# Sibley State Park

# **Management Plan**





Sibley State Park Management Plan State of Minnesota Department of Natural Resources Division of Parks and Trails

This management plan has been prepared as required by Minnesota Statutes Chapter 86A.09. For more information on this management plan please contact any of the following project participants from the Division of Parks and Trails.

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The Minnesota Department of Natural Resources, Division of Parks and Trails would like to thank all who participated in this management plan process, especially members of the Citizen Advisory Committee (see below) and the Sibley State Park Improvement Association.

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## Department of Natural Resources Approval of the Sibley State Park Management Plan

*Minnesota Statutes* 86A.09, Subdivision 1, requires that a master plan be prepared for units of Minnesota's outdoor recreation system, including state parks and state recreation areas. Sibley is one of the oldest state parks, established in 1919, but largely developed in the 1930s by the Veterans Conservation Corps.

The Minnesota Department of Natural Resources worked in partnership with Minnesota citizens and an interdisciplinary resource team to develop a management plan for Sibley State Park.

The management plan was approved by the Division of Parks and Trails management team and the Southern Region Management Teams.

Rapivers

Erika Rivers Assistant Commissioner

Date

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# **Executive Summary**

This plan documents the work of a 12-month planning process and sets the general direction for the management of Sibley State Park for the next twenty years. These recommendations are the result of a collaborative planning process involving a citizens advisory committee that included recreational users, local businesspeople, members of the Sibley State Park Improvement Association, park and regional staff, and others. Specific management prescriptions and operational details may change as new information becomes available or as budgets change. It is the responsibility of park and regional staff, along with Minnesota's citizens, to determine appropriate priorities and actions needed to implement the plan's recommendations.

## **Park Description**

Sibley State Park, over 2,500 acres in size, is one of the largest and most popular parks in west-central Minnesota, with almost 250,000 annual visits. Sibley is one of the state's oldest parks, established in 1919, but was largely developed in the 1930s by the Veterans Conservation Corps. Mount Tom, one of the highest points within a 50-mile radius, offers views of a patchwork of forest, farmland, prairie knolls, and lakes. Summer visitors enjoy swimming, boating, and fishing on Lake Andrew. Visitor facilities include 18 miles of hiking trails, seven miles of horse trails, and a combination of paved and on-road bike trails, as well as winter cross-country ski, snowshoe and snowmobile trails. A canoe route invites visitors to explore the natural shorelines of Henschien and Swan lakes. The park offers several campgrounds, camper cabins, a modern group center, a primitive group camp, a horse camp, picnic areas, and interpretive programs year-round.

## **General Directions and Recommendations**

This summary highlights major recommendations in the plan. More detailed recommendations and discussions can be found in the individual chapters of the plan and a complete list of the recommended actions is found in Appendix A.

**Natural Resources:** Options for managing and restoring the park's oak savanna, forest and prairie ecosystems are important elements of the plan. Sibley's landscape has changed greatly since the presettlement period – most of the park's land was farmed in the early 20<sup>th</sup> century but then reverted to woodland. Fire suppression allowed dense hardwood forests to flourish. Restoration efforts will focus on the best locations for prairie and savanna – hilltops and southfacing slopes above certain elevations in the eastern half of the park. Existing remnant prairies will also be expanded and prescribed fire will be used as a management tool. Another priority is to identify, evaluate, and manage mature and old-growth forest stands and legacy trees. In particular, work to preserve

the relatively unbroken forest canopy on the west side of the park between Swan, Henschien and Middle lakes.

**Cultural Resources:** This section of the plan discusses the need to protect the cultural resources of the Veterans Conservation Corps Historic District at Lake Andrew, including seeking context-sensitive solutions to shoreline erosion, beach recession and campground overcrowding. Vegetation will be managed throughout the park to restore historic scenic vistas.

**Interpretation:** Because of Sibley State Park's high resource significance and high visitor use year round, the park maintains a robust interpretive program with a full service interpretive center. Interpretive themes include 1) glacial processes, plant communities and wildlife; 2) human presence and impact on the park's area; 3) outdoor recreation and nature skills. Recommendations include a focus on outdoor skills programs such as the "I Can" series, on value-added (fee-based) skills workshops, and on outreach activities and programs that target underserved populations, including youth, young families, and minority communities.

**Recreational Use and Visitor Services:** This section of the plan emphasizes the expansion of some facilities to meet the changing needs and interests of park visitors without compromising the natural environment. One new direction is the opening up of the park's largely undeveloped west side to low-impact visitor activities that are compatible with its high-quality natural resources. Other recommendations include facilitating the connection of the Glacial Lakes State Trail to and through the park, improvements to the Lake Andrew beach area and its historic resources, addition of camper cabins, and potential campground expansion.

**Park Operations:** This section of the plan focuses on staffing and funding levels and enforcement issues. One primary conclusion is that new development project recommended in the plan, such as a new group camp, would increase park visits, which would increase operational costs, as well as revenues. It will be important to ensure that staffing is adequate to meet visitor expectations and protect the park's natural and cultural resources.

**State Park Boundary Expansion:** Sibley State Park includes 3,014 acres within its statutory boundary. Of that acreage, 2,512 acres is owned by the State of Minnesota, while 502 acres within the boundary remain in private ownership. The plan proposes expansions of the statutory boundary in several areas: near the southeast corner of the park in order to facilitate the connection to the Glacial Lakes State Trail, on the south and east side of Middle Lake, between Norway and Middle lakes, and on the north side of the park. Extension of a park's statutory boundary simply means that DNR staff may negotiate with interested property owners in that area.

April 2013

# Introduction

# **Park Overview**

Sibley State Park, over 2,500 acres in size, is one of the largest and most popular parks in west-central Minnesota, with almost 250,000 annual visits. Sibley is one of the state's oldest parks, established in 1919, but was largely developed in the 1930s by the Veterans Conservation Corps. Mount Tom, one of the highest points within a 50-mile radius, offers views of a patchwork of forest, farmland, prairie knolls, and lakes. Summer visitors enjoy swimming, boating, and fishing on Lake Andrew. A canoe route invites adventurers to explore the natural shorelines of Henschien and Swan lakes. The park offers several campgrounds, a modern group center, a primitive group camp, horseback camps, picnic area, and interpretive programs year-round.

Sibley State Park's boundary, land base and visitor facilities have changed significantly since the last management plan was completed in 1979. This new plan addresses development and preservation opportunities in the largely undisturbed western half of the park, the connection of the Glacial Lakes State Trail to the park, improvements to the beach area and its historic resources, addition of camper cabins, and potential campground expansion. Options for managing and restoring the park's oak savanna, forest and prairie ecosystems are important elements of the plan.

## Resources

Sibley State Park is located within a glacially formed moraine, an area characterized by a lake-studded, rolling landscape. Glacial deposits in this region are among the deepest in the state, up to 400 feet deep in places. The region's original vegetation consisted of prairie openings within a northern hardwood forest (primarily oak to the south and west and maple-basswood to the north and east). The park lies within one of the narrowest vegetational transition zones in North America: from prairie to deciduous forest to coniferous forest.

Because of the park's hilly topography and long history as a recreational preserve, many important vegetative communities have survived there that are not found elsewhere within its ecological region.

Long before Sibley State Park was established, the Lake Andrew beachfront and present-day campground offered equally hospitable places for native people to camp during the Late Woodland period (500-1000 CE). The summit of Mount Tom, 150 feet above the level of Lake Andrew, was the site of Dakota Indian camps and councils. The park is rich in archaeological remains, although these have not been comprehensively inventoried to date.

## Park History and Legislation

In the early years of the 20<sup>th</sup> century, Mount Tom was a popular picnic spot, and local landowners and tourism promoters strongly favored its designation as a park. Their strategy was to initially establish a game reserve and then campaign for park designation.<sup>1</sup> In 1917 the Monongalia Game Preserve was established, and a visit that year by game and fish commissioner Carlos Avery lent support for park designation. In 1919, bills were introduced calling for creation of Sibley State Park. The park was actually authorized through the 1919 appropriations bill, which included \$25,000 for purchase of so much of section 35, Colfax Township, and section 2, Lake Andrew Township, as the game and fish commissioner might deem "desirable and necessary" for park purposes. Supervision of the new park was vested in the game and fish commissioner; however, Kandiyohi County was permanently obligated for all maintenance of the park, which then comprised 356 acres, with about a mile of shoreline on Lake Andrew and a corridor connecting to Mount Tom.

The requirement for county maintenance was lifted in 1931, and small appropriations were made for the park in subsequent years. However, most park development occurred as a result of the Veterans Conservation Corps development projects between 1935 and 1938.

Park acreage did not increase significantly until 1957, when a gradual expansion began. Almost every legislative session from then until 1973 authorized additions to the park, with particularly large additions in 1969 and 1973. The 1973 bill substantially enlarged the park's statutory boundary and brought in much of the wooded land adjacent to Middle, Norway and Games lakes. Recent legislation has focused on the Glacial Lakes State Trail and its extension to the park.

<u>Legislative Record</u>: <u>1919 c 463</u>; <u>1931 c 292</u>; <u>1957 c 63</u>; <u>Ex1959 c 90 s 4</u> subd 2; <u>Ex1961 c 60 s 4</u>; <u>1963 c 790 art 5 s 1</u> subd 1 (15); <u>1965 c 810 s 9</u> subd 5; <u>1967 c 787 s 3</u> subd 18; <u>1969 c 524 s 2</u>; <u>1969 c 879 s 1</u> subd 11; <u>1973 c 628 s</u> <u>1</u>; <u>1974 c 406 s 79</u>; <u>1980 c 489 s 1</u> subd 10; s 2; <u>2000 c 486 s 2</u> subd 6

# Sibley State Park's Role in the State Park System

Sibley State Park is noteworthy for its diverse natural resources, which include natural communities such as oak savanna, prairie, and old growth forest, and several lakes that provide a range of aquatic habitats. The CCC/Rustic Style historic district at Lake Andrew preserves the history of an important era of public works and park development.

<sup>&</sup>lt;sup>1</sup> Information in this section is drawn from Roy Meyer, *Everyone's Country Estate: A History of Minnesota's State Parks*, 1991, and from legislative records.

Sibley is heavily used by people from the Willmar – New London area, but also, because of its central location, by visitors from around the state and by travelers passing through the state. Sibley's extensive lake frontage is rare in central Minnesota, where most lakeshore is privately owned. As Roy Meyer's history of the state park system states, "It fills a niche in the state's park system that needs to be filled. Not so environmentally fragile as some of the parks in the southeast and the northeast, it can stand relatively heavy recreational use without serious damage, and yet it offers the visitor much that cannot be found elsewhere on public land in the west central part of the state."<sup>2</sup>

# **Planning Process**

The management plan is a 20-year strategic vision for the park. It guides the development of facilities and management of unit resources. *Minnesota Statutes*, Section 86A.09 requires a management plan be developed for certain units of the outdoor recreation system – including state parks and recreation areas. The DNR must prepare and approve a management plan prior to requesting money from the Minnesota State Legislature for the construction of new facilities or other development.

Management plans are developed through an open public process. Division staff and planners work with other Department of Natural Resources (DNR) staff, other agencies, local government officials, local legislators, and citizens during the planning process.

A citizen advisory committee (CAC) provided input during the planning process. The CAC was made up of representatives from the local communities, the Sibley State Park Improvement Association, other park users, and interested citizens. The committee met six times during the planning process. They reviewed information, provided input on park management issues, suggested park improvements and reviewed draft recommendations for the plan.

An interdisciplinary group of technical advisors from DNR's various divisions also contributed to and reviewed the plan.

# **Public Input**

An initial open house was held on October 18, 2011. About 35 people attended and commented on issues that the plan update should address. Many comments focused on the desire for horse trail and campground improvements. The Sibley State Park Improvement Association also suggested a range of improvements. Many of these suggestions have been incorporated in this plan.

<sup>&</sup>lt;sup>2</sup> Roy Meyer, Everyone's Country Estate: A History of Minnesota's State Parks, Minnesota Historical Society Press, 1991.

An on-line survey was also made available to park users during the planning process; the results are summarized in Appendix B.

The draft management plan was released for public comment on October 31, 2012 and was available for a 30-day period. During this period an open house was held at the park, on November 13, 2012, to review and discuss the draft management plan. About 25 people attended and commented on the draft. Comments were also received by e-mail. All public comments are kept on file at the DNR Central Office and are summarized in Appendix B.

## **Mission and Vision Statements**

## Minnesota Department of Natural Resources Mission

The DNR has a three-part mission that encompasses its interactions with the environment and the public:

The mission of the Department of Natural Resources is to work with citizens to conserve and manage the state's natural resources, to provide outdoor recreation opportunities and to provide for commercial uses of natural resources in a way that creates a sustainable quality of life.

## Parks and Trails Division Vision

The Division of Parks and Trails is guided by this vision: To create unforgettable park, trail, and water recreation experiences that inspire people to pass along the love for the outdoors to the next generation.

The DNR's Division of Parks and Trails is also guided by the fundamental principles and strategic directions established by the *Parks and Trails Legacy Plan*, developed to guide how Legacy Amendment funds and traditional sources of funding should be spent for parks and trails of state and regional significance. The plan identifies four strategic directions:

- <u>Connect People and the Outdoors</u>: better develop Minnesota's stewards of tomorrow through efforts to increase life-long participation in parks and trails.
- <u>Acquire Land, Create Opportunities</u>: create new and expanded park and trail opportunities to satisfy current customers as well as to reach out to new ones.
- <u>Take Care of What We Have</u>: provide safe, high-quality park and trail experiences by regular re-investment in park and trail infrastructure, and natural resource management.
- <u>Coordinate Among Partners</u>: enhance coordination across the large and complex network of public, private, and non-profit partners that support Minnesota's parks and trails to ensure seamless, enjoyable park and trail experiences for Minnesotans.

## Vision and Management Principles for Sibley State Park

Over the next 20 years, Sibley State Park will continue to serve as an outstanding unit within the Minnesota State Park System, exemplifying best practices in resource and recreation management and providing high-quality visitor experiences.

Sibley State Park will be managed to meet the needs of current and future generations, guided by the following principles:

- Manage and enhance the park's natural, cultural and scenic resources.
- Preserve, restore, manage and interpret the natural communities found in the park, including oak savanna, prairie, and old growth forest communities.
- Continue to combat invasive species, both aquatic and terrestrial, and work to heighten awareness of the various species that threaten our native communities.
- Preserve, enhance and interpret the buildings, structures and landscapes associated with the CCC/Rustic Style Historic District, the focus of the park's development in the 1930s.
- Preserve opportunities to experience quiet, solitude, open spaces and dark night skies.
- Provide a diversity of sustainable trail opportunities, from remote walking trails to multi-use recreational trails, focusing on opportunities for shared trail use where appropriate.
- Consider priority land acquisitions and expansion of the park's statutory boundary to provide additional resource protection and recreational opportunities.
- Provide varied, unique, rewarding and diverse educational and interpretive programs to create a sense of stewardship among park visitors.
- Promote the diversity of the park's landscape, cultural resources and recreational attractions.
- Continue to promote group activities such as formal and informal group camping, family reunions, and various other forms of group gatherings.
- Increase the promotion of park activities and resources within surrounding communities. Continue to cooperate with city, county and regional agencies to link the park to other regional attractions, including county and city parks and cultural institutions, scenic byways and state/regional trails.

Statewide, Minnesota's, total population of racial and ethnic minorities is expected to grow by 112 percent. Comparatively, Minnesota's white population is expected to only grow by nine percent. By 2035, a quarter of all Minnesotans are projected to be nonwhite or Latino, compared to 14% in 2005.

Racial and ethnic. minority populations tend to participate less in most nature-based outdoor recreation activities, including visiting state parks and trails. In 2007, only 2.8 percent of state park visitors identified themselves as nonwhite and/or Hispanic/ Latino, while representing over 14 percent of the state's residents. The division will reach out to these groups and learn what opportunities and experiences they may be seeking, and what barriers they may face in visiting state parks and trails.

Minnesota State Parks and Trails: Directions for the Future, 2011

# **Regional Analysis**

This section of the plan describes the socioeconomic region in which Sibley State Park is located. The region is described in terms of population and regional recreation and tourism opportunities.

# **Regional Population Analysis**

Sibley State Park is located in northern Kandiyohi County, near the city of New London. Willmar, the county seat and largest city, is located about 18 miles south of the park. The cities of Willmar, Spicer and New London are linked by State Trunk Highway 23 and by the Glacial Lakes State Trail, which begins in Willmar.

The 2010 Census recorded a population of 42,239 for Kandiyohi County, a 2.5% increase over the 2000 population of 41,203. The population of Kandiyohi County is expected to increase steadily over the next several decades. By 2035, the population is projected to be 44,180, or an increase of 6.1% since 2005.

All of the cities near the park saw larger population increases in the 2000s than the county as a whole. New London's population grew by 17.3%, from 1,066 in 2000 to 1,251 in 2010. Spicer grew by 3.6%, from 1,126 in 2000 to 1,167 in 2010. Willmar saw an increase of 6.9%, from 18,351 in 2000 to 19,610 in 2010. The desirability of lakes-area housing likely affects population growth in all three cities, in addition to Willmar's growth as an employment center.

According to the State Demographic Center, Minnesota's population as a whole is projected to increase 18% from 2010-2035. Much of the growth is expected to occur in the suburban counties surrounding the metropolitan area of Minneapolis-St. Paul and along the major highway corridors to St. Cloud and Rochester. "Lakes regions" such as the Willmar – New London area are likely to experience growth in both vacation properties and year-round homes. The median age of the population will rise as well, with the fastest growth in the 65+ age group.<sup>3</sup>

At the same time, the ethnic and racial diversity of Minnesota's population is increasing. The state's Latino / Hispanic population increased by almost 75% during the 2000s. Kandiyohi County saw a 42% increase in the Latino population, which now comprises 11% of the county's total population. The city

3

http://www.demography.state.mn.us/documents/MinnesotaPopulationProjections200 52035.pdf

of Willmar's population is particularly diverse, with about 21% Latino and with a growing Somali population.

