Minneopa State Park Management Plan

Minnesota Department of Natural Resources
Division of Parks and Recreation
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Acknowledgments

Thank you to the members of the Citizen Advisory Committee for all the hours of their time they donated to help guide the development of this plan.

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MINNEOPA STATE PARK *"PRELIMINARY"* DRAFT MANAGEMENT PLAN

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I. INTRODUCTION

PARK DESCRIPTION

Minneopa State Park includes 1,216 acres of old glacial river terraces, riparian forests south of the Minnesota River, and Minneopa Creek gorge. Within Minneopa State Park is southern Minnesota's largest waterfall and the remains of the Seppmann Windmill, a historic structure of regional significance.

Minneopa State Park is located off State Highways 169, and 68, three miles west of Mankato in Blue Earth County. One of the main attractions to Minneopa State Park is the double waterfall of Minneopa Creek, for which the park is named, and the gorge the creek has created. The word Minneopa means "water falling twice" or "two waterfalls" in the Dakota Indian language. The first falls drops about ten feet and the second at least 40 feet. Other attractions to the park include the beautiful views of the Minnesota Valley.

The history of the Minneopa State Park is rich and varied. On the Blue Earth River, near where it enters the Minnesota River is the famous bed of clay which the Dakota Indians called "mankato," or blue earth. This clay was highly valued and was used for decoration and for ceremonial purposes. It also attracted early European explorers. This bluish-gray clay was mistakenly identified as copper. Under the commission of the French government, Pierre LeSueur visited the area with 30 soldiers and miners during the fall of 1700. The expedition traveled by boat up the Minnesota and Blue Earth rivers to the mouth of the LeSueur River and built Fort L'Huillier. A quantity of the clay was sent to France where it was discovered that it did not contain copper. The Dakota forced the LeSueur party to cache their tools and abandon the area in 1703.

Minneopa Creek was known to the early pioneers as Falls Creek or Lyons Creek. The latter is a reference to Isaac S. Lyons, the first settler to build a cabin and locate a claim on its banks in July, 1853. In August of the following year, he built a small sawmill operated by water power which was the first mill west of the Blue Earth River. His log cabin stood at the foot of the west bluff.

A wind-powered grist mill was constructed by Louis Seppmann and Herman Hagley between 1862 and 1864, on a site which lies within the park. The mill operated as a flour mill for its first 16 years. In 1873, lightning struck and destroyed two of its windmill blades; they were soon replaced. However, when a tornado again destroyed the blades in 1880, they were not replaced. The mill operated on two blades, as a feed mill, until 1890. Seppmann Mill was placed on the National Register of Historic Places in 1971.

The St. Paul and Sioux City Railroad was constructed along Minneopa Creek between Mankato and Lake Crystal between 1868 and 1869. The late Honorable D.C. Evans owned the land around the falls and held the largest interest in the nearby village of South Bend. When the railroad company decided not to put a depot in South Bend because it was too close to Mankato, Evans convinced them to put it at the falls. This decision sealed the fate of South Bend, but Mr. Evans was somewhat placated by having a depot

on his land by the falls. This land was then platted as a townsite under the name of Minneopa in 1870. The railroad built a depot and grain elevator. Soon after, a hotel, store, blacksmith shop and a lumberyard were opened.

Mr. Evans cleared the brush and fallen trees around the falls, constructed footbridges over the creek and built a long flight of wooden stairs down into the glen below the falls. The area attracted many large picnic excursions from St. Paul, Minneapolis, St. Peter, Mankato, Winona and other places. Camp meetings, some attended by 3,000 to 5,000 people, were held here during the summer season. Memberships of local lodges, churches, schools and granges also made it a gathering point. A grasshopper plague which destroyed all crops for three successive years, spelled financial disaster for Minneopa Village and the town was abandoned.

Within and immediately adjacent to the park lay significant cultural resources. Review of the cultural resource files at the Office of the State Archaeologist and the Minnesota State Historic Preservation Office indicates the following recorded resources are present within, or partially within, the park:

- Minneopa Cemetery
- Works Progress Administration (WPA)/Rustic Style Historic Resources District
- Historic Park Boundary
- Dakota Village Site
- Hanel Mound Group
- American Indian Archeological Sites

The diverse vegetation communities found in Minneopa provide a variety of habitats to support a wide assortment of wildlife species. Park visitors commonly see prairie, woodland, and aquatic species of birds, mammals, and reptiles in the park.

Visitor favorites in the park are:

- Birding/wildlife observation
- Hiking/walking
- Camping
- Sightseeing
- Cross-country skiing
- Group/family picnicking
- Nature photography

Current park facilities include three picnic areas, two large open shelters, a primitive group camp, visitor center, 4.5 miles of hiking trails, 4 miles of cross-country ski trails, and 62 semi-modern campsites that can accommodate recreational vehicles up to 60 feet in length.

UNIT PLANNING PROCESS

This management plan was developed through an open public process. Two committees provided input into the development of the plan, and helped identify the major issues that needed to be addressed during the planning process.

A Park Advisory Committee (PAC) was formed to provide public input into the plan throughout the planning process. The advisory committee was comprised of people that are primarily from the local area and have an interest in the future of the park. These individuals represent a variety of perspectives that are intended to be representative of the diversity of the public at large. The committee members unselfishly spent many hours over the course of the planning process to analyze and provide recommendations on a variety of environmental and recreational issues.

The other committee was an Ecosystem Based Management (EBM) team made up of members of the Blue Earth River Team (BERT). It is comprised of technical experts from each division or unit of the DNR with resource management responsibilities.

The planning process started with a public informational meeting explaining how the plan would be developed. An invitation was extended to anyone who wanted to participate on the Park Advisory Committee (PAC). Throughout the planning process, PAC meetings were held to discuss specific issues and look at management alternatives. A final open house was held to review the plan and to solicit public opinion on the proposals. Copies of the draft were made available for review for thirty days.

The revised draft received official review by DNR staff and was signed by the Commissioner of Natural Resources.

A complete park plan and "planning process files" documenting the 1996-97 planning process and pertinent background information was distributed to the following locations: Minneopa State Park Office, State Park Regional Park Manager's Office in New Ulm, State Park Planning Section in St. Paul, and the DNR Bureau of Engineering in St. Paul.

The recommendations in this plan are the result of this partnership-based planning process. This plan provides a basic management direction for Minneopa State Park and is not intended to provide specific management or development details.

II. MISSION AND VISION

DEPARTMENT OF NATURAL RESOURCES VISION

We will work with the people to manage the state's diverse natural resources for a sustainable quality of life.

DIVISION OF PARKS AND RECREATION MISSION AND VISION

Division of Parks and Recreation Mission

We will work with the people of Minnesota to provide a state park system which preserves and manages Minnesota's natural, scenic and cultural resources for present and future generations while providing appropriate recreational and educational opportunities.

Division of Parks and Recreation Vision

We will continue to work with the people of Minnesota to ensure that the Minnesota State Park system will be sensitive to the needs of current and future generations and guided by the following principles and values:

- A commitment to ensure deliberate and effective natural, cultural, historical, and archaeological resource management
- A commitment to provide appropriate recreational opportunities
- A commitment to maintain a proper balance between resource protection and recreational use of state park lands
- A conscious recognition of our responsibility to the public for wise and prudent acquisition and development of state park lands
- A recognition of our environmental education and interpretive roles
- A pledge to provide high quality public service
- A promise to consistently seek public involvement and support in decision making
- A conscious and continuous effort to respect the valuable human resources embodied in our employees and the public

- A commitment to manage state parks for the benefits that they provide to people, society, the environment and the economy

- A continued desire to actively seek and adopt innovative, effective and efficient management practices

- A realization of our responsibility to secure and maintain the resources necessary to implement our mandates and mission.

MINNEOPA STATE PARK MISSION AND VISION

Minneopa State Park Mission

Minneopa State Park will strive to provide recreational opportunities, environmental education and resource management appropriate for the resources it contains, the people it serves, and the landscape it represents.

Minneopa State Park Vision

Minneopa will be a focal point on a trail and wildlife corridor that follows the Minnesota River, and that provides river access. Trails will provide access for park users to enjoy the rich natural resources the park and the Minnesota River Valley have to offer.

The native riparian forests, northern hardwoods, oak savanna, prairie, and wetland vegetation communities in the park will be managed for Minnesota citizens to enjoy and study. Much of the park will remain undeveloped except for management of the natural resources, and limited trail access.

The park will be much larger in size, providing opportunities for restoration of natural communities, connection of fragmented ecosystems, stabilization of disturbed floodplain and space for additional recreational activities.

Minneopa Falls is the centerpiece around which the park was established. The creek will be clean and free of contaminants, have acceptable nutrient and sediment loads and stable water flows. It will be the focus of Minneopa Creek Watershed cleanup efforts and a model for other watersheds to follow. Cleanup processes and results will be extensively interpreted.

Park visitors will have the opportunity to visit and learn about the historic and cultural resources of the park and surrounding area, including the Seppmann Mill, Minneopa Village, and Indian habitation sites. Interpretation of the Minneopa Falls, natural, cultural, and historic resources of Minneopa State Park and the Minnesota Valley will be a major activity in the park.

Summary of Recommended Management Actions

Natural Resources Management

Prairie Management
Action: Practice adaptive management in prairie areas. Make annual management decisions based on successes and failures of previous activities.

Savanna Management
Action: Remove northern hardwood species and other invasive tree species that have become established in the savanna areas.
Action: Continuing prescribed burning savannas, and try to increase frequency.

Hardwood Management
Action: Work with area forester and regional parks resource management specialist to develop a management plan for the northern hardwood communities.
Action: Conduct periodic reviews and assess management activities to assure plan recommendations are having desired effects.

Shade Tree Management
Action: Select the most desirable native shade trees and future shade trees in the campground, group camp area, and picnic area and manage for their future growth.
Action: Continue annual inspection for defects and potential hazards.
Action: Prune or remove where appropriate to assure visitor safety.
Action: Develop a planting plan for replacement of shade trees that have been lost due to natural mortality, and secure funding for implementation of the plan.

Turf Grass Management
Action: Conduct periodic soil sampling and testing of nutrients, Ph, organic matter, and soil structure.
Action: Implement a program to enhance soil quality to favor turf growth.

Surface Water Management
Action: Continue active participation in the development of the Blue Earth River watershed plan to ensure the water problems Minneopa has are addressed.
Action: Work with Blue Earth County Engineer, and the Minnesoat Department of Transportation to review and possibly modify the altered drainage patterns which will result from County Road 90 (South Route) interchange construction.
Action: Surface road to campground to reduce dust and erosion impact on surrounding natural communities, and to reduce maintenance costs.
Action: Prairie area - determine whether run-off from new development along 69 is increasing soil deposition on prairie areas.
Action: Work with Blue Earth River Team to create additional on land storage of water above the Ulman property to reduce flow.

Cultural Resources Management

Archaeology
Action: Survey for cultural resources in park use areas and on future additions to the park.
Action: Continue to survey for cultural resources in areas where facilities are being developed in the park, and in resource management project areas.
Action: Reestablish the location of the Hannel burial mound group.
Action: Locate the Dakota Village site that is described as being located near the mouth of Minneopa Creek.

Seppmann Mill
Action: Maintain the building and grounds of the mill, and provide better interpretation, until the time comes when the mill is restored.

Minneopa State Park WPA/Rustic Style Historic District
Action: Annually monitor the condition of buildings and structures that are on the National Register of Historic Places.
Action: Formally nominate the original Minneopa State Park Historic Area to the National Register of Historic Places.

Record and Maintain Archaeologic and Historic Records
Action: Register the location and pertinent relational data for each cultural resource property on the Department of Natural Resources, Geographic Information System

Day-use Recreation Facilities

Hiking Trails
Action: Add hiking trails in the waterfalls area of the park. Additional trails should be added upstream from the falls, and along the creek.
Action: Repair washed out loop trail along Minneopa Creek south of the waterfall.
Action: Add additional hiking trails along Minneopa Creek between Highway 68, and the Minnesota River. Minneopa State Park is located on the bluff overlooking the Minnesota River, however, there are no accessible views of the Minnesota River. The only place to get a view of the river is from the trail along bluff, and those views are limited. There are some spectacular overlook sites that would provide a visual link to one of the most beautiful, undeveloped stretches of the Minnesota River.

Minnesota River Overlook
Action: Build at least one overlook on the bluff along the Minnesota River. Provide turn-out parking, and signs from the main park road directing park visitors to overlooks.

Horse Trails
Action: Depending on resource assessment, when there is a significant park expansion, when the park is linked to the proposed Minnesota River Trail, or when local designated horse trails are developed outside the park, the option of providing horse trails inside the park should be reevaluated. Park staff should continue to work with horse owners and clubs to explore riding alternatives both within the park, and in the local area.

Internal Circulation Trails
Action: Link waterfall area, and main park area north of TH 68 with a trail for both bikes, and hiking. The preferred route would be to follow the creek, and cross over Highway 68 with a bridge.

Trail Link to Mankato Area Trail System
Action: Provide connecting trails, as needed, from park facilities to county and local trails that tie into Minneopa. One proposed route would follow the stretch of County Road 117 from the Waterfalls to the county trail system now being built adjacent to Blue Earth County 90 (South Route). This section of road will be abandoned by Blue Earth County, redesigned and converted to a trail.

Trail Link to Williams-Minneopa Nature Center
Action: Provide a link between Minneopa State Park and the Williams-Minneopa Nature Center with a hiking trail and a bridge over Minneopa Creek.

Proposed Upper Minnesota River Trail
Action: Park staff should become involved in the planning process for the Upper Minnesota River Watershed Recreation Plan. A component of the plan is a proposed trail along the Minnesota River. Staff should be involved to ensure it is consistent with the management plan for Minneopa State Park.

Waterfalls Picnic Area
Action: Landscape the existing falls picnic area to include flattened picnic sites or terraces, catch basins, and water channels. Implement an ongoing vegetation and turf management program that will retain ground cover, hold soil, and concentrate use in the least sensitive areas.
Action: Rehabilitate scarred hillsides and closed hiking paths to their natural condition so that use is deterred and erosion is curtailed.
Action: Surface the existing parking area with a bituminous surface and install catch basins and storm drains that transports storm runoff west to Minneopa Creek. Use sediment catching and pollutant skimmer techniques.
Action: Construct ramps at both ends of the foot bridge over Minneopa Creek to make it accessible to people with disabilities.
Action: Install commercially produced, rustic style creative play equipment.

Overnight Recreation Facilities

Campground

Action: Construct a small parking area adjacent to the campground sanitation building for use by visitors and by those using the building.

Action: Build one camper cabin with the possibility of adding up to three additional units if use warrants additional cabins.

Action: Consider conversion of existing primitive group camp sites to camper cabin sites, and establish a new primitive group camp in the area of proposed boundary expansion.

Action: If a horse trail is developed in the park, an overnight horse camp should be developed.

Park Interpretation

Interpretive Services

Action: Hire a full-time year round Environmental Interpretive Specialist.

Action: Revise the Grasses of the Park exhibit in the Visitors Center.

Action: Develop an interpretive publication about the park's resource management activities.

Action: Revise the Minneopa waterfall interpretive sign with a new color sign.

Action: Revise the resource management interpretive signs located on the mill road.

Action: Provide several small parking areas in conjunction with the existing interpretive displays along the road to the Seppmann Mill. The parking areas would allow vehicles to be parked off the road.

Action: Develop interpretive signage at the overlook at the Seppmann Mill describing Glacial River Warren and the formation of the Minnesota River Valley.

Administrative Facilities and Infrastructure

Contact Station / Park Office

Action: A new combined office and contact station is currently being planned for the falls area of the park. It should be constructed as soon as construction begins on the realignment of Co. Rd. 69.

Maintenance Shop

Action: Build an unheated storage building south and east of the existing shop building to provide additional space for storage and equipment protection.

Park Roads

Action: Expand waterfalls parking lot to accommodate parking for long recreational vehicles.

Action: Install bituminous surface on the section of roadway leading uphill to Seppmann Mill from the base of the hill to the point at the top where the grade again levels off.

Action: Stabilize the back slope of the mill road cut to the degree necessary to maintain the slope.

North Park Entrance
Action: Relocate north entrance road, so it accesses the north portion of the park directly across from where Co. Rd. 117 intersects TH 68. From there it would tie into existing park road near the Trail Center parking lot.

Trailer Dump Station
Action: Build a trailer dump station off the campground access road.

Multipurpose Building

Action: Build new multi-purpose building so recreational and educational uses will increase in north portion of the park.

