub-unit.

In special cases, a portion of a park can be classified as a subunit. The Larson Mill area was analyzed to determine whether or not it fulfills the criteria for classification as a state historic site.

The extent to which Old Mill fulfills the criteria, as defined by the ORA '75, is summarized below.

Natural State Park Alternative

ORA Criterion # 1

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

Old Mill is located in the Red River Valley Biocultural Region. This region, a nearly flat plain, was once covered by prairie grasses and wild flowers. The occasional river valleys were wooded with elm, cottonwood, aspen, and boxelder on the floodplain and oak on the valley walls. Old Mill State Park contains a very small tract of native prairie. Its vegetation is primarily the woods along the river. Therefore, Old Mill does not exemplify the major characteristics of its biocultural region. There is no potential expansion area that would provide enough prairie vegetation to adequately portray the character of the biocultural region.

ORA Criterion # 2

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

Old Mill does not attract people from throughout the state. Its clientele generally are drawn from the surrounding area, eastern North Dakota, and southern Manitoba, Canada.

ORA Criterion # 3

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

Old Mill is approximately 287 acres (116 hectares) in size. Although this is enough area to provide a broad range of recreational opportunities, it is not sufficient to allow the preservation of much of the park in a completely natural state.

Recreational State Park Alternative

ORA Criterion # 1

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

The recreational facilities in the park do attract visitors from beyond the local area.

ORA Criterion # 2

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

Much of the park contains resources which can be used by large numbers of people without undue disruption of those resources. Areas that are sensitive can be avoided or developed so that disruption is minimized.

ORA Criterion # 3

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

Municipal and county facilities are available in the vicinity.

If a park receives primarily local use, it should be managed by the local county or a group of counties.

The day use of Old Mill is predominantly local, however, campers come from a much larger area. Over the last three years (1977-79), an average of 27 percent of the campers came from Canada, 24 percent from North Dakota, and 5 percent from other states. Only 44 percent came from Minnesota. Management of this park, with its high interstate and international use, is definitely the responsibility of the state rather than a county or a group of counties.

State Historic Site Subunit

An area may be classified as a state historic site if it is historically important for any of the following reasons:

1. is the site of, or directly associated with, a significant historical event; or

2. is associated with persons whose lives and accomplishments are historically unique or important; or

3. embodies the distinctive characteristics of an architectural style or method of construction which represents a particular and significant historical period, or the work of a master builder, designer, or architect, or

4. has yielded or is likely to yield, historical or archaeological artifacts, records, or other original data or information; or

5. is a geographical feature of outstanding significance and includes, by way of example, the highest point in the state, the continental divide, and the source of the Mississippi River.

The Larson Mill is on the state register of historic sites and can be justified as a state historic site as stated in #3 above. Although the outside of the mill may not be particularly distinctive, the milling equipment is representative of the late 1800s and early 1900s. Mills were very important to their respective communities. They were often a commercial and social focal point in rural communities. The Larson Mill is one of the few remaining operating mills of its kind in the state.

Recommended Classification

A recreational state park classification with a state historic site, operated and maintained by the DNR, Division of Parks and Recreation is recommended for Old Mill State Park. Although there are minimal trail facilities in the park, a number of other recreational activities are accommodated. The potential park expansion would greatly enhance the trail system.

THE GOAL

The goal for Old Mill State 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 recreation opportunities in a natural setting which may be used by large numbers of people."

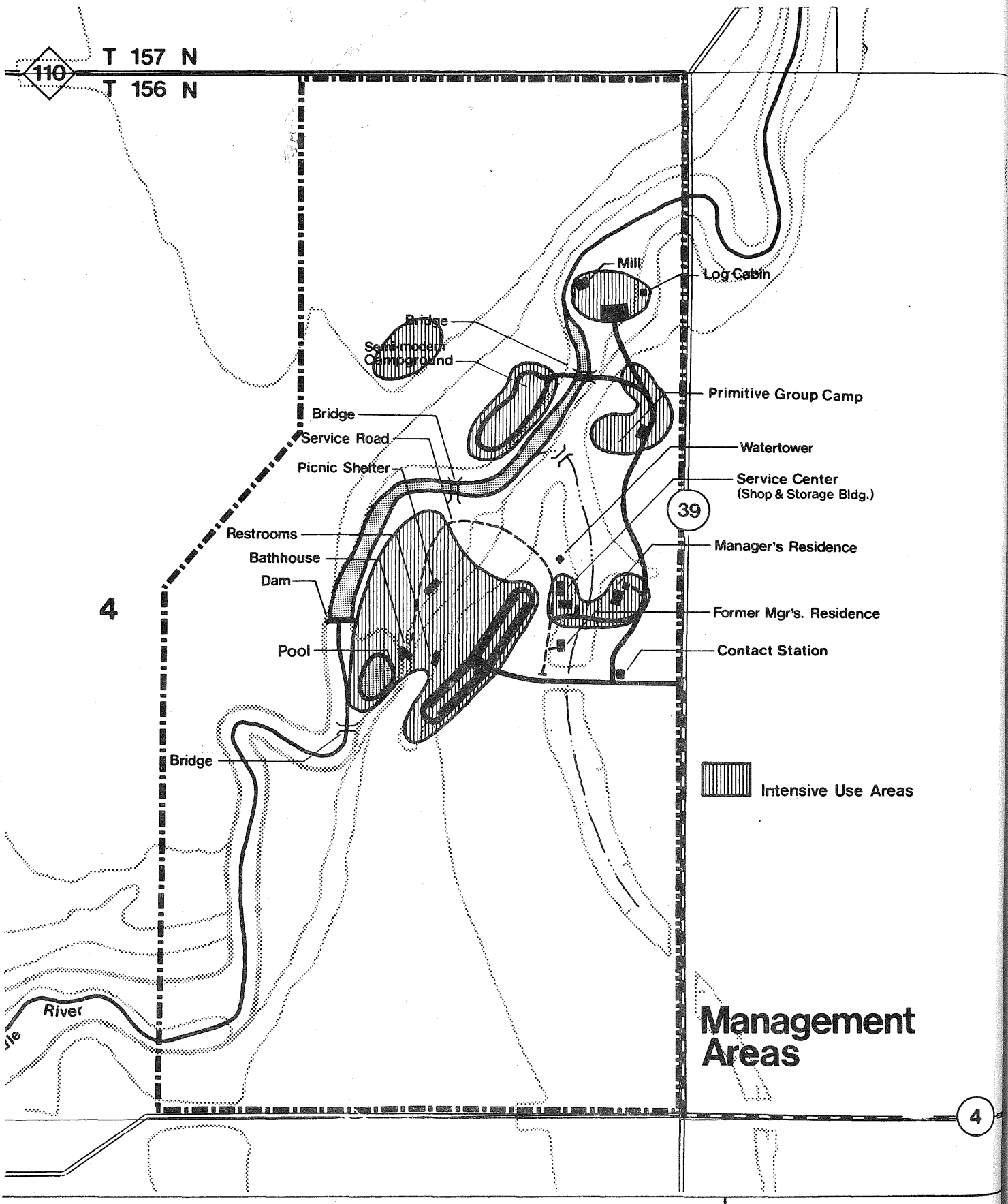
Management Areas

MANAGEMENT AREAS

Old Mill can be divided into two general areas for management. One will be managed for intensive use and the other for passive use (see Management Areas Map, p 42). The intensive use area will be maintained for the comfort and enjoyment of visitors without undue impact on the natural environment. The passive use area except for trails and overlooks, will be managed for perpetuation of native plants and animals.

The intensive use area is heavily used by park visitors and park staff. Because of the amount of use, it is necessary to actively manage the resources in this area to ensure a safe, comfortable, and enjoyable area for park visitors. The scenic qualities focused on in a state park are qualities of the natural environment as contrasted to the well manicured appearance of a typical city park. Therefore, the amount of area maintained in mowed grass will be minimized. Islands of native vegetation will be maintained in all areas not needed for active use. The trees will be pruned only when necessary to remove hazardous limbs.

The passive use area comprises the remainder of the park. Use in this portion of the park is limited to trails and a few overlooks. The management proposals for this area (see Vegetation Management, pp 52 - 54) are directed toward reestablishing native vegetation and enhancing the diversity of wildlife habitat.


T 157 N
T 156 N
110
Mill
Log Cabin
Bridge
Semi-modern Campground
Primitive Group Camp
Bridge
Service Road
Watertower
Picnic Shelter
Service Center
(Shop & Storage Bldg.)
39
Restrooms
Manager's Residence
Bathhouse
Dam
4
Former Mgr's. Residence
Pool
Contact Station
Bridge
Intensive Use Areas
River
Management Areas
4
N
Feet
Meters
0
500'
1000'
0
100m
200m
Old Mill State Park

Park Resources

30

30

39

34

35

36

114

R 46 W

R 45 W

110

110

T 157 N

T 156 N

T 157 N

T 156 N

1000

1000

Legend

0 - 6%

6% and over

Missouri River

39

4

3

2

4

N

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

Miles

Kilometers 0 500m 1km

Old Mill State Park

Slope

RESOURCE MANAGEMENT OBJECTIVES

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

They are:

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

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

ELEVATION AND SLOPE

The Slope Map (p 45) was developed from an analysis of the contour lines on a United States Geological Survey Map. Use of this slope map will aid in the site selection and management of park facilities.

Most of the land in Old Mill State Park is flat. The only exception to this is along and near the Middle River where steep banks 10 to 30 ft (3 to 9 m) high slope down to the river. To provide an exciting and varied ski touring experience, trails should be designed to take advantage of these river bank slopes. Other development on these slopes should be avoided.

CLIMATE

Average summer temperatures in Minnesota vary only a few degrees from north to south. The only major exception is the North Shore of Lake Superior where average temperatures can vary from 10 to 15 degrees (on a Fahrenheit scale) cooler than southern Minnesota.

Average temperatures for the month of July in the Old Mill area vary from an average high of 82°F (28°C) to an average low of 58°F (16°C). This is quite similar to temperatures in southeastern Minnesota which experience average highs of 84°F (29°C) and average lows of 58°F (16°C).

In winter there is a greater variation in temperature within the state. Average temperatures for January in the area surrounding Old Mill vary from an average high of 12°F (-11°C) to an average low of -8°F (-22°C). This is about 12 degrees (on a Fahrenheit scale) colder than the average temperatures for January in southeastern Minnesota.

Information on annual precipitation in the Old Mill area comes from a weather recording station in Argyle located 12 mi (19 km) west of the park. There average annual snowfall totals 34 in. (86 cm). Total annual precipitation (rain and snow) is about 20 in. (50 cm). In southeastern Minnesota the annual precipitation total is considerably higher, about 30 in. (76 cm).

GEOLOGY

The existing topography of Old Mill State Park is the result of considerable glacial activity. The area has been covered by glacial ice several times, the last advance being the Grantsburg-Des Moines lobe of the Wisconsin glacial stage. This huge body of ice melted about 10,000 years ago forming glacial Lake Agassiz, a vast body of over 110,000 sq mi (177,000 sq km) of water covering all of Marshall County, much of northwestern Minnesota, and the Canadian provinces of Manitoba and Ontario.

Lake Agassiz was originally drained by the glacial River Warren, which carved out the Minnesota River Valley. The Minnesota River is a remnant of this once sizeable river.

As the glacier retreated northward into Canada, other river beds were exposed and the drainage of Lake Agassiz shifted northward, flowing into Hudson Bay. When most of the lake had drained, the Red River was formed on the silt-laden lake bed.

Remnants of glacial Lake Agassiz, in the form of old beach ridges, can be seen throughout the area. These low ridges of sand and gravel were formed by waves beating against the shoreline. Each time the lake receded, another beach ridge was formed. One of these beachlines, the McCauleyville Beach, is near Old Mill State Park.

There are no rock outcrops in the area due to the extensive deposits of silt on what once was the bottom of Lake Agassiz. These deposits vary from 250 to 500 ft (76 to 152 m) in depth. Beneath them the bedrock consists of thin layers of shale resting on top of deposits of granite, slate, and schist.

An analysis of the mineral potential of the park was conducted by the DNR, Division of Minerals. Their findings showed a good potential for the presence of iron, nickel, zinc, copper, lead, gold, and silver. The reliability of this rating was considered to be fair. This does not mean that these minerals exist in deposits extensive enough to mine, or even that they exist at all. The good potential rating only indicates there is a possibility these mineral exist due to the presence of certain types of rock favorable to the occurrence of mineral deposits.

SOILS

Detailed soil analysis information for the park is not available, but the Soil Conservation Service has developed a "General Soil Map for Marshall County, Minnesota." This map shows that the southeast portion of the park is underlain with the Lohnes-Syrene-Hangaard Association. These soils are typically located on or adjacent to the beach ridges of glacial Lake Agassiz. Soils within this complex vary from excessively well-drained to poorly drained.