# **Regional Recreation and Tourism Opportunities**

There are a variety of recreational opportunities available in the areas surrounding Sibley State Park.

## State Parks, Recreation Areas and Waysides

There are five state parks, one state recreation area and one state wayside located within 50 miles of Sibley State Park. These units include Lake Carlos State Park, Glacial Lakes State Park, Monson Lake State Park, Lac qui Parle State Park, Upper Sioux Agency State Park, Joseph R. Brown State Wayside and Greenleaf Lake State Recreation Area. Recreation opportunities available in one or more of these units include hiking, biking, horseback riding, camping, wildlife watching, interpretive programs and water access.

## Scientific and Natural Areas (SNA)

SNAs offer wildlife watching and nature viewing opportunities. There are 13 SNAs within 50 miles of Sibley State Park including St. Wendel Tamarack Bog, Avon Hills Forest, Partch Woods, Bruce Hitman Heron Rookery, Cold Spring Heron Colony, Roscoe Prairie, Clear Lake, Blue Devil Valley, Gneiss Outcrops, Swede's Forest, Quarry Park, Sedan Brook Prairie and Langhei Prairie.

## Wildlife Management Areas (WMA)

There are nearly 250 WMAs within 50 miles of Sibley State Park. These units offer hunting opportunities as well as nature viewing and wildlife watching opportunities.

## State Trails

Portions of three state trails are within 50 miles of Sibley State Park, including the Glacial Lakes State Trail, Luce Line State Trail and the Central Lakes State Trail. These trails are available for hiking, biking, in-line skating, horseback riding, snowmobiling and cross-country skiing along various trail segments.

The **Glacial Lakes State Trail** is located on a former Burlington Northern Railroad grade. It currently extends from Willmar to Paynesville in Stearns County, a distance of 27 miles. The segment from Willmar to New London has 10 miles of parallel, grass treadway for horseback riding, while the New London to the Kandiyohi/Stearns County line segment has grass shoulders to accommodate this activity. The five mile segment extending to Paynesville was recently paved.

There is an on-road connection from the trail in New London to Sibley State Park via three miles of paved shoulder along County Road 148. An off-road paved

trail connection is in the planning and land acquisition stage; it will generally parallel County Highway 40 and State Trunk Highway 71 (see Figure 2).

## Nature Preserves

The Nature Conservancy manages several preserves within a short distance of Sibley State Park. Moe Woods Preserve, Leif Mountain Preserve, and Ordway Prairie are all located northwest of the park on the same glacial moraine topography that characterizes the park, and contain both grasslands and woodlands in a mosaic representation of millions of acres in the Midwest.

## **County and Local Parks**

There are six parks in Kandiyohi County, of which five offer camping. Park #7 is located on Games Lake on County Highway 5 near the western boundary of Sibley State Park. The park offers 56 campsites, picnicking, fishing, boating access and rental, and a swimming beach with a lifeguard. The nearby cities of New London, Spicer and Willmar all have park systems.

## Scenic Byways

The **Glacial Ridge Trail Scenic Byway** is a largely circular route that extends for 245 miles from Alexandria to Willmar, mainly on county and township roads. Because there is not a single Point A to Point B route, travelers can enjoy many different segments along the way. There are many points of interest along the Glacial Ridge Trail, including historic sites, natural scenery, and four state parks, including Sibley State Park. Near the park, the scenic byway includes sections of County Roads 2, 5, 8, 40, and 121, and Minnesota Trunk Highway 9.

## **Canoeing and Boating**

There are many lakes, rivers and streams near Sibley State Park, with over 300 water access sites within 50 miles. Portions of eight different State Water Trails (designated routes for boating, canoeing, and kayaking) are located within 50 miles of the park. These water trails include the Chippewa River, Minnesota River, Long Prairie River, Mississippi River, Pomme de Terre River, Sauk River, North Fork Crow River and South Fork Crow River. Portions of the North Fork Crow, Mississippi and Minnesota Rivers are also designated as scenic or recreational under Minnesota's Wild and Scenic Rivers Program.

## **Other Day Use Activities**

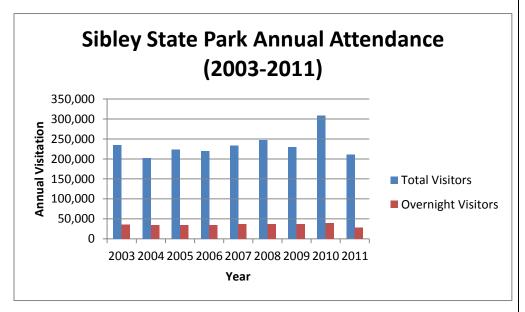
Several other recreational and educational opportunities are available near Sibley State Park.

 <u>Monongalia Historical Society and Museum</u> - Located in New London, the museum houses historic artifacts including a linotype newspaper, handmade wooden tools, and a wicker undertakers basket. The genealogical library contains the oldest records in the county, dating back to 1859. The 1869 Sakariason Cabin, a pioneer homestead, is open for viewing.

 <u>Prairie Woods Environmental Learning Center</u> – Located near Spicer about seven miles south of Sibley State Park, Prairie Woods is a nonprofit environmental learning center that provides a variety of educational programs, public events and outdoor experiences to people of all ages in Kandiyohi County and throughout Southwestern and West Central Minnesota. The mission of Prairie Woods states: "We will promote an individual and shared commitment to the responsible use, management, and preservation of our natural resources." Prairie Woods encompasses 500 acres and includes nearly seven miles of hiking and cross-country ski trails, an education building with 5 classrooms, a trailhead, and a 30-foot indoor climbing wall. The Gary Westby Observatory building sits atop Prairie Woods' highest hill. Also onsite are a Native American History Village and the Gary Westby Educational Shooting Sports Range.

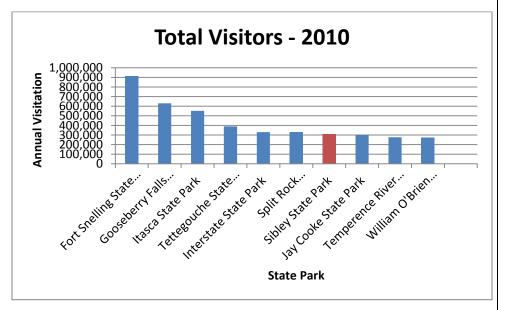
# **Visitor Use Patterns**

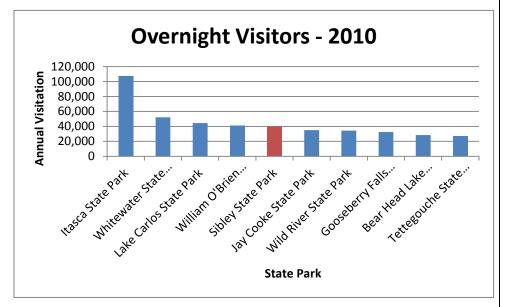
During the last nine years (2003-2011), annual attendance has varied from 200,000 to over 300,000. The number of annual overnight visits has remained relatively constant, varying from just about 28,000 to nearly 40,000. Average annual visitation over the nine year period is 234,382 while the average number of overnight visits is 35,238.

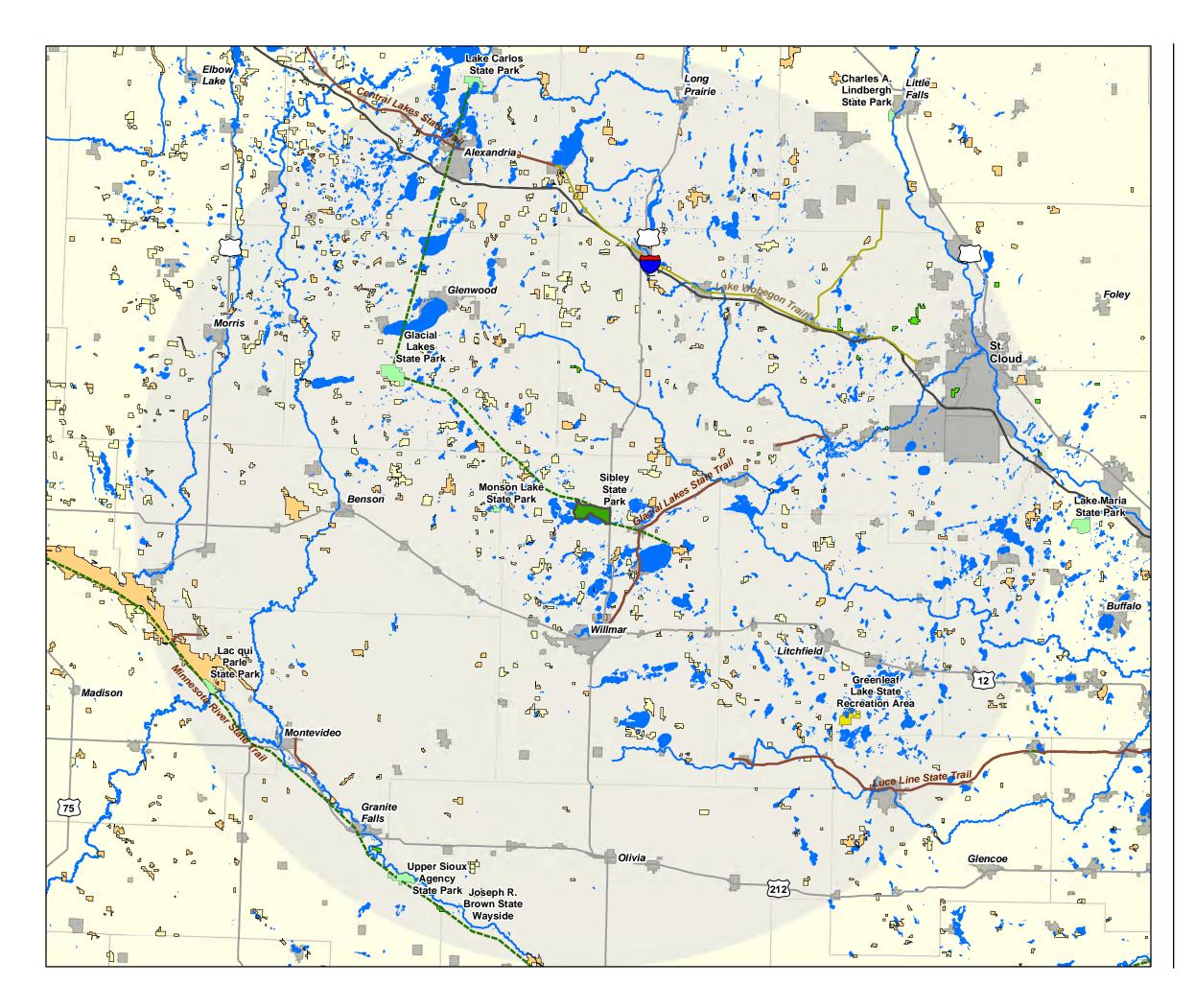


Sibley State Park has been among the top twelve most visited parks in the state park system and has ranked in the top ten for overnight visits each year since 2003. Visitor numbers have increased over the past several years, with a significant increase in 2010. In that year, Sibley was the seventh most visited park and had the sixth largest number of overnight visits. Comparative visitor numbers for 2011 were not used because of the state government shutdown, which caused the park to be closed for 3 weeks in July. In 2012, Sibley State Park had over 42,000 visitors through May, making it the third most visited park in Minnesota during that time period.

Sibley State Park experiences a high rate of repeat visitors, especially at campgrounds. The Group Center, which accommodates up to 128 people, is frequently booked by the same groups each year.







# Sibley State Park Figure 1:

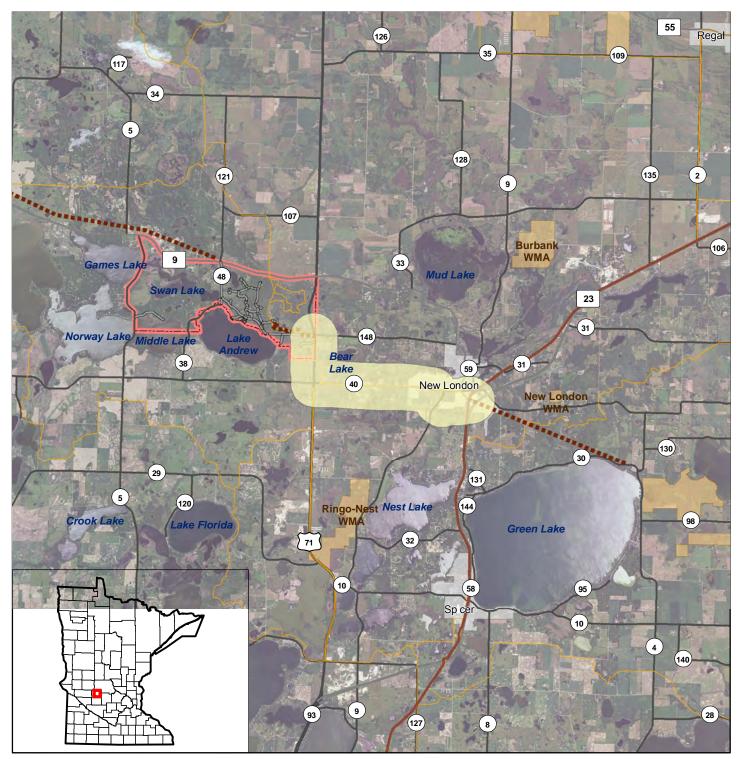
50 Mile Radius of Recreation Opportunities

Legend			
$\sim$	Regional Trails		
$\sim$	Minnesota State Trails		
1001	Legislatively Authorized State Trails		
	Sibley State Park		
	State Park		
	State Recreation Area		
	State Wayside		
	State Wildlife Management Areas		
	Scientific and Natural Areas		
	USFWS Waterfowl Production Areas		
5	Lakes and Rivers		
	City Boundaries		
	County Boundaries		



MN Department of Natural Resources Division of Parks and Trails

August 2012



# Sibley State Park Figure 2:

Figure 2: Glacial Lakes State Trail Connection



Division of Parks and Trails

MN Department of Natural Resources



August 2012

# Legend

- Glacial Lakes State Trail Search Corridor
- Planned Glacial Lakes State Trail
- ✓ Glacial Lakes State Trail
- Snowmobile Trails
  - State Park Statutory Boundary
  - State Wildlife Management Area
- City Boundaries

# Natural Resources

Natural resources are at the heart of Minnesota's State Parks System and play a key role in the mission of the Division of Parks and Trails. The Division has adopted the following broad resource management goals:

- Protect and perpetuate natural and cultural resources within state park system.
- Minimize damage to the natural and cultural resources of the state park system while providing appropriate recreational and educational activities.
- Restore natural communities and ecosystems in the state park system.
- Promote understanding and awareness of the natural and cultural resources within the state park system and their management and protection.
- Participate in landscape-level planning activities relative to the protection of the natural and cultural resources of the state park system.

The resource management program goals are derived from the state statutes that guide the development and operations of Minnesota's State Parks:

State parks shall be administered by the commissioner of natural resources in a manner, which is consistent with the purposes of this subdivision to preserve, perpetuate, and interpret natural features that existed in the area of the park prior to settlement and other significant natural, scenic, scientific, or historic features that are present. Management shall seek to maintain a balance among the plant and animal life of the park and to reestablish desirable plants and animals that were formerly indigenous to the park area but are now missing.

Programs to interpret the natural features of the park shall be provided. Outdoor recreation activities to utilize the natural features of the park that can be accommodated without material disturbance of the natural features of the park or the introduction of undue artificiality into the natural scene may be permitted.

Park use shall be primarily for aesthetic, cultural, and educational purposes, and shall not be designed to accommodate all forms or unlimited volumes of recreational use. Physical development shall be limited to those facilities necessary to complement the natural features and the values being preserved.

## Minnesota Statute 86A05. subd 2c

Sibley State Park staff has actively worked to protect, manage, and restore the health and quality of the natural resources within the park since the last management plan was adopted in 1978. Much progress has been made in the

areas of prairie and oak savanna restoration, wetland restoration and shoreland management.

This section provides an overview of the current status of Sibley State Park's natural resources, the desired future conditions for these resources, and the management recommendations that will be used as a guide for protection and restoration over the next 20 years.

# **Regional Landscape and Ecological Classification System**

Much of the Minnesota landscape was shaped by ice and meltwater. Four times in the history of Minnesota, glaciers advanced from the north, covering the state with a sheet of ice up to two miles thick. During the last of these advances, as recent as 10,000 years ago, most of the features of the Minnesota landscape were formed.

The park's landscape has been shaped by numerous forces over time, including glaciers, rivers, fire, wind, grazing and farming. Historically, the natural communities of the park developed under the influence of processes such as fire, while modern land use practices have changed the role and scale of these processes.

Minnesota's Ecological Classification System (ECS) is part of a nationwide mapping initiative developed to improve the management of natural resources in the state. ECS integrates climate, geology, topography, soils, hydrology and vegetation to convey basic information about the biological and physical characteristics of the landscape. ECS divides Minnesota into 26 distinct units called subsections.

Sibley State Park is located in the Minnesota River Prairie subsection, but is located close to the boundary of the Hardwood Hills and Big Woods subsections. The influence of all three subsections is seen in the landscape within and surrounding the park, which includes areas of prairie, oak savanna, and hardwood forest (see Figure 3).

The Minnesota River Prairie subsection is a gently rolling ground moraine about 60 miles wide. The Minnesota River occupies a broad valley that splits the subsection in half. The valley was created by Glacial River Warren, which drained Glacial Lake Agassiz. Loamy ground moraine (till plain) is the dominant landform, but end moraines and lake plains also occupy a significant area. Well to moderately well drained loamy soils formed in gray calcareous till of the Des Moines Lobe origin are dominant. The soils in Sibley State Park are mostly made up of sandy loams.

This subsection is drained by the Minnesota River. Most of the smaller rivers and streams in the subsection eventually empty into the Minnesota or the

Upper Iowa rivers. Wetlands were very common before settlement; most of them have been drained and used for crop production, although some have been restored.