Statutory Boundary

Boundary Modification
Action: Modify existing Statutory Boundary to include expansion area identified during planning process.
Action: Purchase land within the proposed statutory boundary from willing sellers when sufficient funding is available.
Action: Accept donations of land within the proposed statutory boundary

Partnerships with the Community

Tourism
Action: The staff will recommend private facilities, especially when the park is full, and find ways of cooperating with and complementing private facilities in the area
Action: Plan for increased use, however continue concentration of use to minimize ecosystem fragmentation is recommended.
Action: Seek opportunities to promote bird and wildlife watching in the park and vicinity, and provide educational materials.
Action: Develop a Merchandise Plan for the park.
Action: Cooperate with area chambers and other area tourism groups to promote the area.

Volunteers
Action: Develop a volunteer manual for the park.
Action: Prepare a long range plan for volunteer projects and local school projects as needed.

Partnerships
Action: Work with landowners within the park boundary and in adjacent areas so

that land is managed to protect water quality, woodlands, wetland, and prairie habitat.

Action: Park staff should participate in local and regional planning efforts to sustain healthy ecosystems. Planning should begin at the landscape level to determine where opportunities are in the landscape to promote interior forest habitat and other natural community efforts.

Action: Park staff should continue working with groups active in water related issues such as the Blue Earth River Team, water plan, etc. Minneopa State Park should be an integral core of any plan that is developed.

III. REGIONAL ANALYSIS

REGIONAL POPULATION ANALYSIS

Minneopa State Park located in southcentral Minnesota, is 45 miles north of the Iowa border and 75 miles southwest of St. Paul/Minneapolis. Within a 50 mile radius of the park, county populations total over two hundred thousand.

Minneopa State Park is located along the Minnesota River in northern Blue Earth County in South Bend Township. In 1990, the county population totaled 54,044. The three largest communities in Blue Earth County are Mankato (31,419), Mankato Township (2,135), and Lake Crystal (2,084). North Mankato located just across the Minnesota River in Nicollet County has a population of 10,164. Table 1 gives the population in counties and major cities surrounding the park. These above mentioned sites are shown on the Minneopa Regional Vicinity Map, (page 13).

Table 1. Population data for cities and counties within 50 miles of Minneopa State Park .

Counties	**Population**	**Cities**	**Population**
Blue Earth	54,044	Mankato	31,419
Waseca	18,079	Waseca	8,385
Faribault	16,937	Blue Earth	3,745
Martin	22,914	Fairmont	11,265
Watonwan	11,682	St. James	4,364
Brown	26,984	New Ulm	13,132
Nicollet	28,076	North Mankato	10,164
LeSueur	23,239	LeSueur	3,714
Sibley	14,366	Gaylord	1,935
TOTAL:	**216,321**	**TOTAL:**	**88,123**

Source: US Department of Commerce. August 1991. *1990 Census of Population and Housing, Minnesota.*

REGIONAL RECREATIONAL RESOURCES

Table 2. Summary of recreation opportunities within 50 miles of Minneopa State Park

	Miles of Trail						
Administration	Hiking	Horse-back	X-C Skiing	Snow-mobiling	ATV	Bike	Number of Campsites
Private	0	0	0	0	0	0	995
Municipal	10.5	0	7.5	0	0	2.9	42
DNR - State Parks	41.5	15	26.8	14.8	0	0	344
DNR - T&W	24.6	5	6	0	0	24.6	0
County (Grant-in-Aid)	0	0	0	785.8	0	0	0
County (non-GIA)	44.9	0	29.4	0.5	0	5.6	179
Total	121.5	20	69.7	801.1	0	33.1	1560
Sources:							

REGIONAL TOURISM IMPACT

The travel and tourism industry is one of the top five employers for the state of Minnesota. In 1994, travel and tourism accounted for 136,123 jobs statewide of which 5,814 were in the southewst region. The gross receipt impacts for 1994 in the southwest region was $303,000,000, 4.3% of the statewide total. The southwest region of the state has the lowest figures for tourism impacts in the state. However this region showed a 5.3% increase in gross receipts real growth from 1988 to 1994.

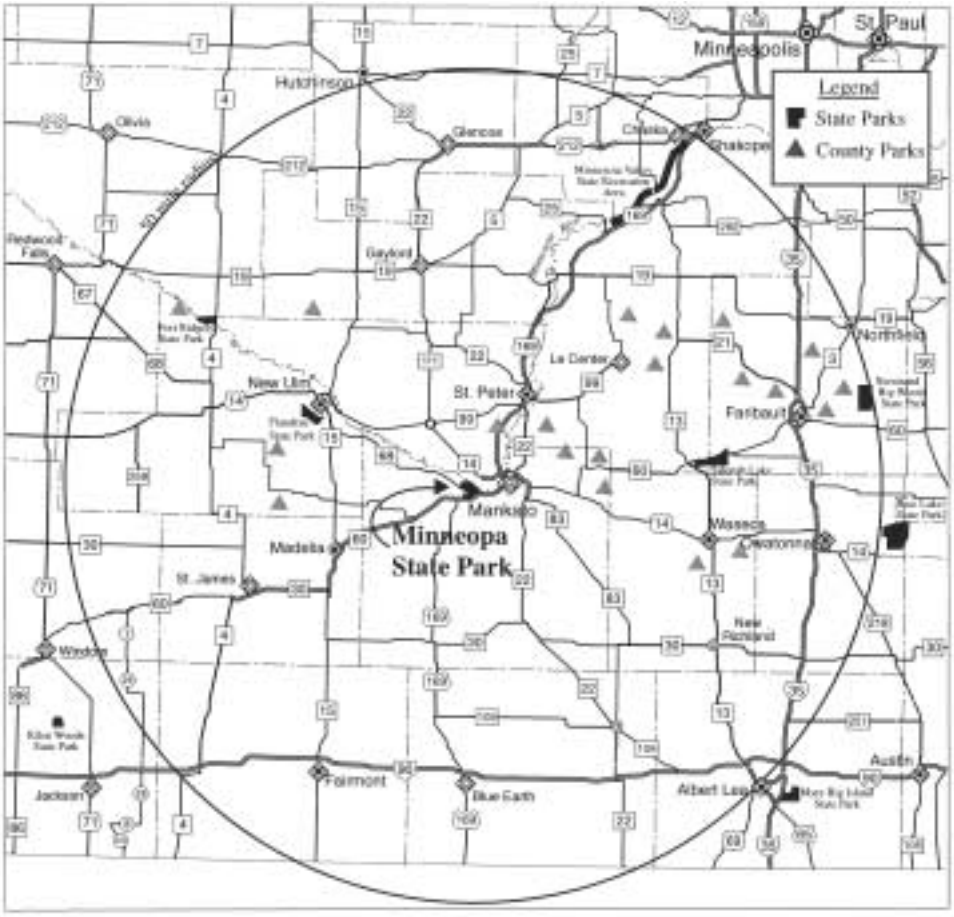


Figure 1. Minneopa Regional Vicinity Map - 50 Mile Radius.

Table 3. Southwest Minnesota tourism-related financial statistics for 1994 and 1995 estimates. Other southern Minnesota counties with state parks are included for comparison.

A. Total tourism receipts including direct, indirect and induced spending.

County	1994 dollars	1995 estimated dollars
Blue Earth	$44 million	$41 million
Waseca	$5 million	$6 million
Faribault	$4 million	$4 million
Martin	$4 million	$4 million
Watonwan	$2 million	$2 million
Brown	$32 million	$36 million
Nicollet	$22 million	$22 million
LeSueur	$19 million	$20 million
Sibley	N.A.	N.A.
Regional total	**$7.096 billion**	**$7.636 billion**

B. Number of jobs in the travel and tourism industry.

County	1994 jobs	1995 estimated jobs
Blue Earth	844	781
Waseca	101	123
Faribault	71	76
Martin	76	76
Watonwan	44	37
Brown	609	684
Nicollet	420	424
LeSueur	373	338
Sibley	N.A.	N.A.
Regional total	**136,123**	**144,183**

C. Wages earned in tourism and travel.

County	1994 dollars	1995 estimated dollars
Blue Earth	$17 million	$ 17 million
Waseca	$2 million	$3 million
Faribault	$1 million	$ 2 million
Martin	$2 million	$ 2 million
Watonwan	$1 million	$ 1 million
Brown	$12 million	$ 14 million
Nicollet	$9 million	$ 9 million
LeSueur	$8 million	$ 8 million
Sibley	N.A.	N.A.
Regional total	**$ 2.8 billion**	**$ 3.1 billion**

Park Visitor Analysis

Minneopa State Park is a popular attraction for local residents and visitors to the Mankato area. The park attracts a variety of visitors who enjoy a wide range of activities.

Minneopa Falls draws local residents throughout the year to observe changes in stream

flow over the falls. The facilities and natural resources of the park have made it a popular site for many different groups. The park picnic shelters are often booked on many weekends for events such as weddings, company picnics, and family reunions. Because of the popularity of the park as a spring picnic area, school buses often fill the parking lots . The park is a popular spot for Mankato State University students and they often bring their parents to the park as part of a local attractions tour.

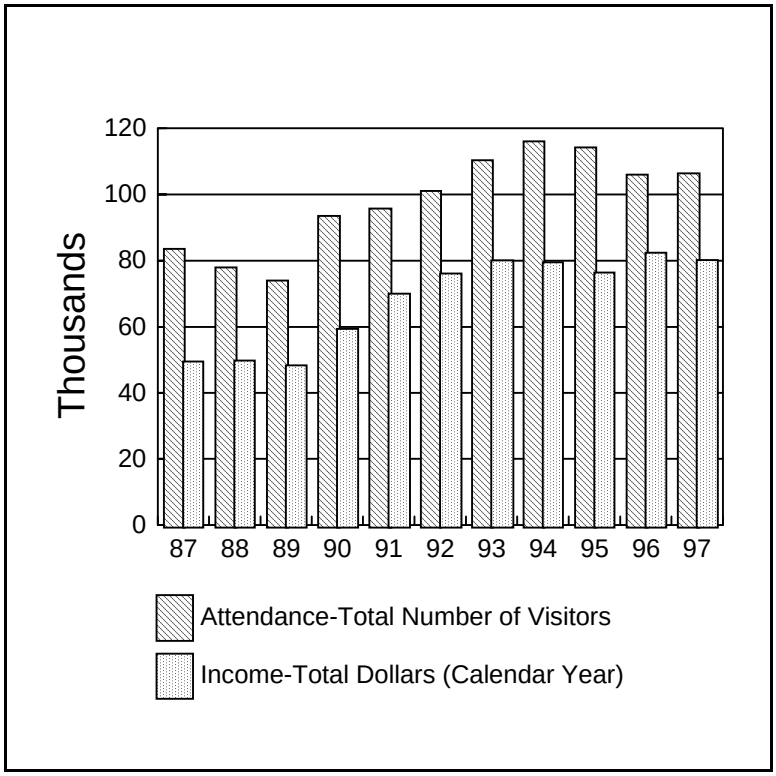


Figure 2. Minneopa State Park attendance and income totals.

The natural resources of the park attract visitors from throughout the state. The remaining prairie remnants are a unique feature of the park that visitors like to view throughout the year. Minneopa Creek, a tributary of the Minnesota River, is enjoyed by anglers who fish both the creek and the river. Minneopa State Park is also a local favorite for many bird watchers. The park provides seasonal habitat for Bald Eagles, Great Blue Heron, and the Cooper's Hawk.

The historical aspects of Minneopa draw many users each year. Seppmann Mill, a wind powered grist mill, was constructed by Louis Seppmann and Herman Hagley between 1862 and 1864. The mill operated for twenty six years, first as a flour mill and eventually as a feed mill. The mill adds a great deal of history to the park and generates many users specifically interested in it.

Regional Recreation Patterns

Greater Minnesota accounts for the majority of campers at Minneopa State Park (Figure 3). Many people are drawn to the Mankato area because of the variety of unique area activities. Park attendance often fluctuates as a result of these events. Some of the events in the area include: the air show at the Mankato Airport, antique car shows, Indian Pow Wow in West Sibley, Duck Days in Lake Crystal, the Minnesota Vikings practices, New Ulm fests, and the Fourth of July fire works.

Many people take part in several sporting events in Mankato and use the park for

camping or just as a place to unwind after their event. Softball tournaments, pool tournaments, golf, and a hill climb of motor cross events are only a few of the sporting events in the area.

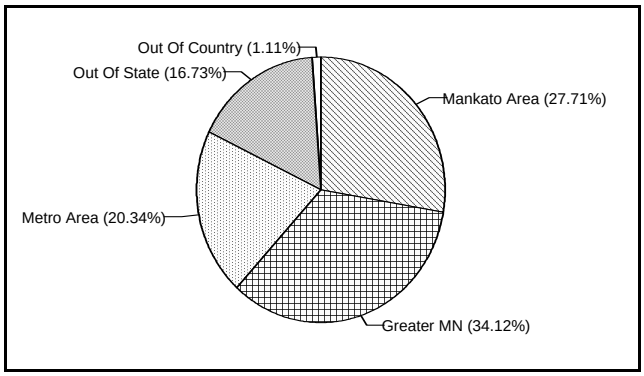


Figure 3. Origin of Minneopa State Park campers.

People staying in the park enjoy going to Mankato for shopping and entertainment. Mankato offers one of the largest shopping malls in rural Minnesota. People also come to Mankato to tour the Blue Earth County museum. The Mankato Civic Center puts on many performances throughout the year which draw large groups of people. Many families staying at the campground even make day trips to Valley Fair.

Minneopa State Park provides camping sites for a variety of users. Visitors come to the park to relax and spend time outdoors. Many users enjoy spending the day in the park with their relatives. During the summer visitors enjoy going to Hiniker Pond, an abandoned gravel pit near the park with a nice beach, to swim and enjoy the sunshine. The fall colors of the Minnesota River Valley and the Minneopa Falls are extraordinary sites for campers as well as day users. The Heritage Fest in New Ulm is a large event and people often rely on Minneopa for camping because Flandrau's sites fill.

IV. INVENTORY OF EXISTING RECREATION FACILITIES, AND NATURAL AND CULTURAL RESOURCES

RECREATION RESOURCES

Existing Development

Camping

- *The Red Fox Campground:* Consists of 62 campsites accommodating recreational vehicles up to 60 feet in length. Each site is equipped with a parking spur, fire ring, picnic table, and tent pad. Six of the campsites are equipped with 30 amp electrical outlets. Sanitation facilities include both vault toilets and a modern sanitation building equipped with showers and flush toilets.

- *Group Campground:* Minneopa has one primitive group camp with four individual group camp sites. The group camp includes a shared parking area, water supply, and vault toilets. Each individual campsite consists of a mowed tenting area, picnic tables, and fire ring.

Trails

- *Hiking:* 4.5 miles. All existing trails, except a ½ mile loop around the falls, lie on the north side of the park. These traverse oak savanna, open prairie, and eastern red cedar stands on a flat terrace of the Glacial River Warren. Two spurs descend to and dead end at the Minnesota River.

Trail from Group Camp Area to Minnesota River.

  Trail surface is mowed grass, maintained 6 feet in width by mowing with a tractor mounted flail mower. Exposed bedrock protrudes through the mowed grass surface limiting the choices for trail alignment and making maintenance challenging.

- *Cross Country Skiing:* 4 miles. When summer hiking trails contain sufficient snow cover their use is transformed to cross Country skiing. Snow depths must be sufficiently deep to cover exposed rock before grooming can occur. All trails are designated either easy or moderate in skiing difficulty.

Maintenance of these trails is always a challenge. The wide open terrain through which Minneopa's ski trails traverse is highly wind swept. Well manicured tracks often drift into obscurity within minutes of the groomers passage. At other times a bright January sun will melt a track that would not be affected in a more woodland environment.

During winters of heavy snowfall it is not unusual for drifts in excess of fifteen feet to form in the middle of the entrance road in front of the north contact station. Clearing these huge drifts exceeds the capability of park equipment necessitating the contracting of snow removal, an expense not budgeted for. Lack of winter staffing also complicates operations.

Day-Use

- *Two open picnic shelters:* The shelter located adjacent to Minneopa Falls was built circa 1915. It is large, well lighted, equipped with electrical outlets, and can accommodate groups up to 200 people. It is heavily used for family reunions and weddings and is reserved most weekends throughout the summer.

  The upper shelter lies just north of Minnesota State Highway 60, is not often used with most park users unaware of its existence. This structure is constructed of dimension timbers. The western end is enclosed while the other three walls remain open.

  
  Upper Picnic Shelter.

  With the construction of the Blue Earth County 90 (South Route), access to this facility will be severed except for the bicycle trail that will be part of the South Route project.