The rest of the park is underlain with Arveso-Ulen-Poppleton Association. These soils vary from moderate to low fertility, and are generally moderately to poorly drained. Some of the soils are subject to dryness and wind erosion due to poor water holding qualities.

Objective:

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

- Detailed Recommendation

Action #1. Test soils before construction of major facilities.

Because of very general information available on the soils in the park, soil borings should be taken and analyzed before major facilities are constructed.

Cost. Included in construction costs.

VEGETATION

Presettlement Vegetation

The Old Mill area was an oasis in the middle of prairie in the mid 1800's when the Red River Oxcart Trail was heavily traveled. The floodplain adjacent to the Middle River was covered with bottomland hardwood vegetation. The valley walls were scattered with bur oaks with prairie groundcover (oak savanna). The level upland was a mixture of scattered areas of prairie, wet prairie, and brush prairie.

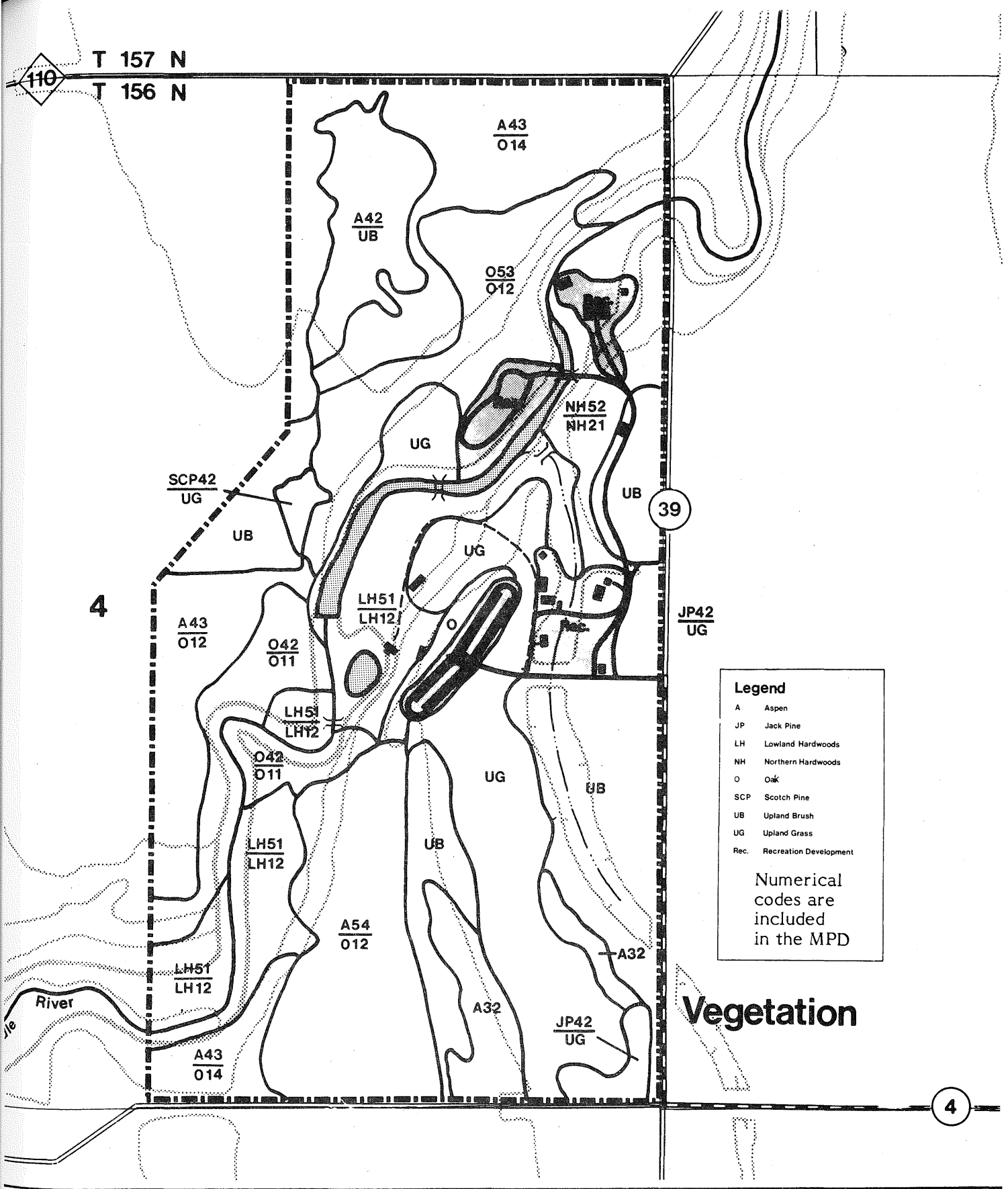
Existing Vegetation

The lowland hardwood vegetation along the Middle River is still very similar to what it was during the mid 1800's (see the Vegetation Map, p 51). Oak are still very prevalent on the valley walls. However, in many areas, aspen trees have grown taller than the oaks and are beginning to compete with them for available sunlight. Oak are intolerant of very much shade and as a result may decrease in number. Aspen is presently the most common tree in the park. This was not the situation in the mid 1800s. Aspen is not tolerant to fire, but bur oaks are. The incidence of prairie fires was reduced significantly once this area of the state was settled. Once fires were controlled, the aspen grew unchecked. Because aspen grows faster than oak, it has become the dominant tree species. Areas that were once prairie, such as the southeast quarter of the park, are being invaded by aspen and brush in the absence of occasional fires.

Management

Objectives:

To protect and perpetuate rare or unusual plant communities


T 157 N
T 156 N
110
A43
O14
A42
UB
O53
O12
NH52
NH21
UG
SCP42
UG
UB
39
UB
UG
4
LH51
LH12
O
JP42
UG
A43
O12
O42
O11
LH51
LH12
O42
O11
UG
UB
LH51
LH12
UB
A54
012
A32
LH51
LH12
River
A32
JP42
UG
A43
014
4
Legend
A Aspen
JP Jack Pine
LH Lowland Hardwoods
NH Northern Hardwoods
O Oak
SCP Scotch Pine
UB Upland Brush
UG Upland Grass
Rec. Recreation Development
Numerical codes are included in the MPD
Vegetation
N
Feet
Meters
0 500' 1000'
0 100m 200m
Old Mill State Park

To manage vegetation for scenic diversity and wildlife habitat

To manage vegetation in development areas to allow intensive use without major resource deterioration

To manage vegetation with natural forces (such as fire) whenever feasible

To retain or reestablish the visual character of the vegetative cover of the majority of the park consistent with pre-European settlement vegetation patterns

• Detailed Recommendations

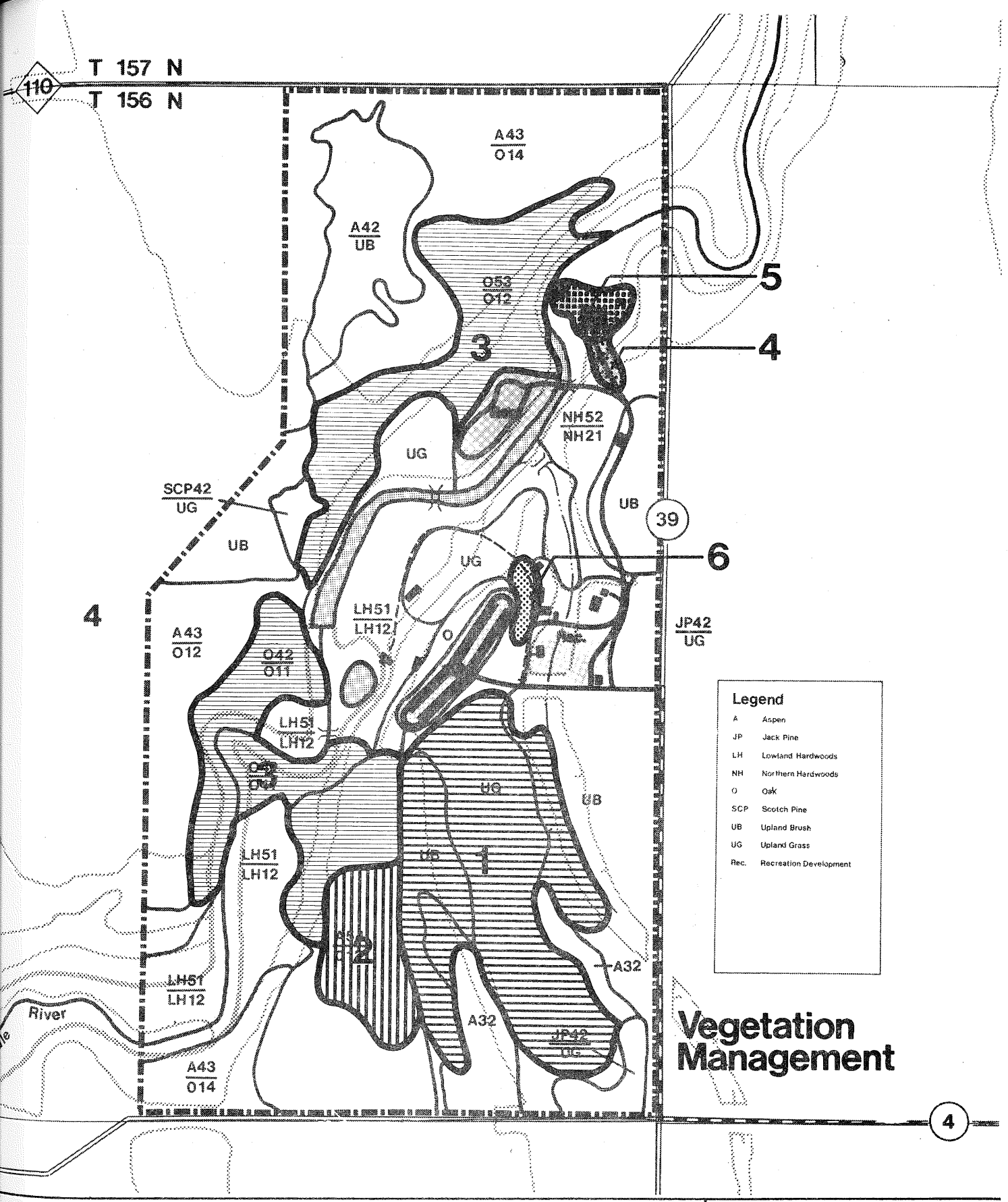
Action #1. Reestablish native prairie vegetation. (See Vegetation Management Map, p 53 .)

This area of the park, which was prairie in the mid 1800s, still supports a variety of prairie plants, although it is presently being invaded by aspen and upland brush. This area should be managed to reestablish native vegetation. Burning every three to four years will be the main management tool. Some seeding or transplanting of native species which were once found in the park, but have died out, may be necessary. Also, some very localized herbicide application may be necessary, although herbicides will be used only when other types of nonchemical control have failed.

Cost. $9,000

Action #2. Reestablish oak savanna vegetation.

The vegetation in much of the park can be managed to restore an oak savanna character. However, only one relatively small area (5-10 acres, 2-4 hectares) will be actively managed initially. This area was selected because it is adjacent to the prairie area which will be managed with fire. It has a good stand of mature oak mixed with the aspen. The interpretive trail will pass through the area making it a good demonstration area for the interpretive program. There is also good road access.


T 157 N
T 156 N
110
A43
014
A42
UB
053
012
3
5
4
NH52
NH21
UG
SCP42
UG
UB
39
6
UB
UG
4
LH51
LH12
A43
012
042
011
JP42
UG
O
LH51
LH12
042
011
UB
UB
1
LH51
LH12
A32
LH51
LH12
River
A32
JP42
UG
A43
014
4
Legend
A Aspen
JP Jack Pine
LH Lowland Hardwoods
NH Northern Hardwoods
O Oak
SCP Scotch Pine
UB Upland Brush
UG Upland Grass
Rec. Recreation Development
Vegetation Management
N
Feet
Meters
0
500'
1000'
0
100m
200m
Old Mill State Park

The process followed to reestablish oak savanna will generally be: 1) harvest existing aspen trees; 2) kill stump sprouts, preferably with several fires, but if necessary, with chemicals; 3) suppress aspen seedlings and enhance prairie plant conditions with prescribed burns every three to four years.

Cost. $4,000 - if harvested by a contractor (may also be done by park staff, or through timber sales)

Action #3. Restore oak savanna in the future.

When the oak savanna restoration in Action #2 is implemented, proven successful, and accepted by the park users, other areas of the park should be managed in a similar fashion. This will enhance the scenic qualities of the park, allow better air circulation to reduce mosquito problems, and restore the area to its mid 1800 appearance.