American Indians also influenced the pre-European vegetation, primarily through fire, which was the most common natural disturbance prior to settlement. Today, agriculture and lake-oriented recreation are the dominant land use around Sibley State Park. Remnant stands of tallgrass prairie are rare, but a few remain in the park.

## Climate

The climate at Sibley State Park is like that of the rest of Minnesota, continental with extremes in temperature from summer to winter. Summers are typically warm and wet while the winters are cold and dry. According to the Midwestern Regional Climate Center, the average temperature in New London ranges from 9.7°F in January to 71.8°F in July.

This climate produces an almost ideal environment for a wide variety of recreational pursuits. In addition to the multitude of lakes in this area, the comfortable summer season (May – August) with its warm days and cool nights, attracts tourists. Recreational activity in the autumn seasons (September – November) ranges from camping and hunting to watching the change of leaves and annual bird migration. During the winter seasons (December – March) the region usually receives sufficient snowfalls and low temperatures that maintain conditions for skiing, snowmobiling, and ice-fishing.

Annual average precipitation in the New London area is 31.67 inches. While total precipitation is important, its distribution during the growing season is even more significant. Typically, native vegetation grows for seven months (April to October) and row crops grow for five months (May through September).

## **Geology and Topography**

Much of the Minnesota River Prairie subsection is covered by 100 to 400 feet of glacial drift. Cretaceous shales, sandstones, and clays are the most common kinds of bedrock. Loamy ground moraine (till plain) is the dominant landform, but end moraines, and lake plains also occupy a significant area. Ground moraine topography is level to gently rolling. Many of the landscape features were left behind by the last glacial advances as recently as 10,000 years ago. These features have played a significant role in developing the soils and vegetation found within the park.

Sibley State Park lies within the Alexandria Moraine Complex, which was laid down by glaciers more than 30,000 years ago. The rocks, sand, and gravel left

by the last glacier make up the drift which formed Mount Tom and the rest of the landscape. These deposits, as deep as 450 feet, are some of the deepest found anywhere in the state.

Mount Tom, one of the highest points within a 50-mile radius, has an elevation of about 1,375 feet above sea level, or over 150 feet above the elevation of Lake Andrew. Figure 4 illustrates the high degree of topographic relief within the park and in the area northwest of the park.

Many of the 194 lakes in Kandiyohi County are ice-block lakes. These are steepsided lakes formed by the melting of a large block of ice which was completely or partially buried by glacial till. Lake Andrew is another type of glacial lake that was formed in a depression by melting glacial ice.

## Soils

Most of the soils within the park fall into the Koronis-Hawick-Sunburg soil association, described in the Kandiyohi County Soil Survey as "undulating to very steep, well drained, loamy and sandy soils that formed in glacial till and outwash; located on ground moraines and outwash plains. The northeastern portion of the park falls into the Esterville-Hawick-Lena soil association, described as "nearly level to very steep, well drained and excessively drained, loamy and sandy soils that formed in glacial outwash and nearly level, very poorly drained, mucky soils that formed in organic deposits; located on outwash plains and ground moraines.

Many individual soil types are found within the park, including patches of hydric (wetland) and organic soils, steep knolls of better-drained soil, and gravel deposits.

A few areas of escarpment, nonbedrock are found in the southeastern corner of the park. These features are described in the Kandiyohi County Soil Survey as "a relatively continuous and steep slope or cliff, which generally is produced by erosion but can be produced by faulting, that breaks the continuity of more gently sloping land surfaces. Exposed earthy material is nonsoil or very shallow soil."

Areas of short, steep slope are scattered throughout Sibley State Park (again, see Figure 4). These areas are made up of "narrow soil area that has slopes that are at least two slope classes steeper than the slope class of the surrounding map unit."

The 1978 Park Management Plan included a detailed analysis of soils and their limitations for construction. This information is still useful, but more relevant to specific development projects that may occur as a result of this plan update or other needs. According to the previous plan, more site-specific information is

usually needed: "The park's extremely variable topography and associated historic vegetation patterns have developed a very complex and finely dissected pattern of soil types. The soil series surveys... tend to generalize extremely variable topography such as this. Therefore, where accurate soil data is critical, such as in the siting of sewage disposal facilities, soil borings will be necessary."

## **Presettlement Vegetation**

The main components of the presettlement vegetation of Sibley State Park included prairie, oak openings and barrens, big woods-hardwoods (oak, maple, basswood, hickory), and a small section of wet prairie.

Oak openings and barrens made up the majority of the park. A small area of wet prairie was located near the current park boundary on the eastern shore of Lake Andrew. Prairie was located in the northwestern areas of the park, and on steep, dry, south-facing knobs. Hardwoods were located in the western end, between the northern and southern lakes. According to the Public Land Survey records, thickets and brush were found at many section corners within the park. However, the numerous lakes around the park acted to block wildfire through this area and this "fire shadow" enabled hardwood forests to mature between the lakes.

## **Present-Day Vegetation**

Currently, agriculture is the dominant land use in the Minnesota River Prairie subsection. Within Sibley State Park, mesic (moderately moist) hardwood forest systems make up the majority of the land cover. The forest has gradually supplanted what was once a landscape of prairie and oak savanna as a result of suppression of fires in recent decades. The forest is dominated by oak, red cedar, ironwood, green ash, aspen, maple, and basswood. Small remnants of prairie grasses grow on some knolls. Other areas of the park have been restored from farm fields to native prairie and oak savanna.

The park's land cover types were updated in 2011 and are shown in Figure 5. The major types are described below.

## Native Plant Community Classifications

A complete inventory of Sibley State Park's flora has not been conducted, but major plant communities have been identified and are described below.<sup>4</sup> Each system can be further divided into distinct classes.

<sup>&</sup>lt;sup>4</sup> Minnesota Department of Natural Resources (2005). *Field Guide to the Native Plant Communities of Minnesota: The Eastern Broadleaf Forest Province*.

#### Fire-Dependent Forest/Woodland System

#### Pin Oak – Bur Oak Woodland (FDs37)

Dry-mesic hardwood forests on undulating sand flats, moraines, and river bluffs. Canopy has abundant northern pin oak and bur oak. Shrub layer is often dense with prickly ash, chokecherry, American hazelnut, gray dogwood, prickly gooseberry, and downy arrowwood. Historically, fires were common in this forest type.

#### Mesic Hardwood Forest System

#### Basswood – Bur Oak – (Green Ash) Forest (MHs38)

Mesic hardwood or hardwood-conifer forests. Canopy is most often dominated by basswood, bur oak, or green ash. Subcanopy and shrub layer have ironwood with occasional basswood. Present on wind-deposited silt on bedrock bluffs, on calcareous till on rolling till plains, and, rarely, in association with natural fire breaks in prairie landscapes or on weakly calcareous till on stagnation moraines.

#### Marsh System

#### Cattail Marsh (Prairie) (MRp83)

Emergent marsh communities, typically dominated by cattails; if sedges and grass species are present, they are minor components. Most marshes dominated by pure stands of cattails are dominated by non-native cattails and often occur in basins with altered hydrology or other factors that favor invasion by narrow-leaved cattail or hybrid cattail. Present on floating mats or rooted in mineral soil in shallow wetland basins.

### **Open Rich Peatland System**

### <u>Graminoid – Sphagnum Rich Fen (Basin)</u> (OPn92)

Open peatlands on deep, well-decomposed peat or floating peat mats in basins, often adjacent to lakes and ponds. Dominated by fine-leaved graminoids or shrubs with Sphagnum covering more than 50% and often nearly continuous. Species usually present include bog rosemary, Labrador tea, small cranberry, leatherleaf, etc.

#### Upland Prairie System

#### Dry Sand – Gravel Prairie (Southern) (UPs13)

Grass-dominated herbaceous communities on level to steeply sloping sites with droughty soils. Common species include site-oats grama, plains muhly, and prairie dropseed. Historically, fires probably occurred every few years.

Prairie and oak savanna restoration and reconstruction efforts have been underway at the park since the 1970s. Initial areas included the northwest and southeast corners of the park. Current efforts are directed at preservation of prairie remnants, restoration of degraded savannas (degraded by invasives such as red cedar) adjacent to remnants, and reconstruction of old fields into prairie/savanna. Invasive species such as buckthorn and garlic mustard are controlled through cutting, hand-pulling, targeted spraying, and prescribed burns. Project areas include the corridor between the park entrance station and Mount Tom, Little Mount Tom, Badger Hill and the Mount Tom ridge.

## Hydrology

## Watersheds

Sibley State Park falls within two major watersheds, that of the Chippewa River and Crow River, which drain respectively to the Minnesota and Mississippi rivers. The western three quarters of the park falls within the Chippewa River watershed. The lakes within and around the park form an interconnected chain in which water flows downstream from Norway Lake to Games Lake, Swan Lake, Henschien Lake and Lake Andrew, which discharges into Shakopee Creek, a tributary of the Chippewa River. Middle Lake also has an outlet to Lake Andrew. The Chippewa River is a tributary of the Minnesota River, flowing 130 miles in a southerly direction to its confluence with the Minnesota at Montevideo. The Chippewa is designated as a State Water Trail for about 50 miles between the city of Benson in Swift County and the confluence.

The area of the park east of Lake Andrew is part of the Middle Fork Crow River sub-watershed, which is part of the larger North Fork Crow River Watershed. The Middle Fork of the Crow River joins the North Fork of the Crow River near Manannah in Meeker County; the North Fork eventually joins the Mississippi River near Dayton, Wright County.<sup>5</sup> Figure 7, Hydrology, depicts major and minor watersheds.

## Lakes

Swan Lake, Henschien Lake, and the small Lake 21 sit largely within park boundaries (including some adjoining private properties) while Lake Andrew and Middle Lake cross park boundaries. Although they form part of the regional chain of lakes, Games and Norway lakes lie outside the park.

**Lake Andrew** is located at the downstream end of the park's chain of lakes; it covers 736 acres and is 26 feet deep at its maximum depth. Lake Andrew is a low to moderately productive lake. During the 2010 survey, the water clarity was found to be 12.8 feet. Twenty-two varieties of aquatic plants were sampled growing at a maximum depth of 14.8 feet. Sixteen varieties of fish species were found. The DNR regularly stocks Lake Andrew with walleye and occasionally with northern pike and largemouth bass. Lake Andrew has four DNR public

<sup>&</sup>lt;sup>5</sup> Information on the Middle Fork Crow River Watershed District is available at <u>http://www.mfcrow.org/</u>. Information on watershed classifications is found at <u>http://www.dnr.state.mn.us/watersheds/index.html</u>

water accesses, including the access within the park. Sibley State Park is located along the north and northwest portions of the lake and a bible camp is located along the eastern shore. Residential development has occurred along the remainder of the shoreline. Lake Andrew has 14 inlets and an outlet, Shakopee Creek. Water level at the outlet is controlled by a weir structure.

**Middle Lake**, last surveyed in 2010, is 365 acres with a maximum depth of 11 feet and poor water clarity (two feet). The lake is non-aerated and productive. It is located between Norway and Andrew lakes in a chain of lakes. There is minimal residential development on the lake (two homes) in addition to a few roads or farm sites adjacent to the lake, but there is potential for additional development. Middle Lake contains 19 varieties of aquatic plants and five species of fish, and is historically known as an excellent waterfowl hunting lake. Low dissolved oxygen can be a problem during the winter and can result in winterkill of various fish species. Middle Lake is connected to several intermittent marshes along the north and east shores and has an outlet connecting to Lake Andrew. In the past, Middle Lake was directly connected to Norway Lake, but the outlet was severed when County Road 5 was upgraded. A new aquatic management area is located on the south side of the lake, and will be developed to include a public water access.

**Norway Lake**, surveyed in 2010, is 2,327 acres, 33 feet deep at its deepest point, and considered to be a productive lake. The water clarity is considered fair at four feet. There are three public water accesses on Norway Lake. Thirty-two varieties of aquatic plants and 16 varieties of fish were sampled on the lake. Norway Lake has eight inlets and an outlet that flows into Games Lake. Nutrient levels in the lake are relatively high due to two of the large inlets carrying significant amounts of agricultural runoff. Blue-green algae blooms are common and intense during the late summer. Eurasian milfoil was found throughout the lake in 2001 at low to moderate densities in the West Norway and Big Norway basins. Norway Lake receives moderate recreational and angling use during the summer months and is managed primarily for walleye, northern pike, largemouth bass, bluegill, and black crappie.

**Games Lake** was last surveyed in 2010. It is a moderately sized lake at 521 acres with a maximum depth of 42 feet and is considered low to moderately productive. Games Lake has three public water accesses, a county park, and 89 homes on its shores. An aquatic management area is also located along the north shore of the lake. Thirty-two varieties of aquatic plants and 16 varieties of fish species are found in the lake. The water clarity is 6.3 feet. Games Lake has seven small inlets, a large inlet connecting Games to Norway Lake, and an outlet on the east side. The lake is stocked for walleye (primarily walleye fingerlings) every other year.

Conditions in **Swan Lake**, **Henschien Lake** and **Lake 21** are less welldocumented. They support sporadic fisheries and experience periodic winterkills of fish because of their small size and shallow depth.

#### Streams

The park has no perennial streams within its boundaries other than the channels between the lakes, specifically between Lake Andrew and Henschien, Swan and Games lakes, as well as Lake 21 and Henschien Lake. Shakopee Creek, as mentioned above, is the outlet for Lake Andrew and the chain of lakes.

#### Wetlands

Most of the defined wetlands within the park consist of shallow marshes scattered throughout wooded areas. Several shrub swamps are located along the park's western boundary and close to Lake Andrew. A few wooded swamps are scattered throughout the park. In addition, several unusual wetland types, known as graminoid-sphaghnum rich fens, are located between Mount Tom and Lake 21 (see description above under Present-Day Vegetation). These wetlands are largely fed by groundwater.

## **Groundwater and Drinking Water Supplies**

Sibley is situated in rolling glacial topography within the Alexandria Moraine Complex. The grey-colored till deposited by the Des Moines lobe during the last glacial period, is typically calcareous and clayey in nature. The low permeability of the clayey soils accounts for the numerous perched lakes and wetlands in this area. Terminal moraines are usually constructed of a wide range of soil types associated in complex bedding structures, because of the slumping and collapse of glacial drift caused by the melting of buried ice blocks. The best aquifers in terminal moraine deposits are intermittent lenses of sand and gravel often found in discontinuous patterns and elevations within the till, usually at considerable depths.

The park's water supply is obtained from three primary wells and six seasonal wells. The primary wells are located at the park office, the interpretive center, and the park maintenance/residence area. Seasonal wells are located in the campgrounds and picnic areas. All draw from glacial deposits, at depths ranging from 120 to 485 feet. Groundwater flows are also significant as water sources for many of the fens and other wetlands in the park.

All wells are tested annually. A Source Water Protection Plan for the park's water system has been prepared by the Minnesota Department of Health and was last updated in May 2012. The plan defines a wellhead management zone that consists of a 200 foot radius around each well that supplies drinking water. All potential contamination sources (i.e., buildings, holding tanks, drainfields,)

within this zone are carefully monitored. The plan indicates that no contaminants have been detected in any wells in the park.

## **Surface Water Quality**

As discussed above under Hydrology, all of the park's interior and boundary lakes support productive fisheries and are considered suitable for fishing and aquatic recreation. However, Norway Lake is considered to be impaired for aquatic recreation because of excess nutrients, and both Norway and Lake Andrew are listed as impaired for aquatic consumption due to high mercury levels resulting from airborne pollutants concentrating in fish tissue (a common impairment in many Minnesota lakes). Surface water quality is also impacted by activities further upstream in the subwatershed that feeds the chain of lakes, such as agricultural drainage practices that accelerate sedimentation and speed of runoff.

### **Chippewa River Watershed Project**

As mentioned above under Hydrology, the watershed of Shakopee Creek, the outlet from Lake Andrew, is a subwatershed of the North Fork of the Chippewa River. The Chippewa River Watershed project is a non-regulatory, cooperative partnership focused on improving water quality and watershed life in the Chippewa River and its tributaries. The project's overall goal is to "improve water quality and flooding problems within the Chippewa River watershed while promoting a healthy agricultural, industrial, and recreation-based economy for the region." The project is funded with state grants from programs such as the MPCA's Clean Water Partnership Program and local water plan contributions; it also relies heavily on volunteers. Project partners include the counties in the watershed, conservation groups, soil and water conservation districts, and state and federal agencies (see <a href="http://www.chippewariver.com/about\_proj.aspx">http://www.chippewariver.com/about\_proj.aspx</a>)

The first identified priority area of the Chippewa River Watershed was the Shakopee Creek Headwaters Watershed, which was identified due to elevated levels of sediment, nutrients and bacteria. Significant effort is going toward improving water quality in the headwaters area through various programs and land conservation practices. Grants have been received to help implement Best Management Practices, promote educational activities, and to continue water quality monitoring and assessment. A Shakopee Creek Headwaters Advisory Group meets monthly.

## **Fisheries**

Lake Andrew, Middle Lake, Norway Lake and Games Lake are managed for fish and ecosystem health by DNR's Division of Fish and Wildlife. Fisheries management activities are summarized in the table below. Lake Andrew is regularly stocked with walleye and occasionally with northern pike and largemouth bass. Current fish management activities on Lake Andrew include monitoring the fish population on a periodic basis, protecting aquatic vegetation through the permit process, assisting aquatic plan management and enforcement personnel in educating boaters and monitoring access sites for potential invasive species introduction, participating in local watershed initiatives, and stocking various fish species as warranted.

**Middle Lake** is a popular lake for winter crappie fishing when dissolved oxygen readings are adequate to sustain fish survival. It is managed as a boom and bust fishery primarily for northern pike, yellow perch and black crappie. There are currently no public accesses to Middle Lake, although one is planned as part of the aquatic management area. Current fish management activities on Middle lake include monitoring the fish population on a periodic basis, monitoring winter dissolved oxygen levels, protecting aquatic vegetation through the permit process, participating in local watershed initiatives, and stocking various fish species as warranted.