- *Visitor Center:* (See Interpretive Services section)

- *Fishing in the Minnesota River and Minneopa Creek:* Fishing currently occurs both in the Minnesota River adjacent to the north boundary of the park and also in Minneopa Creek. Species present in the Minnesota River are often times found in Minneopa Creek but cannot migrate further than the natural barrier of the falls. The preponderance of species encountered below the falls

are generally rough fish (e.g., carp and suckers).

The Minnesota River often produces a variety of game fish. The channel and flathead catfish fishery can be superb and park users have been known to come from Iowa, Missouri and Illinois to experience it. The confluence of Minneopa Creek and the Minnesota River is a popular night fishing location.

Minnesota River near mouth of Minneopa Creek.

- *Carry In Boat Access:* The carry in access is actually a trail spur that leads from the east end of the Class III Group Camp, north to the confluence of Minneopa Creek and the Minnesota River. At that location no formal development has occurred however, it is relatively easy to slip a canoe or small boat into Minneopa Creek.

  Because of the distance between the vehicle parking lot and actual water access, (estimated at 0.2 miles) the access receives little use. A further deterrent is the elevation change between the vehicle parking area and water access making the trek suitable for only the most physically fit and adventuresome. An access site accessible by vehicle should be sought if proposed boundary expansion occurs.

- *Volleyball:* A sand volleyball court exists in the falls picnic area between the parking lot and the falls sanitation building.

- *Horseshoes:* One set of horseshoe pits exists at the toe of the north facing slope, just south of the falls picnic shelter.

Information Kiosk.

- *Interpretive Exhibits:* Non-personal interpretation in the form of signing exists at the vista of the lower Minneopa Falls, at the south end of the bridge below the upper falls, at prairie management sites adjacent to the road leading to Seppmann Mill, on the interior walls of the campground sanitation building and at the Seppmann Mill site. Additionally, photographs and brief narratives exist on display in the falls

visitor center. Three themes are interpreted: park history, snakes commonly found at Minneopa, and the grasses and flowering plants of Minneopa prairie.

- *Information Kiosks:* Four single panel information kiosks exist. One is located along the path leading from the falls parking lot to the falls picnic shelter, another is located in a flat grassy area north of the campground contact station, a third is located at the trail head near the east end of the group camp parking lot and a fourth is mounted on the north end of the campground sanitation building. Material displayed attempts to answer commonly asked questions and is used to keep park visitors informed of current issues impacting the park and its use.

Sanitation building in Falls Picnic Area.

- *Sanitation building with flush toilets.* Tucked into the hillside just south of the falls parking lot lies a modern sanitation building that serves the needs of visitors using the falls picnic area. This building was one of those constructed as a WPA project and is built of locally quarried limestone, dimension lumber and asphalt shingled roof. In 1984 a major renovation of this building occurred converting it from a vault with dump pan system to its modern configuration containing flush toilets. This renovation was well done preserving the exterior appearance and building footprint while meeting current needs. The building remains on the state historic site preservation list.

- *Vault Toilets:* Two vault toilets and two pit toilets service day use facilities. One vault is located on the hillside adjacent to the modern falls sanitation building. This unit serves falls visitors during periods of freezing weather when water is turned off and the flush toilet facility is closed. The second vault is located adjacent to the Seppmann Mill site and serves its visitors.

  One pit toilet is located south of the stairway which ascends the valley below Minneopa Falls. Lastly, the second pit toilet serves the upper level picnic area. If the upper level picnic area continues to serve as a facility accessible to bicycles and if the existing picnic shelter at that location is retained then consideration should be given to replacing this pit toilet with a vault type to prevent ground water contamination.

Park Administration

- *Park Office:* The building currently being used as a park office is the former managers residence which lies in the service area a short distance north of the

falls. This building was converted from a residence to office space in the autumn of 1996. Plans are currently underway to construct a new building adjacent to the new park entrance road. This new facility will replace the existing office as well as the existing falls contact station.

- *Contact Stations:* There are two contact stations which are staffed on a seasonal and "as needed" basis. One is located at the entrance of the falls parking lot and the other is located adjacent to the north entrance, just south of the campground. Both measure 10' x 12' and neither have telephone service. Both are at locations separate from the park office so users often express frustration with not being able to find park staff to serve their needs. (This problem will be partially eliminated with the construction of the new office/contact station currently scheduled.)

Maintenance Shop.

- *Administrative Facilities:*
  - Maintenance Shop. This is a concrete block and stick building constructed in the early 1960's. Much of the material was salvaged from the demolition of other buildings. It contains two maintenance/storage bays, one of which is heated. In 1989 a small addition was constructed on the west end for the purpose of providing a winterized flush toilet facility for staff and some additional space for an employee lunch/break room. Current space is not sufficient to warehouse existing park supplies and equipment.

  - Lumber Shed. This is an open sided, dirt floor, wood building measuring 16' x 22', built in the 1930's. Although the roof is sagging and some boards are beginning to rot, it is still serving a functional need. Additional space for firewood storage (stores for resale), wood to heat the maintenance shop and room to house additional lumber and construction material is needed.

  - Old Office Building. This building was constructed in 1939 as a WPA tool shed. It was used from 1977 to 1996 as office space. It is currently being used to store firewood used for sale to park visitors for campfires.

  - Gas & oil storage building. This building measures 6' x 8' and is used to store oil and other flammable materials not affected by freezing.

- *Roads:* The park contains approximately three (3) miles of interior roads and two parking lots. All surfaces are covered with either class 5 aggregate or crushed limestone (3/4" minus). Road surfaces are "at grade" and extensive snow drifting occurs. The north entrance is therefore only plowed from Minnesota State Highway 68 to the trail head parking lot. Conditions

occasionally exceed the ability of park staff to clear snow from this segment with existing equipment.

Minneopa State Park
Existing Facilities
N
Information
Minneopa Falls
Overlook
Picnic Area
Primitive Group Camp
Red Fox Campground
Sepmann Windmill
Minneopa Falls
Railroads
Minneopa State Park Statutory Boundary
Mineral Lodge
Williams Nature Center
Minnesota River
Dakota, Minnesota & Eastern Railroad
Union Pacific Railroad
0.25
0
0.25
0.5 Miles

NATURAL RESOURCES

Minnesota River Prairie

The park is part of the Minnesota River Prairie Subsection of Minnesota's Ecological Classification System (see map below), which was formed by the drainage of Glacial Lake Agassiz and deposition and scouring of ice sheets that covered the area more than 50,000 years ago. At the time of the first European

Subsection Map of Minnesota.

settlement this region was covered by tallgrass prairie, with scattered trees in wet areas or along lakes, streams, and rivers. Today agriculture is the dominant land use in the area, remnant stands of tallgrass prairie are rare. Parcels of highly disturbed prairie still exist in the park with the highest quality remnants being located where it was either too wet to plow or rock outcroppings provided protection from intensive grazing. Riparian forests of silver maple, elm, cottonwood, and willow still grow on the floodplain along the Minnesota River.

Climate

The Mankato area has a continental-type climate which is subject to frequent outbreaks of cold arctic air during winter months and is frequently dominated by hot air masses from the Gulf of Mexico during the summer months. The mean temperatures for January are a maximum of 23°F and a minimum of 3°F. The mean July temperatures are a maximum of 84°F and a minimum of 82°F. On average, 35 days per year are 0°F or below and 16 days per year are 90°F or above. Average snowfall is 41 inches per year and average annual precipitation is 30 inches.

The park contains a wide variety of land forms which contribute to a variable microclimate. Along the heavily wooded Minneopa Creek, temperatures are lower in the summer and higher in the winter than the adjacent prairie areas along Highway 68. Spring and fall may be the best times to enjoy these areas in the Minnesota River Valley. Areas close to the river, which are blocked from wind, tend to be havens for mosquitoes and have less utility as canoe campgrounds.

Geology and Minerals

The most outstanding topographic features in the park are the deep gorge through which the Minnesota River runs, and the waterfall and deep gorge formed by Minneopa Creek.

The Minnesota River is a small river flowing in a large valley which was formed by Glacial River Warren. The volume of water that once flowed in this river had tremendous erosive power. Loose surface glacial deposits and the thin underlying layers of sedimentary shale, sandstone and conglomerate rock were quickly removed, exposing the more durable granite rocks below. The river cut through as much as one hundred feet of granite rock at the site of Renville County Park No. 2 and other locations. Between Browns Valley and New Ulm there are numerous exposures of granite rock along the river valley. Downstream from New Ulm, the river flows through younger sedimentary rocks, mostly limestones. Jordan sandstone outcrops are exposed along both the Minnesota River and Minneopa Creek gorges. The water level is approximately at the St. Lawrence dolomite level.

Glacial River Warren probably flowed from Glacial Lake Agassiz for several thousand years. As the glacier continued to retreat northward, Lake Agassiz eventually found lower outlets to the northeast and finally drained into Hudson Bay. With the large supply of water from Glacial Lake Agassiz eliminated, Glacial River Warren shrank in size to what is now known as the Minnesota River. The Minnesota River no longer had the energy to carry the large quantities of sediment supplied by its tributary streams and formed large deltas at the confluences which became lakes. Some examples of these are: Lake Travers, Big Stone Lake, Marsh Lake, and Lac Qui Parle Lake.

The major geologic feature in the park is Minneopa Falls. The falls were formed by Minneopa Creek, which flows northeastward in a shallow valley across the upland prairie. The creek has cut downward through the glacial drift into the underlying Cambrian sandstones and shales where it approaches the Minnesota River Valley. The 40 foot cliff at Minneopa Falls was formed by the erosion of Jordan sandstone. Before reaching the point where the water falls over the cliff, the stream has eroded through about 15 feet of sandstone. At that depth, it comes in contact with a harder layer of the sandstone which is six to eight feet thick. These cemented layers have resisted the erosive action of the stream longer than the underlying softer layers resulting in the projecting shelf over which the water plunges.

Minneopa Falls.

The pool below the falls is in a walled amphitheater that rises about 40 feet on each side. The spray from the falls keeps the walls wet. This action, plus the freezing and thawing during winter and spring, weathers the soft sandstone and keeps the walls nearly vertical. The pool at the foot of the falls is confined by a bank of gravel in front of the cascade.

Originally, the waterfalls on Minneopa Creek may have been located near the confluence of the Minnesota River. The sandstone cliff has been continually eroded by the water which has formed the Minneopa Creek gorge.

Minneopa Creek below falls.

Both the Oneota dolomite and the Shakopee dolomite crop out and form terraces along the Minnesota River and its major tributaries. The rock consists primarily of buff and pink dolomite which are quarried near Mankato and Kasota. Before the deposition of the Upper Keeweenawan sediments, there was a hill of granite more than a thousand feet high between the present locations of Mankato and the park. This surface irregularity was later buried under the flat-lying rocks that are now exposed in the area. According to information available on bedrock geology in the park area, there is a low potential of any major metallic minerals being found there. However, more intensive studies may find otherwise.

Soils

The majority of the soils in Minneopa are of the Alluvial land-Copaston-Chaska association. The association consists of poorly drained to somewhat poorly

Table 4. Minneopa State Park Soils Limitations.

Map Unit	Description	Slope	Permeability*	High Water Table Depth (feet)	Septic Tank Absorption Fields	Buildings**	Roads	Camp Areas	Picnic Areas	Playgrounds	Paths & Trails	Overall Suitability
41B	Estherville sandy loam	2-6%	0-22"/2.0-6.0	>6.0	L	L	L	L	L	M	L	L
41C	Estherville sandy loam	6-8%	0-22"/2.0-6.0	>6.0	M	M	S	M	M	S	L	M
94	Terril loam	0-2%	0-60"/0.6-2.0	>6.0	L	M	M	L	L	L	L	L
94B	Terril loam	2-6%	0-60"/0.6-2.0	>6.0	L	M	M	L	L	M	L	L
94C	Terril loam	6-15%	0-60"/0.6-2.0	>6.0	M	M	M	L	L	S	L	M
100	Copaston loam	1-4%	0-10"/0.6-2.0	>6.0	S	S	S	L	L	S	L	M
106B	Lester loam	2-6%	0-60"/0.6-2.0	>6.0	M	M	S	L	L	M	L	M
106C	Lester loam	6-12%	0-60"/0.6-2.0	>6.0	M	M	S	M	M	S	L	M
106D	Lester loam	12-18%	0-60"/0.6-2.0	>6.0	S	S	S	S	S	S	M	S
222B	Lasa fine sand	2-8%	0-45"/2.0-6.0	>6.0	L	L	L	M	M	S	S	S
238B	Kilkenny clay loam	2-6%	0-34"/0.2-6.0	>6.0	S	M	S	M	M	M	M	M
239	LeSueur clay loam	1-3%	0-60"/0.6-2.0	2.0-5.0	M	M	S	M	M	M	M	M
286	Shorewood silty clay loam	1-6%	0-17"/0.2-0.6	3.0-5.0	S	S	S	M	M	M	M	M
317	Oshawa silt loam	-	0-21"/0.6-2.0	0-1.0	S	S	S	S	S	S	S	S
321	Tilfer silty clay loam	-	0-31"/0.6-2.0	1.0-3.0	S	S	S	S	S	S	S	S
329	Chaska loam	-	0-8"/0.6-2.0	1.0-3.0	S	S	S	S	S	S	S	S
360B	Lasa loamy fine sand, rock	1-6%	0-48"/2.0-6.0	>6.0	M	M	L	M	M	S	M	M
360E	Lasa loamy fine sand, rock	12-35%	0-28"/2.0-6.0	>6.0	S	S	S	S	S	S	M	S
414	Hamel clay loam	1-4%	0-28"/0.2-2.0	1.0-3.0	S	S	S	M	M	M	M	M
539	Palms muck	-	0-50"/0.2-6.0	0-1.0	S	S	S	S	S	S	S	S
923	Copaston-Rock outcrop complex	1-4%	0-10"/0.6-2.0	>6.0	S	S	S	L	L	S	L	S
961	Storden complex	very steep	0-60"/0.6-2.0	>6.0	S	S	S	S	S	S	S	S
992	Rock outcrop-Copaston complex	very steep	0-7"/0.6-2.0	>6.0	S	S	S	S	S	S	S	S
1001	Alluvial land, occasionally flooded	-	Varies	>6.0			variable					
1002	Alluvial land, frequently flooded	-	Varies	>6.0			variable					
1004	Alluvial land, gently sloping	-	Varies	>6.0			variable					
1007	Alluvial-Urban land complex	-	Varies	>6.0			variable					
1039	Urban land	0-2%	Varies	>6.0			variable					
1800	Caron mucky peat	-	0-60"/2.0-20	0-1.0	S	S	S	S	S	S	S	S

Legend - Soils Suitability/Characteristics

L = (Low) Limitations for a stated use are minor and can be overcome easily.

M = (Moderate) Limitations for a stated use can be overcome by special planning, design, or intensive maintenance.

S = (Severe) Limitations for a stated use generally require a major soil reclamation, special design, or intensive maintenance.

*Depth and permeability (inches per hour) i.e. soil 41B = top 0-20" of soil depth have a permeability of 2.0-6.0 inches per hour.

**Based on buildings with a basement or foundation.

drained, medium and moderately coarse-textured soils in the Minnesota River floodplain and excessively drained, medium-textured shallow soils over limestone bedrock which occur on the higher terraces. Typically, these terraces have sharp escarpments facing the river. Old river channels found on terraces adjacent to the base of the steep slope are of the Storden-Lomax-Comfrey association. These terraces were formed when the river encountered layers of bedrock which were much harder to erode than the overlying layers.

Minneopa State Park
Soils
N
0.5 Miles
0.25
0
0.25
Railroad
Minneopa Park Boundary
Minneopa Creek
Minnesota River
Soil Boundaries
Dakota, Minnesota & Eastern Railroad
Union Pacific Railroad
Minnesota River
Park Road
Gravel Pit

Water Resources

Minneopa Creek Watershed

Land within the Minneopa Creek watershed is mostly in private ownership and is intensively farmed. Minneopa State Park is located in the lower watershed, representing a mix of forest and grassland. The upper watershed consists of poorly to moderately well drained soils. The lower reaches of the stream are more heavily wooded with well drained, coarse-textured glacial till soils.

The land adjacent to the creek varies from flat, intensively row-cropped land with a narrow grass riparian area in the upper watershed to narrow to moderate width corridors of interspersed grassy and wooded vegetation in the mid-stream reaches and wooded vegetation consisting of deciduous trees and herbaceous shrubs, forming a large riparian corridor along the lower reaches.