Cost. Dependent on Action #2.

Action #4. Screen the new mill parking lot from the mill area.

When the parking lot for the mill is built near the park road (see Proposed Development, Mill Area, Action #1, p 80), it will be screened from the mill area. This will enhanced the historical character of the area.

Cost. $2,000

Action #5. Establish a short growing, native grass in the mill area.

The well-manicured blue grass lawn presently maintained near the mill is not in character with the time period being depicted. Short growing native grasses such as buffalo grass or grama grass will, when established, maintain a low groundcover with minimal maintenance. Some minor variations in grass height can be expected. This will add authenticity to the visual character of the area while still maintaining a neat appearance.

Cost. $2,000

Action #6. Screen the service court from the picnic ground parking lot.

The service court is not a public use area and should not be visible to park visitors. Young tree seedlings have been planted between the parking lot and the maintenance court, but some interplanting of larger stock is desirable to improve the existing screening. Tree species used should be those native to the prairie edge and northern hardwood forest types of vegetation. In this park, those species would include hawthorn, aspen, green ash, and basswood. Although bur oak would be a desirable tree species to plant, they do not transplant easily.

Cost. $2,000

WILDLIFE

Inventory

Most of the land around Old Mill is used extensively for farming and, as a result, provides poor habitat for wildlife. Old Mill and the river bottom land along the Middle River provide the only adequate wildlife habitat in the immediate vicinity of the park. Therefore, even though it is a relatively small area, it is quite important to wildlife.

Located 1 mi (1.6 km) north of Old Mill is the Florian Wildlife Management Area operated by the DNR, Division of Fish and Wildlife. This wildlife management area is approximately 900 acres (364 hectares) in size and is managed primarily for waterfowl, although there is habitat for ruffed grouse, deer, and moose. The area is also used as a nesting site by sandhill cranes.

There are approximately 100 species of birds which are common in the park. Another 50 species are frequently seen during periods of migration.

Species of mammals common in the park include white-tailed deer, beaver, raccoon, woodchuck, white-tailed jack rabbit, and snowshoe hare.

A few of the birds observed in Old Mill are considered by the DNR to merit varying degrees of special consideration.* Osprey are the only bird species, identified in "The Uncommon Ones" as being endangered or threatened, that has been observed in the park. They do not nest in the park, but have been observed in the spring and fall.

Species of changing or uncertain status - These are species that are uncommon or have restricted habitats in Minnesota. They are not presently endangered or threatened, but could become so.

Franklin gull - commonly seen during migration
Common tern - commonly seen during migration
Marsh hawk - common summer resident

Species of special interest - These are species that merit special consideration in Minnesota and, in some places and at some times, merit special management because of unusual or unique values, special public interest, or vulnerability of habitat.

Great blue heron - commonly seen during migration

Management

Objectives:

To maintain and reestablish, where feasible, those wildlife species present in the park before European settlement

To maintain wildlife populations at a level which will not unduly impact other park resources

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

• Detailed Recommendations

At present there are no specific management actions necessary regarding the park wildlife. However, there is some potential for overpopulation of deer and beaver. These populations should be monitered and, if management is necessary, appropriate action should be taken jointly by the DNR, Division of Parks and Recreation and DNR, Division of Fish and Wildlife.

WATERS

Inventory and Analysis

Surface Waters

The only natural surface water resource in Old Mill is the Middle River. It enters the park in the northeast corner, flows in a southwesterly direction, and exits the park in the southwest corner. From there, the river flows in a westerly direction and joins the Snake River a few miles before that river empties into the Red River.

The Middle River is classified as a warm water fishery resource. This means that the river should be suitable for the production and maintenance of warm water fish such as bass, sunfish, and pike. During periods of low water, there may be a decrease in oxygen levels which would have a negative effect on the fish population.

A warm water fishery classification also means that the water quality of the river should be acceptable for all forms of recreation, including swimming.

No water quality testing has been done on the river regarding herbicide and pesticide runoff from surrounding agricultural fields. Communities such as Stephen and Hallock, located 15 and 35 mi (24

supply from rivers which flow through similar agricultural areas. Water testing for both these communities shows little evidence of agricultural runoff.

The Middle River is subject to flooding from snowmelt in the spring and occasional heavy spring and summer rains. Only minor damage occurs in the park from such flooding because the river banks are fairly steep and are capable of containing most of the floodwater.

A dam was constructed across the Middle River in the late 1930s to provide water for the swimming pool. It has minimal effect on flooding and does not significantly affect fish habitat. Water flowing over the dam drops about 7 ft (2 m). This dam is rated as being a low hazard structure by the DNR, Dam Safety staff.

The dam is no longer used to provide water for the pool. Well water is now used. River water may again be used in the future during late spring to warm the pool water. It will not be used in other seasons because the river carries a heavy silt load in the early spring and has little or no flow in the summer and fall.

Groundwater

Several wells drilled in the vicinity of the park show the area to be covered by deep layers of sand, gravel, and clay. These deposits are the remains of the lake bed of glacial Lake Agassiz. Water suitable for human consumption is found in these sand and gravel layers. Most wells in the vicinity range from 40 to 120 ft (12 to 37 m) deep. Yields of less than 50 gallons per minute (gpm) can be expected from most, although some wells are capable of producing 100 gpm. Old Mill has two wells which produce enough water for drinking and sanitation purposes and provide water for the swimming pool.

Management

Objectives:

To provide for adequate drainage of water runoff from the park land and surrounding agricultural fields

To maintain the dam in a structurally sound and safe condition

To ensure that park development does not decrease the water quality of the Middle River

To make all park facilities in the Middle River floodplain flood proof

To provide water suitable for human consumption

To maintain high quality groundwater

- Detailed Recommendations

Action #1. Realign the drainage ditch to enter the river downstream from the dam.

At present a drainage ditch enters the park near the southeast corner and runs straight northwest, passing near the manager's residence before emptying into the Middle River. This ditch must be realigned to eliminate the problem of flood waters coming past the manager's residence, eroding the soil, and causing problems with the sewage drain field. In addition, park roads block water flow and occasionally the water backs up into nearby fields.

A drainage ditch outflow has been constructed downstream from the dam. The steep slope down to the river has been stabilized with gabian baskets to minimize erosion.

By digging a new channel for the ditch and directing the water to the developed outflow, the existing problems will be eliminated. The new channel will be aligned and graded to fit unobtrusively into the natural surroundings.

Cost. $45,000

Action #2. Request that the DNR, Bureau of Engineering do a comprehensive water distribution and sewage disposal system study.

(See Proposed Development, Administrative/Support Facilities, Action #5, p 86.)

Action #3. Repair the dam and the erosion on the downstream of the dam.

The DNR Dam Safety staff inspected the dam and made the following observations and recommendations.

Water seepage occurs through the expansion joints. This should be corrected by the use of bentonite on the upstream side of the dam.

Erosion has occurred along the banks on the downstream side of the dam. This should be repaired by replacing the eroded fill and strengthening the rock rip-rapping. Also, the dam abuttments should be tuck-pointed.

Cost. $20,000

FISHERIES

No fish population studies have been done on the Middle River. Therefore it is uncertain what species of fish inhabit it. Several species of rough fish and game fish are known to exist.

Most of the fishing in Old Mill is done at the spillway adjacent to the picnic ground in the spring when northern pike can be caught.

There is better fishing in the Florian Recreation Area where a lake has been created by damming the Tamarack River. The DNR, Division of Fish and Wildlife stocks this lake with northern pike.

Any fish habitat improvement on the Middle River would be of questionable benefit. The river has periods of no flow nearly every year resulting in stagnation and oxygen levels too low to support a good game fish population. In order to make any significant improvements, a dam would need to be constructed which would create a lake similar to the one in Florian. This would be an expensive project and would require purchase of a great deal of land from surrounding landowners. These landowners and other local citizens are strongly opposed to such a project. For these reasons, no dam construction or fish habitat improvement will be proposed.

Old Mill State Park has been surveyed for prehistoric sites by the University of Minnesota Archaeology Department. No sites were found. However, the park is rich in history related to the settlement and farming of the Red River Valley.

Prior to the boom in agriculture, the valley was a vast, treeless prairie. Several small rivers meandered through the prairie. Large areas were covered by marshes.

Early settlement was clustered along the Red River near the United States-Canada border. Fur trading was the most common occupation. Traders operated small posts where they exchanged such staples as flour, salt, tobacco, gunpowder, clothing, and weapons for buffalo hides and various other animal pelts.

Transporting goods was a problem in the area because there was no natural system of waterways. This was overcome by the introduction of the oxcart. These carts were originally used by metis (French/Indian people) to haul buffalo meat and hides taken during their annual hunts. The earliest description of the oxcarts was given in 1801 by a fur trader stationed at Pembina. He described a small wooden cart with wheels carved from tree trunks. Several design improvements were later made including a change to large spoked wheels which were better able to withstand the rugged condition of the trails. Oxcarts were used in the 1820s, but their widespread use for trade did not occur until the 1840s. St. Paul was the usual destination for southbound carts from the Red River Valley. In 1845 furs valued at $15,000 were transported to St. Paul. Between 1851 and 1857 the number of oxcarts arriving in St. Paul jumped from 102 to 500. The carts traveled in large groups over several well-established trails. One of these, the Woods Trail, passed within a mile of Old Mill. Use of the oxcarts flourished until the 1870s when their services were replaced by railroad and steamboat transportation.

The western two-thirds of Marshall County was included in the terms of the Old Crossing Treaty of 1863 in which the Ojibway Indians ceded the Red River Valley to the United States. Settlement began a few years later. Most of the site on which Old Mill State Park is located was homesteaded by Lars Larson Jr. in 1882. In the next two years he was joined by his brother John and father, Lars Sr. The original mill, powered by water from the Middle River, was built by Lars Sr. in 1886 about one-quarter mile downstream from the present mill site. This mill was destroyed by a flood two years later. Larson next constructed a wind powered mill in the area of the picnic grounds parking lot. This mill proved to be unsuccessful. In 1889, John Larson built a mill one-quarter mile up river from the present site. This mill was powered by a case engine #359 now on display in the restored mill. In 1897 John moved the mill to a site very near its present location. Because of mechanical problems with the steam engine it was replaced with a gasoline engine. The steam engine remained unused until it was restored to operating condition in 1958. The mill remained in the Larson family for many years. It was later purchased by the Skoglund brothers, who operated the mill until it was sold to the state in 1937. The mill ceased operation and was abandoned until it was restored in 1958.

The miller's cabin located near the mill had deterioriated too badly to be restored. It was removed and a similar homesteader's cabin, donated by the Marshall County Historical Society, now stands in its place. The cabin is furnished with furniture and utensils of the late 1800s. A period garden, pit toilet, and wood pile all help to reestablish the historical setting of the mill site.

The site is open to the public during the summer months. Each year during the Labor Day weekend in September, the mill is put into operation for viewing and enjoyment of park visitors. The flour produced during this demonstration is available for purchase by visitors.

Mattson, E. Neil. 1958. Red River Carts, Marshall County Statehood Centennial Committee.

Management

Objectives:

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

To enhance the historical character of the Larson Mill area

To interpret historic and prehistoric use of the park area for visitors

Detailed Recommendations

Action #1. Raise the door on the east side of the mill and construct a loading platform below it.

The present door is located near ground level. This was not its original location. To make the building historically accurate, the door should be raised and a loading platform constructed below it.

Cost. $1,000

Action #2. Remove and relocate the existing visitor parking lot for the mill. (See Proposed Development, Mill Area, Action #1, p 80).

Action #3. Construct an outdoor interpretive bulletin board near the entrance to the mill area. (See Visitor Services, Action #2, p 89.)

Action #4. Repair the Case steam engine.

The engine was restored several years ago, but has not been used in the past few years because the safety of the boiler is questionable. For this reason, power to operate the mill is provided by a tractor. The boiler should either be repaired or replaced. It is desirable to have the engine in working order because its operation adds much to the historic character of the mill.

Cost. Dependent on bids for contracted work

Action #5. Improve the visual character of the historic mill area.

The mill and the mill operator's cabin have been restored and are in good condition. However, the area around them is rather sterile in appearance. The historical character of the site could be much improved if some historic artifacts or replicas were included such as wagons, feed sacks, and binders. All items must be typical of the late 1800s to accurately depict the time period being interpreted.

Cost. $1,000

Action #6. Prepare an interpretive prospectus for the mill.

The regional naturalist should prepare a prospectus which addresses the history of settlement in the Red River Valley and specifically in the Old Mill area. It should focus on the way of life of the early settlers and also address the operation of the mill - how successful it was and what led to its end as a useful enterprise. Taped interviews with some of the people familiar with the operation of the mill could be very useful for future interpretive programs.