**Norway Lake** receives moderate recreational and angling use during the summer months and is managed primarily for walleye, northern pike, largemouth bass, bluegill, and black crappie. Current fish management activities on Norway include monitoring the fish population on a periodic basis, monitoring and preventing the spread of Eurasian milfoil in connected waters, assisting aquatic plan management and enforcement personnel in educating boaters and monitoring access sites for other potential invasive species introductions, protecting aquatic vegetation through the permit process, participating in the Shakopee Creek Watershed Project, operating the Engen Northern Pike Spawning Area, and stocking various fish species as warranted.

**Games Lake** is stocked for walleye (primarily walleye fingerlings) every other year. Current fish management activities on Games include monitoring the fish population on a periodic basis, protecting aquatic vegetation through the permit process, assisting aquatic plant management and enforcement personnel in educating boater and monitoring access sites for potential invasive species.

Current fish management activities	Lake Andrew	Middle Lake	Norway Lake	Games Lake
Survey date	July 2010; re- survey	June 2010; initial survey	July 2010; re- survey	July 2010; re- survey
Monitoring the fish populations on a periodic basis	x	x	x	x
Protecting aquatic vegetation through the permit process	x	x	x	x
Assisting aquatic plan management and enforcement personnel in educating boaters and monitoring access sites for potential invasive species introductions	x	x	x	x
Participating in local watershed initiatives	Х	х	х	х
Stocking various fish species as warranted	х	х	х	х
Monitoring dissolved oxygen levels		х		
Monitoring and preventing the spread of Eurasian milfoil in connected waters			x	
Operating the Engen Northern Pike Spawning Area			x	

## Wildlife

The presence of wildlife within the park is dynamic and likely to change from year to year as weather and other conditions change. The information in this section is based on recent surveys.

### Mammals

White-tailed deer, red and gray fox, coyote, and raccoon are inhabitants of the forest. Chipmunks, red and gray squirrels, mink, striped skunks, badgers, and woodchucks are other species visitors can see as they hike the trails at Sibley State Park. A fisher, a new species at the park and an uncommon one in this part of Minnesota, was identified by a trail camera in October 2012.

### Birds

Sibley State Park is well-known for its diversity of bird life; 205 species of birds have been documented in the park, of which 130 are potentially breeding species. Birds common to Sibley include great blue herons, egrets, wood ducks, Canada geese, scarlet tanagers, indigo buntings, pelicans, loons and bluebirds. (See bird checklist, Appendix C, for a complete list of birds.)



A fisher, a new species at the park, was captured on a trail camera.

### **Reptiles and Amphibians**

A survey of the park in 2006 identified eight species of amphibians, the most common of which was the Blue-spotted salamander, the most common salamander found in Minnesota woodlands, with over 100 sightings. Other species included the Tiger salamander and Central newt. Other amphibians included the American toad, and the Western chorus frog, Northern leopard frog, gray treefrog and wood frog.

Reptiles identified in the survey were the common snapping turtle, Western painted turtle, the Northern prairie skink, Northern redbelly snake, and common garter snake.

## Fish

A survey of fish species within the park was conducted in 1993, in addition to periodic surveys by DNR Fish and Wildlife staff. Thirty-eight species are currently listed within the park – that is, within the lakes that fall wholly or partially within park boundaries (see Appendix C).

## Invertebrates (insects)

Surveys of insect species have been limited, but 54 species of butterflies have been identified in the park. Dragonflies and damselflies have also been surveyed; 27 dragonfly species were observed in the park (see Appendix C).

## **Species in Greatest Conservation Need**

As part of Minnesota's Wildlife Action Plan, *Tomorrow's Habitat for the Wild and Rare*, Species in Greatest Conservation Need (SGCN) are described by ecological province and subsection. SGCN are defined as "wildlife species whose populations are rare, declining or vulnerable in Minnesota." Within the Minnesota River Prairie subsection, 116 SGCN are known or predicted to occur. Of these, 52 are also federal or state endangered, threatened, or species of special concern. This section of the state is an important nesting area for prairie ducks and is a major migratory corridor in the Mississippi Flyway. Sibley State Park has been identified as an important area for SGCN. The park is home to about 60 SGCN, primarily bird species (see Appendix C).

## **Endangered, Threatened, and Special Concern Species**

The following list of species found within the park is drawn from the databases of the Natural Heritage Information System of the DNR, Division of Ecological and Water Resources. Species are classified as follows:

SPC	Special Concern
THR	Threatened
END	Endangered
NON	A species with no legal status, but about which the Division of
Ecologi	cal and Water Resources is gathering data for possible future
listing	

All of the bird species listed in the table below have been documented within the park but only a few – the red-shouldered hawk and bald eagle – are identified with specific locations such as nesting sites. The park is also home to 27 bird species listed on the Audubon Minnesota Action List, which identifies species whose long-term survival is in doubt and are in most urgent need of conservation (see <u>http://mn.audubon.org/birds-risk-0</u>).

Name Category	Common Name	Scientific Name	MN Legal Status
Vascular Plant	Small white lady's- slipper	Cypripedium candidum	SPC
	Prairie moonwort	Botrychium campestre	SPC
	Sea naiad	Najas marina	SPC
	American ginseng	Panax quinquefolius	SPC
Vertebrate Animal	Red-shouldered hawk	Buteo lineatus	SPC
	Cerulean warbler	Dendroica cerulea	SPC
	Bald eagle	Haliaeetus leucocephalus	SPC
	Franklin's gull	Larus pipixcan	SPC
	American white pelican	Pelecanus erythrorhynchos	SPC
	Horned grebe	Podiceps auritus	THR
	Forster's tern	Sterna forsteri	SPC
	Common tern	Sterna hirundo	THR

Several terrestrial (vegetative) communities within the park are also listed as high-quality natural features:

- Basswood Bur Oak (Green Ash) Forest
- Dry Sand Gravel Prairie (Southern)
- Northern Poor Fen

In addition, one animal assemblage – a bat colony – is found in the park. These classifications have no legal status but are noted as high-quality habitats.

## **Natural Resource Recommendations**

**Overall Natural Resources Goal:** Actively protect and enhance Sibley State Park's native plant communities, rare plants, wildlife, and other significant natural features.

#### Vegetation management

- Protect populations of endangered, threatened, and special concern plant species documented within the park and any other ecologically vulnerable species that persist or become established as climate change occurs.
- Figure 6, Desired Future Conditions, illustrates proposed restoration priorities for the park. Note that the distinctions between native plant communities are not as sharp as they appear on the map, and that priorities will be adjusted based on actual conditions in the field.
  - The primary focus will be on restoration of oak savanna and prairie communities as feasible. Sibley's landscape has changed greatly since the presettlement period most of the park's land was farmed in the early 20<sup>th</sup> century but then reverted to woodland. Fire suppression allowed dense hardwood forests to flourish. Restoration efforts will focus on the best locations for prairie and savanna hilltops and southfacing slopes above certain elevations in the eastern half of the park. Existing remnant prairies will also be expanded and both prescribed fire and timber harvesting will be used as management tools.
  - Another priority is to identify, evaluate, and manage mature and oldgrowth forest stands and legacy trees. In particular, work to preserve the relatively unbroken forest canopy on the west side of the park between Swan, Henschien and Middle lakes. The size of this hardwood forest, located in the fire shadow of the lakes, makes it an important habitat for forest interior birds, such as red-shouldered hawk, ovenbird, veery, and red-eyed vireo, all of which are Species of Greatest Conservation Need.

One specific location for forest restoration is the large old field just east of County Park #7, which was originally forested and is a good candidate for planting with maple-basswood forest species. (A previous planting effort was unsuccessful, but could succeed with appropriate preparation and maintenance.)



A 1920 view from Mount Tom shows more open land than is visible today. Minnesota Historical Society.

- Maintain old fields/croplands and pasture in herbaceous vegetation until reconstruction of native plant communities can begin. The intent here is to stop the incursion of cedar and other trees and provide habitat for grassland-dependent birds.
- Periodically monitor native plant communities, particularly high quality areas, to insure that terrestrial invasive plants are not invading them or that these communities are not otherwise being degraded (e.g. lack of fire in fire-dependent communities).
  - Map locations of terrestrial invasive plant infestations throughout the park. (In Sibley, invasive plant species currently include buckthorn, widespread throughout wooded areas mainly on the east side, garlic mustard, mainly on the west side, exotic honeysuckle and Norway maple.) The dense forest canopy on the west side tends to shade out buckthorn another reason to preserve this plant community.
- Conduct resource assessments early in the planning stages of any development projects ideally before exact locations have been identified.
- Use timber harvest as a resource management tool where appropriate. The DNR uses timber harvesting as a tool to meet its resource management goals and to facilitate interpretive and recreation activities. Timber harvests take place in state parks and state recreation areas primarily to restore or manage native plant communities. In some cases, a harvest is necessary to restore visitor usage and reduce fuel loads following a storm event.

Timber harvests are conducted in state parks and state recreation areas to achieve various results:

- Stands of trees or other woody species not native to the park may be removed in order to "preserve, perpetuate and interpret natural features that existed in the area of the park prior to [European] settlement" (Minnesota Statutes, 86A.05 subd. 2c).
- Trees are harvested as part of restoring native plant communities such as oak savannas and prairies or to integrate planted stands into surrounding forest communities.
- Trees are sometimes harvested to prepare a site for regular resource management through prescribed fire – the timber harvest is used first to reduce the fuel load.
- Trees may be harvested to address an insect or disease issue, or to thin a stand for better growth.

 On occasion, trees are harvested to restore visitor access by clearing trails and other facilities, and to reduce fuel loads following a storm event.

The Department may contract with a commercial operator to conduct timber harvest activities. It is often more efficient and effective for a commercial operator to use their specialized equipment for this purpose.

#### Wildlife

- Maintain the diversity of ecosystems and their characteristic wildlife populations.
- Preserve or restore populations of native vertebrates and invertebrates in the park, including dragonflies, reptiles, amphibians, birds and mammals.
- Conduct inventories of reptiles, mammals and selected invertebrates.
- Maintain or improve water quality, aquatic habitat, and quality fish populations (both native and stocked).
- If the park ever acquires all lands surrounding the "interior lakes," consider managing one or more of them as a "heritage fishery." This designation restricts the use of all motors and electronic devices while providing a quality fishing opportunity. Lakes in Glendalough and Mille Lacs Kathio state parks have received this designation.
- Manage populations of deer such that native vegetation and tree regeneration are not overly impacted.
- Manage for nesting waterfowl and other cavity nesting bird species by creating new and maintaining existing snags where visitor safety is not an issue.
- Manage for woodland birds by preserving the forest canopy on the west side of the park
- Review and update the status of listed species where necessary.

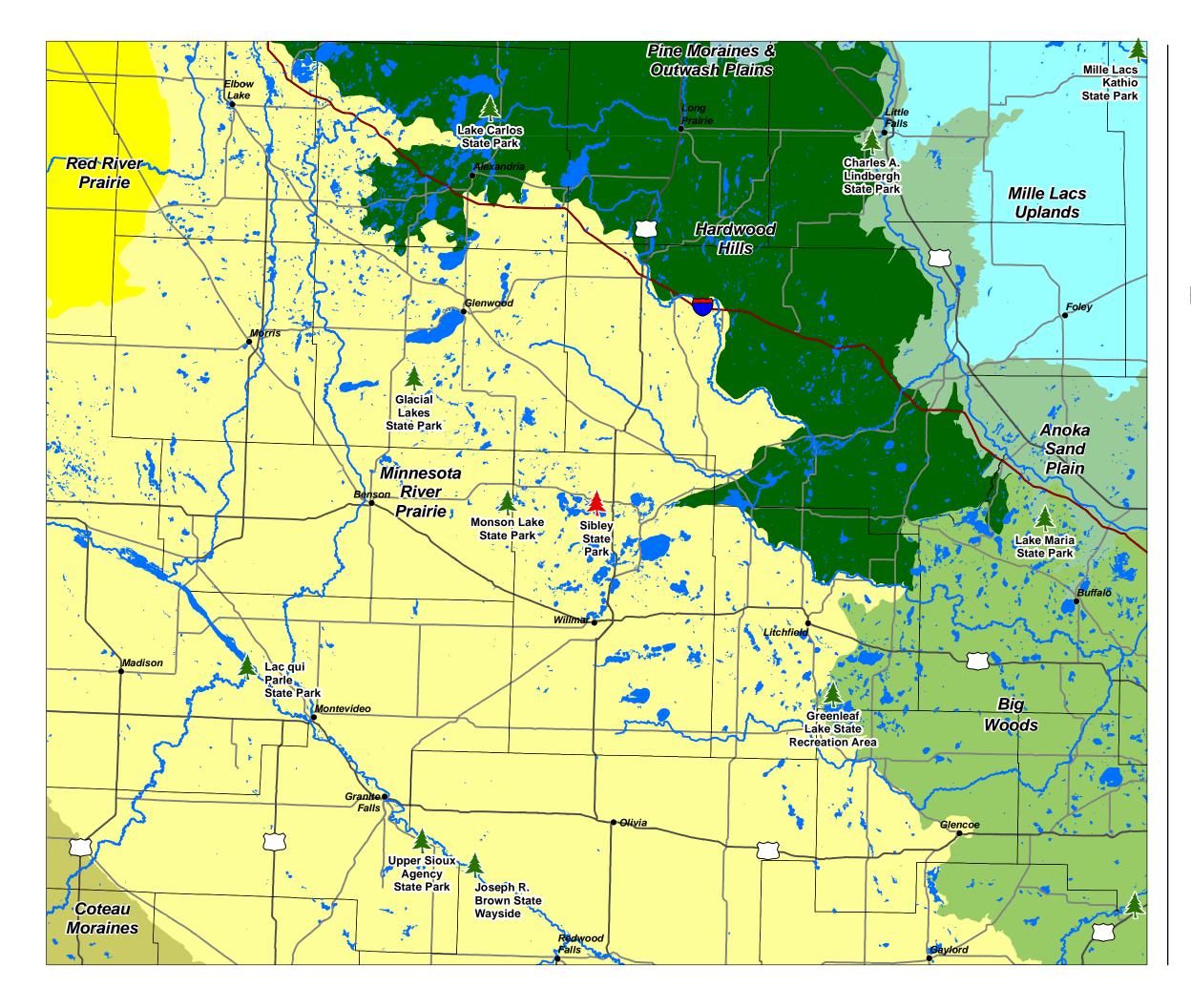
#### Water resources

- Restore, where feasible, historic drained wetlands.
- Regularly consult with DNR's Divisions of Ecological and Water Resources and Fish and Wildlife on how common goals for improving water quality on the park's lakes can be achieved.
- Work with the Chippewa River Watershed Project (CRWP), Minnesota Pollution Control Agency (MPCA), Kandiyohi County, and other interested partners to improve water quality in the Shakopee Creek Sub-Basin.

- Continue to implement Shoreland Best Management Practices (BMPs) at the park, including improvements to the Lake Andrew shoreline that are consistent with visitor use and cultural resource protection.
- Inform nearby landowners of shoreland BMPs and encourage them to implement them.

#### Other resource recommendations

- Publicize resource management activities through various means. For example send out press releases and other bulletins before and during events such as prescribed burns. Develop a series of temporary and on-site interpretive signs that tell the resource management stories in the park, such as prescribed burns, prairie restoration, savanna restoration and management, wildlife species re-introductions, and invasive species management.
- Use energy-efficient designs and practices for current park facilities and for future development. Conservation efforts may include: fuel-efficient vehicles, clean fuel use, energy efficient office equipment and appliances, energy-conservation in buildings, and landscaping designs that reduce the need for mowing.