Minneopa Creek is similar to most other warm water streams found in the corn belt of southern Minnesota. These streams are characterized by unstable flows, high sediment loading, degraded in stream habitat, and simple fish communities. The majority of Minneopa Creek is best described by these characteristics. However, the last mile or the lowest stream reach, contains a variety of habitat types unlike the upper reaches. Because of the variety of habitats and the strong influence of the Minnesota River, the fish community in this reach is surprisingly diverse. Minneopa State Park surrounds the lowest reach of the stream, ensuring that it will be minimally impacted.

Minneopa Creek above waterfalls.

Both municipal and agricultural runoff contribute to stream quality degradation. Excessive nitrogen, phosphoreus, sedimentation and flow rates negatively impact water quality, and the fish and wildlife that depend on it. Elevated fecal coliform bacteria levels limit the streams recreational potential.

Endangered, Threatened, and Special Concern Species

Minneopa Natural Heritage Elements

The following vegetative elements are known to be located within the current and proposed boundaries of Minneopa State Park, including a two-mile perimeter around both boundaries. This information is from the Natural Heritage Database maintained by the Natural Heritage and Nongame Wildlife Research Program, a

unit within the Section of Ecological Services, Department of Natural Resources (DNR).

"State status" is the legal classification of plant and animal species under the state endangered species law. The three classifications are endangered, threatened, or special concern. There is an additional classification called "rare". These have no legal status, but are uncommon, and may become listed if they decline further.

The state rank, or S Rank, assigned to natural community types is intended to reflect the known extent and condition of the natural communities in Minnesota. Community types are ranked on a scale from 1 to 5; those ranked 1 are considered in greatest need of conservation action in the state, while community types ranked 5 are considered secure under present conditions. The ranks do not represent a legal protection status. They are used by the Minnesota DNR to set priorities for research, inventory and conservation planning. The state ranks are periodically updated as inventory information becomes available.

Table 5. Vegetation Elements located in Minneopa State Park and a two mile perimeter.

ELEMENT	MN Status	S Rank	Class
1. Rudbeckia triloba (Three-leafed coneflower)	SPC	-	SP
2. Shrub Swamp unknown/unresolved subtype	-	S4	NC
3. Mesic Prairie (southeast) Carbonate Bedrock Subtype	-	S1	NC
4. Cerastium brachypodum (Mouse-ear Chickweed)	-	S1	SP
5. Dryopteris goldiana (Goldie's fern)	SPC	-	SP
6. Huperzia porophila (Rock clubmoss)	THR	-	SP
7. Maple-Basswood Forest (Big Woods)	-	S2	NC
8. Asclepias sullivantii (sullivant's milkweed)	THR	-	SP
9. Cypripedium candidum (Small White Lady's-Slipper)	SPC	-	SP
10. Wet Prairie (Southeast)	-	S1	NC
11. Trillium nivale (Snow Trillium)	SPC	-	SP
12. Agalinis auriculata (Eared False Foxglove)	END	-	SP

END = Endangered
THR = Threatened
SPC = Special Concern

Note: The column labeled class is a broad category of elements tracked in the Natural Heritage database. NC = natural communities; OT = other (usually aggregates of animals such as waterbird colonies and prairie chicken booming grounds); SA = special animals; SP =special plants.

Table 6. Animal Elements located in Minneopa State Park and a two mile perimeter.

ELEMENT	MN Status	S Rank	Class
1. Lanius ludovicianus (loggerhead shrike)	THR	-	SA
2. Scaphirhynchus platorynchus (shovelnose sturgeon)	NON	-	SA
3. Actinonaias ligamentina (mucket mussel)	THR	-	SA
4. Mussel sampling site #118	-	-	OT
5. Mussel sampling site #119	-	-	OT
6. Quadrula metanevra (monkeyface mussel)	THR	-	SA
7. Bartramia longicauda (upland sandpiper)	NON	-	SA
8. Elaphe vulpina (fox snake)	NON	-	SA
9. Lanius ludovicianus (loggerhead shrike)	THR	-	SA
10. Lampropeltis trianulum (milk snake)	NON	-	SA
11. Actinonaias ligamentina (mucket mussel)	THR	-	SA
12. Mussel sampling site #117	-	-	OT

THR = Threatened
NON =

Note: The column labeled class is a broad category of elements tracked in the Natural Heritage database. NC = natural communities; OT = other (usually aggregates of animals such as waterbird colonies and prairie chicken booming grounds); SA = special animals; SP =special plants.

Vegetation

Original Vegetation

The original vegetation of this park was a mixture of big woods, native prairie, bottomland hardwoods and oak opening barrens. Big woods vegetation was found south of the Minnesota River in a broad band that generally followed Minneopa Creek. Native prairie vegetation generally covered the broad, flat, rocky plain where the deteriorated prairie is now located. The boundary between the oak opening barrens and the big woods was near the eastern park boundary. The bottomland hardwoods were located on the Minnesota River floodplain.

Existing Ecological Communities

Much of the land within Minneopa was too steep or rocky to plow. As a result, much of the original vegetation remains intact, except for areas used as pasture land and wood lots. Most of the areas suitable for agricultural row crops and previously cultivated have been purchased by the state, however, several small areas are still being farmed.

Old field area on recently acquired parcel of land.

Agricultural Land (Ag) 39 acres

The park has several small parcels of agricultural land. One is located on the prairie area.

Bottomland Hardwoods (BoT) 170 acres

This vegetation type is located on the floodplain along the Minnesota River and Minneopa Creek. The overstory consists primarily of cottonwood, silver maple and elm, with an understory of pole-sized ash, elm, cottonwood, silver maple and basswood.

Northern Hardwoods (NoH) 273 acres

Northern Hardwoods are concentrated along the valley walls of Minneopa Creek and the Minnesota River. This vegetation type consists of a fairly even distribution of elm, red oak, basswood and sugar maple, with scattered hackberry and ironwood. This type also contains possibly the furthest southwestern yellow birch in Minnesota. The average diameter of trees is 14" and the stand is estimated to be about 80 years old.

Old Field (OF) 204 acres

This land is formerly cultivated fields. Characteristic plant species include bluegrass, bromegrass, Russian thistle, alfalfa and scattered, very young cottonwood, and willow seedlings. Areas of this type can be found on the southeast portion of the dry prairie area.

Bottomland hardwoods along Minnesota River.

Open Woods (OpW) 49 acres

Scattered parcels of this vegetation type are distributed throughout the park. It consists of bur oak and some scattered elm. The trees average 12" in diameter.

Orchards and Plantations (OrP) 2 acres

This stand consists of black walnut trees averaging six inches in diameter and spaced approximately 16 feet apart. It is apparent that the site, just north of the falls picnic area parking lot, was poorly chosen for this planting, as the trees should be much larger and more vigorous for their age (approximately 35 years old).

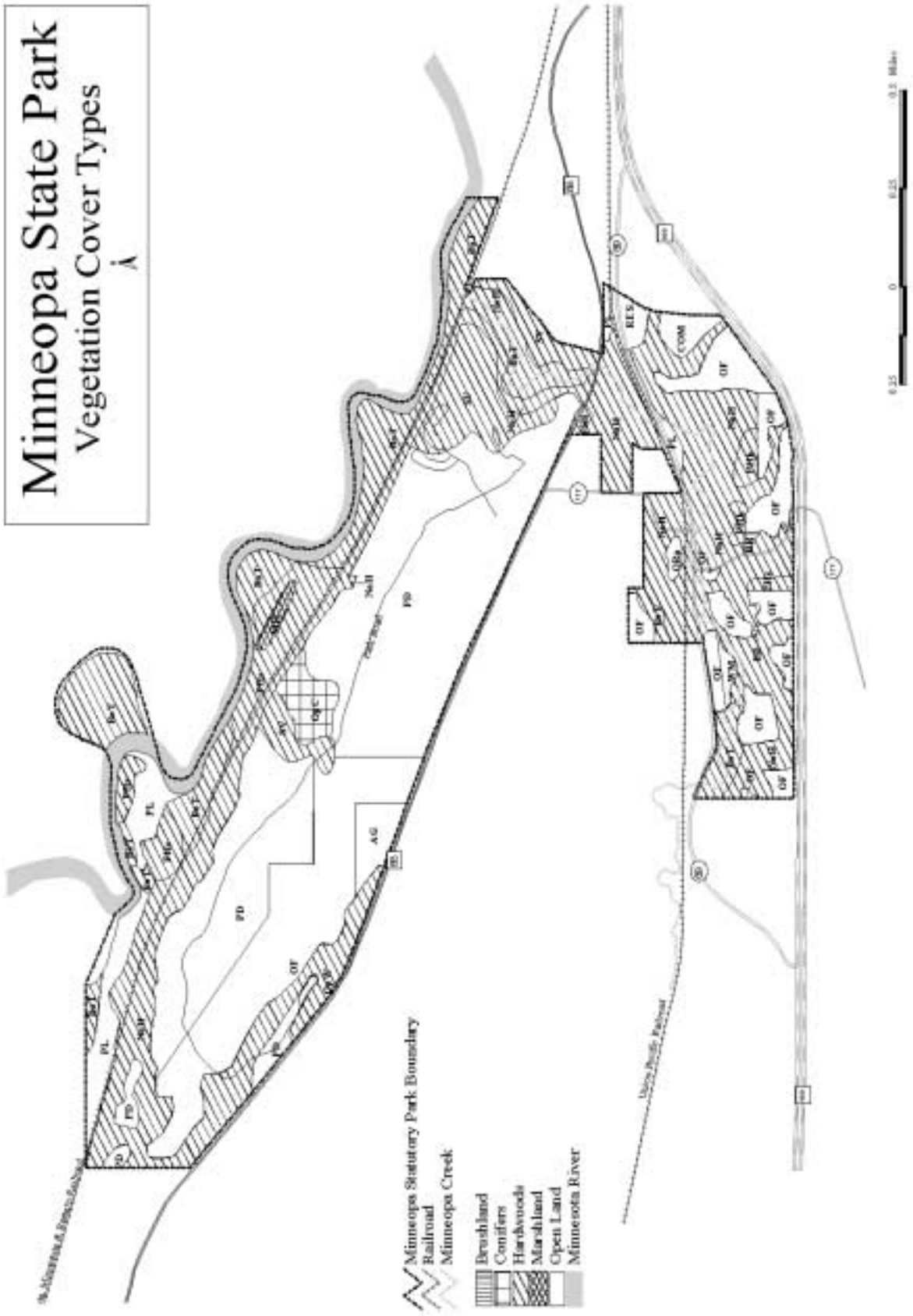
Dry Prairie (PD) 355 acres

This broad, flat area lies north of TH68. At present, it is composed of evenly distributed, lichen-covered granite boulders and three to 10 inch diameter red cedars with a ground cover of June grass and scattered prairie forbes and grasses.

Dry prairie.

Pioneer Hardwood/Sapling (PHs) 13 acres

This area, just south of TH68, was formerly crop land. When cultivation was stopped, grasses took over and were eventually succeeded by young saplings. At present, these trees are one to four inches in diameter and approximately 15 feet in height. There are well over 800 young trees per acre, which is an excellent stocking rate for this stand. The tree species are ash, basswood, elm and boxelder, with a grass understory.


Minneopa State Park
Vegetation Cover Types
Minneopa Statutory Park Boundary
Railroad
Minneopa Creek
Brushland
Conifers
Hardwoods
Marshland
Open Land
Minnesota River

Map Code	Community	Acres	Approximate Percent
Ag	Agricultural Land	19	1
BoT	Bottomland Hardwoods	170	13
NoH	Northern Hardwoods	273	21
OF	Old Field	204	16
OpW	Open Woods	49	4
OrP	Orchards and Plantations	2	*
PD	Dry Prairie	355	28
PHs	Pioneer Hardwood/sapling	13	*
PL	Lowland Prairie	68	5
SV	Oak Savanna	58	4
WM	Wet Meadow	7	*
BR	Open Brush	3	*
PHh	Mature Pioneer Hardwoods	5	*
RES	Residential	4	*
COM	Commercial	8	*
MH	Marsh and Ponds	6	*
OPC	Open Conifers	11	*
OP	Open Pasture	8	*

* Less than 1%. (Because of estimation, percentages do not total 100%.)

Oak Savanna (SV) 58 acres

The overstory species present in this area are primarily mature bur oak with scattered birch, elm, hawthorn and red cedar. Very little understory or brush layer is in evidence, but there is a ground cover of grass and occasional prairie and woodland forbes. The campground, group picnic area and northern picnic area are all located in this vegetation type.

Oak Savanna.

Wet Meadow (WM) 7 acres

The wet meadow areas are characterized by reed canary grass, bluejoint, sedges and cut grass. One privately owned area north of the falls and along Minneopa Creek is of this community type.

Open Brush (BR) 3 acres

Two small areas of this type are located within the park. They are characterized by sumac, hazel and gray dogwood.

Mature Pioneer Hardwoods (PHh) 5 acres

Quaking aspen and boxelder dominate this type, which is found in two small areas near TH169.

Marsh and Ponds (MH) 6 acres

In the Minnesota River Valley there is one area that has shallow standing water and is primarily vegetated with cattails, bulrushes and arrowhead.

Open Conifers (OPC) 11 acres

Samples of this vegetation type can be found along the prairie edge, where the prairie has been invaded by red cedar.

Open Pasture (OP) 8 acres

A small area near TH169 has been pastured and is vegetated primarily with red oak and bur oak with a grass understory.

Fish and Wildlife

Introduction

Many species are commonplace but unnoticeable because of their elusive or secretive behavior. For many visitors, the mere awareness of the presence of wildlife is all that is needed to change a dull, uneventful walk through the brush into a challenging refreshing stroll. In order to provide such an experience for park users, detailed inventories of park wildlife are needed so that managers are better able to manage habitat to attract certain species or protect habitat to ensure the continued presence of existing species. The following wildlife inventory was based on checklists and reports submitted by local residents, birders, naturalists, area wildlife managers, and park managers. The list is not all inclusive and will continue to be revised and upgraded as new data are reported.

Great blue heron.

Certain wildlife species occurring within a park are especially noteworthy because special precautions are required in their management or protection. These species may be sensitive to human activity or have the potential of damaging vegetation and property or they may pose a threat to park visitors. These wildlife species and the potential problems are discussed in the following paragraphs.

Species of Special Interest

Species within this group include those which are uncommon or locally distributed in Minnesota and are not presently threatened or endangered, but may become so. Also included are those species which are not in any particular difficulty, but should be closely watched because of unusual or special values; because they are of special public interest; or because their habitat is especially vulnerable. Special habitat management techniques may be required.

	Seasonal Residence	Permanent Residents
Birds:	Cooper's Hawk	Pileated Woodpecker
	Bald Eagle	
	Great Blue Heron	
	Great Egret	

Troublesome Species

Troublesome species include those species of wildlife which as individuals or populations might become nuisances or cause harm to the natural resources of a park, park property or park visitors.

	Species	Potential Problem
Mammals:	Raccoon	Nuisance and causes property damage
	Pocket gopher	Mounds damage mowing equipment and complicate prairie forb restoration efforts. However, they are very important for prairie soil development.

Sensitivity to Humans

Species listed within this group are those which are unusually sensitive to disturbances due to human activity. Disturbance during one season or another may result in nest or den abandonment, decrease in territorial size or shift in territorial movement. Such disturbance might be detrimental to the survival of the species in a given area or may have effects over a much larger area.

Birds: Bald Eagle

Mammals

Management Objectives:

- To maintain existing native wildlife population.

- To provide opportunities for visitors to observe wildlife and learn more about their habits and habitat.

- Wildlife habitats within the park will be maintained and enhanced by bringing the prairie areas back to their native condition and thereby maintaining and expanding the amount of prairie/forest edge areas. These prairie/forest edge areas are desirable habitat for a broad variety of wildlife. Also, expansion and maintenance of the oak savanna vegetation community will increase the amount of acorns which are a prime food supply for deer, squirrel and other animals. However, due to the limited size of the park, not all pre-settlement wildlife can be introduced without large containment facilities and supplemental agricultural forage (e.g., buffalo).

- Harvest of animal populations will be viewed as a management tool rather than as a sport and will be used only when wildlife populations adversely affect the resources of a park or threaten the health and safety of park visitors.

- Wherever feasible, management will attempt to reintroduce species not presently found in the vicinity of a park, but which inhabited the area prior to European settlement. Any decision regarding reintroduction of a species must consider such factors as park size and available habitat. Potential conflicts between wildlife and park users or area residents must also be considered.

Thirteen-lined ground squirrel.

Raccoon, can be a nuisance and cause property damage.

Table 7. Mammals known to exist in Minneopa State Park.