Cost. To be done by DNR interpretive staff

Action #7. Field check all proposed development sites for the presence of prehistoric and historic remains before any work is begun.

Where remains are found, an assessment will be made of the size and importance of the site. When necessary, the site will be excavated before construction is begun. All excavation work must have prior approval by the state historic preservation officer. Artifacts removed will become the property of the DNR. Information obtained on the site during excavation will be made available to the park interpretive program. Construction of the development in another location will be considered if the site proves to be significant.

Cost. Dependent on whether significant materials are located. Included in cost of each development.

Physical Development and Recreation Management

RECREATION MANAGEMENT OBJECTIVES

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

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

To develop the park for optimum recreational opportunities and efficient park management with consideration for the existing natural resources

To locate park development where it will not have a major impact on natural or historic resources, will not detract from the enjoyment of users, and will provide easy access to areas of scenic or educational values

To make major facilities in the park accessible to special populations (i.e., persons with physical disabilities, the elderly, and the very young)

EXISTING DEVELOPMENT

Campground

24 campsites

Modern toilet building

Primitive Group Camp

150 capacity

Two pit toilets

Historic Site

Larson Mill

Miller's cabin

25 car parking lot

Picnic Grounds

Picnic shelter (also used as winter warming room)

Picnic tables

400 car parking lot

Modern toilet building

Swimming Beach

Bathhouse (changing rooms and refectory)

Pool and sand beach

Administrative Facilities

Contact station (sticker sales and park office)

Manager's residence

Former manager's residence (used for storage)

Shop

Storage building

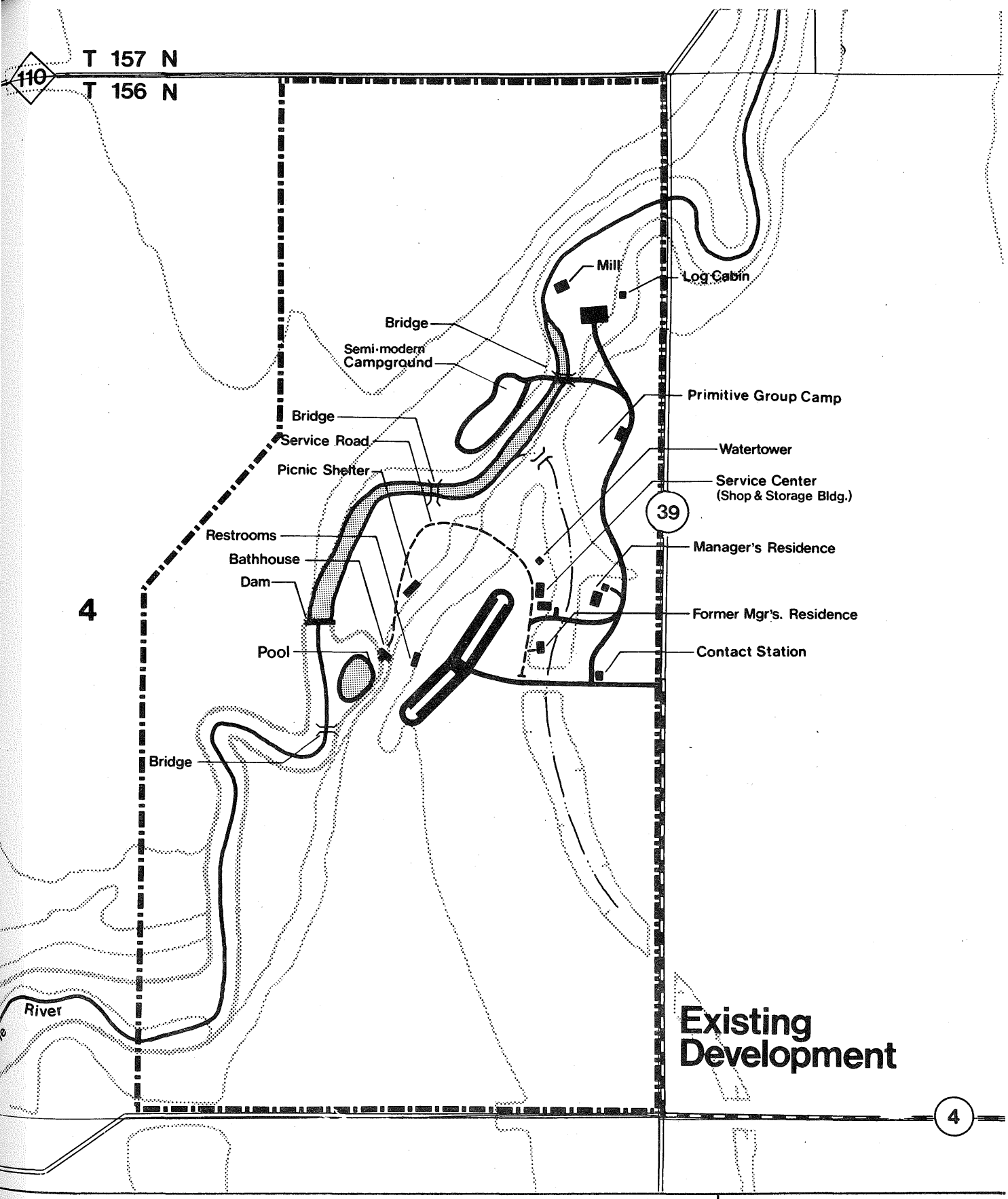
Water tower

Trails

5.5 mi (9 km) hiking

2.5 mi (4 km) ski touring

3 mi (5 km) snowmobiling


T 157 N
T 156 N
110
Mill
Log Cabin
Bridge
Semi-modern Campground
Primitive Group Camp
Bridge
Service Road
Picnic Shelter
Watertower
Service Center (Shop & Storage Bldg.)
39
Restrooms
Manager's Residence
Bathhouse
Dam
4
Former Mgr's. Residence
Pool
Contact Station
Bridge
River
Existing Development
4
N
Feet
Meters
0
500'
1000'
0
100m
200m
Old Mill State Park

PROPOSED DEVELOPMENT

Overview

Camping

-Construct four to six walk-in campsites

- Provide low level lighting near campground toilet building

-Develop a play area in the campground

-Install barrier-free pit toilets in the group camp

Picnic Ground Swimming Beach

-Remodel the picnic shelter

-Remodel the picnic ground toilet building

-Provide fire rings in the picnic ground

-Provide barrier-free access to the picnic ground

-Remodel the bathhouse changing facilities

-Construct barrier-free toilets in the bathhouse building

-Reconstruct the water level control structure for the pool

-Increase the temperature of the well water entering the swimming pool

-Provide barrier-free access to the swimming pool

-Install a gate valve in the river water supply pipe to the swimming pool

Mill Area

-Remove and relocate mill area parking lot

Trails

-Realign the hiking trail along the east side of the river near the group camp

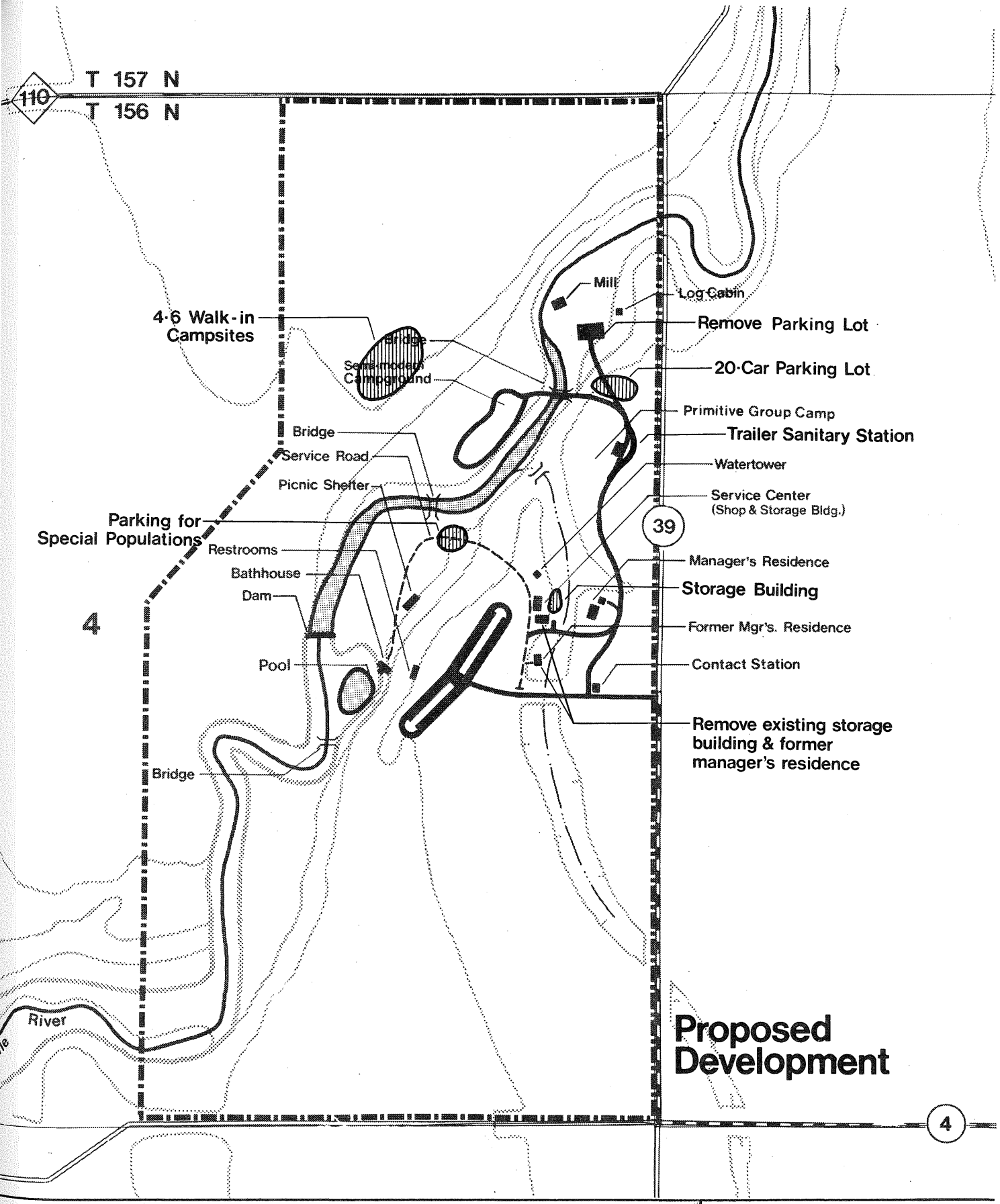
-Remodel the picnic shelter to provide adequate warming facilities for ski tourers and snowmobilers

-Construct overlooks along the trail system to provide scenic views of the river

-Constuct a barrier-free trail between the campground and the swimming beach

-Construct a barrier-free trail from the mill parking lot to the mill area

-Construct two sets of steps between parking lot and the picnic ground


T 157 N
T 156 N
110
4·6 Walk-in Campsites
Bridge
Semi-modern Campground
Mill
Log Cabin
Remove Parking Lot
20-Car Parking Lot
Primitive Group Camp
Trailer Sanitary Station
Watertower
Service Center
(Shop & Storage Bldg.)
39
Bridge
Service Road
Picnic Shelter
Parking for Special Populations
Restrooms
Bathhouse
Dam
Pool
Manager's Residence
Storage Building
Former Mgr's. Residence
Contact Station
Remove existing storage building & former manager's residence
4
Bridge
River
Proposed Development
4
N
Feet
Meters
0
500'
1000'
0
100m
200m
Old Mill State Park

Administration/Support Facilities

-Remodel the contact station

-Remove the former manager's residence

-Remove the unheated storage building

-Construct a new unheated storage building

-Provide water and toilet facilities in the shop building

-Construct a gasoline and oil storage building

-Conduct a study of the water distribution and sewage disposal system

-Replace all overhead electrical lines with underground lines

Camping

Objectives:

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

To provide for a variety of camping experiences

During the planning process, campsites with electric hook-ups and a trailer dump station were requested by the public. However, the campground in the Florian Recreation Area, a county park 10 mi (16 km) north of Old Mill, was recently expanded. It now has 150 campsites, all with electric hook-ups and a trailer dump station. Therefore, it was decided not to develop these types of facilities in Old Mill. After Action #1 below is implemented, facilities for three different types of camping experiences will be available in the area, with no duplication of facilities.

Action #1. Construct four to six walk-in campsites near the west side of the campground accessible by an existing hiking trail.