# **Sibley State Park** Figure 3: Ecological Subsections

# Legend

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Other State Parks, SRAs, and State Waysides

Sibley State Park

Cities

Lakes and Rivers

County Boundaries

#### **Ecological Subsections of Minnesota**

Red River Prairie

Pine Moraines & Outwash Plains

Hardwood Hills

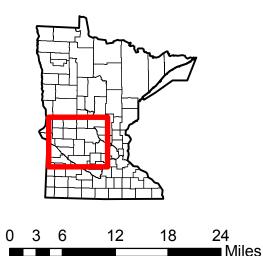
Mille Lacs Uplands

Anoka Sand Plain

Minnesota River Prairie

Big Woods

Coteau Moraines

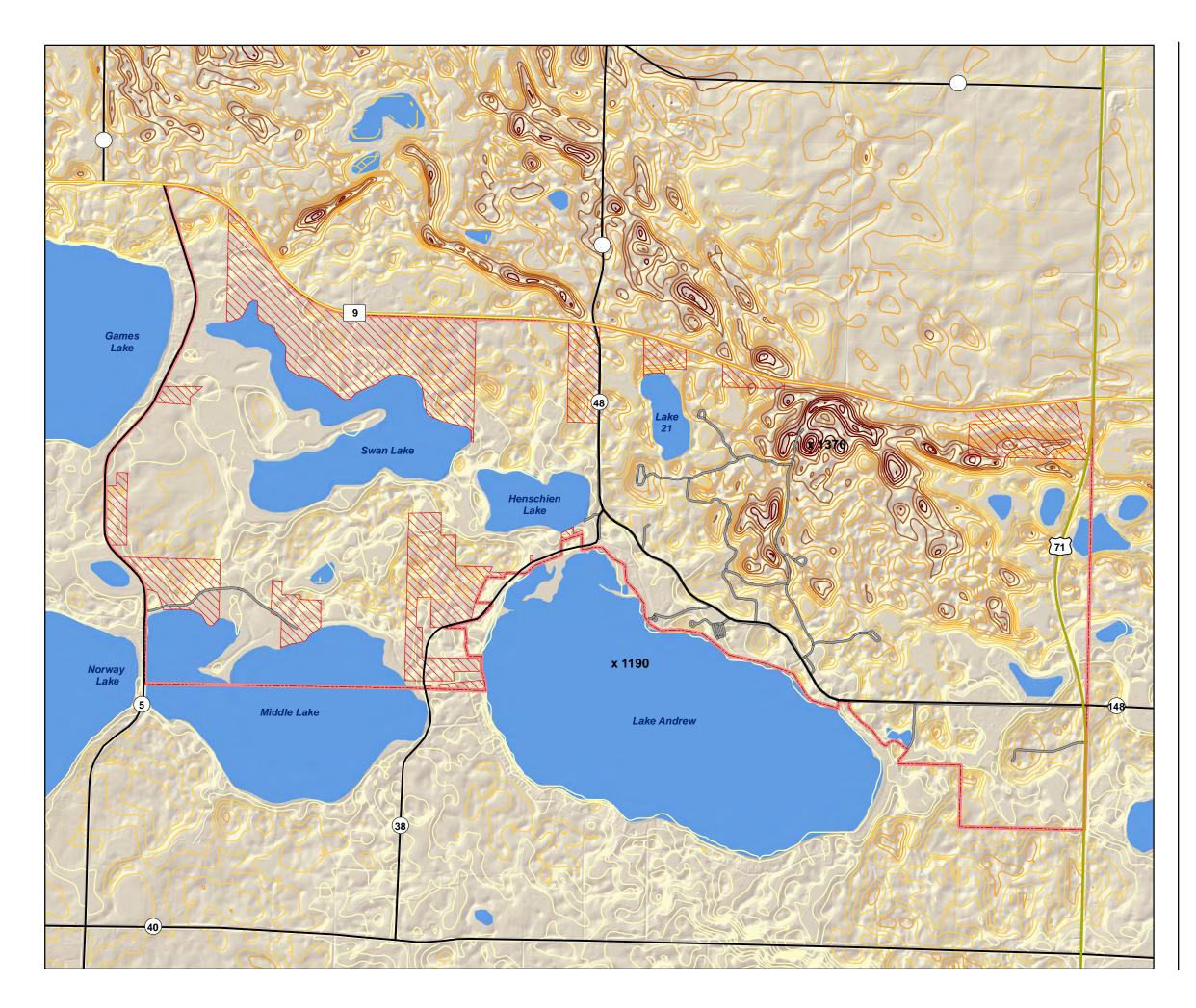




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MN Department of Natural Resources Division of Parks and Trails

August 2012



# **Sibley State Park** Figure 4: 10 Foot Contours

# Legend

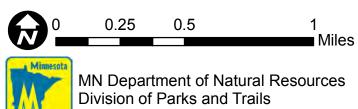
State Park Statutory Boundary Private Property within Park Boundary

10 Foot Interval Contours

### Elevation (in feet)



1160 - 1210 1211 - 1240 1241 - 1270 / 1271 - 1300 / 1301 - 1370 Lakes



August 2012

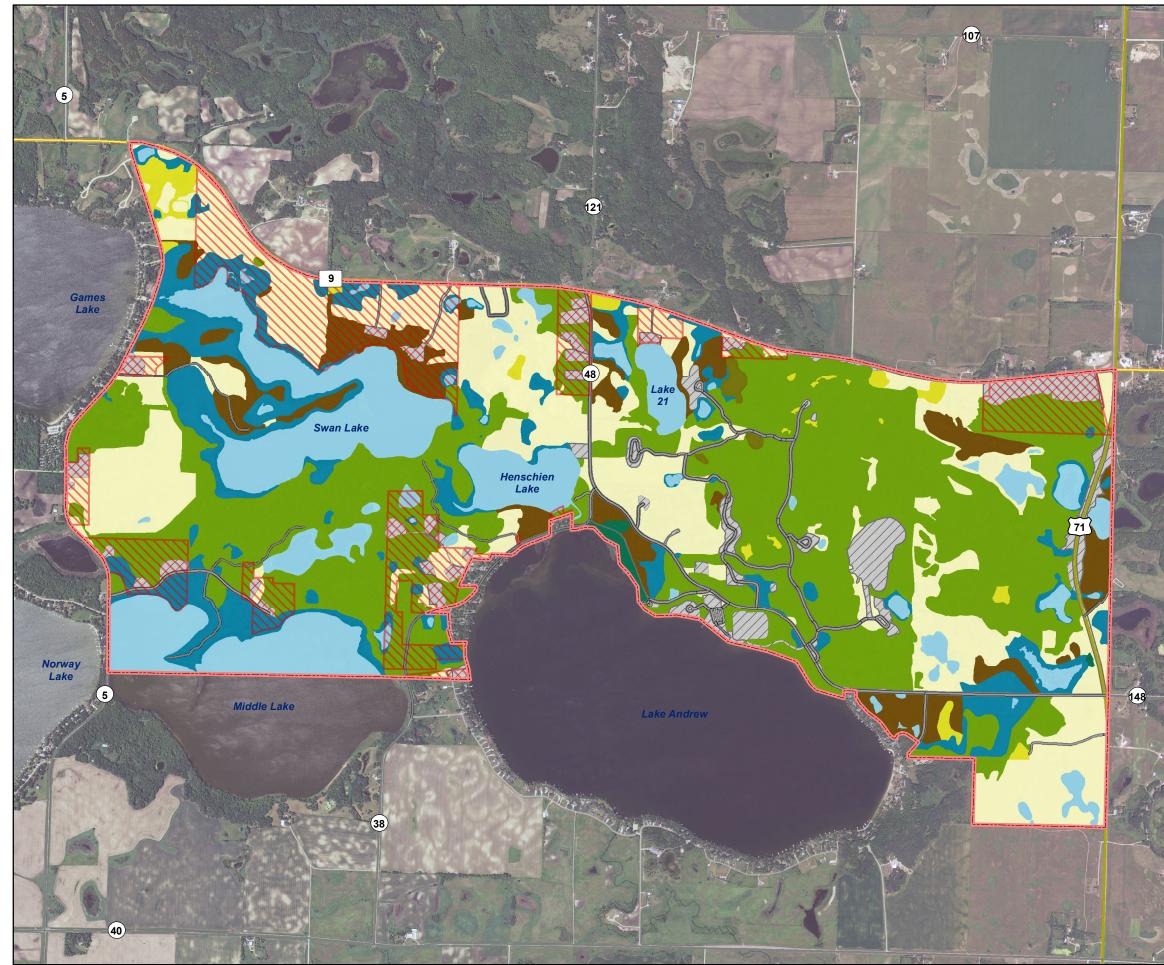
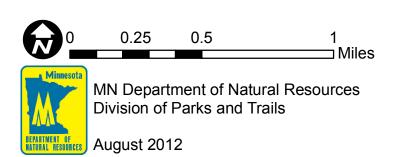


Figure 5: System Level Land Cover

# Legend

State Park Statutory Boundary
 Private Property within State Park Boundary
 Park System Level Land Cover
 Fire-Dependent Forest/Woodland System
 Floodplain Forest System
 Marsh System
 Mesic Hardwood System
 Open Rich Peatland System
 Open Water
 Non-Natural System (old fields, etc.)
 Facilities System (developed & use areas)



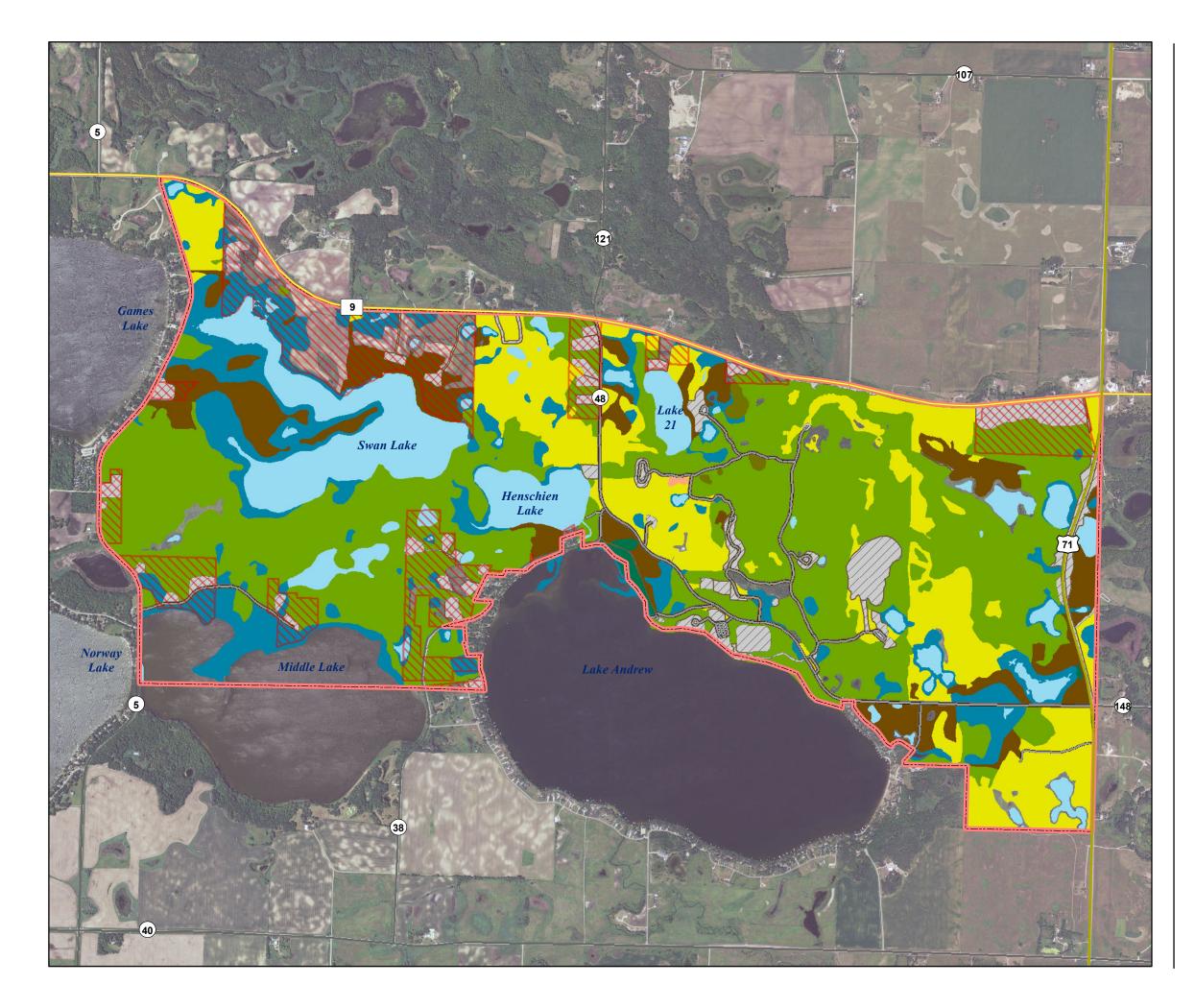
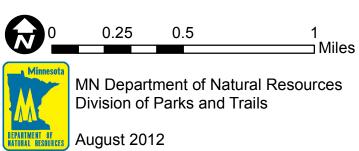


Figure 6: Desired Future Conditions

# Legend

State Park Statutory Boundary
 Private Property within State Park Boundary
 Desire Future Conditions
 Fire-Dependent Forest/Woodland System
 Floodplain Forest System
 Marsh System
 Mesic Hardwood System
 Open Rich Peatland System
 Upland Prairie System
 Wetland Prairie System
 Open Water
 Facilities System (developed & use areas)



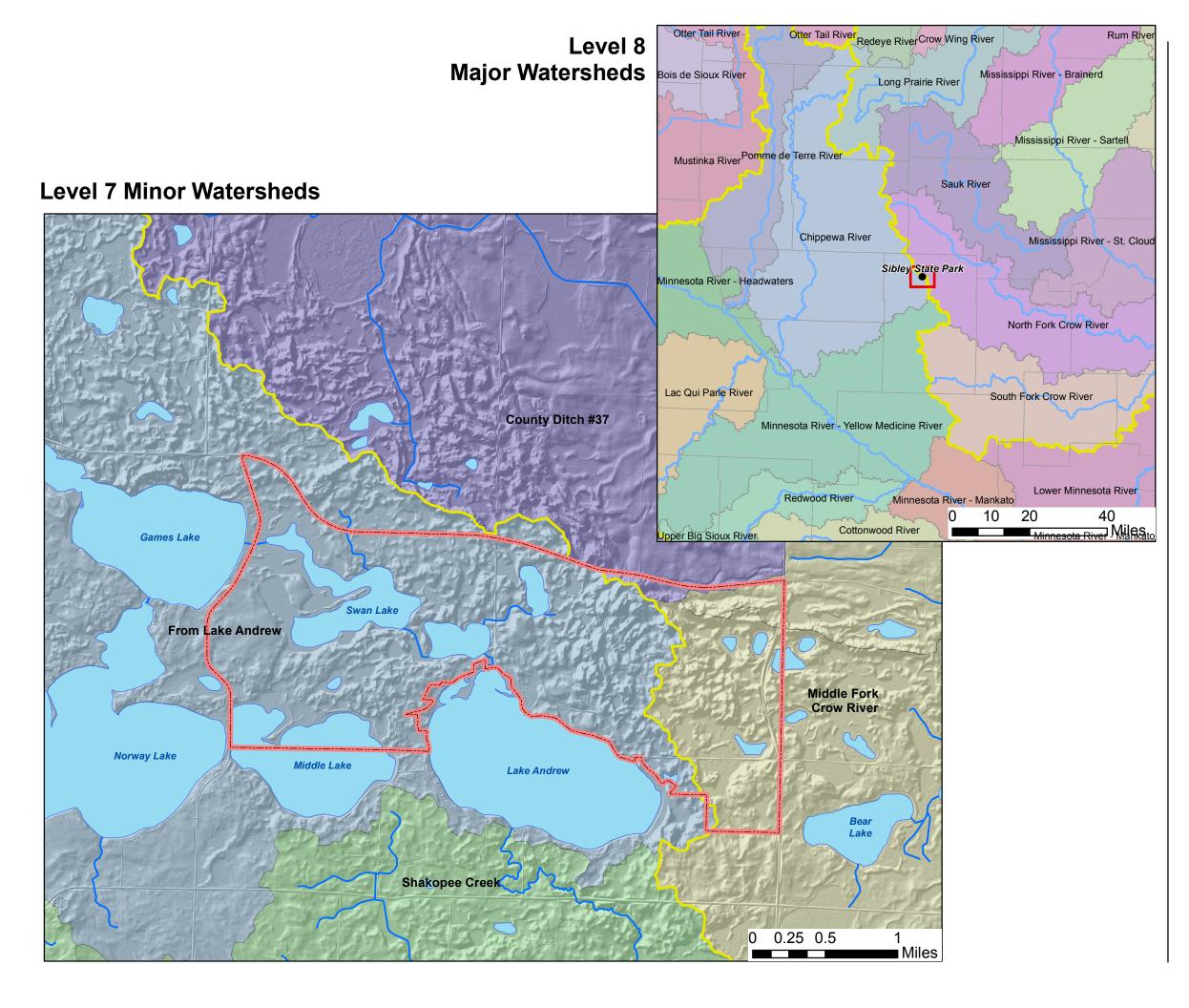


Figure 7: Watersheds

# Legend

State Park Statutory Boundary

5 Lake

- River or Stream
  - Major Watershed (Level 4) Divide

# Level 7 Minor Watersheds

- County Ditch #37
- From Lake Andrew
- Middle Fork Crow River
- Shakopee Creek



MN Department of Natural Resources Division of Parks and Trails

August 2012

# **Cultural Resources**

Sibley State Park contains significant concentrations of archaeological and historical resources. The confluence of prairie, oak savanna, and protected hardwood forest around the park made it a favorable location for use by native peoples for centuries before Euro-American settlement.

There is evidence that humans inhabited this area as much as 6,000 years ago, leaving burial mounds with pottery fragments and implements. Unfortunately, most of these mounds have been disturbed, and few are well preserved. Later, the region provided important hunting and fishing grounds for the Dakota people who succeeded the mound builders. The name "Kandiyohi" comes from the Dakota phrase for "abundance of buffalo fish."

Prior to Euro-American settlement, the Dakota (Sioux) Nation covered a broad expanse in modern-day central, western, and southern Minnesota. During the 19<sup>th</sup> century, westward-moving settlers and the U.S. government took possession of Dakota lands through a series of treaties, the most important of which were signed in 1851 at Traverse des Sioux and Mendota. Soon, immigrants hoping to homestead farms were flooding in and land speculators were laying out towns along proposed railroad lines. Conflict between the Dakota and encroaching settlers flared up in the U.S.–Dakota War of 1862. While the main conflict was concentrated further south along the Minnesota River Valley, clashes occurred at what is now Monson Lake State Park, in nearby Swift County, and near present-day Hawick.

Ten archaeological sites have been identified within the park, mainly discovered during assessment of park development projects or highway construction projects. In some cases informant reports help locate the sites. All of these sites are places where American Indian stone artifacts or pottery was found. Three of the sites are assignable to the Woodland period, 3,000 to 350 years ago.

Sibley State Park was established in 1919 after a game reserve had been established on the site in 1917 (see discussion in Chapter 1 under "Park History and Legislation"). The park and was named after Minnesota's first governor, Henry Hastings Sibley, who had enjoyed hunting in this part of west-central Minnesota. Improvements to the park, however, were slow and sporadic until the 1930s. In that decade, the New Deal work-relief programs launched by the federal government brought major investments in the infrastructure of state and national parks across the nation. Buildings, structures, roads and trails were designed by National Park Service architects and engineers in what came to be known as the NPS Rustic Style, using local wood and stone In 1935, Veteran Conservation Corps Camp SP-7, known as the "Three Bear Camp," was established at Sibley to house a 200-man contingent of World War I veterans. According to Meyer's history, the group arrived on May 3, in the midst of a spring snowstorm.

"By July 10 the veterans had cleared 1,200 feet of beach (Lake Andrew had receded during the drought years, leaving a fringe of debris), planted 5,000 trees, and constructed ten permanent buildings, latrines ("not cheap outhouse style," boasted the *Willmar Daily Tribune*, but real flush toilets), and a water system. Underway or planned were five miles of foot trails, a tourist camp building, a floating dock in the lake, completion of the picnic grounds, and planting of another 5,000 trees. New roads were also being built – straight rather than winding, in line with the preference of the era. <sup>6</sup>"



View of the VCC camp during the 1933-38 period. Minnesota Historical Society

The VCC activities stimulated public interest in the park, and in October of 1935 the Sibley State Park Improvement Association was formed. By 1938, VCC development projects were complete and the camp transferred to Itasca State Park, where they completed such notable stone buildings as the Forest Inn.