Opossum	Big brown bat
Short-tailed shrew	Little brown bat
Masked shrew	Red bat
Eastern cottontail rabbit	Hoary bat
Thirteen-lined ground squirrel	Woodchuck
Southern flying squirrel	Fox squirrel
Plains pocket gopher* (special concern)	Gray squirrel

White-footed mouse	Red squirrel
Muskrat	Beaver
Short-tailed weasel	Meadow vole
Least weasel* (special concern)	Prairie vole
Striped skunk	Raccoon
Red fox	Long-tailed weasel
Gray fox	Mink
Coyote	Badger
	White-tailed deer

*Listed in *Minnesota's List of Endangered, Threatened, and Special Concern Species,* effective 7/1/96.

Please refer to "Natural Heritage Elements" on pages 30 for a more detailed discussion about the listed species. The relative abundance and seasonal occurrence of these mammals is unknown or uncertain at this time.

Fish

Minneopa Creek represents a degraded warm water stream that supports a very limited fish fauna, with the exception of the stream's lowest reach. The Minnesota River has a strong influence on the higher species diversity in the lower reach and also helps provide some angling opportunities.

The lower reach of the creek lies within Minneopa State Park and is densely wooded. The stream has a high gradient through this reach which, in combination with the area geology, provides a complexity of different in stream habitats that supports a comparable diversity of fish species. Table 8, shows the species present in the lower reach of the creek.

Table 8. Fish species present in the lower reach of Minneopa Creek.

Shortnose gar	Common carp	GAME FISH:
Emerald shiner	Blacknose dace	Channel catfish
Fathead minnow	River carpsucker	Largemouth bass
Highfin carpsucker	White sucker	Walleye
Smallmouth buffalo	Silver redhorse	Sauger
Shorthead redhorse	Channel catfish	
Green sunfish	Johnny darter	
Blacksided darter	Freshwater drum	

Note: Sampling was at 0.6 miles from the mouth of the creek.

Currently, the creek does not represent a favorable environment for supporting most game fish species. The stream is most suitable for species tolerant of harsh environmental conditions. This is reflected by current species composition throughout the majority of the upper part of the stream.

The waterfall at mile 2.2 (measured from the Minnesota River) of Minneopa Creek is the only natural barrier limiting upstream movement of fish, preventing recolonization or use of the upper reaches by certain species. Most of the upper reaches of the stream lie in a predominantly agricultural zone, where the stream and its corridor reflect those land management practices.

Presently, fish management practices are not being used in Minneopa Creek. Unless environmental conditions change, this is likely the most sensible management option**.**

Birds

A bird checklist, put together by the Regional Interpretive Specialist with assistance from students and faculty from Mankato State University is available to visitors of Minneopa State Park. The list consists of 213 birds which are regular and casual species in or near the park. Regular species are birds that have been sighted in at least nine of the last ten years. Casual species are defined as birds that have been sighted in at least four of the last ten years. It is noted that some of the birds on the checklist were not sighted in the park, but were sighted within seven miles of the park in a similar habitat.

Reptiles and Amphibians

Several herpetological habitats exist in the park, but have not been surveyed. The following reptiles and amphibians (Table 9) have been known to exist within the park boundary, but their current status is unknown.

Table 9. Reptiles and amphibians known to exist in Minneopa State Park.

Common snapping turtle (special concern)	
American toad	Tiger salamander
False map turtle	Spring peeper
Plains garter snake	Gray treefrog
Bullsnake	Northern leopard frog
Common garter snake	Western chorus frog
Prairie skink	Smooth softshell turtle (River)
Blue racer	Spiny softshell turtle
Ringneck snake	Painted turtle
Milk snake	Common map turtle
Brown snake	
Redbelly snake	

CULTURAL RESOURCES

Park History

In late January, 1905, the Honorable Ezra Gates introduced a bill establishing the 54-acres of land surrounding Minneopa Falls as a state park and appropriating $5,000 for its purchase (see map page 45). Since the spot had been celebrated for over forty years for its natural beauty and had been used by the people of southern Minnesota as a public resort and gathering place, the project met with the hearty approval of the legislature and the public.

The Board of Trade of the city of Mankato passed a resolution approving the bill and commending Representative Gates for his action. Dr. J. W. Andrews, Thomas Hughes, and C. N. Andrews were appointed to inform the legislature of the need for this park and to otherwise aid in the passage of the bill and in procuring the land for a state park. On April 19, 1905, the bill was passed by the legislature.

In October of that year, Governor John A. Johnson, Attorney General E. T. Young, and State Auditor S. G. Verson met with the local committee of the Mankato Board of Trade, the owner, Mr. Orange Little, and others on the site of the proposed 54-acre park. They inspected the land and opened negotiations for its purchase. The eastern portion of the land, with the falls, was purchased for $3,500 in 1906 and the western portion was purchased for $1,600 in 1910.

Since 1910, the following additions have been made to the park, bringing the present state acquired ownership to 1068 acres:

1917 - 11.5 acres
1931 - 1.24 acres
1935 - $350 appropriated to purchase of additional lands
1947 - Land Exchange, net gain of 3.3 acres
1961 - Addition of approximately 23.9 acres
1967 - Northern part of park was added following an initiative by the people of Mankato (~925 acres?)
Extra Session 1967 - $102,000 appropriated to purchase lands
1969 - 10.7 acres gifted to park
- 24.2 acres gifted to park
1996 - 82.76 acres

Archaeology

Archaeological Resources. The terraces above the Minnesota River and tributaries of the Minnesota River such as Minneopa Creek possess a high potential for American Indian archaeological and cemetery sites. Eight American Indian lithic scatter sites are recorded either wholly or partially within the park's statutory boundary (see Historic Sites map below). The former location of the Minneopa Depot within the park has also been

assigned a site number (21BE253) and can also be located on the map on page 44.

The location of American Indian cemetery site (21BE1), the Hanel Mound Group, needs to be field verified by the Office of the State Archaeologist. File information suggests that the site lies in the northwest corner of the park, but its exact location has not been reevaluated recently.

Historic Features

Within and immediately adjacent to the park lay significant cultural resources. Review of the cultural resource files at the Office of the State Archaeologist and the Minnesota State Historic Preservation Office indicates the following recorded resources are present within, or partially within, the park:

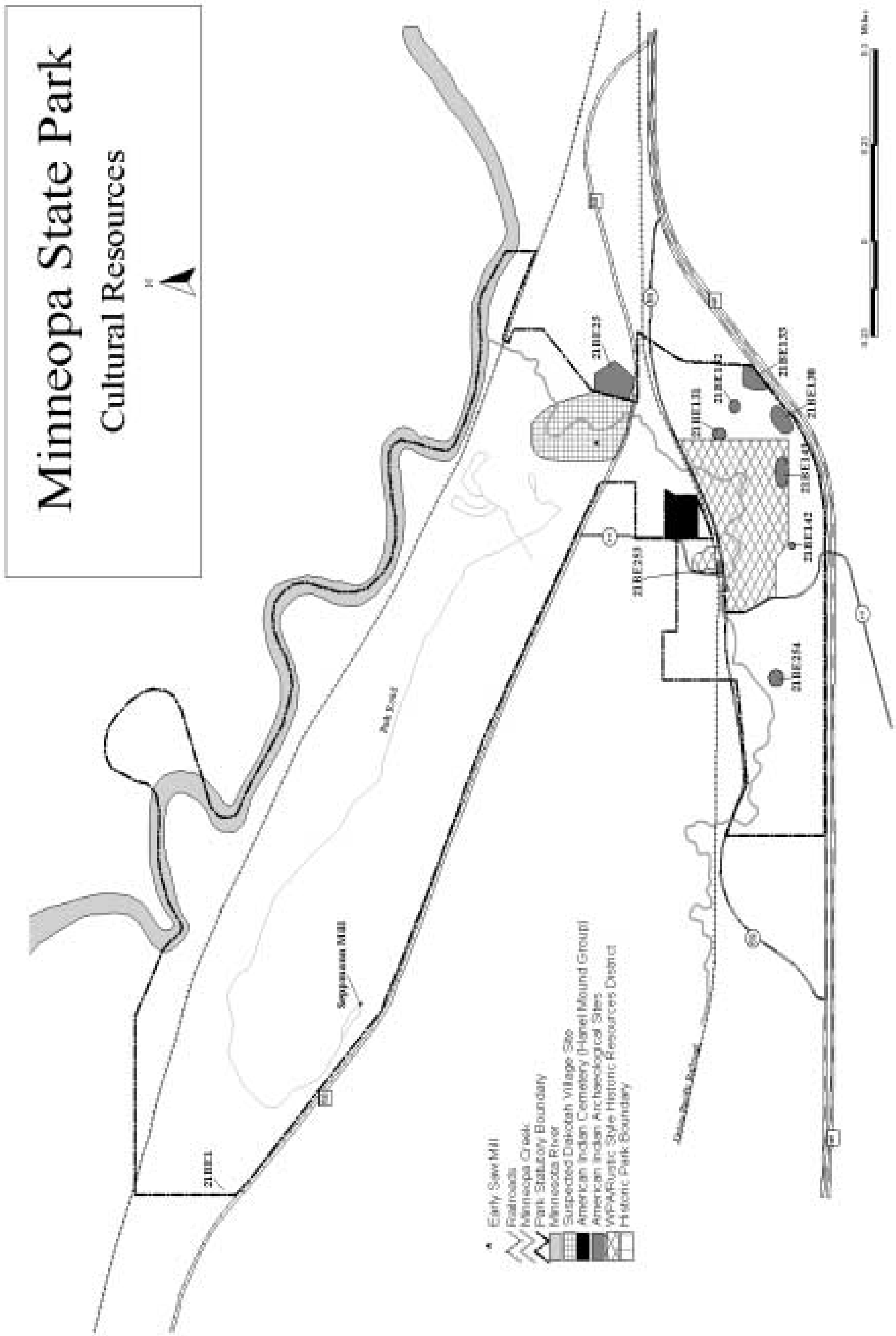
Seppmann Mill.

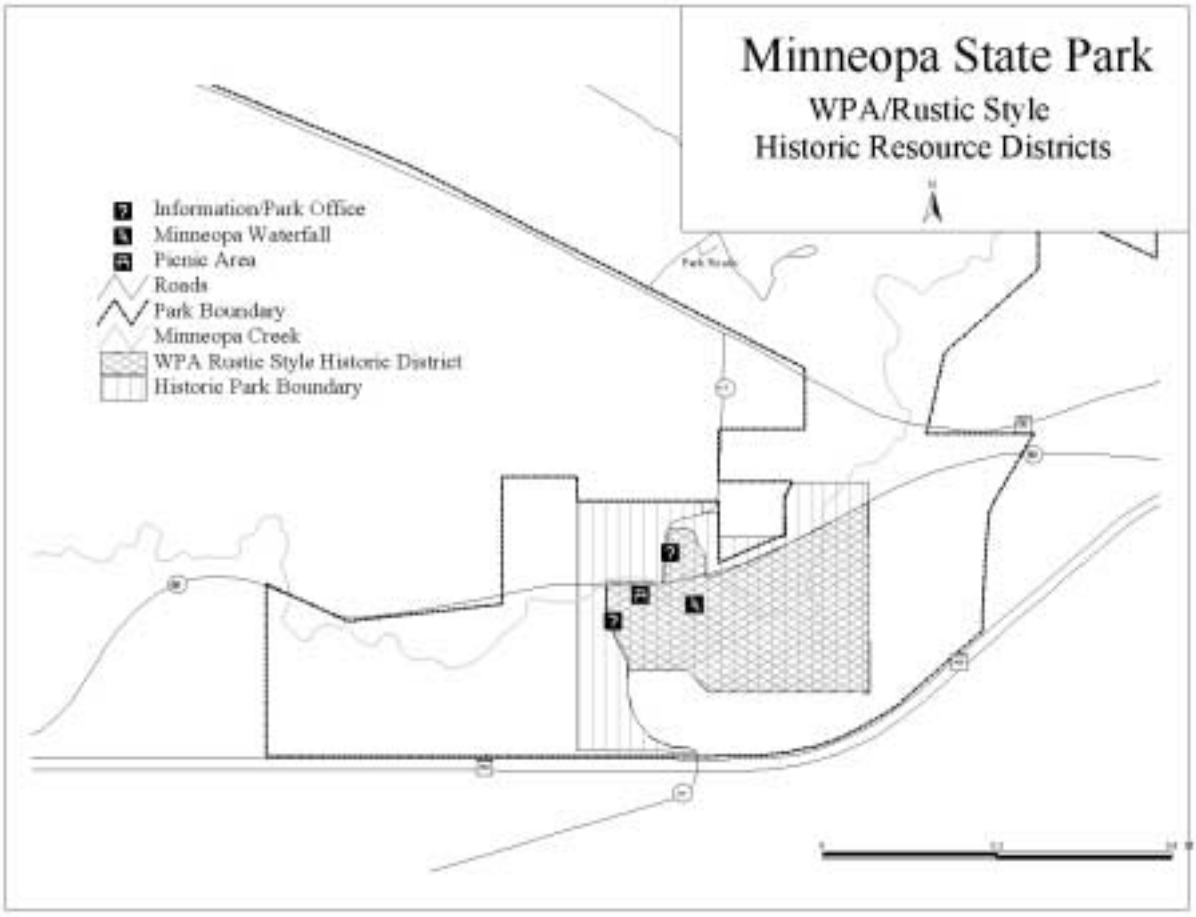
Seppmann Mill. A wind-powered grist mill constructed by Louis Seppmann and Herman Hagley between 1862 and 1864 and operated for 26 years. It is located in the north-western area of the park. (See map, page 44.)

Minneopa State Park WPA/Rustic Style Historic District. The Minneopa State Park WPA/Rustic Style Historic District includes that portion of the park that was developed by the Works Progress Administration (WPA) between 1937-1940 (Anderson 1988). The historic district encompasses 58 acres in the vicinity of the Minneopa Falls and park shop area. The resources that compose the historic district are significant because they are outstanding examples of rustic style construction featuring native sandstone and because they are associated with the Great Depression and a Federal Relief Program (the WPA).

Contributing to the historic district are the kitchen/concession building, latrine, pump house, drinking fountain, steps and retaining walls near Minneopa Falls, custodian's cabin, and the garage/office/tool room in the shop area. Construction of the picnic shelter in the falls area predates the WPA, yet it retains significance as part of the early development of Minneopa State Park (1915).

Kitchen/concession building, now used as an interpretive center.


Minneopa State Park
Cultural Resources
Early Saw Mill
Railroads
Minneopa Creek
Park Statutory Boundary
Minnesota River
Suspected Dakotah Village Site
American Indian Cemetery (Hanel Mound Group)
American Indian Archaeological Sites
WPA/Rustic Style Historic Resources District
Historic Park Boundary



Original Minneopa State Park. (Historic Park Boundary) The 105 acres that comprise the early boundary of Minneopa State Park (1905-1940) has been determined eligible for inclusion in the National Register of Historic Places as an example of an early state park that served a nearby urban area that retains high degree of historic integrity (Sluss and Arnott 1996).

V. ECOSYSTEM BASED MANAGEMENT, AND NATURAL AND CULTURAL RESOURCES MANAGEMENT

ECOSYSTEM-BASED MANAGEMENT

Ecosystem-Based Management is the process of managing for sustained ecosystem integrity through partnerships and interdisciplinary teamwork. Ecosystem-based management focuses on three interacting dimensions: the economy, the social community, and the environment. Ecosystem-based management seeks to sustain ecological health while meeting socioeconomic needs.

Ecosystem-based management requires that DNR interdisciplinary teams work with the public to develop and implement sustainability goals for entire ecosystems.

NATURAL AND CULTURAL RESOURCES MANAGEMENT

The goal of the natural and cultural resources management program in Minneopa is to protect and sustain significant natural, and cultural resource features of the park into the future.

The objectives and recommendations that follow are intended to provide general direction for the resources management activities that will be conducted in the park. Annual work planning meetings will use these recommendations to set short term goals and priorities. Some management activities are quite specific. In those cases, we are very familiar with the resources, and we know the steps needed to ensure their maintenance. Other resources we know less about; specific management actions will be developed as better information is obtained. Natural resources management will be dictated by soils, water, and other physical factors in the park. Cultural resources management will be influenced by known historical and archaeological features in the park, and by information that is obtained by future field surveys and literature searches.