There is an area on a slight rise of about 500 ft (152 m) west of the campground that would make an excellent location for walk-in campsites. An old well that once provided water for the campground is near the proposed sites. It had too low a volume for the campground, but should work well for the walk-in campsites. Site preparation should consist mainly of clearing some young aspen. Such

a camping option would be popular with campers wishing more seclusion than the existing campground provides. A small (6-10 car) parking lot will also be constructed off the campground loop near the trail head for walk-in campers and campground visitor parking.

Cost. $4,000

Action #2. Provide low level lighting near the campground toilet building.

Because of the high amount of use this park receives by special populations, it would be desirable to have some low level lighting along the surfaced trail through the center of the campground loop to the toilet building.

Cost. $2,000

Action #3. Develop a play area in the campground.

At present, a metal swing set and a sand box are provided in the campground. These facilities should be removed and a nature-oriented play area developed. Climbing structures created out of large branches treated with preservatives, rocks, and logs in a sand base should be provided. The finished structure should blend into the surrounding landscape. This play area will provide a close, safe area where young children can play.

Cost. $2,000

Action #4. Replace the group camp pit toilets with two barrier-free pit toilets.

The existing toilets are not barrier-free. When the existing toilets need to be moved or repaired, they should be replaced with barrier-free toilets.

Cost. $6,500

Picnic Ground/Swimming Beach

Objectives:

To provide a variety of picnic facilities to fulfill the needs of a wide range of users

To provide the complementary facilities needed for a pleasant picnicking experience

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

To provide for a safe, enjoyable swimming experience

Action #1. Remodel the picnic shelter.

The picnic shelter is in sound condition and, with normal maintenance, will last for many years. Remodeling of the structure will improve its usability. Potential flooding should be taken into consideration for all building modifications.

The present fireplace is poorly designed. It smokes excessively and does not provide adequate heat during the winter. The building is used as a warming house for skiers and snowmobilers. A new fireplace in the center rear of the room will provide more heat. The naturalist uses the shelter for audio-visual programs. By locating the fireplace toward the center rear of the room, the visual obstruction it causes to visitors attending a program will be minimal.

At present there is no storage area in the shelter. Everytime the naturalist gives a program, the projector, films, screen, extension cord, and projector cart must be carried in. If a storage area were constructed, most of the materials (except the projector and films) could be stored in the building. There is space for such a storage locker at the front of the room in a corner next to the stone fireplace.

The kitchen facilities receive considerable use and are in poor condition. A new sink and counter are needed. The sink should be connected to the sewage disposal system. The four fire grates used for

cooking are badly rusted and need replacement. The grates should be replaced with new ones designed to burn charcoal. The stone chimney and counter which houses the fire grate is in good condition. The exhaust hood should be replaced.

The building's electrical system needs upgrading and the glass windows should be replaced with lexan.

Cost. $7,000

Action #2. Remodel the picnic ground toilet building.

The toilet building is time consuming to clean, has antiquated plumbing, and is in need of a new roof with skylights to improve interior lighting. The following improvements should be made:

1) cover the floor with quarry tile
2) replace partitions
3) install flush toilets
4) build a closet for cleaning supplies on the men's side
5) install skylights
6) replace roof
7) install steel panel doors at entrances
8) replace urinals and sinks
9) divert surface runoff away from the back of the building
10) flood proof the sewage disposal and water supply systems

Cost. $50,000

Action #3. Provide fire rings in the picnic ground.

Most of the fire rings in the picnic ground are in poor condition. They should be replaced and more rings provided.

Cost. $1,000

Action #4. Provide barrier-free access to the picnic ground.

The slope from the parking lot to the picnic ground is too steep for easy access by special populations. Therefore, the service road will be designated for use by special populations. A small 5-10 car parking lot and a bus turnaround will be provided north of the picnic shelter and adjacent to the surfaced path. After unloading, the buses can park in the main picnic ground parking lot.

Cost. $2,000

Action #5. Remodel the bathhouse.

There is need for additional picnicking facilities near the swimming pool. Remodeling the changing rooms into picnic shelter would provide a picnicking alternative for park users. Remodeling would include removal of the wooden portion of the bathhouse walls and construction of a roof over each of the two sections. This roof will match in line and appearance the roof over the storage and bathroom area of the refectory. Small tables and benches will be installed. The resulting facility will provide picnic space for an additional 35 people and will provide shade and rain protection. Six to eight changing booths will be installed in the open corridors.

Construct barrier-free toilets in the central portion of the building. The picnic area toilet building is located on a slope which is too steep to provide a barrier-free access trail. The bathhouse can be made accessible. Toilets near the pool are a desirable convenience for swimmers. Potential flooding should be taken into consideration for all building modifications.

Cost. $75,000

Action #6. Discontinue park operation of the snack bar.

The snack bar provides a useful service for park visitors, particularly day visitors using the swimming beach. However, a reduced statewide park operation budget makes it necessary to reduce the amount of staff in each park. The service in Old Mill State Park which can be eliminated with the least impact on park visitors is the snack bar.

Arrangements have been made with a private firm to operate the snack bar for the summer of 1980. This working relationship will be reviewed at the end of the season to decide if it should be continued. If the snack bar is discontinued, vending machines will be considered. Vending machines are not as convenient or varied as a snack bar, but they would provide some refreshments while requiring minimal staff time.

Cost. None

Action #7. Divert picnic ground surface runoff away from the swimming pool.

At present much of the surface water from both the upper and lower picnic grounds flows into the northeast corner of the swimming pool. The flow of water washes beach sand, nutrients, silt, and debris into the pool. A low berm with very gradual side slopes should be constructed from an area just southeast of the bathhouse east to the steep slope. This berm will stop the flow of water into the pool. A catch basin and tile line should also be constructed to carry the water collected behind the berm around the pool to the river.

Cost. $2,000

Action #8. Reconstruct the water level control structure for the pool to stop floodwaters from entering the pool.

The overflow outlet is the lowest point around the pool. During spring runoff, the water in the river channel flows back into the pool, depositing sediment. If the retaining wall is raised to a uniform height and a large gate valve installed to allow outflow of pool water, the high water of the river will not affect the pool. A new drain-out valve is also needed. Unless the pool is full of water before runoff begins, the drain-out plug presently in place will not keep the river water out. The new drain valve should also be a large gate valve.

Cost. $5,000

Action #9. Conduct an engineering study to determine the cost effectiveness of increasing the temperature of the well water entering the swimming pool.

During periods of low water, the quantity of water available from the Middle River is generally not enough to supply the swimming pool. For the past few years, water from the well near the miller's cabin has been the only water supply for the pool. The volume of water has been sufficient, but the water entering the pool is very cold ($40^{\circ}F/4.4^{\circ}C$). The temperature of the swimming pool is often uncomfortable. Therefore, somewhere along the water line, probably on the prairie hilltop north of the service area, a solar heating system should be installed, if it is cost effective. Use of river water should also be considered during late spring.

Cost. No development cost for the study. The cost of implementation is dependent on the study results.

Action #10. Construct barrier-free access to the swimming pool.

The swimming pool receives considerable use by special populations. This use would be facilitated by constructing a hard surfaced ramp with handrails into the pool. A prototype ramp has been constructed at the swimming beach in Fort Snelling State Park. Some problems have been experienced with this design. After the required modifications are made, a facility of similar design should be constructed for the Old Mill swimming pool.

Cost. $1,000

Mill Area

Objective:

To provide a facility where park users can learn about early milling techniques and the living conditions of early area settlers

Action #1. Remove the existing parking lot used by visitors to the Larson Mill and the miller's cabin. Construct a new 20 car parking lot, 150 to 200 ft (46 to 61 m) south of the existing lot. This lot would be adjacent to the turnoff from the road leading to the campground.

The historic character of the mill site is intruded upon by the presence of automobile parking so near the structures. Relocation of the lot in the proposed location will improve the appearance and authenticity of the historic site without making the walk from the lot to the site too long.

Cost. $5,000

Action #2. Construct and install two bulletin boards, one adjacent to the bathhouse and the other adjacent to the campground toilet building.

These bulletin boards would be useful in informing visitors of the interpretive and recreational opportunities that are available in the park.

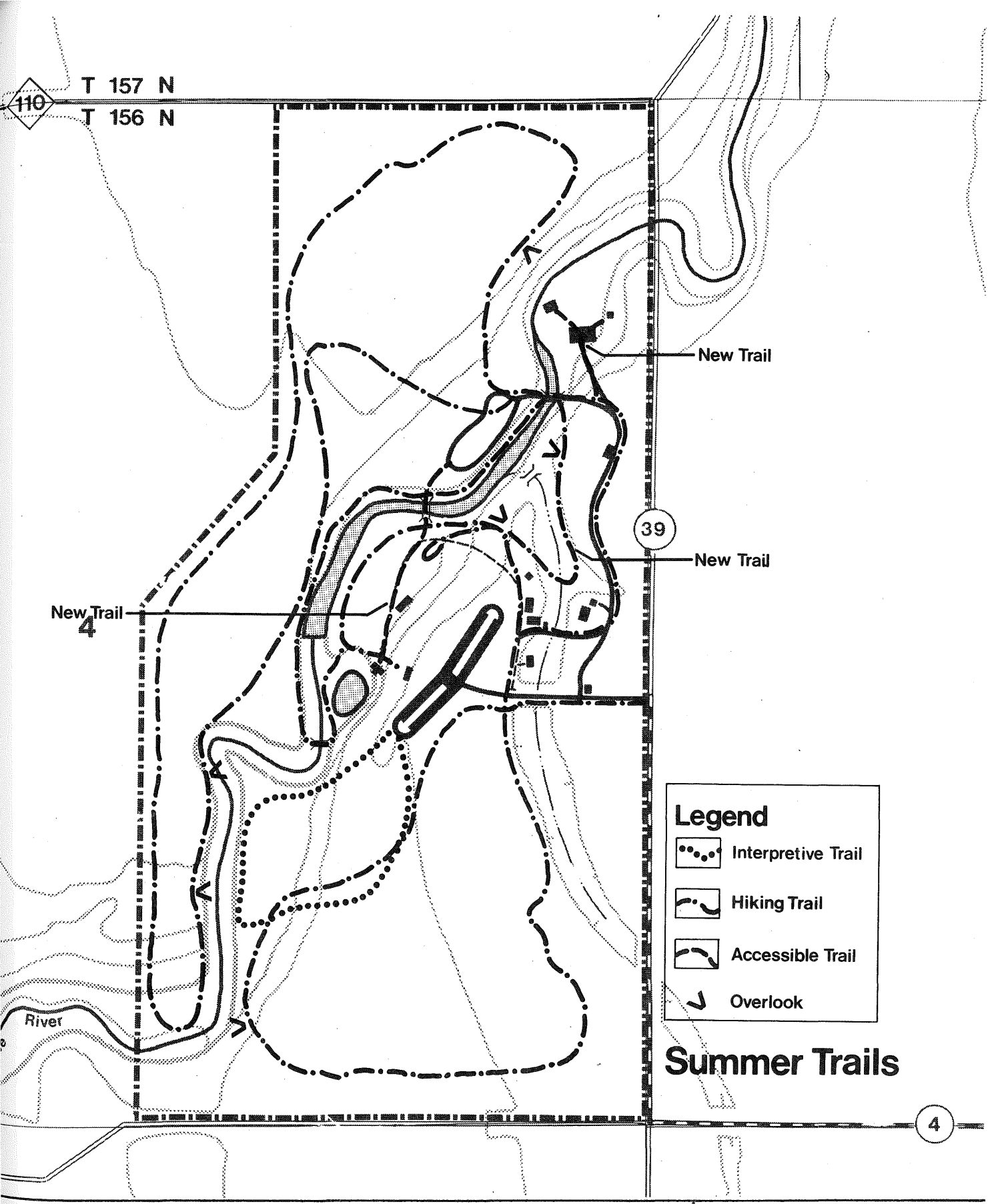
Cost. $1,000

Trails

Objective:

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

Action #1. Realign the hiking/ski touring trail that runs along the east side of the river near the group camp. (See Proposed Summer and Winter Trail Maps, p 81 and p 83.)


T 157 N
T 156 N
110
New Trail
39
New Trail
New Trail
4
River
4
Legend
Interpretive Trail
Hiking Trail
Accessible Trail
Overlook
Summer Trails
N
Feet
Meters
0
500'
1000'
0
100m
200m
Old Mill State Park

This section of the trail closely parallels the river. It is subject to erosion, particularly during spring floods. The trail should be realigned to follow the top of the bluff at the edge of the group camp. The new alignment will cross the ravine at an area where a small bridge (2-3 ft, .6-.9 m span) is needed. The eroded section will be closed and the small existing foot bridge removed.

Cost. $1,000

Action #2. Remodel the picnic shelter to provide adequate warming facilities for ski tourers and snowmobilers.

See Picnic Ground/Swimming Beach, Action #1, p 74.