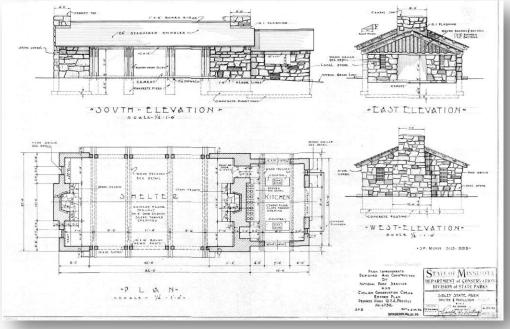
The CCC/Rustic Style Historic Resources district at Sibley State Park was listed on the National Register of Historic Places in 1988. It includes the entire Lake Andrew beachfront, Lakeview Campground, Cedar Hill Picnic Area, and service yard, as shown in Figure 7. Individual resources in the district include not only the shelter pavilion, bath house (now store) and restroom buildings but drinking fountains, stone steps, and the garage and office buildings in the service area.

<sup>&</sup>lt;sup>6</sup> Roy Meyer, Everyone's Country Estate: A History of Minnesota's State Parks, Minnesota Historical Society Press, 1991.

As described in the National Register nomination:

"The labor-intensive process characteristic of Rustic Style construction was clearly apparent at Sibley State Park. State park records indicate that 75 percent of the masonry was unusable because the exceptional hardness of the local stone [granite from nearby Cold Spring and Rockville quarries] made splitting very difficult. The Rustic Style stone buildings in the public use area of the park are significant because they have remained remarkably unchanged since construction. Sibley State Park also provides a superlative example of master planning, as the clearly defined circulation patterns and functional areas along the shoreline of Lake Andrew help reduce congestion and overcrowding among picnickers, bathers and campers."<sup>7</sup>





The bathhouse shortly after construction, 1938. Minnesota Historical Society

Detail of picnic shelter design, 1938. DNR archives

<sup>7</sup> Minnesota Historical Society:

<u>http://www.mnhs.org/places/nationalregister/stateparks/Sibley.html</u> Source: National Register of Historic Places Registration Form, 1988.

One additional historic resource, the stone shelter on the summit of Mt. Tom, was later removed from the district when its height was increased in 1992, in an effort to recapture the views from the summit that had been lost to tree growth.

Today the historic district's resources are significant not only as buildings and structures but as a designed landscape – one that was designed for the park users of the 1930s, an era when picnicking was hugely popular and camping vehicles were small in size. Changes have been made over time to the Lakeview Campground (infrastructure, density, circulation patterns), the beachfront (retaining wall and erosion prevention) and the picnic area (fencing). Future changes must be evaluated carefully in order to ensure that the character of the landscape and the integrity of the resources are preserved.

### **Cultural Resource Recommendations**

#### Overall Cultural Resources Goal: Preserve, restore and interpret Sibley State Park's historic structures, historic district and archaeological resources.

- Protect all known cultural resources within the VCC Historic District, including landscape resources. Seek context-sensitive solutions to shoreline erosion, beach recession and campground overcrowding within the historic district. Manage vegetation in the Cedar Hill picnic area to open up historic views of Lake Andrew.
- Manage historic scenic vistas elsewhere in the park, such as Mount Tom, through targeted vegetation management (see discussion of prairie and oak savanna restoration under Natural Resource Recommendations).
- The stone shelter on the summit of Mount Tom was an important element of the historic district and of the park's cultural landscape. If the Mount Tom lookout tower should require extensive repairs in the future, consideration should be given to returning the structure to its original form. If the surrounding viewshed is restored or improved as planned, consideration should also be given to restoring the structure.
- Conduct resource assessments during the planning stages of any development projects, ideally before exact locations have been identified, so that potential for resource impacts can be identified and avoided or mitigated.

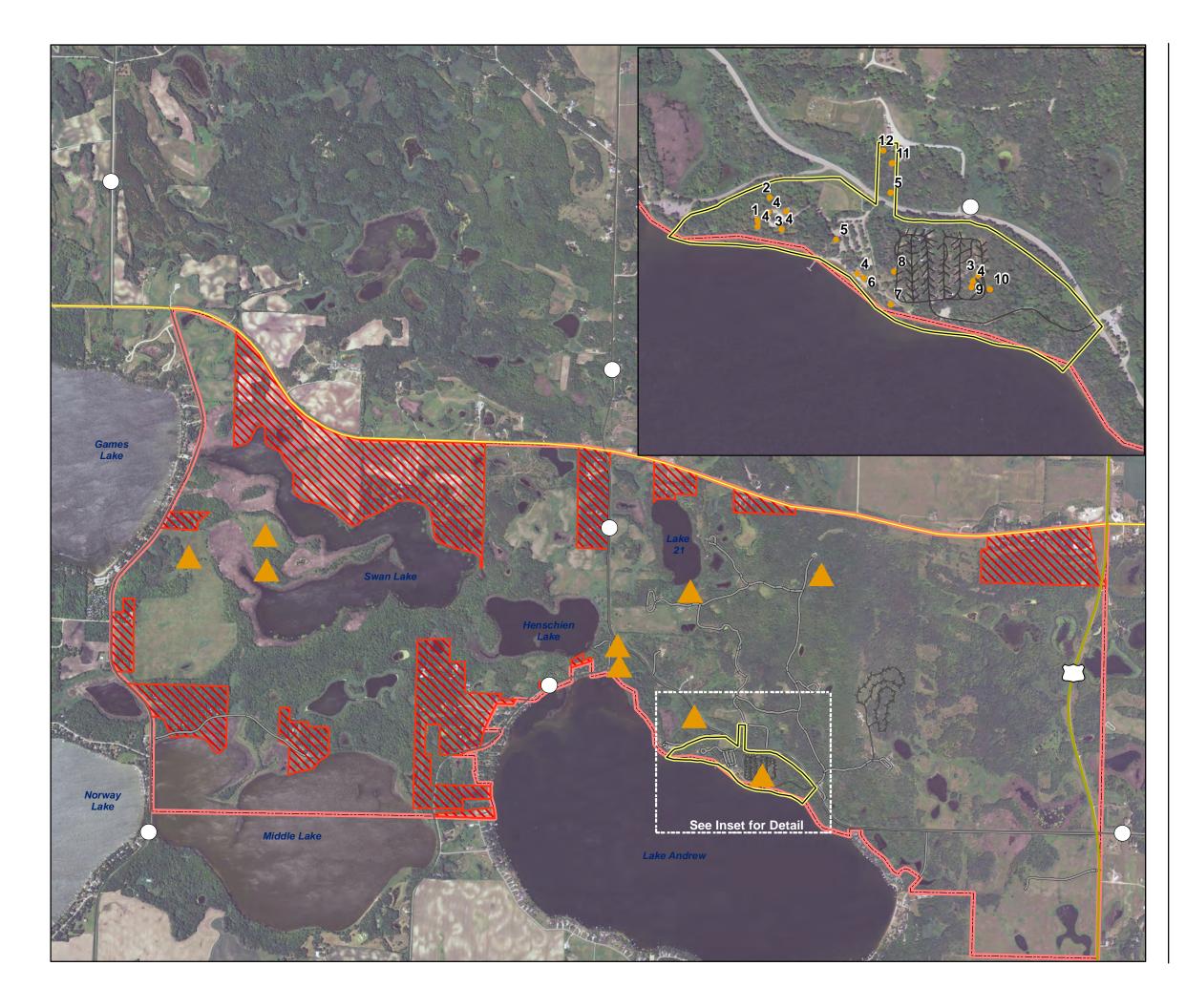
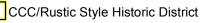
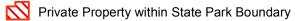


Figure 8: Historic District and Archaeological Sites

# Legend

Archaeological Sites





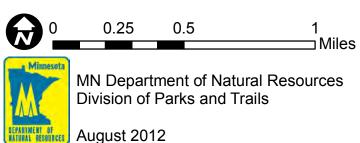


State Park Statutory Boundary

### Features in Historic District:

- 1. Shelter Pavilion
- 2. Pump House
- Latrine
   Latrine
   Drinking Fountains
   Stone Steps
   Bath House

- 7. Fish House
- 8. Ice & Wood House 9. Campground Shelter 10. Water Tower
- 11. Custodian's Cabin
- 12. Garage & Office



# **Interpretive Services**

The mission of the DNR Division of Parks and Trails interpretive program 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.

The Division of Parks and Trails' interpretive services program focuses its efforts on providing first-hand, resource-based accessible programs and activities that create a sense of connection with and stewardship for Minnesota's natural and cultural heritage. Telling the park's unique stories and illuminating the changing relationship between people and landscapes over time may accomplish this.

Division of Parks and Trails interpretive staff work in collaboration with other DNR divisions, agencies, educational institutions, local communities and citizens to develop programs and activities that will enhance the visitor's experience by increasing their understanding, appreciation and enjoyment of natural and cultural resources. Interpretive opportunities are presented in a variety of ways: guided experiences such as naturalist-led talks, special events, and outdoor skills building programs; and self-guided experiences such as interpretive trail kiosks, exhibits, brochures, and electronic media

# **Current Interpretive Services**

According to the 1995 *Minnesota State Park System Interpretive Services Plan*, Sibley State Park is a Group 4 park, meaning that it has high resources significance and visitor use that is high throughout the year with high seasonal peaks. ("Group 5" is the highest of these categories in terms of use and significance.) This merits programming four to seven days a week during heavy use periods throughout the year with a full service interpretive center, usually open year round; audio-visual programming; indoor displays and exhibits; supporting interpretive facilities such as information stations, self-guided trails, wayside exhibits, and multi-developed interpretive locations.

Currently, Sibley State Park has one full-time Interpretive Naturalist, a Seasonal Interpretive Naturalist, and two Naturalist Corps Aides assigned to provide naturalist-led programs and activities. Guest speakers provide additional educational programs and activities that may be outside the expertise of the interpretive staff at the park. Subjects covered by guest speakers have included wood carving, flint knapping, birds of prey, photography, music, cross-country ski lessons, summer and winter fishing, among others.

Interpretive services highlights at Sibley State Park currently include:



#### Modern Interpretive Center

The interpretive center contains three exhibit rooms, including a wetlands room, a glacial geology and park orientation room and an oak savanna exhibit room, installed in 2011, with 12 separate panels, interpretive signs and other objects explaining the oak savanna ecosystem. The glacial geology room contains a large, three-dimensional colored topographic map of Sibley State Park. A new touch screen kiosk that helps park visitors identify birds, wildflowers, amphibians and the Park's Veterans Conservation Corps history is located in the interpretive center. In front of the building is a native prairie garden with wildflower identification signs. The center includes an indoor auditorium with seating for 120 people, a big screen television and a large rear screen for videos, DVDs and computer presentations. An outdoor amphitheatre and stage area adjacent to the building has seating for over 200 people.



<u>Self-Guided Trails</u>

Two self-guided trails begin near the Interpretive Center. One trail focuses on Wetlands and the other on "Trees and Shrubs that Benefit Wildlife." These trails offer park visitors the opportunity to learn more about the trails' native surroundings. Lakeshore Area

A lakescaping demonstration area with interpretation is located at the Lake Andrew boat landing. An interpretive kiosk about the history of the Veterans Conservation Corps (VCC) is located near the Lakeview Campground.

<u>Mt. Tom Area</u>

Interpretive panels displaying information on Minnesota Biomes and Sibley State Park Windows to Minnesota are located near the Mt. Tom parking lot. Six vista identification signs help park visitors understand what distant features, including lakes and towns, they are seeing from the Mt. Tom observation deck. These signs also provide the direction and distance of each point from Mt. Tom. Six signs that interpret the subjects of common birds, trees and shrubs, glacial geology, plan succession and history are also located near Mt. Tom.

### Partnerships

Partnership can enhance interpretive services in several ways, from assisting with the design or supporting programs directly to providing avenues for reaching specific audiences such as youth. The core partners for interpretive services at Sibley State Park will be the other divisions within the DNR, which continue to integrate their interpretive and educational efforts into the programs at the Park.

Park staff already work with other partners in the area, including the Prairie Woods Environmental Learning Center, local school districts, and service organizations. Other potential partners have been identified during the planning process, including community groups that serve youth and minority populations. The DNR will actively seek partnerships to expand the potential topics and reach of the interpretive services programs at Sibley State Park.

### **Interpretive Services Recommendations**

#### **Overall Interpretive Services Goal:**

Visitors to Sibley State Park will be made aware of, come to appreciate and understand the scenic landscapes, the human impact on the surrounding landscape, seasonal recreational possibilities and wildlife viewing opportunities found in the park. Through this process, they will take ownership in the Park and work to protect, preserve and enhance the Park's resources.

#### **Interpretive themes**

Sibley State Park provides opportunities to learn about quality natural and cultural resources and actively recreate in them. Interpretive themes for Sibley

April 2013

State Park can be organized in three main groups, listed below with examples of the many potential sub-themes.

#### Glacial Processes, Plant Communities and Wildlife

Natural forces have shaped this landscape and its plants and animals and continue to shape them today.

- Geological themes
  - Advancing and retreating glaciers formed the landscape we see today.
  - Glaciers form lakes in Sibley by two processes.
  - Glacial till deposits can identify the movements of glaciers.
  - Glaciers provide benefits for us today.
- Botanical themes
  - Fire helps maintain healthy environments.
  - Lack of fire causes a decline of biodiversity.
  - Resource management activities improve Sibley's natural resources.
  - Prairie seed collection and planting helps improve prairie biodiversity.
  - Wildlife diversity can improve plant diversity.
  - Wetlands benefit people and wildlife.
  - Human activity causes wetland loss
  - How and why does Sibley's park management restore oak savanna?
- Zoological themes
  - Why and how do we manage Sibley's deer herd?
  - How do Sibley's water resources affect wildlife and fisheries?
  - Water quality and effects on fisheries
  - Sibley has 11 of the 29 reptile species found in Minnesota.
  - Sibley has 11 of the 19 amphibian species found in Minnesota.
  - Dragonflies are common because of Sibley's many wetlands.
  - Over fifty species of butterflies inhabit Sibley State Park.
  - Lake Andrew is part of the Shakopee Creek Watershed. What is a watershed?
  - What function do plants play in lakes?
  - What is a depression lake?
  - What are invasive species and how can they harm a lake?

#### Human Presence and Impact on the Sibley State Park Area

People have had an important impact on the development of Sibley State Park.

• Evidence of early people who lived and hunted in the area since the last ice age is abundant.

- In the 1800's the Sibley area was the boundary between the Dakota and Ojibwe.
- Did an ox cart trail run through Sibley in the 1800's?
- How and why did Sibley become a state park?
- Why is Henry Hastings Sibley the namesake of Sibley State Park?
- Henry Hastings Sibley is one of Minnesota's most important historical citizens. What were his main accomplishments?
- The Veterans Conservation Corps (VCC) built today's modern state park.
- Many of Sibley's oldest buildings are on the National Register of Historic Places.
- How do we manage and protect the park's archaeological and historic resources?

#### **Outdoor Recreation and Nature Skills**

Quality natural resources provide great opportunities for visitors to learn about and actively experience Sibley State Park.

- Sibley offers a blend of recreational opportunities ideal for winter and summer activities, for water- and land-based recreation, and for both active and observational activities
  - Sibley offers many excellent winter recreational activities including cross-country skiing, snowshoeing, winter camping, sledding and snowmobiling.
  - Lakes provide many opportunities for summer water-based recreation including fishing, canoeing, kayaking, and sailing.
  - With over 200 species of birds, Sibley is a premier bird watching area.
  - Land-based recreation such as biking, hiking, running, horseback riding, rollerblading, camping, geocaching, digital photography, archery and outdoor cooking are popular warm season activities.
  - Beautiful and diverse natural resources provide opportunities for nature observations, photography, nature and song writing, painting, drawing, woodcarving, etc.

#### **Program Recommendations**

- Integrate existing division programming, such as the "I Can" outdoor skills program series, into the outdoor education efforts at Sibley State Park.
- Organize an outdoor academy that will offer value added (fee-based) beginning and advanced training in recreational skills (camping, outdoor cooking, fishing, trapping, hunting, canoeing, etc.) and nature skills (photography, native plant gardening, plant identification, etc.)

- Consider acquisition of a pontoon, motor, trailer and dock for fishing, aquatic education and value added tours on Lake Andrew.
- Develop a demonstration area, activities and programs on solar and renewable energy and energy conservation initiatives.
- Integrate new resource information into interpretive programs and materials.
- Investigate partnerships for creating and providing interpretive programs.
- Promote the direct linkage between the park and the Glacial Lakes State Trail, both as an interim bike route and as a future off-road trail connection.
- Provide programs and facilities that meet the emerging needs of younger generations of park visitors.
- Explore and implement outreach activities and programs that specifically target underserved populations, including youth, young families, low-income people, and specifically Latino and Somali communities in the Willmar area.
- Provide programs and facilities that meet the outdoor recreation needs of an aging population, with relevant programming and volunteer opportunities.

# Recreational Use and Visitor Services

The Division of Parks and Trails strives to create memorable recreational experiences and to inspire users to pass along a love for the outdoors. The park planning process provides an opportunity to determine what types of recreation park users are interested in and balance those desires with the park's resource base and complement what recreational opportunities are available within the surrounding region.

### **Existing Recreational Facilities**

Existing trails and park facilities are shown on Figure 8.

#### Camping

Sibley State Park offers many opportunities for camping. The Lakeview Campground has 74 campsites, of those, 53 are electric sites that can accommodate RVs up to 70 feet in length. Four sites are accessible and one of the accessible sites is electric. There is an accessible shower building with flush toilets and a trailer sanitation station that operates from mid-May through mid-October.