NATURAL RESOURCES MANAGEMENT OBJECTIVES

Prairie Management Objectives - Although much of the original vegetation of the park was prairie, nearly all of the former prairie areas were destroyed either by heavy grazing or because they had been converted to crop land. Most of the former prairie inside the statutory boundary is now in state ownership, and is being managed, and restored. There is no one prescription that can be applied to all prairies, they must be managed on an individual basis.
Action: Practice adaptive management in prairie areas. Make annual management decisions based on successes and failures of previous activities.

Savanna Management Objectives - The savanna areas of the park are located on the edge of the prairie. They are a transition vegetation type found between the prairie and the northern hardwood vegetation types found in the deep ravines along Minneopa Creek, and the steep bluff above the Minnesota River. The savannas along with much of the prairie areas of the park suffered from heavy grazing with little natural understory, and almost no bur oak regeneration. Since the savanna areas are no longer being grazed, bur oak have regenerated resulting in a healthy mixed aged class bur oak understory. However, along with the bur oak, many of the northern hardwood species have also seeded into the savannas. Without active management the savannas will naturally convert to northern hardwood forests.

Volunteers collecting prairie seeds for replanting.

Action: Remove northern hardwood species and other invasive tree species that have become established in the savanna areas.

Action: Continuing prescribed burning savannas, and try to increase frequency.

Hardwood Management Objectives - The northern hardwood forests are concentrated along the steep valley walls of Minneopa Creek and on the steep slopes along the Minnesota River. Historically this vegetation type consisted of a fairly even distribution of elm, red oak, basswood, and sugar maple, with scattered hackberry, ironwood, and yellow birch. Most of the elm has been lost due to Dutch elm disease, and as old oak die off, the northern hardwood forests are gradually converting to more shade tolerant maple and basswood. Unless active hardwood management is initiated, they will convert to a solid maple basswood forest type.

Action: Work with area forester and regional parks resource management specialist to develop a management plan for the northern hardwood communities.

Action: Conduct periodic reviews and assess management activities to assure plan recommendations are having desired effects.

Floodplain Management Objectives- The floodplain forests are primarily vegetated with large cottonwood and silver maple. The soils are wet, frequently flodded, and are not suitable for development. Hiking and cross country skiing trails have been built in the past to provide access to the Minnesota River, but have always been destroyed by floods. At the current time trails are no longer being rebuilt, but the area is still being used by hikers. No specific management actions are being proposed for the floodplain.

Shade Tree Management Objectives - Both the campground and picnic area are enhanced by being located on sites with good stands of shade trees. However, with most other vegetation types in the park, unless they are actively managed their vegetation composition will change. The campground is located in an area that was once a prairie savanna. With out the presence of fire, an understory of both bur oak, and shade tolerant

tree species has started to grow. It provides valuable screening between campsites, but as the trees grow up, that screening will be lost. The picnic area is much different in nature, the vegetation is primarily an old sugar maple overstory with blue grass turf as the understory. Few young trees exist to replace the older trees when they eventually are lost due to age.

Shade trees in campground.

Action: Select the most desirable native shade tree and future shade trees in the campground, group camp area, and picnic area and manage for their future growth.
Action: Continue annual inspection for defects and potential hazards.
Action: Prune or remove where appropriate to assure visitor safety.
Action: Develop a planting plan for replacement of shade trees that have been lost due to natural mortality, and secure funding for implementation of the plan.

Turf Management Objectives - Turf grass is always hard to maintain under a dense canopy of shade trees. With the addition of foot traffic generated by the large numbers of picnickers, and campers it is even more difficult.
Action: Conduct periodic soil sampling and testing of nutrients, Ph, organic matter, and soil structure.
Action: Implement a program to enhance soil quality to favor turf growth.

Surface water outlet draining into park.

Surface Water Management Objectives - Surface water is a problem throughout the park. The physical characteristics that contribute to the surface water problems in the park are; much of the park has shallow soils over bedrock, it receives a lot of surface run-off from agricultural land and asphalt highway surfaces, and the park is lower than much of the surrounding land. There are no storm water retention systems in place on either the agricultural lands or on the highways, consequently the park gets most of the run-off.
Action: Continue active participation in the development of the Blue Earth River watershed plan to ensure the water problems Minneopa has are addressed.
Action: Work with Blue Earth County Engineer, and Minnesota Department of Transportation to review and possibly modify the altered drainage patterns which will result from County Road 90 (South Route) interchange construction.
Action: Surface road to campground to reduce dust and erosion impact on surrounding natural communities, and to reduce maintenance costs.

Action: Prairie area - determine whether run-off from new development along 69 is increasing soil deposition on prairie areas.
Action: Work with Blue Earth River Team to create additional onland storage of water above the Ulman property to reduce flow.

CULTURAL RESOURCES MANAGEMENT OBJECTIVES

Survey Objectives - The Minneopa area is rich in archaeological and historic resources, however much of the park has never been formally surveyed. In addition several of the archaeological and historic sites known from the literature have never been officially located on the ground.
Action: Survey for cultural resources in park use areas and on future additions to the park.
Action: Continue to survey for cultural resources in areas where facilities are being developed in the park, and in resource management project areas


Park office, listed on National Register of Historic Places.

Seppmann Mill Management Objectives- Seppmann Mill is the only wind powered mill in the state park system. Although the internal mechanism has been dismantled, the mill structure is still intact, and still in good shape. The long term goal for the mill is to restore the mechanical components of the mill inclucing the internal machinery and the wind sails. The short term goal is to maintain the structure, and provide interpretation.
Action: Maintain the building and grounds of the mill, and provide better interpretation, until the time comes when the mill is restored.

Historic Site Management Objectives - Minneopa State Park was one of the first parks in the system. Early development features of the park dating to between 1905 and 1917 are considered eligible for listing on the National Register of Historic Places. Park development done by the Works Progress Administration during the 1930s and early 1940s has already been listed on the National Register of Historic Places as the Minneopa State Park WPA/Rustic Style Historic District.
Action: Annually monitor the condition of buildings and structures that are on the National Register of Historic Places.
Action: Formally nominate the original Minneopa State Park Historic Area to the National Register of Historic Places.

Archaeological Site Location Objectives - There are two archaeological sites within the park that are documented in literature, but the description of their field location is not clear. Their exact locations should be reestablished in order that they receive protection.
Action: Reestablish the location of the Hanel burial mound group.

Action: Locate the Dakota Village site that is described near the mouth of Minneopa Creek.

Site Mapping Objectives - New methods of recording, and maintaining an accurate location of physical resources within parks has become available to resource managers in the last few years. One of the best is the Department of Natural Resources, Geographic Information System.
Action: Register the location and pertinent relational data for each cultural resource property on the Department of Natural Resources, Geographic Information System.

VI. RECREATION RESOURCES MANAGEMENT

RECREATION MANAGEMENT OBJECTIVES

The objective of the Minnesota State Park System is to provide appropriate recreational opportunities while maintaining the natural resources unimpaired for future generations. Any recreational objectives at Minneopa must fit within that guideline.

At Minneopa State Park, overnight visitors comprise a relatively small percentage of the total guests when compared to other State Parks with similar annual attendance. Of the total attendance at Minneopa, approximately 7% are overnight visitors, compared to 11% for parks statewide. This under representation by campers is likely a reflection of the lack of "water based" recreational opportunities. Minneopa camper stays tend to be short term and concentrated on weekends.

While most campers spend at least a portion of their stay in the falls area, many day users generally spend their entire visit at the falls. Most day users usually do not visit the portion of the park north of TH 68 where the campground and most of the hiking trails are located. With the current layout of the park this use pattern will probably continue.

1) Two roadways and a high ridge separate the two sides of the park creating both a physical barrier and a visual barrier.

2) The time of acquisition between the falls area becoming a park (1905) and the campground (1960's) has resulted in a perception, that these are actually two separate parks.

3) Based on experience of park management staff, the types of park users between the two sides tend to be different. Those who come to visit the falls are looking for a mowed, more developed type of setting. They are perhaps somewhat older, and are looking for a more sedate form of recreational experience. Those visiting the northern portion of the park want a physically demanding experience, are more inclined to be visiting to view wildlife, and appreciate a more natural setting.

Because of high use concentrated in a relatively small area, past management (and planning) efforts have attempted to "redirect" falls usage to the northern portion of the park or campground side of the park. In reality, given the above conditions, the falls area will continue to receive a concentration of visitors despite any management efforts to the contrary.

There are number of changes proposed during the planning process that, if implemented, would change this traditional use pattern. They include:

- When possible, develop facilities that are accessible by persons with disabilities. Everyone who visits Minneopa State Park should have the opportunity to benefit

from their experience in the park; therefore, all new and remodeled facilities will be designed to accessible to all park users.

- Expansion of the park upstream along the Minnesota River may allow additional types of uses that would attract a broader spectrum of visitors to that area.

- Increasing existing trail lengths resulting from this expansion would enhance the experiences of existing users, and increased usage would then be anticipated as the word spread.

- The addition of interpretive staff would introduce new users to the northern portion of the park, and the unique features it has to offer.

- A recent land acquisition upstream from the falls will provide opportunities for trail use away from the concentrated use area immediately adjacent to the falls.

- Moving the administrative office to the proposed location near the new south park entrance will place park staff in contact with more users who will then receive a better orientation to facilities. Currently large numbers of users enter the falls parking lot without having any contact with park staff.

- Establishment of a trail which links the falls area to the northern portion of the park would introduce new users to additional park resources. Crossing County State Aid Highway (CSAH) 69 and Trunk Highway (TH) 68 however makes this challenging.

- Expansion of the park "up-river" could provide vehicular access to the Minnesota River increasing the utilization of the river by park visitors. Additional trail and camping facilities may also be provided in the expansion area.

- Construction of a combination interpretive/trail center in the northern portion of the park where most of the trails are located would focus use on that area of the park.

PROPOSED DEVELOPMENT

OVERNIGHT FACILITIES

Campground Objectives - Add visitor parking in the campground. Currently there is no visitor parking in the campground. This results in too many vehicles parked on campsites. When asked to park in the trail-head parking lot, users complain that the walk is too far. Another campground parking problem frequently develops when campers drive to the sanitation building. During peak use periods this results in congestion along the roadway, damage to grassy areas surrounding the sanitation building and unsafe conditions for those trying to squeeze between improperly parked vehicles.

Action: Construct a small parking area adjacent to the campground sanitation building for use by visitors and by those using the building. Campsite A-27 should be deleted and the space used for parking if no other alternative is feasible.

Provide camper cabin exrerience. Camper cabins which have been built in a number of state parks have become increasingly popular and extend the camping season significantly.

Action: Build at least one camper cabin with the possibility of adding additional units in the future.

DAY USE FACILITIES

Internal Trails

Hiking Trail Objectives - Expand and renovate existing system. The existing hiking trail system in Minneopa State Park is only 4.5 miles in length with the majority of the trails located in the prairie area of the park. The existing trail in the Falls area is limited to a small loop around the waterfall gorge, and park visitors frequently ask for more hiking trails in the area. Recent land acquisitions make it possible to provide trails in some of the most scenic areas of the park along Minneopa Creek. Although the rugged topography makes trail construction difficult, the topography, the proximity to water, and the forested canopy also makes it desirable for hiking trails. See Proposed Trails Additions map, page 56.

Action: Add hiking trails in the waterfalls area of the park. Additional trails should be added upstream from the falls, and along the creek.
Action: Repair washed out loop trail along Minneopa Creek south of the waterfall.
Action: Add additional hiking trails along Minneopa Creek between Highway 68, and the Minnesota River.

Provide Minnesota River overlook. Minneopa State Park is located on the bluff overlooking the Minnesota River, however, there are no accessible views of the Minnesota River. The only place to get a view of the river is from the trail along bluff, and those views are limited. There are some spectacular overlook sites that would provide a visual link to one of the most beautiful, undeveloped stretches of the Minnesota River.

Minnesota River Overlook

Action: Build at least one overlook on the bluff along the Minnesota River. Provide turn-out parking, and signs from the main park road directing park visitors to overlooks.

Internal Trail Linkage Objectives - The way Minneopa State Park is physically cut up by roads, railroads, and large blocks of private property, it really functions as two separate parks. At the present time, the only link between the waterfalls area, and the main park area, is to either drive by car or to hike or bike along County Road 117. A trail link between the two main portions of the park would have a dramatic impact on the perceived size of the park. There is a corridor of state owned land between the waterfalls area and the remainer of the park, along Minneopa Creek. A hiking/biking trail link through this area would physically connect the two portions of the park, while at the same time it would provide access through one of the most scenic areas of the park.

Action: Link waterfall area, and main park area north of TH 68 with a trail for both bikes, and hiking. The preferred route would be to follow the creek, and cross over Highway 68 with a bridge.

Connecting Trails to External Trail Systems

Horse Trail Objectives - According to the Minnesota Horse Council, there is a large population of horse owners within 50 miles of the park with few places to ride (See Table 2, page 12). Because of the negative impacts caused by fragmentation of natural communities, erosion, weed introduction, and lack of space in the park it is has been impossible to provide horse trails within the existing park boundary. However, there are some new opportunities that look promising which may provide a good horse riding experience in the area if the impact on the park resources can be minimized. The most immediate is the possibility of park expansion with enough suitable space for horse trails. Another opportunity may be to connect to a proposed Minnesota River Trail. The third opportunity may be to develop "grants-in-aid" horse trail system in the local area with a connection to the park.

Action: Depending on resource assessment, when there is a significant park expansion, when the park is linked to the proposed Minnesota River Trail, or when local designated horse trails are developed outside the park, the option of providing horse trails inside the park should be reevaluated. Park staff should continue to work with horse owners and clubs to explore riding alternatives both within the park, and in the local area.

Proposed trail bridge location over Highway 68.

Mankato Area Trails Objectives - Several new trails have been proposed to be built in the Mankato Area. The first is a multi-purpose trail that will follow the a new highway being built that bypasses the south side of Mankato. This trail is known as the South Route Trail, and will connect Minneopa to the Red Jacket Trail,

Mankato City Trails, and the Sakatah State Trail. The other trail being proposed is known as the River Trail. This trail will also link Minneopa to all of the other trails in the area. It will follow TH 169, from the western end of the South Trail Route at Minneopa State Park, to the Land of Memories Park, where it will tie into the Mankato City Trail System.

Action: Provide connecting trails, as needed, from park facilities to county and local trails that tie into Minneopa. One proposed route would follow the stretch of County Road 117 from the Waterfalls to the county trail system now being built adjacent to Blue Earth County 90 (South Route). This section of road will be abandoned by Blue Earth County, redesigned and converted to a trail.

Minneopa State Park
Proposed Developement
N
Proposed Closing of
Road and Entrance
New Multipurpose Entrance Building (Trail Center,
Interpretive Center and Contact Station)
Relocate
North Entrance Road
Williams Nature Center
Established Hiking Trails
Proposed Hiking Trails
Williams Nature Center Trails
Proposed Road Additions
Railroad
Minneopa Statutory Park Boundary
Minneopa Creek
Minnesota River
Williams Nature Center and Trails
117
68
69
169
117
New Park Office/Contact Station
Convert Picnic Area
to Trail Rest Area
0.25
0
0.25 Miles

Minneopa State Park
Proposed Trail Additions
N
Dakota, Minnesota & Eastern Railroad
Union Pacific Railroad
Established Hiking Trails
Proposed Hiking Trails
Williams Nature Center Trails
Railroad
Minneopa Statutory Park Boundary
Minneopa Creek
Minnesota River
Williams Nature Center and Trails
Williams Nature Center
Develop a walking trail connection between Minneopa and Williams Nature Center
Link to Proposed Upper Minnesota Valley Trail
Trail Link to Williams Nature Center
Proposed Trail Bridges
Williams Nature Center
Bike, Hike, Ski Trail Link Between Waterfalls Area and North Park Area
Proposed trail connection to Minnesota River Trail in Mankato
Proposed Conversion of County Road 117 into a Trail Link to Southern BypassTrail (Hiking, Biking)
68
69
117
169
0.25 0 0.25 0.5 0.75 1 Miles

Williams-Minneopa Nature Center - Just to the east of the main portion of the Minneopa State Park is an area known as the Williams-Minneopa Nature Center. It is a small nature center operated by Blue Earth County. The nature center and the state park compliment each other very well. Currently county trails exist on state park property under an easement arrangement with Blue Earth County Parks. However, the recreational value of both facilities could be improved by linking them together with a hiking trail. Visitors to both the park and the nature center would have access to hiking trails in both units, providing them with more variety, and more opportunity to enjoy the scenic beauty of the Minneopa Creek ravine.

Action: Provide a link between Minneopa State Park and the Williams-Minneopa Nature Center with a hiking trail and a bridge over Minneopa Creek.