Action #3. Construct several overlooks along the trail system to provide scenic views of the river.

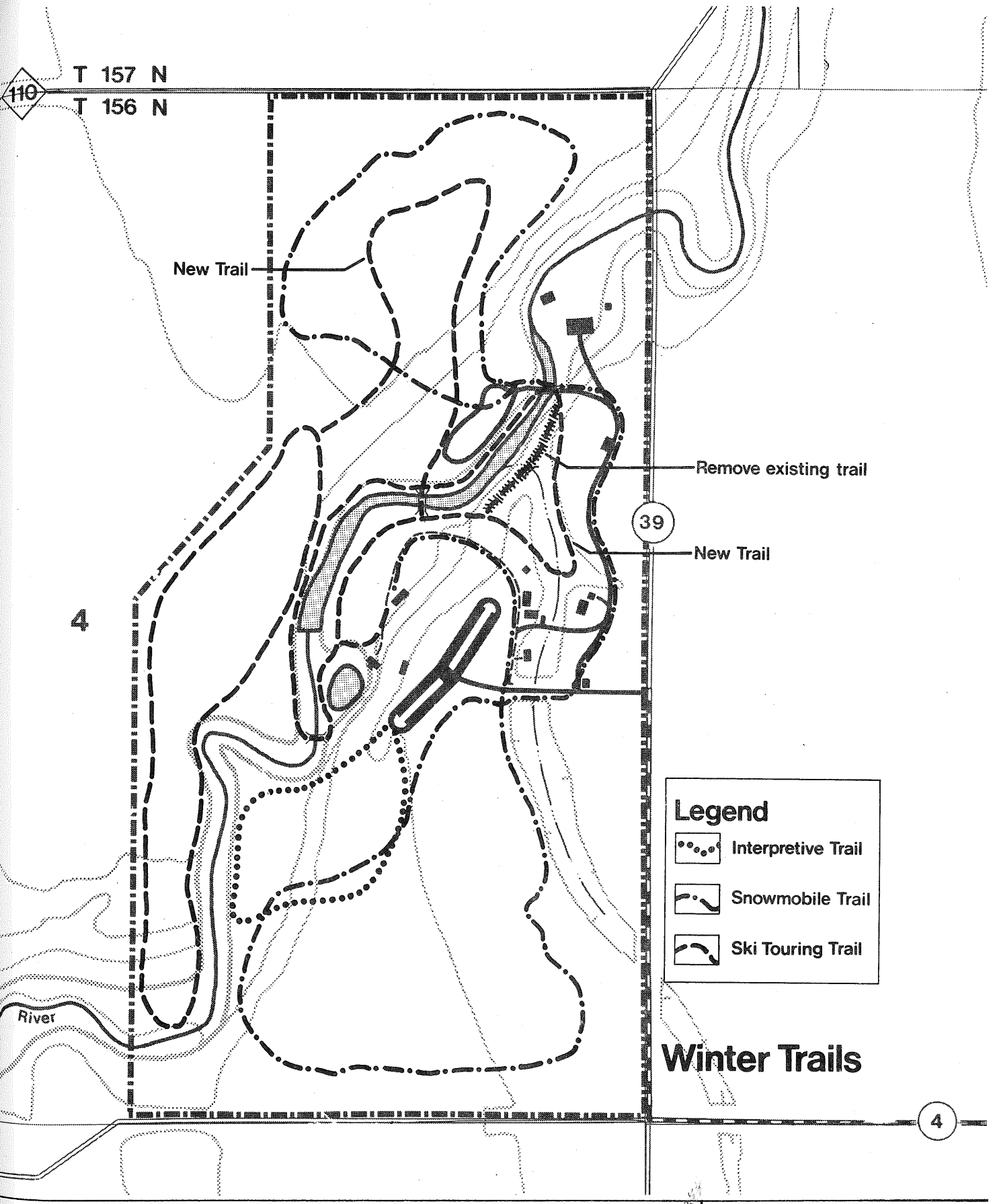
The park is developed along the Middle River, but the river is not visible from most of the trails. Due to spring flooding, developed trails along the river are not practical. Most good upland trail alignments are back slightly from the crest of the bluff. Therefore, in order to provide access to scenic views of the river, short trails to overlooks will be established. Some pruning of lower tree branches and brush removal will be necessary to allow good views.

Cost. $2,000

Action #4. Construct a barrier-free trail between the campground and the swimming pool.

A surfaced trail from the campground through the picnic area to the swimming pool would make most of the high areas in the park accessible to special populations without using a car. The proposed alignment is on very level land. The only area needing special construction is the approach to the pedestrian bridge. The steps will be reconstructed as ramps.

Cost. $10,000


T 157 N
T 156 N
110
New Trail
Remove existing trail
39
New Trail
4
River
4
Legend
Interpretive Trail
Snowmobile Trail
Ski Touring Trail
Winter Trails
N
Feet
Meters
0
500'
1000'
0
100m
200m
Old Mill State Park

Action #5. Construct a barrier-free trail from the mill parking lot to the mill area.

A short barrier-free trail is needed from the new mill parking lot to the mill and the miller's cabin. This trail is expected to receive heavy use. Surfacing it and realigning it will make it more accessible for all park users. The trail should be wide enough for use as a service road. It will generally follow the existing road alignment, although it should be modified with a gentle S-curve to minimize the view of the parking lot from the mill area.

Cost. $3,000

Action #6. Construct two sets of steps between the picnic parking lot and the picnic ground.

One set of steps is now provided on the hill near the south end of the picnic parking lot. These steps are irregular and in need of replacement. There are no steps near the north end of the parking lot so several paths have been worn into the steep hillside. Two sets of steps with landings should be constructed to provide easy access up and down the hillside. These steps should reroute much of the pedestrian use from the paths, correcting the erosion problems.

Cost. $7,000

Administrative/Support Facilities

Objectives:

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

To improve the operation of the park's water and sewage systems

Action #1. Remodel the contact station.

The contact station functions well, except there is no wood storage space available and the manager's office is not well insulated. By constructing a new manager's office on the east side of the building,

most of the existing office space can be used for wood storage and installation of toilet facilities. A composting toilet should be considered, as this would eliminate the need for water and a drain field. The electrical system should also be upgraded.

Cost. Cost dependent on alternative selected.

Action #2. Remove the former manager's residence and the unheated storage building.

The former manager's residence has limited use for storage. It is doubtful that an assistant manager position will ever be allocated for this park. This is the only reason that a second residence is needed. The building should therefore be removed.

The unheated storage building is in poor structural condition. Also, it is not suitable for storing machinery. This building should be removed and a new unheated storage building constructed. (See Action #3)

Cost. $2,000

Action #3. Construct a new unheated storage building.

An unheated storage building approximately 30 ft by 50 ft (9 m by 15 m) with large doors (10 ft by 12 ft/3 m by 3.5 m clearance) should be built. This building will be used to store machinery, wood, and supplies for the park. A loading dock would be desirable at one end of the building. It should be located east of the shop building with a parking lot turnaround area between them.

Cost. $60,000

Action #4. 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 storage building.

Cost. $8,000

Action #5. Request that a comprehensive water distribution and sewage disposal system study be done, and the most cost effective non-polluting system be constructed.

Both the water distribution and the sewage disposal systems in the park are antiquated. Maintenance of these systems is becoming costly in staff time, replacement parts, and potential public health problems. Some of the identified problems are:

1. The sewer line from the picnic ground toilet and the bathhouse to the drain field runs within a few feet of the swimming pool. Occasionally this line plugs and manhole overflows have been noted.

2. The drain field for the picnic ground toilet and the bathhouse is located in a wooded area near the river, where the potential for clogging and inadequate filtration is high.

3. The floor drain from the bathhouse refectory drains toward the swimming pool.

4. The picnic ground toilet building still has tip-trough toilets.

5. The well water entering the swimming pool is very cold.

6. The water pipe to the group camp leaks.

7. There is no year-round water supply to the service area, which has only a pit toilet.

8. Neither drinking fountains nor faucets are currently provided in the picnic area near the parking lot.

9. The well pump does not operate at its rated capacity.

10. Water lines and sewage disposal systems in the floodplain must be flood proofed.

Cost. The study will be conducted by the DNR, Bureau of Engineering or consultants hired by them. Construction costs will vary between $300,000 and $500,000 depending upon the system necessary. Accurate cost estimates will not be available until the study is completed.

Action #6. Replace all overhead electrical lines with underground lines.

Overhead electrical lines are visually obtrusive in a park setting and are a potential hazard to park users. Underground lines require minimal maintenance, are safe, and allow the appreciation of natural and historic sites without the visual distraction of power lines and poles.

Cost. $5,000

VISITOR SERVICES

Interpretive Program

Objectives:

To provide interpretive opportunities for those visitors interested in the history and natural environment of Old Mill State Park and the surrounding area

To provide interpretive information for out-of-state visitors interested in the Minnesota state park system

Old Mill has a variety of natural and historical features which are the basis for an interesting interpretive program. Distinct geological features are not numerous in the park. However, a mile east of the park is an ancient beach ridge formed by glacial Lake Agassiz. This ridge was used over 100 years ago as a route for the Red River ox carts.

Biological features have potential for interpretation with the establishment of a native prairie area (see Vegetation Management, Action #1, p 52). Other vegetation management activities will also enhance the interpretive potential of the park.

As there are no known archaeological sites in the park which could be utilized in the interpretive program, archaeology should play a minor interpretive role. In the future, if any sites are located, information about them should be incorporated in the park interpretive program. The potential for such sites exists in the proposed expansion area along the river where some Indian habitation sites may be located.

The potential for historic interpretation is excellent. The restored mill provides a good opportunity to demonstrate milling techniques used during the time of settlement. The miller's cabin, donated and moved to the park by the Marshall County Historical Society, provides a chance for visitors to observe the living conditions of early settlers.

In a portion of the proposed boundary expansion area (see the Boundary Adjustments Map, p 99) are the remains of a small stretch of an ox cart trail once used by traders to transport goods between St. Paul and the Minnesota/Canada border. This topic would be excellent for historic interpretation. If the area is purchased and the trail marked with appropriate signage, the ability of the program to interpret this aspect of the state's history will be enhanced.

Another factor to consider in developing an interpretive program for the park is that a very large percentage of park visitors, particularly campers, come from out-of-state. Most of these out-of-state visitors come from North Dakota and Manitoba. Because of Old Mill's location in the northwestern corner of the state, it serves as a gateway park. It is the first, and perhaps the only Minnesota state park many out-of-state visitors encounter. There is an excellent opportunity to present information to visitors on the other recreational opportunities that Minnesota's park system provides.

The Old Mill interpretive program is currently staffed by a person who usually presents programs on Sunday afternoons. The chief assignment of the interpreter is to operate the interpretive program at Lake Bronson State Park, 37 mi (59 km) to the north. Present weekday use of Old Mill does not justify the need for a full time summer season interpreter. In addition, staffing budgets are limited. It is unlikely that Old Mill will have a full time summer interpreter in the foreseeable future, therefore, in order to provide an adequate interpretive program for Old Mill, efforts should focus on interpretive methods and materials which do not require the direction or supervision of a park interpreter. Actions #2, #3, #8, and #9 of this section are intended to be elements of such a program.

Action #1. Remove the existing mill area parking lot and construct a new one. (See Proposed Development, Mill Area, Action #1, p 80.)

Action #2. Construct an outdoor interpretive display in the mill area.

This will be a "bulletin board" type of display with photographs, drawings, and text describing the historic mill and the lifestyle of the people who first settled the area.

Cost. $500

Action #3. Develop and print a brochure describing the historic mill site.

This should be made available at the outdoor interpretive display.

Cost. $1,000

Action #4. Remodel the door on the east side of the mill.

(See History/Archaeology, Action #1, p 62.)

Action #5. Repair the Case steam engine.

(See History/Archaeology, Action #4, p 63).

Action #6. Improve the historical character of the mill area.

(See History/Archaeology, Action #5, p 63.)

Action #7. Remodel the picnic shelter to improve storage of audio visual materials used in interpretive programs.

(See Proposed Development, Picnic Ground/Swimming Beach, Action #1, p 74.)

Action #8. Develop a short (2-3 minute) automatic tape program for the mill.

This program would consist of the sounds normally heard during a grinding operation such as sounds of the mill, the steam engine, and worker's talking. Such a tape program would give visitors more of a feeling for the daily operation of the mill.

Necessary equipment would include an automatic tape player, speakers, and a control switch which could be operated by visitors. Equipment of this type now available does have some problems with maintenance and reliability. Such a program should not be developed until reliable equipment is available at a reasonable cost. Significant improvements to such equipment have been made in recent years. Within three to four years, suitable equipment should be available that will meet the necessary requirements.