The Oak Ridge Campground has 58 campsites, four of which are accessible. No campsites offer electrical service. There is a shower building with flush toilets. Four camper cabins are available for year-round use.

The equestrian campground has nine campsites. No sites are electric. Water, tie lines, and vault toilets are available.

The primitive group camp located near Lake 21 has three sites that can accommodate up to 30, 50 and 20 people respectively. These sites are all tent only sites that include fire rings, picnic tables, running water and vault toilets.

The group center can accommodate up to 128 people. The center includes staff quarters, seven bunk houses, a dining hall, a modern sanitation building, a craft hall and an outdoor amphitheater.

#### Trails

Summer Trails

- Eighteen miles of hiking trails
- Seven miles of horseback riding trails
- Nearly two miles of biking trails connect the Lakeview Campground and the Interpretive Center



Primitive group camp



Horse camp

A canoe route connects Middle Lake, Lake Andrew, Henschien, Swan, and Games lakes. Short portages are necessary between Middle Lake and Lake Andrew (1,850 feet), Lake Andrew and Henschien Lake (850 feet), Henschien and Swan Lakes (600 feet), and Swan and Games Lakes.



Sibley's lakes are ideal for canoeing and kayaking

Winter Trails

- Eight miles of classic ski trails
- Two and a half miles of skate ski trails
- Six miles of snowmobile trails within the park that connect to an extensive county trail system
- A two and a quarter mile snowshoe trail. Snowshoeing is also allowed anywhere in the park except on groomed trails

#### Picnic Areas

Picnic areas are located at Cedar Hill, the Lake Andrew Beach area and the boat access area. The Cedar Hill picnic area features an open stone shelter with electricity, two fireplaces, picnic tables, fire rings and flush toilets overlooking Lake Andrew. This picnic area is reservable up to one year in advance.

The picnic area near the beach area features numerous picnic tables and fire rings. A volleyball court and the swimming beach are nearby. The picnic area at the boat access also has picnic tables and fire rings, drinking water and vault toilets.

#### Lake Access

A popular boat ramp is available within the park. Canoes and kayaks are available for rent at the beach store. A public water access is also located near the western edge of the park on Games Lake. Parking is located near all of these locations.

#### **Historic District**

Numerous buildings and roads in the park were built by the Veterans Conservation Corps in the 1930s. These buildings are concentrated along the shoreline of Lake Andrew within the CCC/Rustic Style Historic District (see discussion under Cultural Resources). Some of the features in the historic district include the picnic shelter pavilion, the bath house, fish house, campground shelter and stone steps leading to the Cedar Hill picnic area.

#### Interpretive Center

A modern interpretive center has three exhibit rooms, a wetlands room, an oak savanna room, and a glacial geology and park orientation room. It also has an indoor auditorium with seating for 120 people, a big screen television and a large rear screen for videos, DVDs and computer presentations. Outside the interpretive center is an outdoor amphitheatre and stage area with seating for over 200 people and a native prairie garden with wildflower identification signs.

#### **Other Day Use Facilities**

- Fishing pier at the Inlet area (the inlet of the Henschien Lake channel)
- Swimming beach at Lake Andrew
- Mt. Tom overlook

#### **Other Winter Facilities**

- Sledding hill near interpretive center
- Warming house inside interpretive center

#### Access

State and local governments may not discriminate on the basis of disability (Americans with Disabilities Act of 1990|28 CFR Part 36). Access must be provided to services, programs, and activities. All services, when viewed in their entirety, must be useable by individuals with disabilities. This includes facilities such as parking, pedestrian access routes, restrooms, drinking water and recreation facilities.

The Americans with Disabilities Act (ADA) provides guidance for accommodating the natural environment's variable character when providing accessibility. ADA delineates modifications and exceptions that can be applied when necessary to maintain the integrity of an outdoor recreation setting, accommodating such elements as hydrology, terrain, surface characteristics and vegetation. Information regarding accessibility will be available in brochures and on the DNR website to guide visitor expectations. $^{8}$ 

Facilities in Sibley State Park have been developed consistent with the accessibility standards that were in place at the time of development, and may not meet all of today's standards. Future development will continue to comply with the most current ADA standards.

# **Recreational Use Issues**

#### Trail Issues

The density of trails in the eastern half of the park is very high, and some of these trails are only used seasonally. Additionally, trail erosion has been a problem on the steep hiking trails. During the spring, summer and fall, some of the trails are shared between hikers and horseback riders. Conflict between trail users on shared trails has not been a concern for park visitors to date.

One way to improve trail maintenance would be to use some of the existing winter trails for summer hiking and to eliminate the poorly designed segments of the summer hiking trails. This plan (Figure 10) shows several options for these trail realignments.)

Many participants in the planning process have expressed the desire for additional miles of horseback riding trails. This plan recommends opening several miles of snowmobile trail to horse use, as well as connecting the park's trails to the Glacial Lakes State Trail, providing additional mileage for horseback riders.

Other park users have expressed strong interest in creating options for off-road biking opportunities on natural-surface trails that would give cyclists an alternative to the park roads and the relatively short paved bike trail. This plan recommends exploring options for shared use of certain hiking trails, ski and snowmobile trails by hikers and cyclists.

#### **Campground Issues**

The Lakeview Campground is very popular and is often filled during the summer months. The campground was redesigned in the 1990s to accommodate larger recreational vehicles. Because it is so heavily used, there are some issues regarding soil compaction and tree canopy cover. Many of the trees in the campground are dying, leaving hazardous branches and a lack of shade. Electric and water services are also nearing the end of their useful lives and will likely need to be replaced in the near future. One way to reduce the pressure on the Lakeview Campground would be to make improvements to the Oak Ridge

<sup>&</sup>lt;sup>8</sup> See <u>http://www.dnr.state.mn.us/accessible\_outdoors/index.html</u>

Campground by adding additional sites and bringing electrical service to most sites. (Electrification of campsites would also likely result in an increase in revenues from camping reservations.)

Park users have also expressed the desire to improve the equestrian campground by adding electricity and water. These improvements will be evaluated in the context of potentially expanding horse trails within the park.

#### Lake Andrew Shoreline Issues

The popular beach area is in need of redesign and shoreline stabilization. The retaining wall near the beach store building is deteriorating and is threatened by ice damage and erosion. Because of Lake Andrew's predominantly sand substrate in the near-shore areas, the beach is also susceptible to erosion and ice ridges. Because the entire beach area is within the historic district, any improvements will need to be consistent with the character of the district. The boat access west of the beach is also highly susceptible to ice damage. The popular shore fishing area at the Lake Henschien inlet is in need of improvements to parking, pedestrian circulation and accessibility.

# Recommendations for Recreational Use and Visitor Facilities

#### Trail improvements and alterations

- Balance protection of the relatively undisturbed native plant communities and other resources of the park's west side with lowimpact visitor access. The goal is to provide a variety of park experiences, including limited access to more remote trails and sites for hiking, birding, and fishing.
- Develop a natural-surface hiking trail linking the "portage trail" with various points on Swann and Henschien lakes and connecting to the informal "County Park" trail on the park's western edge. Trail and surroundings would need to be carefully monitored to avoid spreading invasive plants or otherwise degrading resources.
- Evaluate the potential for developing (classic) ski trails on the west side, if they can be accommodated without degrading resources.
- Improve the portage trail landing sites, especially the Henschien Lake access, with a structure such as boardwalk or floating dock, to improve access for boaters.
- Reduce trail density on the east side of the park by consolidating and eliminating poorly designed segments (see Figure 10 for several options). Maximize year-round use of existing seasonal trails where

feasible (i.e. snowmobile trails and horse trails, ski trails and hiking trails).

- Expand horse trails to provide more options for riders and to increase use of the equestrian camp. The park's size and sensitive resources create challenges for much expansion of the horse trail network within current park boundaries. About three miles of additional horse trail are shown on Figure 10. In addition, the following options will be explored:
  - Realign and expand horse trails to the west & north of Henschein Lake if privately-owned land becomes available in the future.
  - Extend the horse trail to the southeast to connect with the Glacial Lakes State Trail extension to the park.
  - Explore options for trail easements on private properties north of Highway 9 and elsewhere around the park.
  - Explore options for horse trail expansion to the south of the current statutory boundary, in conjunction with boundary expansion.
  - Evaluate the feasibility of additional horse trail connections from the equestrian camp to the Oak Ridge campground, using existing ski trails.
- Explore options for shared use of certain trails by hikers and off-road cyclists. There is increasing interest in off-road biking options in the park

   not technically demanding mountain bike trails but rather natural-surface trails with gentle gradients. The loop of classic ski trails that extends from the Oak Ridge Campground to the primitive group camp is one potential route. The area identified for a potential new group camp (see below) also has possibilities for trail development.
- Complete the Glacial Lakes State Trail connection to the park. Completing this link will require additional land or easement acquisition, as well as a safe crossing of MN Highway 71.
- Determine a preferred route for the Glacial Lakes State Trail through the park. The trail as currently planned would terminate at the Interpretive Center. One option might involve a separated path paralleling County Road 48 through the park to County Highway 9. (The trail alignment to the west of the park has not been determined, and future development prospects are uncertain since most of the proposed route to Glacial Lakes State Park is in private ownership.)

#### Campground recommendations

• Reduce the density of campsites at Lakeview Campground to improve circulation and reduce pressure on infrastructure.

- Remove hazard trees and replant shade trees.
- Add overflow parking and improve options for group camping by reconfiguring sites.
- Plan on renewing infrastructure, such as electric and water service, recognizing that these systems are likely to need replacement in the near future.
- Consider development of several canoe-in campsites, primarily in the western half of the park, if appropriate sites can be located.
- Expand group camping opportunities, which are in high demand. Specifically, there is a high demand for the "Class II" type group campgrounds, which include a sanitation building. The existing group camp is a Class III, or "Primitive" camp, and is in an environmentally sensitive location that would be difficult to serve with central water and sewer facilities. A potential site for a new Class II group camp is identified on Figure 10 at a location just south and downslope from the existing equestrian camp.

One option to consider would be to provide a central sanitation building that could serve both the existing equestrian camp and a new group camp.

- Explore the option of upgrading lodging facilities at the Group Center to accommodate user requests and enhance lodging options. Consider adding a few camping sites in the group center for recreation vehicles for groups that wish to also bring RVs. Consider replacing the existing staff quarters building with a year-round accessible lodging/ guesthouse facility. Campsites and guest house could be rented individually during the fall and winter months.
- Add electric sites and additional camper cabins to the Oak Ridge Campground to increase its attractiveness to visitors (compared to the popular Lakeview Campground).
- Explore potential for adding electrical sites to the equestrian camp, within the context of potential horse trail expansion and the creation of a new Class II group camp nearby.
- Explore additional lodging opportunities such as camper cabins at all campgrounds; evaluate the desirability and maintenance requirements of scattered hike-in and boat-in sites elsewhere in park.

#### Lake Andrew beach / Cedar Hill recommendations:

- Repair and improve the beach area. A comprehensive redesign of the beach area is needed, within the context of the historic district, to include:
  - Design of a context-sensitive retaining wall around the historic camp store building to protect it from erosion and ice heaving;
  - Shoreland stabilization and restoration around the beach area, focusing on the use of native plant materials and other best management practices for erosion control;
  - Possible redesign of the parking area, potentially reducing its size and moving it further from the lake in order to expand the picnic area;
  - Evaluate stability of the bluff at the Cedar Hill picnic area and reinforce if necessary. Seek a more context-sensitive option to replace the existing wire fence, if needed.

#### Lake-related recommendations:

- Consider re-orientation of the Lake Andrew boat access to avoid ice damage. A more southerly orientation may be preferable.
- Improve the shore fishing area at the Henschien Lake Andrew inlet area, where a fishing pier was recently installed. Currently, off-street parking is scattered in a few small lots on the west side of County Road 38, forcing visitors to cross the road to reach the fishing pier.
   Improvements would include centralizing parking on the east side of County Road 38, as well as improved accessibility and pedestrian safety improvements such as a crosswalk and signage.
- Evaluate options for adding a connection between Norway Lake and Middle Lake, to create a six-lake water trail for canoes and kayaks. (The existing five-lake portage trail system includes Lake Andrew and Henschien, Swan, Games and Norway lakes.) Two major concerns are 1) managing invasive species such as Eurasian milfoil; and 2) establishing a safe crossing of County Road 5 between Norway and Middle lakes.

#### Traffic management recommendations

 Improve traffic management within the park. Because the park is crossed by several county roads used by area traffic, traffic management is a challenge. Options for calming and slowing traffic in congested areas such as along County Road 38 on the western shore of Lake Andrew should be considered. Among the options discussed are adding caution signs, striped pedestrian crossings, pedestrian-activated signal lights, and narrowing the striping of travel lanes, a common traffic-calming method. Park and regional staff would need to discuss these options with Kandiyohi County public works staff.

 Work with MnDOT to install a left turn lane at the US 71/County 148 intersection and a right turn lane at the Trunk Highway 9/County Road 48 intersection. High traffic speeds on the two state highways make it difficult to safely turn onto these two primary entrances into the park.

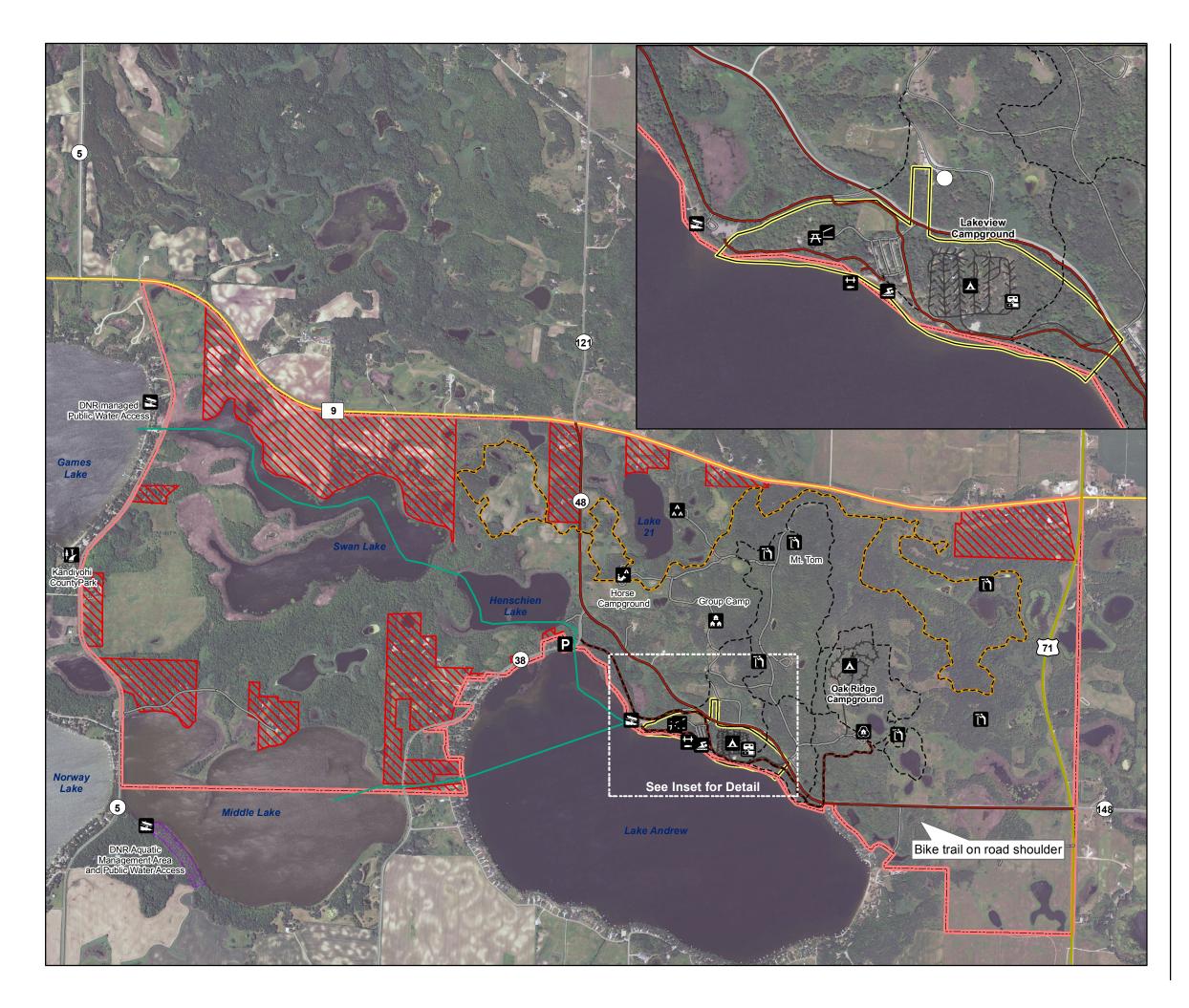


Figure 9: Existing Visitor Facilities and Trails

# Legend

- State Park Statutory Boundary
- Private Property within State Park Boundary

### CCC/Rustic Style Historic District

#### **Visitor Facilities**

۲	Visitor Center		
Å	Campground		
^ ^ ^	Primitive Group Camp		
<b>A A A</b>	Group Center		
i 🖍	Horse Campground		
Ĩ	Overlook		

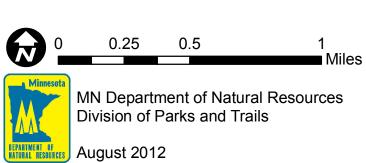
- 🛃 Beach
- Fishing Pier
- Boat Ramp
- A Picnic Area
- Shelter
- P Parking