Proposed Upper Minnesota River Trail Objective - Since the late 1960's there have been proposals to extend the Minnesota Valley Trail from LeSueur up the Minnesota River to Ortonville. The proposals have recommended building a multi-purpose trail that would serve bicycle riders, hikers, and horses in the summer, and skiers and snowmobilers in the winter. A new proposal know as the Minnesota River Watershed Comprehensive Recreation Plan is currently taking shape, and could have a major impact on the park. Minneopa State Park is the largest state park on this stretch of the river, and would probably become a major access point if the trail is developed.

Action: Park staff should become involved in the planning of the Upper Minnesota River Trail to ensure the plans for the trail are consistent with the management plan for Minneopa State Park.

Waterfalls Picnic Area Objective -The falls picnic area is heavily used resulting in compacted forest soils which are prone to water erosion. Water coming off the surrounding hillsides is concentrated and directed on to these compacted soils producing gully and sheet erosion. Water flows across the existing parking lot carrying large amounts of gravel and depositing it in the grass covered picnic area. Numerous undesignated or "volunteer" trails traverse hillsides which are too steep to support foot traffic. These paths collect and funnel water resulting in down cutting, and scarring which results in increased sedimentation of Minneopa Creek.

Falls Picnic Area in Winter.

Action: Landscape the existing falls picnic area to include flattened picnic sites or terraces, catch basins, and water channels. Implement an ongoing vegetation and turf management program that will retain ground cover, hold soil, and concentrate use in the least sensitive areas.

Action: Rehabilitate scared hillsides and old hiking paths to their natural condition so that use is deterred and erosion is curtailed.
Action: Surface the existing parking area with a bituminous surface and install catch basins, storm sewers, and a sedimentation pond to prevent storm runoff from being discharged directly into Minneopa Creek. Use sediment catching and pollutant skimmer techniques.

Despite the popularity of viewing the falls, this park feature is currently not handicap accessible. The foot bridge that crosses Minneopa Creek above the falls has a series of steps at each end that prevents wheel chair access.


Foot bridge over Minneopa Creek.

Action: Construct ramps at both ends of the foot bridge over Minneopa Creek to make it accessible to people with disabilities.

Family reunions and other family oriented activities continue to bring a number of young children into the falls area with little in the way of facilities to entertain them. Playground equipment is frequently requested by parents of small children.

Action: Install commercially produced, rustic style creative play equipment.

VII. INTERPRETIVE SERVICES

INTRODUCTION

The Minnesota State Parks and Recreation's interpretive mission is "to provide accessible interpretive services which create a sense of stewardship for Minnesota's natural and cultural heritage by illuminating the changing relationships between people and landscapes over time."

As a division of the Minnesota Department of Natural Resources, the Minnesota State Park System seeks to accompolish the following: (1) promote increased understanding, appreciation, and enjoyment of natural and cultural resources in Minnesota, (2) assist in protecting each state park's resources, (3) to increase public awareness of critical environmental problems on a local, state, national and worldwide scope, as a major provider of environmental educational experiences, and (4) promote public understanding of, involvement in, and support for the Minnesota Department of Natural Resources and its Division of Parks and Recreation.

This chapter identifies and describes interpretive themes (or stories) that should be told about Minneopa State Park based on its natural, cultural and recreational resources. The resources and themes listed in this chapter reflect the importance of those stories as they fit in with the *Minnesota State Park System's Interpretive Services Plan* (1995).

Minneopa State Park has a high rating of resource significance with high visitor use throughout the year along with high seasonal peaks. This attendance merits programming four to seven days a week during heavy use periods throughout the year. To accommodate this demand the following actions are justified: (1) a full service interpretive center, (2) audio-visual programming, indoor displays and exhibits, (3) supporting interpretive facilities such as information stations, self-guiding trails, wayside exhibits, and multiple developed interpretive locations.

Minneopa State park is located in the **Minnesota River Prairie Landscape Region** in the southwestern part of the state. (See Regional Analysis, page 12.) This area is covered by gray, calcareous till deposited by the Des Moines Lobe of the Wisconsin glacial period. An original vegetation map compiled in 1930 by F.J. Marschner indicated the area's pre-European settlement vegetation consisted largely of mesic to dry prairie with many small islands of wet prairie.

The change in vegetation from the time of pre-European settlement demonstrates the most dramatic differences in cultural values and technologies in Minnesota. The Dakota inhabitants understood and thrived in the tall and mid-grass prairie of the area with its interspersed marshes, lakes, and streams. Today, extensive farming has replaced the prairie. Large mammals flourished on the prairie and the Indian hunting culture developed a dependancy on these animals. However, the soils were found to be especially suited to European agricultural values. The ground was flat, fertile and did not have to be cleared of trees before use. The U.S.-Dakota Conflict in 1862 marked the

beginning of European cultural dominance over this area and the expulsion of the Dakota. Today, almost all of the vestiges of the original flora and large fauna have been removed.

Landscape regions provide a reference point in time to interpret what resources were here when Europeans arrived, how interactions between people and the land affect each other, and why the landscapes look the way they do today.

INTERPRETIVE CLIENTELE

Groups Requesting Interpretive Programs

1. Elementary school children.
2. Middle and High School students.
3. College students.
4. Boy and Girl Scout leaders.
5. Civic organization.
6. Teachers on Earth Week.
7. Mankato Area Environmentalists.

Interpretive Services Target Groups

1. All park users to enhance their experience.
2. Those who are breaking rules and upon whom we are attempting to invoke behavior modification.
3. Visitors interested in native plant communities.
4. Visitors interested in geological and geomorphic land forms and forces.
5. Visitors interested in history.
6. Visitors interested in wildlife.
7. Visitors that we wish to educate about water quality issues in Minneopa Creek and the Minnesota River.
8. Visitors needing instructions (how to self register for camping, how to find the restroom, how much things cost, why the toilets don't flush).

INTERPRETIVE THEMES

Connecting Themes

Connecting themes are the common elements that tie the area together.

- Glacial activity shaped the landscape we see today.
- Minneopa State Park exists today because of past efforts to protect this area.
- What impacts have humans had on the environment? or How have people shaped the natural environment here?

Primary Themes

Primary themes are the main stories of the park. The Park's Primary themes are:

Cultural

- Who were the earliest people to live in the Minnesota river valley?
- How did the Indians use the Minneopa area?
- How did the Dakota people use the Minnesota river valley?
- How did European settlers change the land?
- What limited the Seppmann's milling success?
- What happened to the Minneopa town site?
- Why was Minneopa State Park created?
- How has modern urban development affected the park?
- What is the mission of Minneopa State Park?

Geologic

- How was the Minnesota river valley formed?
- How did glaciers shape the Minneopa area?
- How did Minneopa Falls form?
- We all live in a watershed.
- Where did all these boulders come from?

Biologic

- What is a prairie?
- What is an oak savanna?
- Fire: natural necessity or natural disaster?
- Clean water is essential for all life along the Minnesota River.
- Land use affects water quality and quantity
- Non-native plants degrade native ecosystems.
- Can we restore Minneopa's native plant communities?
- Can the Loggerhead Shrike survive in Minneopa State Park?
- Bluebirds make a comeback.
- All life is connected to everything else.
- What snakes live in Minneopa State Park?
- What butterflies live in Minneopa State Park?
- What insects live in Minneopa State Park?
- Where are the Coyotes?

Recreation

- The best methods for observing wildlife in Minneopa State Park.
- Tips for Cross-country skiing at Minneopa State Park.
- You can take great photos of Minneopa State Park.
- Tips for canoeing on the Minnesota river.
- Tips for fishing on the Minnesota river.
- Tips for bicycling in Minnesota river country.

Management

- Fire is an important part of prairie and savanna management at Minneopa.
- Why are herbicides used on the park's grassland areas?
- Why are the cedar trees being removed?

SUMMARY OF EXISTING INTERPRETIVE SERVICES

Presentations and Activities

The park has not had any full-time, seasonal or volunteer naturalists in the last ten years. Naturalist-led programs have not been a regular part of the park's operation during the last 15 years. However the park has sponsored several small events and programs. School groups use the park but they supply their own instructors. The regional naturalist has led some programs for school groups upon request.

Trails, Exhibits, and Publications

Publications
Bluebirds make a comeback.
Logger headed shrike's last stand?
Interpretive checklist for the birds of Minneopa.

Signs
Geologic and formation of the waterfall.
Seppmann Mill history.
Road signs that explain resources management in the prairie area.

Visitor Center exhibits
Early days of Minneopa.
Grasses of the Park.
Snakes.
Seasonal photographic display on wildflowers.
Old farm machinery.

Facilities

The building currently serving as a visitor center was initially built as a refectory in 1939, one of the many WPA projects of the era. The south half of this structure has been essentially gutted, a cedar facade was constructed over the old fireplace and moveable panels were erected displaying photographs that attempt to answer the most frequently asked questions of park users.

While the character of the building lends itself well to interpretation of the theme of that era, the facility is lacking functionality, space, and is in need of repair and modernization if it is to continue to function in its current capacity.

Area Interpretive Opportunities

Blue Earth County provides facilities, such as buildings, which are frequently reserved by educators to conduct class in an outdoor setting. Examples of this type facility can be

found at Williams Nature Center and at Brey Park. Blue Earth County also has developed a few self guided nature trails. The City of Mankato provides a summer Naturalist between the dates of April 15 and October 15 from 7 A.M. until noon and all day on Saturdays and Sundays at Rassmussen Woods. On the weekends regular programmed activities occur daily. During the week days this person leads tours of the area resources for groups who request this service. Mankato also provides interpretive signing and meeting facilities at Rassmussen Woods.

INTERPRETIVE SERVICES RECOMMENDATIONS

There are many opportunities for MN DNR State Park's, Wildlife, Fisheries, and Trails and Waterways, private environmental organizations and interested individuals to combine money and time to develop cooperative interpretation and informational programs and activities to the Mankato area. Listed below are some recommendations:

A year-round interpretive specialist should be considered for the Minneopa/Mankato/Bend-of-the-River area. This position is called for in the Statewide Plan as an area position for Minneopa, Flandrau and Fort Ridgely.

Interpretive Services
Action: Hire a full-time year round Environmental Interpretive Specialist.
Action: Revise the Grasses of the Park exhibit in the Visitors Center.
Action: Develop an interpretive publication about the park's resource management activities.
Action: Revise the Minneopa waterfall interpretive sign with a new color sign.
Action: Revise the resource management interpretive signs located on the mill road.
Action: Provide several small parking areas in conjunction with the existing interpretive displays along the road to the Seppmann Mill. The parking areas would allow vehicles to be parked off the road.
Action: Develop interpretive signage at the overlook at the Seppmann Mill describing Glacial River Warren, and the formation of the Minnesota River Valley.

VIII. FACILITY AND BUILDING MANAGEMENT

ADMINISTRATIVE FACILITIES MANAGEMENT OBJECTIVES

ADA Requirements - The Department of Natural Resources follows the American Disabilities Act of 1992 to make public facilities accessible. All DNR development follows the guidelines as described in the "American With Disabilities Act Accessibility Guidelines For Buildings And Facilities". In addition, recreational development also follows the recommendations and guidelines proposed in "Recreational Facilities and Outdoor Development Areas". These guidelines were developed to address those outdoor facilities that are not adequately covered in the buildings and facilities guidelines. The recommendations for recreational facilities were developed in 1994, but haven't been approved yet. The proposed guidelines are being followed as they are now. As any changes or revisions are made, they will be incorporated.

Contact Station/park Office Objectives - In addition to the two park visitor entrances (Falls area and north of campground area) the current administrative office is located near the maintenance shop. The public is served from this location whenever park staff are not assigned to the public contact stations. This location is difficult for park visitors to find and results in inefficient staffing, reduces visitor contact and makes management difficult.

Action: A new combined office and contact station is currently being planned for the falls area of the park. Construction is scheduled to begin in 1998.

Maintenance Shop Objectives - The current maintenance shop has little or no room for storage. Additionally, there is only room for two vehicles to be stored inside during winter months while other vehicles must remain outside. Only one of the two existing bays has enough vertical clearance to service large park vehicles indoors.

Action: Build an unheated storage building south and east of the existing shop building to provide additional space for storage and equipment protection.

Park Road Objectives - Construction of a new park entrance road to the waterfalls area of the park is going to begin in 1998. This new road and bridge over Minneopa Creek is being built as part of a realignment of County Road 69, and Minneopa Creek. The realignment of County Road 69 is being done to eliminate two bridges over Minneopa Creek where the existing road crosses the creek. As park of the realignment, a new entrance road is being built approximately one quarter mile west of the existing entrance. The new entrance should reduce congestion near the waterfalls parking lot.

Action: Add a turn around loop on the new entrance road where the new contact station is going to be built.

Action: Expand waterfalls parking lot to accommodate parking for long recreational

vehicles

Current roads north of TH 68 are surfaced with crushed limestone gravel. Generally speaking, this is adequate for current use and actually can be considered desirable from the standpoint of maintaining a rustic setting with the surrounding native prairie environment. However, at the western end of the road, where it turns south to Seppmann Mill, it climbs a steep grade. This section of road constantly washes out with each significant rainfall. This results in high maintenance costs and hazardous working conditions for crews attempting to blade and grade the east bank which has no shoulder and drops off sharply. The west backslope of this road has a slope that exceeds a 1:1 ratio. This has resulted in periodic slumping onto the roadway after heavy rains. This will only continue to worsen unless corrective action is taken.

Action: Install bituminous surface on the section of roadway leading uphill to Seppmann Mill from the base of the hill to the point at the top where the grade again levels off.

Action: Stabilize the backslope of the mill road cut to the degree necessary to maintain the slope.

North Park Entrance Objectives - Redesign north park entrance off Highway 68 to improve access, entrance control, and administrative efficiency. The existing entrance and circulation pattern in the main park area, north of TH 68 is poorly designed, and can be improved relatively inexpensively. The existing entrance road leads directly from the contact station into the campground. A more desirable pattern would be to enter the day-use area of the park first, then lead into the campground area (See map, page 58). This type of arrangement reduces traffic in the campground, provides better access for day-users, provides better management control (it would be easier to close areas of the park that aren't being used), and it would allow management of a larger block of unfragmented prairie.

Action: Relocate north entrance road, so it accesses the north portion of the park directly across from where Co. Rd. 117 intersects TH 68. From there it would tie into existing park road near the Trail Center parking lot.

Trailer Dump Station Objectives - The campground is designed to accommodate large self-contained camping vehicles, but no facilities are presently provided in the park for dumping their holding tanks. The closest dump station is located in Mankato.

Action: Build a trailer dump station off the campground access road.

Multipurpose Building Objectives - During the planning process for Minneopa, both an interpretive center and a trail center were identified as facilities that would increase the day use value of the park. At the present time there is no trail center, and only a small interpretive display in an old refectory building located in the waterfalls picnic area. It is not suitable for school groups, and it is located a long way from the campground, and natural areas of the park.

The park needs a multi-purpose building located in the area of the existing trail head parking lot. It should be designed so it can serve as a trail center, and an interpretive center. It should also have enough space to serve as a contact station for the northern portion of the park. It should have enough space to provide basic interpretive center functions and enough room for conducting interpretive programs. The building should be winterized, include toilets, drinking water, and have picnic tables located nearby.

Action: Build new multi-purpose building so recreation use will increase in north portion of the park.

IX. PARK BOUNDARY

BOUNDARY MODIFICATION

State park boundaries are established by the Minnesota Legislature. Statutory boundaries serve to identify lands appropriated for inclusion in the park. The state does not have the authority to acquire park land, except from willing sellers, and landowners are not required to sell to the state. Inclusion in a park boundary does not limit what private land owners do with their property.


Old barn to be removed from recently acquired parcel of land.

Boundary modifications are considered during all state park management planning processes. Although this plan can recommend boundary changes, only the Minnesota Legislature can change park boundaries. All boundaries are legally described in Minnesota Statutes. When an addition to a park is considered, the DNR Division of Parks and Recreation will contact private landowners that would be within a proposed boundary and ask for their documented support. Appropriate local units of government will also be contacted for their support. Without the support of the community, the Division of Parks and Recreation will not request boundary changes from the Minnesota Legislature.

EXISTING STATUTORY BOUNDARY

The statutory boundary of Minneopa State Park contains 1215.65 acres. Of the statutory acres, 1068 acres have been acquired by the state, and 1.3 acres are owned by South Bend Township. The remaining 147 acres are privately owned in 20 parcels.

PROPOSED STATUTORY BOUNDARY OBJECTIVES

During the process of preparing the management plan for Minneopa State Park, a statutory boundary change was proposed by the planning advisory committee. The proposed statutory boundary would include two tracts of land along the Minnesota River. The first tract would include all land north of TH 68 between the western park boundary and just east of the Town of Judson (see map, page 71). The second proposed addition to the boundary is a tract of land just east of the park between TH 169, and the Minnesota River.