Cost. $1,500

Action #9. Develop a self-guided trail with an accompanying trail brochure in the area to be restored as a tall grass prairie. (See Vegetation Management, Action #1, p 52.)

The trail and accompanying brochure will provide visitors with information on the tall grass prairies which once covered large portions of Minnesota. Oak savanna vegetation and the geology of the area should also be included in the brochure.

Cost. $2,000

Action #10. Construct and install two bulletin boards.

(See Proposed Development, Mill Area, Action #2, p 80.)

Interpretive Themes

A. Early settlement of the area

1. Dates of settlement

2. Ethnic origins of settlers

   a. Different ethnic groups tended to settle in separate areas
   b. Different ethnic groups settled at different times (For example, Norwegians settled in the eastern half of the upper Red River Valley during the early 1870s.)

3. Methods of settlement and agricultural practices

   a. Sod construction used for homes, barns, and out buildings
   b. Dominance of wheat as the major crop
   c. Use of seasonal and migratory workers to harvest crops
   d. Planting and harvesting techniques

4. Problems of early settlement and farming

   a. Short growing season
   b. Lack of fuel and shelter on the plains
   c. Drought problems
   d. Grasshopper problems
   e. Economic depression of the 1870s

B. Old Mill area

1. Dates of area settlement
2. Ethnic origins of settlers
3. How the mill served settlers in the area

a. Tasks customarily performed by the men, by the women, by the children

b. Social gatherings

C. Operation of the mill

1. Earlier, unsuccessful milling attempts in the vicinity of the existing mill
2. Operation principles of the existing mill

    a. Power supply
    b. Grinding
    c. Separator

3. Closing of the mill

    a. What changes in agricultural practices were responsible`

4. Restoration and present day operation

Park Boundary

INTRODUCTION

Old Mill State Park was established in 1937. The park statutory boundary includes 287 acres (116 hectares) in E1/2 Sec 4 T156N R46W. 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 sets the limit for park expansion by establishing a statutory boundary. The status of the land within the statutory boundary does not change, except that the division can then talk to an individual landowner and negotiate for the purchase of that portion of land within the statutory boundary. Land will only be purchased if the landowner is willing to sell fee title or easement.

Objective:

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

BOUNDARY MODIFICATION

The trail system is very limited in the present park. There is minimal potential for expansion, except for park quality land along the Middle River east of the existing park. The variety of slopes, the wooded character, and the meandering Middle River combine to form an excellent area for scenic hiking and skiing trails. The north side of the river is particularly suitable because the woods along the river is generally wider and the valley slopes are not as steep as the south side.

This land includes several areas of historical significance. The Red River Ox Cart trail crossed the Middle River near Cty Rd 114. This trail was used quite extensively during the mid 1800s. An earlier Indian river crossing and campsite are also in this area. The map, p 99 shows trail alignments and an Indian campsite estimated by two long

time local residents. The park interpretive program now focuses on historical and interpretation of the mill area. These additional historic sites would enhance the interpretation of the mill and allow more extensive historical interpretation. The natural resources of the area would also provide an added dimension to the interpretive program.

Perpetuation of the wooded character of this section of the valley is also very desirable for wildlife management. This area has one of the highest winter deer populations for several miles east or west of the park. If the acreage available to deer for winter shelter continues to decrease, the browsing on the remaining areas and local crop depredation will increase, unless the size of the deer herd is managed. Therefore, if this land is purchased by the state, the deer herd should be closely monitored. The area will be opened for hunting whenever necessary to reduce the herd size. The deer hunting season in this part of the state is usually short (2 weekends) so only a short interruption of the normal recreational activities will result. The development in this area would be limited to trails which would be compatible with hunting. Cty Rd 39 would provide an easily recognized boundary between hunted and non-hunted portions of the park. The most desirable lands for park purposes are the Middle River valley and valley walls, portions of upland with native vegetation adjacent to the river valley, and two strips of upland along the valley rim where the valley borders agricultural land. The narrow strip of agricultural land would be desirable to minimize erosion, protect scenic qualities, and if necessary, for a trail alignment to avoid steep slopes.

If this land is included in the park's statutory boundary, acquisition of fee title is the most desirable because it ensures consistent management of all the land in the park, and allows more flexibility in park development to meet future changes in recreation needs. However, if the landowner does not wish to sell fee title, trail and/or scenic easement should be considered.

Existing State Owned Land

Approximately 480 acres (192 hectares) of land in Sec 36 is state owned trust fund land, administered by the DNR, Division of Forestry. This land lies on both sides of Cty Rd 114. State trust fund land is land that is held in trust by DNR for the Minnesota Department of Education. All money generated from these lands through agricultural leases, timber sales, or sale of fee title goes toward supporting Minnesota's educational system.

Approximately 190 acres (77 hectares) of the trust fund land west of Cty Rd 114 is park quality land.

The DNR, Division of Fish and Wildlife is interested in purchasing the remainder of the trust fund land (290 acres / 117 hectares) for a wildlife management area. A management area administered by the DNR, Division of Fish and Wildlife on the periphery of the park would be a benefit to the park. The park will provide developed recreational facilities and natural wildlife habitat. The management area would provide the food plots necessary to supplement the natural wildlife food supply.

The state trust fund land should not be included in the boundary until the DNR, Division of Forestry and the DNR, Division of Parks and Recreation agree on a method of reimbursing the trust for the use of the land.

IMPLEMENTATION

The process by which a park's statutory boundary is expanded and land purchased is as follows:

1. Identify park quality land adjacent to a state park and justify the need for expansion of the park. (Current stage)

2. The DNR, Division of Parks and Recreation will notify all affected landowners, local newspapers, and the county board before any boundary expansion is pursued.

   Seven landowners would be affected if the park boundary is expanded. The current land ownership pattern (denoted by the numerical code) and the number of acres that would be affected in each tract (toned area) is shown on the Boundary Adjustments Map, p 99.

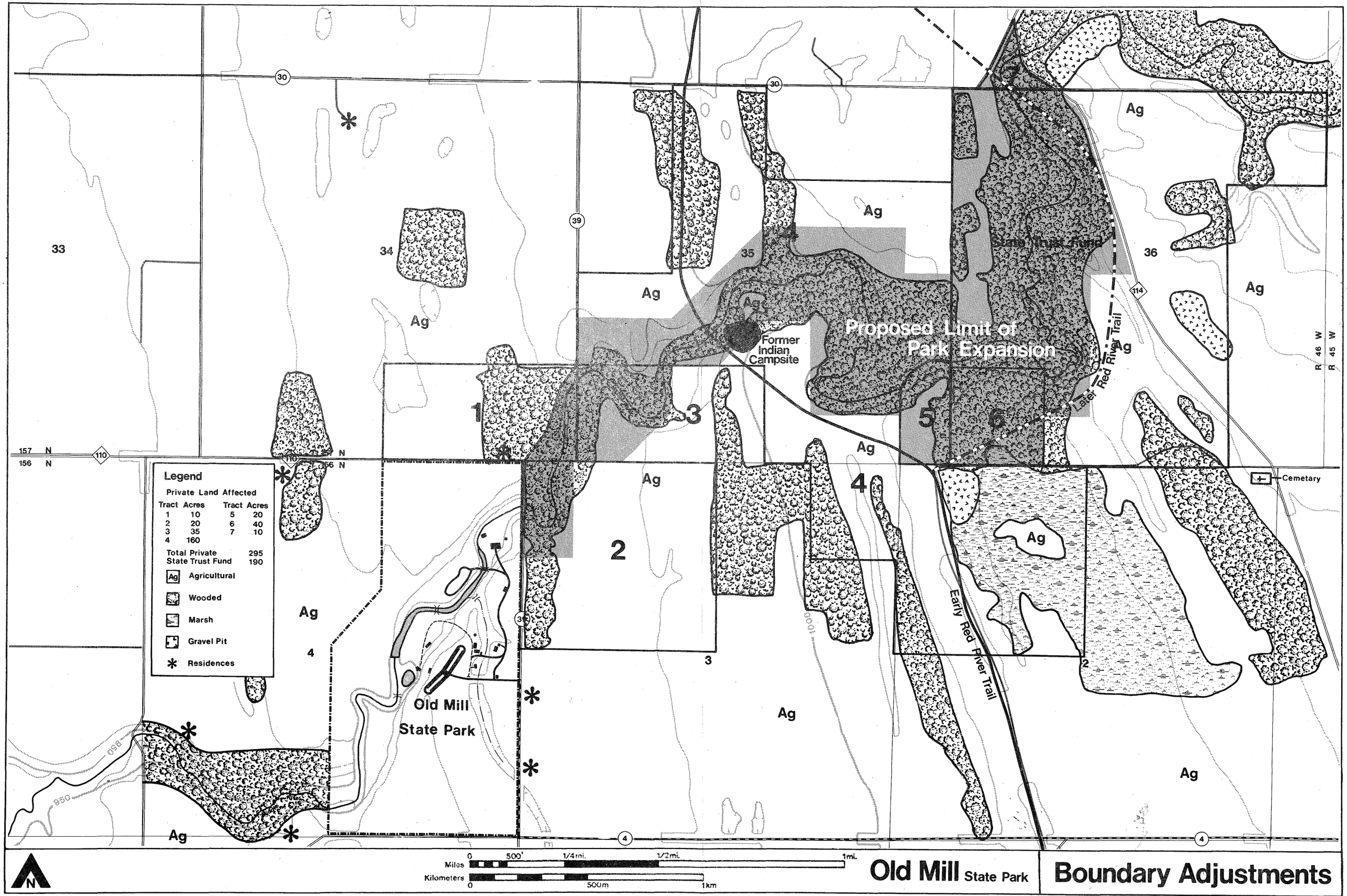
3. The state legislature will then consider the justification for expansion and decide if the park should be expanded.

   The lands of park quality generally follow the valley ridge forming an irregularly shaped corridor. The proposed limit of park expansion (the toned area on the map, p 99) depicts the area that can be easily defined in legislation.

4. If the state legislature expands the park's statutory boundary and if acquisition funds are available, the DNR, Bureau of Lands can then contact each landowner. If a landowner is interested in selling, the land is assessed by appropriate procedures and the DNR makes an offer.

5. If the landowner agrees to sell, the land is purchased.

Expansion of Old Mill's statutory boundary will not be actively pursued at present. There is currently a statewide shortage of park maintenance and operations funds. The major emphasis in the near future will be to seek an increase in this type of funding. The first responsibility of the DNR is to purchase private land for sale within existing statutory boundaries. Therefore, although it would be very desirable to increase the size of Old Mill State Park, this action will be pursued on a second priority basis.


30
39
110
114
33
34
35
36
Ag
Former Indian Campsite
Proposed Limit of Park Expansion
State Trust Fund
Early Red River Trail
Cemetary
R 46 W
R 45 W
157 N
156 N
166 N
Legend
Private Land Affected
Tract Acres Tract Acres
1 10 5 20
2 20 6 40
3 35 7 10
4 160
Total Private 295
State Trust Fund 190
Agricultural
Wooded
Marsh
Gravel Pit
Residences
Old Mill State Park
950
958
0 500' 1/4mi. 1/2mi. 1mi.
Miles
Kilometers
0 500m 1km
Old Mill State Park
Boundary Adjustments

Operations and Staffing

OPERATIONS

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

The task of providing services to the public and security for park facilities and resources 24 hours a day, 12 months of the year is essential. During the busy season, full-time operation is necessary from 8:00 a.m. to 10:00 p.m. The remaining hours are covered by the resident manager. During other seasons, there is only part-time operation 56 hours per week, however, maintenance, repair, and park security account for many extra work-hours. If these responsibilities are to be met, competent trained personnel is essential.

There are four basic aspects to maintenance and operations:

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

One of the major maintenance problems of parks is the impact of people concentrated in specific locations. These areas include: campsites, trails, 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

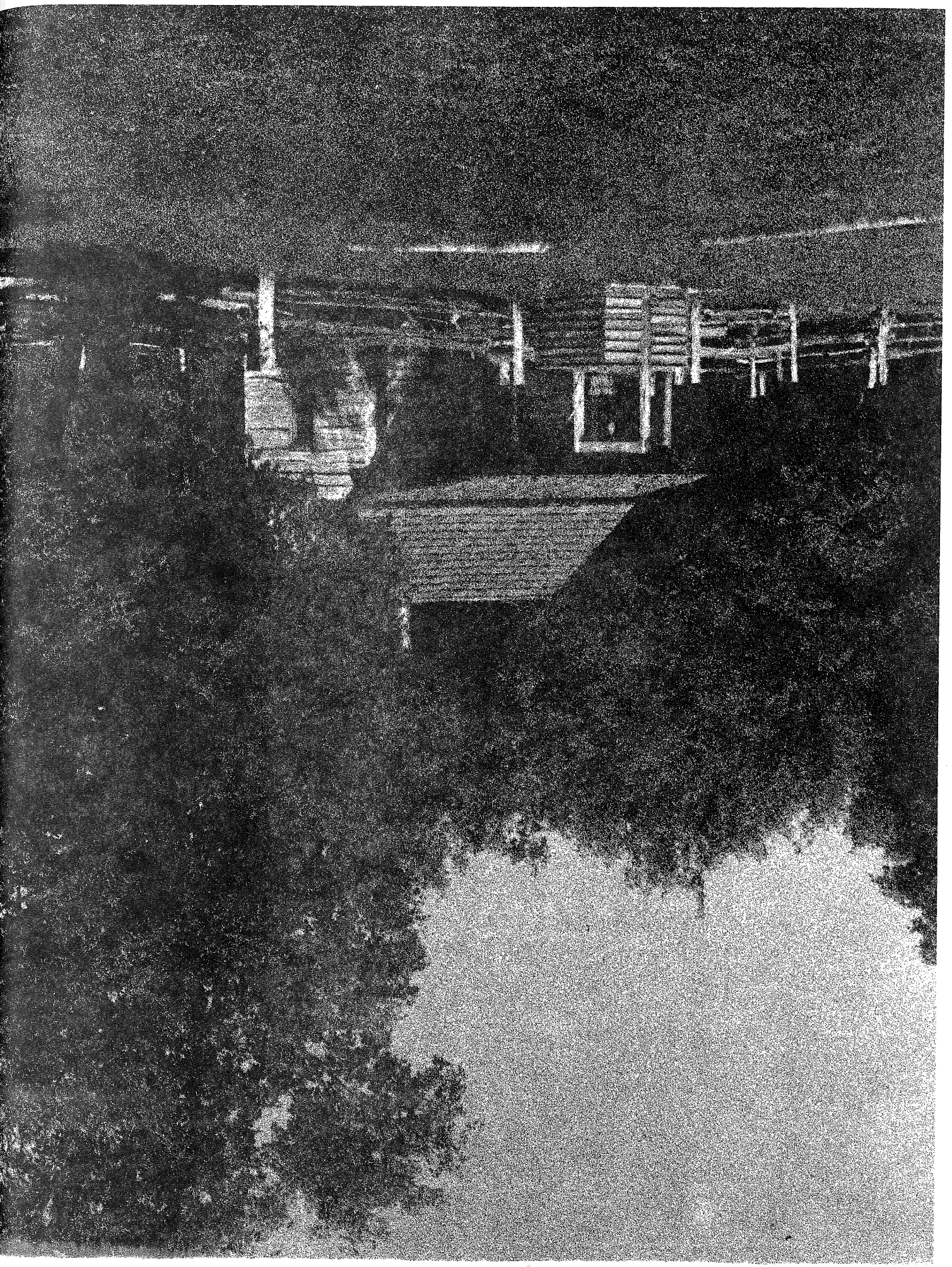
One of the staffing problems in all state parks is the heavy reliance on federally funded work programs, such as the Comprehensive Employment and Training Act (CETA), the Young Adult Conservation Corps (YACC), and Greenview. The low cost personnel provided by these programs makes it possible for parks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

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

Existing Staff	Staff Years (In Months)
Management	12
One full-time park manager	
Maintenance and Contact Station	34 3/4
One 4 1/2-month laborer	
One 3 1/2-month laborer	
One 4 1/2-month park worker	
One 3 1/2-park worker	
Three 3 1/3-month park workers	
Two 2 1/2-month lifeguards	
Total	46 3/4

FUTURE STAFFING NEEDS

None of the proposed actions in this plan would require additional staff time. Some reduction of staff time is allowed by turning the operation of the snack bar over to a private concessionaire. But to maintain the park resources and facilities in the future, at least the same level of staffing must be maintained.



Costs and Phasing Summary

The following cost estimates were generated in January 1979. These cost estimates are based on current prices and available information. As new information is made available and as new or modified programs are initiated, revised cost estimates will be prepared to more realistically represent costs at that time. This plan is intended to be implemented in 10 years. The phases noted suggest the level of funding to be requested each biennium. However, there is no guarantee that this amount of funding would be received from the legislature. Therefore, some change to these phases can be expected.

		Phase	1	2	3	4		
		Biennium	80-81	82-83	84-85	86-87	88-89	Total
RESOURCE MANAGEMENT								
Soils								
Action #1	Test soils before construction.		Included in the cost of each development					
Vegetation								
Action #1	Reestablish prairie.		$ 3,000		$ 3,000		$ 3,000	$ 9,000
Action #2	Reestablish oak savanna.				4,000			4,000
Action #3	Future oak savanna restoration.							
Action #4	Screen mill area parking lot.			$ 2,000				2,000
Action #5	Manage mill area for native short grass.			1,000	500		500	2,000
Action #6	Screen service court.			2,000				2,000
Waters								
Action #1	Realign drainage ditch.		45,000					45,000
Action #2	Water distribution and sewage disposal study.		DNR, Bureau of Engineering					
Action #3	Repair spillway and downstream area.		20,000					20,000
History/Archaeology								
Action #1	Mill loading platform.				1,000			1,000
Action #2	Remove old and construct new parking lot for mill area.		Proposed Development, Mill Area, Action #1					
Action #3	Construct interpretive bulletin board.		Visitor Services, Action #2					
Action #4	Repair the steam engine.		Dependent on bids					
Action #5	Improve historical character of the mill area.		1,000					1,000
Action #6	Prepare an interpretive prospectus on the mill.		Operational Budget					
Action #7	Field check all proposed development sites.		Included in the cost of each development					

Action		Phase / Biennium 1 80-81	2 82-83	3 84-85	4 86-87	5 88-89	Total
PROPOSED DEVELOPMENT							
Camping							
Action #1	Construct 4-6 walk-in campsites.			$ 4,000			$ 4,000
Action #2	Low level lighting in campground.			2,000			2,000
Action #3	Play area in campground.			2,000			2,000
Action #4	Group camp pit toilets.				$ 6,500		6,500
Picnic Ground/Swimming Beach							
Action #1	Remodel picnic shelter.	$ 7,000					7,000
Action #2	Remodel picnic ground toilet building.	25,000	$ 25,000				50,000
Action #3	Fire rings in the picnic ground.		1,000				1,000
Action #4	Special populations parking lot.		2,000				2,000
Action #5	Remodel bathhouse.		75,000				75,000
Action #6	Discontinue park operation of snack bar.	None					
Action #7	Divert surface runoff.		2,000				2,000
Action #8	New valves for swimming pool.		5,000				5,000
Action #9	Increase temperature of well water entering the pool.	Dependent on study results					
Action #10	Make swimming pool barrier-free.				1,000		1,000
Mill Area							
Action #1	Remove existing parking lot and construct new 20 car parking lot.		5,000				$ 5,000
Action #2	Construct two bulletin boards.		1,000				1,000
Trails							
Action #1	Realign hiking trail.	1,000					1,000
Action #2	Warming shelter.	Proposed Development, Picnicking, Action #1					
Action #3	Construct overlooks.			2,000			2,000
Action #4	Construct barrier-free trail from campground to swimming beach.	10,000					10,000

Action		Phase 1 Biennium 80-81	2 82-83	3 84-85	4 86-87	5 88-89	Total
Action #5	Construct barrier-free trail from parking lot to mill and miller's cabin.		$ 3,000				$ 3,000
Action #6	Construct steps between picnic parking lot and picnic ground.			$ 7,000			7,000
Administrative/Support Facilities							
Action #1	Remodel contact station.						
Action #2	Remove the former manager's residence and unheated storage builiding.		2,000				2,000
Action #3	Construct an unheated storage building.			60,000			60,000
Action #4	Construct gas and oil storage building.			8,000			8,000
Action #5	Study water distribution and sewage disposal system.	DNR, Bureau of Engineering					
Action #6	Place all electric lines underground.	$ 5,000					5,000
Visitor Services							
Action #1	Remove mill area parking lot.	Proposed Development, Mill Area, Action #1					
Action #2	Construct outdoor interpretive display.		500				500
Action #3	Printed brochure.		1,000				1,000
Action #4	Remodel mill.	History/Archaeology, Action #1					
Action #5	Repair steam engine.	History/Archaeology, Action #4					
Action #6	Improve historical character.	History/Archaeology, Action #5					
Action #7	Remodel picnic shelter.	Proposed Development, Picnicking/Swimming Beach, Action #1					
Action #8	Develop tape program.			1,500			1,500
Action #9	Develop self-guiding trails.		2,000				2,000
TOTAL DEVELOPMENT COST		$ 117,000	$ 129,500	$ 95,000	$ 7,500	$ 3,500	$ 352,500

Implementation

AUTHORITY

Division of Parks and Recreation

Once a management plan has been completed and approved, it will become the responsibility of the director of the Division of Parks and Recreation (hereafter referred to as the director) to ensure proper implementation of the recommendations of the plan. As such, the director will act as the coordinator and liaison between the planning staff, regional staff, local officials, and the general public to ensure that the plan is implemented correctly.

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

The director and staff will:

1) Coordinate and administer field operations as delegated by the deputy commissioner.
2) Develop and administer programs necessary to accomplish plan goals and objectives. Programs include those necessary to implement management plans and to maintain and operate parks and other programs assigned to the Division of Parks and Recreation (hereafter referred to as the division). Specific program responsibilities at this time are: acquisition, development, resource management, maintenance and service operations, interpretive services, and accessibility.
3) Prepare policies, guidelines, procedures, and standards necessary to implement programs established in this plan (e.g., responsibilities related to letting contracts and initiating force account projects).
4) Prepare legislation necessary to provide program funding, boundary changes, and operational authorities.
5) Review and approve all detailed plans, specifications, and project proposals prepared by the DNR, Bureau of Engineering (BOE) or field staff. Coordinate on-site field staking and site layouts with BOE and regional staff.

6) Coordinate divisional administrative functions with other DNR administrative offices.

7) Work with the DNR's federal grant specialists to obtain maximum federal funding (e.g., LAWCON) for all division programs.

8) Recommend modifications and provide information necessary to update the management plan. All major modifications to the recommendations of an approved plan will be processed through the Office of Planning. The director will submit requests for modifications in writing, stating justification for change and what impact the change would have on the overall management plan. If comments and rationale for opposing a proposed change are not received within 25 working days, agreement is implied. In the event that significant change in the direction of the plan is proposed (e.g., altering goals and/or objectives of the plan), it will be necessary to follow the same procedures established in developing the original plan. If the director and the Office of Planning cannot come to an agreement on the requested change, the director will then submit the request to the commissioner's Planning and Environmental Review Team (PERT) which will formulate the final recommendation to be submitted to the commissioner's executive council. If a recommended modification is minor and follows the intent of the plan, the director has the discretion to make the change without following these procedures, provided informal written agreement is reached with the Park Planning section.

9) Assign responsibilities and funding for implementation of the development program to BOE for letting contracts and to the regional staff for initiating force account projects. In addition, the director shall coordinate the implementation of resource management programs.

10) Make recommendations which will expedite the park planning process and evaluate progress toward the achievement of goals and objectives stated in the plan.

11) Forward BOE requisitions and field project proposals in summary form to the Office of Planning so that the progress of implementation can be monitored.

Regional Office

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

The regional park supervisor will:

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

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

Park Manager

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

The park manager will:

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

Office of Planning

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

The Office of Planning will:

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

IMPLEMENTATION OF RESOURCE MANAGEMENT PROJECTS

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

Contract

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

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

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

Director supervises and monitors the program.

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

Director approves the completed project.

Force Account

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

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

Director assigns funds to the regional park supervisor.

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

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

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

Assign the park manager and field personnel to implement the program

Prepare contracts to be let to local contractors or consultants

Regional staff supervises project.

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

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

IMPLEMENTATION OF DEVELOPMENT PROJECTS

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

Contract

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

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

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

BOE submits drawings and specifications to the director.

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

Force Account

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

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

Director assigns funds to the regional park supervisor.

Regional park supervisor may:

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

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

BOE provides direction to the contractor and establishes site location and field staking.

BOE supervises construction and approves completed work according to contract documents.

Director and staff monitor the progress, funding, and necessary coordination between other state agencies and funding sources.

Assign the park manager to complete the project with field personnel

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

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

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

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

MAINTENANCE AND OPERATIONS

The division will provide the regional staff with necessary direction to maintain and operate state parks in a statewide system. Training courses and policy manuals will be prepared by the division on park operations, maintenance, enforcement, signing, and construction standards. If necessary, special operational orders will be prepared by the commissioner for specific problem areas.

General Procedures

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

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

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

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

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