There are many reasons for supporting the proposed expansion. The Mankato area is one of the most rapidly developing areas in southern Minnesota. Recreation space in the Mankato area is already at a premium. The following are some of the reasons identified for supporting expansion of Minneopa State Park's statutory boundary.

Most of the proposed expansion is on the Minnesota River floodplain. Purchase of additional floodplain land would provide more protection of the Minnesota River from any future development that may have an adverse affect on the River's water quality. By restoring the original forest vegetation on the floodplain, the added park land would serve as a riparian filter, filtering out pollutants carried by surface run-off before they get to the river. Revegetating the floodplain would provide additional wildlife habitat in the area, and it would reduce wildlife habitat fragmentation.

In addition to the environmental benefits, the expansion would provide more space for outdoor recreation. Although the existing park is over 1200 acres in size, it does not have a lot of room for additional recreational development.

Much of the existing park is not suitable for development, or has limited recreational potential because of the railroad lines and highways that sever it. Minneopa State Park is one of the few natural public land areas along the Minnesota River in Blue Earth County. However, there is little access to the river provided within the existing park. Additional park land along the river would provide more space for river access, additional space for recreational trails, an equestrian trail head, additional camping opportunities, and more

opportunities for birding and wildlife observation.

Action: Purchase land within the proposed statutory boundary from willing sellers when sufficient funding is available.
Action: Accept donations of land within proposed statutory boundary.
Action: Expand Statutory Boundary by approximately (1474 acres) as proposed by the Park Planning Advisory Committee, and illustrated on previous page.

Future Statutory Boundary Changes
During the planning process for Minneopa State Park, a proposed statutory boundary change was made by the planning advisory committee, with the proposed changes submitted to the Legislature. All landowners that expressed willingness to be included in the proposed statutory boundary were included. All future boundary changes will be considered, and proposed changes will be evaluated on an individual basis.

X. OPERATIONS, STAFFING, AND COSTS

OPERATIONS AND STAFFING

Public use can become heavy at Minneopa State Park. Peak period thresholds are usually reached at least three weeks earlier than what is considered the norm within the system. An annual influx of "waterfall viewers" is experienced each spring as soon as snow melt begins. This combined with a Mankato State University population anxious for outdoor activity can result in large numbers of early spring park visitors before adequate staffing is on board.

Maintenance work being done on north contact station.

Additionally, a significant number of requests for interpretive presentations are currently being unmet. While the majority of these requests come in the month of May, this is the very time when Park administrative staff can least afford to divert time away from the demands created by seasonal startup, and the early influx of park visitors. While the number of special requests decreases with the end of the school year, the need to "tell the park story" continues throughout the year. This need has taken on additional significance with the work currently being done on the Minneopa Creek Watershed. If the multi-purpose trail center/visitor center/campground contact station is constructed an even greater interpretive demand can be anticipated.

Minneopa is scheduled to be connected to the Sakatah Corridor Trail System. Initially the park will be linked through the Mankato South Trail Route and the Red Jacket Trail, and then, very likely by way of a corridor that parallels Minnesota State Highway 60 and finally, along an abandonment of the DM&E Railroad line. Connections will most likely lead to a very significant increase in park use by both bicyclists and hikers. The need for additional staffing hours will undoubtedly result.

Any other added facilities such as horseback trails may also require additional staffing. For example, staff may have to work with horseback riders and volunteers to maintain additional trails and facilities. As facilities are added, staff hours also usually increase.

Lastly, and perhaps most significantly, the proposed boundary expansion, would more than double the physical size of the existing park. While acquisition will not occur all at once, as parcels are added the workload will increase proportionally. Resource management needs, enforcement needs and trail maintenance needs will all increase significantly. Additional staffing hours will be required for the additional infrastructure and also to meet the needs of the additional park users sure to result from this expanded

resource base.

Staffing patterns and levels in state parks are constantly being adjusted. As park use changes, and new facilities are added, adjustments are made. New facilities should be targeted at the most critical needs in the park. Budgets are expected to continue to be fairly tight for the foreseeable future, so facilities being designed for the park should carefully designed to minimize staffing costs.

COSTS

Operational Costs

If all of the actions and recommendations in this park plan were implemented, the park's annual operational costs would increase dramatically. The level or amount of this increase is difficult to estimate because many of the recommendations are too general to estimates on at this time. However, the increase in staffing outlined in the previous section combined with a review of the development projects outlined below, suggests the parks annual operating budget could increase by 50 to 60%.

Lawn mowing, one of the many ongoing operational activities in the park.

Development Costs

The following list represents those actions which have development cost implications. The total cost to implement these actions is estimated at 1.4 million (in 1997 dollars). This estimate was generated as part of the planning process and based on previous construction costs.

1. Survey for additional biological and cultural resources in existing and new properties.
2. Link falls area with north area via trail and bridge over CSAH 68.
3. Develop connecting links to county and local trails that tie into Minneopa.
4. Connect Minneopa and Williams Nature Center with a trail and bridge over Minneopa Creek.
5. Landscape existing falls picnic area and implement water erosion measures.
6. Rehabilitate scarred hillsides and old hiking trails to original natural condition.
7. Surface falls parking area with bituminous surface and install water catch basins.
8. Construct handicap access ramps at both ends of falls bridge.
9. Install rustic play equipment at falls picnic area.
10. Construct small parking areas adjacent to interpretative displays along mill road.
11. Develop and construct additional non-personal interpretative signing at Seppmann Mill site.
12. Construct office, contact station and additional parking at new falls entrance.

13. Construct an unheated storage building south and east of the existing maintenance shop.
14. Install bituminous surface on Seppmann Mill hill.
15. Stabilize back slope of mill hill road cut.
16. Construct a small visitor parking lot in the campground.
17. Build one or more camper cabins.
18. Relocate north entrance road.
19. Construct a trailer dump station.
20. Build a visitor center/trail center/contact station on the north side.
21. Repair washed out trail loop around Minneopa Falls.
22. Build one or more interpretive overlooks on the bluff along the Minnesota River.
23. Develop horse trails and related facilities if targeted conditions are met.
24. Develop entrance signs at both north and south entrance portals.

Although the above list of projects has been identified as part of the planning process, they may or may not be funded depending on how they are ranked against all statewide project requests.

XI. PARTNERSHIPS WITH THE COMMUNITY

Partnerships with local units of government, volunteer groups, local schools, and Mankato State University are an ongoing and important aspect of working with the community. Existing partnership projects include:

- Work with Riverbend Striders to conduct volksmarch and March For Parks events dating back to long before the Division of Parks ever had a volksmarch program (nearly 20 years). The proceeds from these have been donated to the park.

- Work with the Mankato Canoeing and Paddling Club, Minnesota River Valley Mudders and others to conduct clean up days each spring in the park.

- Work with Blue Earth County chapter of Minnesota Pheasants Inc. which has contributed over $160,000.00 over the past 11 years for land acquisition, native grass seeding, tree planting, and wetland restoration both within and outside of the park. Projects have included private lands, Division of Wildlife parcels, Blue Earth County Parks parcels as well as restoration efforts at Minneopa. For the past 6 years, board members have conducted the only private lands native grass burning program known to exist in the area.

- Work with Minnesota Pollution Control Agency, Crystal - Loon Recreation Association, Lake Crystal Welcome Memorial Schools, area citizens and other DNR staff to complete a Phase 1 Clean Water Partnership for Crystal, Loon and Mills Lakes. This chain of lakes outlets feed into Minneopa Creek.

- Work with Mankato State University on a variety of tasks including job fairs, class presentations, GIS data development and sharing, and development and employment of Parks, Recreation and Leisure Services resource management students.

- Work with Blue Earth County Soil and Water Conservation District, Blue Earth County Environmental Services, Lake Crystal Welcome Memorial Schools, Mankato State University Water Resources Center, and other DNR disciplines to develop a Local Water Plan for Minneopa Creek Watershed which includes implementation strategies for water quality and flow enhancement.

- Work with DNR Blue Earth River Team (BERT)/ Coordinator and U.S. Fish and Wildlife Service to implement stream bank erosion projects on segments of Minneopa Creek.

- Work with BERT Coordinator, Blue Earth County Environmental Services, Natural Resources Conservation Service, Mankato State University, Blue Earth County Soil and Water Conservation District and area citizens to develop an LCMR (Legislative Commission on Minnesota Resources) Grant proposal for a Minneopa Creek Watershed Educator, cost share on non-compliance septic

system upgrades and implementation of buffers and other BMPs (Best Management Practices) on private lands.

- Work with the BERT on projects within the park boundaries including conducting spring burns.

- Work with the Mankato Area Master Gardeners and BERT Coordinator to transplant native plant elements from construction impact zones to areas within the park.

- Ongoing work with Mankato State University students, citizen volunteers and BERT to collect native plant seed material for restoration of old field elements within the park.

- Work with Blue Earth County Sentence to Service crew and administration to implement a massive sumac control project. Served on the Sentenced to Service advisory board.

- Work with local Boy Scout Troops performing trail maintenance, seed collection and various other Eagle Scout projects.

- Work with area citizens, governments and agencies in development of this management plan.

Tourism

Private facilities should be promoted to help meet visitor needs for a variety of recreational activities.
Action: The staff will recommend private facilities, especially when the park is full, and find ways of cooperating with and complementing private facilities in the area

Action: Plan for increased use, however continue concentration of use to minimize ecosystem fragmentation is recommended.

Camper at Minneopa.

Action: Seek opportunities to promote bird and wildlife watching in the park and vicinity, and provide educational materials.

Action: Develop a Merchandise Plan for the park.

Action: Cooperate with area chambers and other area tourism groups to promote the area.

Volunteers

The unit plan and annual work plans will set directions for volunteer projects.
Action: Develop a volunteer manual for the park.

The general process for working with volunteers will be as follows:

Identification of volunteer appropriate projects. A list of projects will be available that volunteers can choose from. Groups or volunteers may approach the park manager with new volunteer ideas at any time. If the project is appropriate, and funding and staff time are available, the park manager will OK the project. If the project is not appropriate, the park manager will work with the volunteer(s) to modify the project if possible.

Reviews, resource assessments, and funding. The park will utilize volunteers and partnerships as much as possible. Their assistance provides a valuable service to the park, allowing many extra projects to be completed that could not be done by park staff alone producing long term benefits to the resources and the park. Occasionally the park manager may need to turn down a partnership proposal due to limited time, conflict with dates, funding, conflict with union contracts, or inappropriateness of the proposal. Volunteers and park staff will need to be flexible. Most volunteer project requests will be approved on a first come, first serve basis.


Orientation of volunteers before starting a park project.

Volunteer Application Process. When someone or a group has volunteered, a letter will be sent to them explaining the Minneopa Volunteer Program. A Volunteer Application will need to be completed to ensure that volunteers are covered by workman's compensation while working in the park. Volunteers can receive a special work permit for their vehicle if needed.

Project Responsibilities. When volunteers arrive in the park for a project, the park manager or staff person will take time to explain the project and give the necessary training on how to complete the project. Volunteers will need to sign-in and record the number of hours they have worked each day. At the end of the project/day volunteers and park staff should meet again to determine the status of the project. Park staff will help volunteers to become more self-sufficient once they are regular participants. At times, the park may need to send a volunteer to special training, or provide background reading material, information or training.

Recognition. The DNR Volunteer Program has a well established set of rewards (pins, cups, caps, and plaques, etc.). These should be presented to the volunteers as they earn them or at an annual Volunteer Recognition Event.

Future Volunteer Coordination. As the volunteer program at Minneopa continues to

grow, new schedules or routines may need to be adapted. Monthly volunteer meetings may be useful which could be working meetings, or just time to meet with the park manager to discuss upcoming projects, training or provide information. Volunteer coordinators may be required. For example, one volunteer may be in charge of helping with all trail projects and another volunteer may oversee all tree planting projects. The park may want to provide "Volunteer Opportunities Notebook" where park visitors can review the list of upcoming projects and sign up for specific projects.

As much as possible, schools should be involved year round on an ongoing basis so that students can see how projects they work on fit into the whole park process. The park staff and the schools should be a shared vision.
Action: Prepare a long range plan for volunteer projects and local school projects.

Partnerships

Encourage partnerships and sustainable farming options with park neighbors, area landowners, wildlife associations, conservation groups, lake associations, and others to promote ecosystem management on private property for wildlife habitat and watershed protection.
Action: Work with landowners within the park boundary and in adjacent areas so that land is managed to protect water quality, woodlands, wetland, and prairie habitat.

Action: Park staff should participate in local and regional planning efforts to sustain healthy ecosystems. Planning should begin at the landscape level to determine where opportunities are in the landscape to promote interior forest habitat and other natural community efforts.

Action: Park staff should continue working with groups active in water related issues such as the BERT, water plan, etc. Minneopa State Park should be an integral core of any plan that is developed.

XII. PLAN MODIFICATION PROCESS

State Park Management Plans document a partnership-based planning process, and the recommended actions resulting from that process. These comprehensive plans recognize that all aspects of park management are interrelated, and that management recommendations should also be interrelated.

Over time, however, conditions change that affect some of the plan recommendations (or, in extreme cases, an entire plan). Plans need to acknowledge changing conditions, and be flexible enough to allow for modifications as needed.

For the purpose of this plan, we will differentiate between less controversial plan revisions, and major plan amendments. Minor plan revisions can generally be made within the Division of Parks and Recreation. If a proposed change to a management plan meets any of the criteria below, it must follow the Plan Amendment Process. To maintain consistency among the plans and processes, all revisions and amendments should be coordinated through the Division of Parks and Recreation planning section. Requests for planning assistance should be directed to the Division of Parks and Recreation Planning Manager at the central office.

MAJOR PLAN AMENDMENTS

CRITERIA FOR MAJOR PLAN AMENDMENTS

If a proposed change meets any of the following criteria, it must be approved through the management process below.

The proposed change:

1. Alters the park mission, vision, goals, or specific management objectives outlined in the plan; or
2. Is controversial among elected officials and boards, park user groups, the public, other DNR divisions or state agencies; or
3. Directly affects other state agencies (e.g., Minnesota Historical Society).

MANAGEMENT PLAN AMENDMENT PROCESS

1. Division of Parks and Recreation Initial Step: Review plan amendment at the park and regional level. Determine which stakeholders potentially have a major concern and how those concerns should be addressed. If the major concerns are within the Division of Parks and Recreation, the issue should be resolved within the division. Review the proposed approach with central office managers.

2. If the proposed change issue involves other DNR Divisions, the issue should be resolved by staff of involved divisions and approved by the Division Directors. This may require one or two area/regional integrated resource management team meetings. The Division Directors will determine whether the proposed change

should go through the departmental review process.

3. If the proposed issue change involves other state agencies, the issue should be resolved by staff and approved by the appropriate Division Directors.

4. If the proposed change is potentially controversial among elected boards, park user groups or the public, the park advisory committee should discuss the proposed change, and attend an open house forum that is advertised in the local and regional area. Following the open house, the Division of Parks and Recreation Director will determine whether the proposed change should be reviewed by the department.

5. All plan amendments should be coordinated, documented, and distributed by the Division of Parks and Recreation planning staff.

PLAN REVISIONS

If a plan change is recommended that does not meet the amendment criteria above, and generally follows the intent of the park management plan (through mission, vision, goals, and objectives), the Division of Parks and Recreation has the discretion to modify the plan without a major planning process.

REVISIONS RELATED TO PHYSICAL DEVELOPMENT CONSTRAINTS AND RESOURCE PROTECTION

Detailed engineering, and design work may not allow the development to be completed exactly as it is outlined in the plan. A relatively minor modification, such as moving a proposed building site to accommodate various physical concerns, is not uncommon. Plans should outline a general direction and document the general "areas" for development rather than specific locations. For the most part, plans are conceptual, not detail-oriented. Prior to development, proposed development sites are examined for the presence of protected Minnesota Natural Heritage Program elements and historical/archaeological artifacts. If any are found, the planned project may have to be revised to accommodate the protection of these resources.

PROGRAM REVISIONS

The resource management section and interpretive services section of the plan should be updated periodically as needed. The Division of Parks and Recreation's Resource Management and Interpretive staff will determine when an update is needed, and coordinate the revision with the park planning section. Program sections should be rewritten in a format consistent with the plan as originally approved by the DNR. To retain consistency, park planning staff should be involved in chapter revision review, editing, and distribution.

XIII. BIBLIOGRAPHY

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