# Summer Trails

- Bicycling Lane
- Hiking Trails
- Morse/Hiking Trails
- Bicycling/Hiking Trails

Trailer Sanitation Station

Canoeing Route



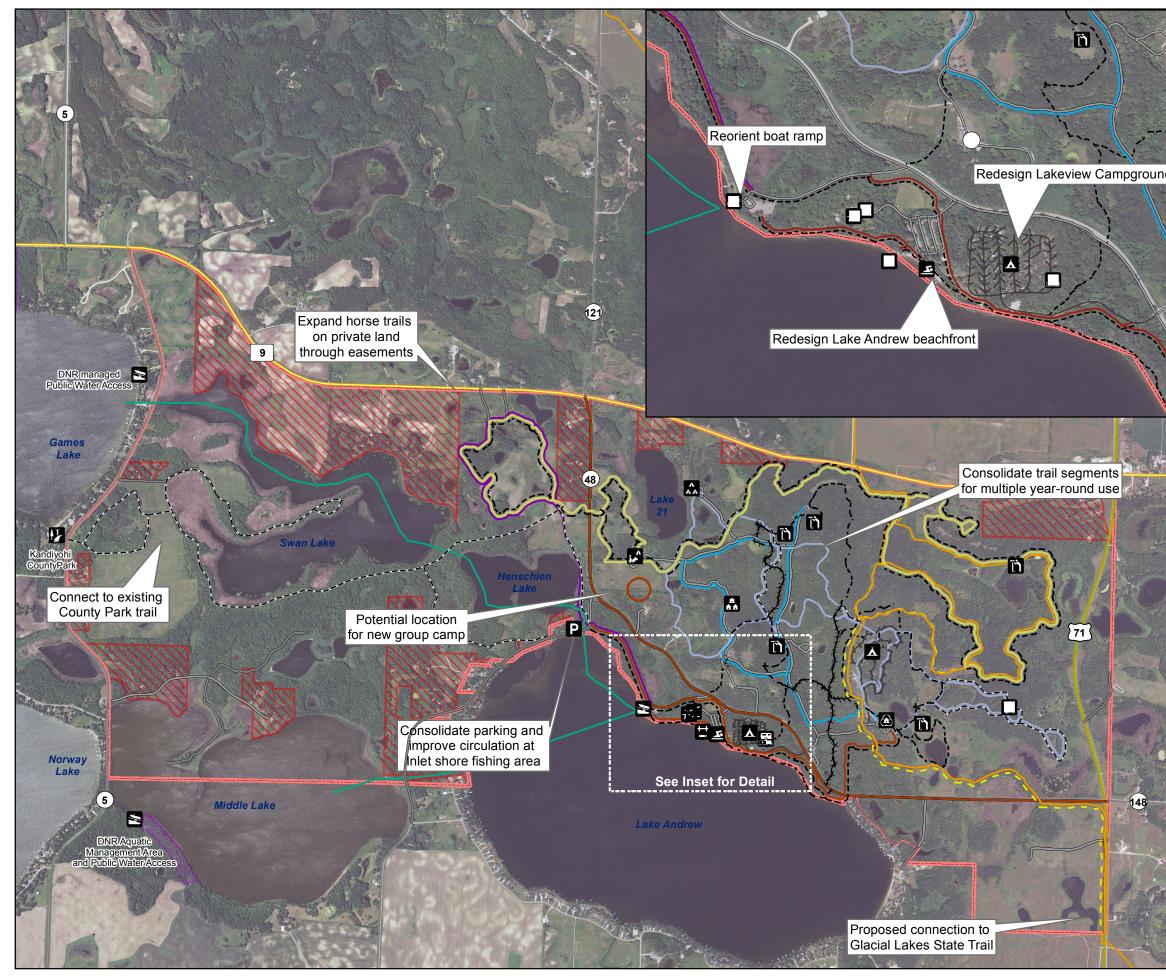


Figure 10: Proposed Development

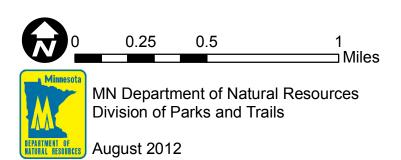
# Legend

State Park Statutory Boundary

Private Property within State Park Boundary

### **Visitor Facilities**

۲	Visitor Center	ž	Beach	
Å	Campground	Ħ	Fishing Pier	
<b>^</b> <b>^</b>	Primitive Group Camp	<u>*</u>	Boat Ramp	
A A	Group Center	Ŧ	Picnic Area	
<u>مغ</u>	Horse Campground		Shelter	
ñ	Overlook	Р	Parking	
F	Trailer Sanitation Station			
Potential Trail Changes				
∠ <sup>Z*</sup> ∀ <sub>Z</sub> Z <sup>+</sup> Potential Trails to Remove				
Potential New Hiking Trails				
Potential New Horse Trails				
Potential New Bicycling/Hiking Trail				
Summer Trails		Winter Trails		
Canoe Route		$\sim$	Classic Ski Trails	
/`\_/ Hiking Trails		$\sim$	Skate Ski Trails	
Horse Trails		$\sim$	Snowshoe Trails	
Bicycling Trails		Snowmobile Trails		



# **Park Operations**

Current staffing at Sibley State Park includes:

Year-round staff:

- Park Manager
- Assistant Park Manager
- Park Naturalist
- Administrative Assistant
- General Repair Worker

Seasonal staff:

- Interpretive Naturalist
- 2 Naturalist Corps Aides
- 4 Parks Workers
- 3 Buildings and Grounds Workers (5 positions allocated)
- 2 Natural Resource Workers (3 positions allocated)
- General Laborer

Temporary or other:

- 3 Interns
- 5 Greenview (part-time) positions. The Greenview program is a partnership between DNR and Greenview, Inc., a nonprofit organization that hires retirees, who work on limited labor tasks appropriate for their skills and physical abilities.

# **Monson Lake State Park Satellite Operation**

Sibley State Park is responsible for the maintenance and operation of Monson Lake State Park (approximately 15 miles west of Sibley). In recent history a staff person was assigned to work at Monson Lake under the direction of Sibley State Park during the summer months and at Sibley during the remainder of their season. The classification of this position has varied from that of a Park Specialist, Park Technician, or Building and Grounds Worker. Currently there are no staff assigned directly to Monson Lake and all maintenance and operations tasks are performed by various Sibley staff. Sibley State Park maintenance and night security staffs make regular visits to Monson Lake and all fiscal management is handled by Sibley staff. Service to Monson Lake guests has been enhanced with the presence of a Campground Host during the summer.

### Enforcement

The park manager and assistant manager are the designated Park Rangers who are authorized by the DNR to enforce rules and regulations within the state park

April 2013

boundary. Typical enforcement issues include campground disturbances, alcohol use and permit violations. Park staff takes a proactive approach to preventing enforcement problems through routine and periodic patrols of use areas and campgrounds by trained security staff. Park staff can also call on other law enforcement agencies, particularly the Kandiyohi County Sheriff's Department, to assist with law enforcement and emergency services. DNR Conservation Officers primarily help enforce fishing, hunting, and trail use rules and regulations and assist with persistent or ongoing enforcement issues.

### **Regional Office Consolidation**

DNR's Management Resources Bureau continues to investigate options to consolidate DNR operations in Willmar – New London area. Sibley State Park currently houses Wildlife Division staff in the former Caretaker's Residence in the shop and service area. Sites within the park will be considered among the various options for locating a combined office. However, no funding is currently available to pursue this option. A separate planning process would be conducted as part of the site selection process, if and when it occurs.

### **Staffing and Funding Levels**

If all the recommendations in this park plan were implemented, annual operational costs would need to be increased. The level or amount of this increase is difficult to estimate, since many of the recommendations are too general to base estimates on. However, new development projects such as a new group camp would increase park visits, which would increase operational costs.

Sibley State Park's level of visitation and its central geographic location mean that it will continue to play an important role within the state park system. As such, it will be important to ensure that staffing is adequate to meet visitor expectations and protect the park's natural and cultural resources.

### **Staffing and Funding Recommendations**

- Ensure that resource management staff time is available to fully implement the resource management recommendations.
- Focus future enforcement and visitor service efforts on heavy-use weekends.
- Seek funding for additional staff hours to manage increased visitation as the development projects outlined in this plan are implemented.

# State Park Boundary

The Minnesota State Legislature establishes state park boundaries. The state park statutory boundary defined in Minnesota Statutes provides staff, citizens and policy makers with a common understanding of which lands are appropriate for inclusion in the park. It is the current policy of the Division of Parks and Trails to include within a statutory boundary only those lands where the landowner has agreed to inclusion. The DNR is then authorized to negotiate with willing sellers for acquisition of lands contained within that statutory boundary. Being within a statutory park boundary does not have any impact on the landowner. He or she retains full ownership of the land until he or she decides to sell to the park or another buyer.

Boundary modifications are considered during all state park management planning processes. Although a state park management plan can recommend boundary changes, only the Minnesota State Legislature can change state park boundaries.

### **Current State Park Statutory Boundary and Adjacent Lands**

Sibley State Park includes 3,014 acres within its statutory boundary. Of that acreage, 2,512 acres is owned by the State of Minnesota, while 502 acres within the boundary remain in private ownership.

Sibley State Park is surrounded primarily by privately owned lands. Agriculture is a dominant land use in the area and is common in the lands surrounding the park. Many farm lands surrounding the park are enrolled in the Conservation Reserve Program (CRP), a voluntary, federal private-lands cost-sharing program designed to encourage farmers to improve environmental quality. Shoreline residential development is also common on Lake Andrew, Norway and Games Lakes.

Kandiyohi County Park 7 is located just across County Highway 5 on the western end of Sibley State Park. The county park is a popular swimming and camping area.

A new combination Aquatic Management Area (AMA) and Public Water Access (PWA) of 8.8 acres has been established on the southern shore of Middle Lake. AMAs are created to ensure that critical fish and wildlife habitats are conserved, to provide non-boat public access to water resources, and to restore habitat in previously disturbed areas. The AMA/PWA will be minimally developed to provide a small parking area, a water access site geared primarily to duckboats, and walking trails for shoreline fishing access.

### **Proposed Boundary Modifications**

As the land use surrounding Sibley State Park is anticipated to remain largely agricultural, the land preserved within the park will become more important for natural and cultural resource protection and for visitors seeking quality recreational experiences.

Some possible additions to the statutory boundary, shown on Figure 11, include:

- The DeLong Farm and other areas near the southeast corner of park. This area may be important for possible trail expansion that would connect to the Glacial Lakes State Trail.
- South and east side of Middle Lake near the AMA. This would provide additional shoreline protection and help preserve water quality, and protect wildlife and fisheries habitat.
- An access parcel between Norway and Middle Lakes to complete a sixlake canoe circuit.
- On the north side of Trunk Highway 9, the hilly, wooded landscape is similar in character to that of the park, and is likely to include similar high-quality natural resources. Expansion in this area could provide opportunities to extend trails and protect significant resources.

Extension of a park's statutory boundary simply means that DNR staff may negotiate with interested property owners in that area. No lands are recommended to be removed from the state park statutory boundary.

### **Park Boundary Recommendations**

- Pursue addition of lands to the park statutory boundary as described above, with the support of property owners.
- Provide local units of government with the opportunity to review statutory boundary proposals.
- Continue to pursue acquisition of private lands within the current park statutory boundary that support the Division of Parks and Trails' mission to protect and perpetuate the diverse natural, scenic and cultural resources for low impact use, education and enjoyment of park visitors.
- Consider acquisition of parcels outside of the park statutory boundary that meet boundary change criteria and are supported by the property owner.
- Support the use of conservation tools like conservation easements and cooperative resource management projects in working with neighboring

communities, special interest groups, county and regional units of government, and private property owners.

• Park staff will ensure that common boundaries with property owners are clearly identified to prevent access to private land by park users and prevent trespass issues onto parkland.

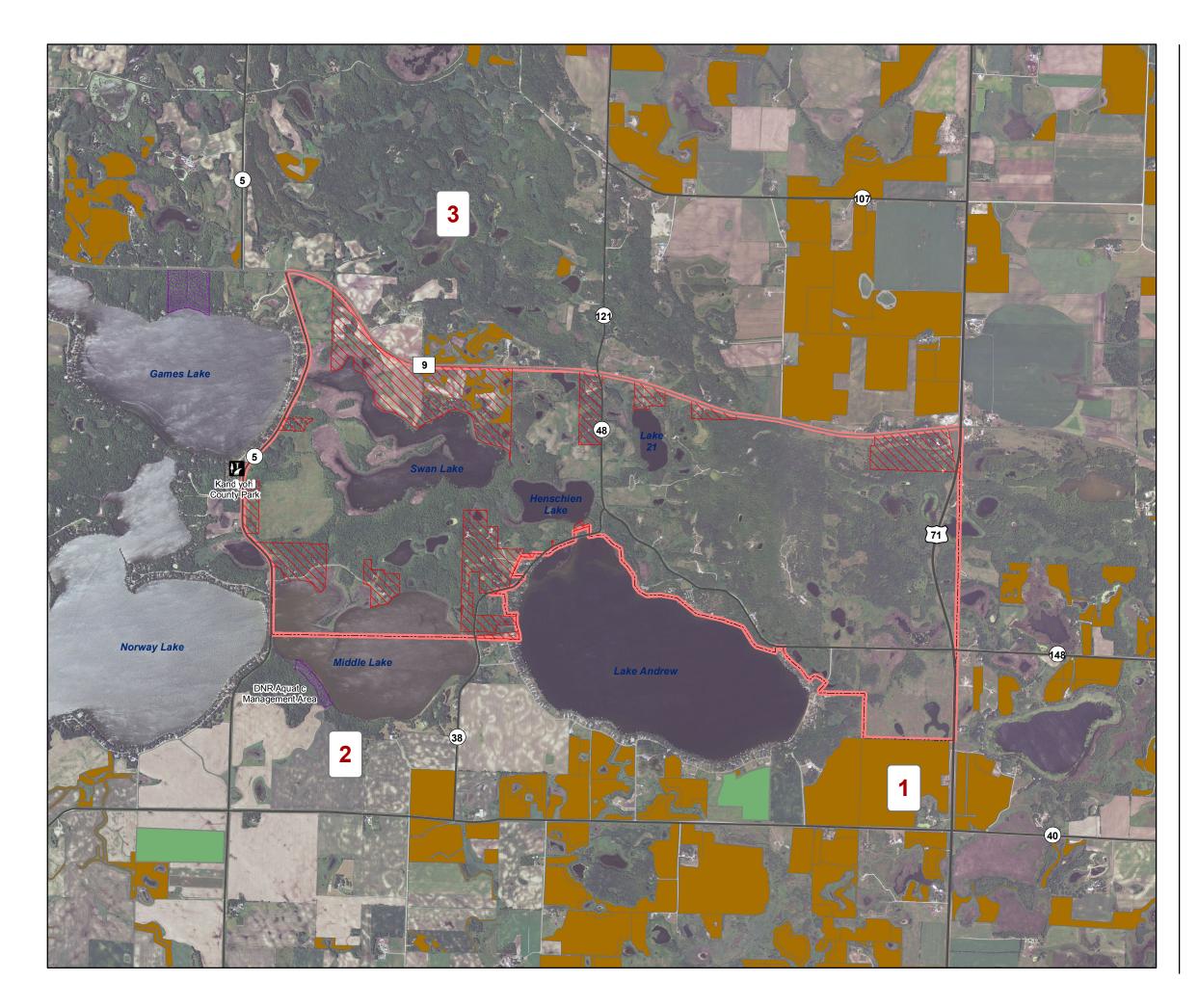
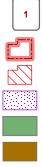


Figure 11: Proposed Boundary Adjustments

# Legend



Potential Statutory Boundary Expansion Zone State Park Statutory Boundary Private Property within State Park Boundary Aquatic Management Area Reinvest in Minnesota (RIM) Conservation Reserve Program (2007)



0 0.25 0.5 1 Miles

MN Department of Natural Resources Division of Parks and Trails

August 2012

# **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 can affect some of the plan recommendations or occasionally an entire plan. Plans need to acknowledge changing conditions and be flexible enough to allow for modifications as needed. The DNR Division of Parks and Trails has adopted processes for plan amendments (major changes) and plan revisions (minor changes), which are coordinated through the division's planning section.

# **Plan Amendment**

A change must be approved through the plan amendment process if it meets any of the following criteria:

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

#### Plan Amendment Process

The Plan Amendment Process consists of five steps:

- The existing plan is reviewed at the park and regional levels to determine which stakeholders are potentially impacted by a resource condition or proposed change.
- If the proposed change involves other DNR divisions, the issue should be resolved by staff of involved divisions and approved by the division directors.
- 3. If the proposed change involves other state agencies, the issue should be resolved by staff and approved by the appropriate division directors from all involved agencies.
- 4. If the proposed change is potentially controversial among elected boards, user groups or the public, a citizen advisory committee should be established to address the proposed change. A locally advertised open house will be held to encourage public input on the matter, after which point the DNR Division of Parks and Trails division director will

determine whether the proposed change should be reviewed by the department.

5. All plan amendments will be coordinated, documented and distributed by the DNR Division of Parks and Trails planning section.

## **Plan Revision**

If a plan change is recommended that does not meet the amendment criteria above, and generally follows the intent of the plan, the DNR Division of Parks and Trails has the discretion to modify the plan without a major planning process.

### Plan Revisions Related to Physical 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 "area" 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 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 sections of the plan should be updated periodically as needed. The DNR Division of Parks and Trails' resource management and interpretive staff will determine when an update is needed and coordinate the revision with the DNR Division of Parks and Trails planning section.

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# Appendix A: Summary of Plan Recommendations

## **Natural Resource Recommendations**

#### Vegetation management

- Protect populations of endangered, threatened, and special concern plant species documented within the park and any other ecologically vulnerable species that persist or become established as climate change occurs.
- Figure 6, Desired Future Conditions, illustrates proposed restoration priorities for the park. Note that the distinctions between native plant communities are not as sharp as they appear on the map, and that priorities will be adjusted based on actual conditions in the field.
  - The primary focus will be on restoration of oak savanna and prairie communities as feasible.
  - Another priority is to identify, evaluate, and manage mature and old-growth forest stands and legacy trees. In particular, work to preserve the relatively unbroken forest canopy on the west side of the park between Swan, Henschien and Middle lakes.
  - One specific location for forest restoration is the large old field just east of County Park #7
- Maintain old fields/croplands and pasture in herbaceous vegetation until reconstruction of native plant communities can begin. The intent here is to stop the incursion of cedar and other trees.
- Periodically monitor native plant communities, particularly high quality areas, to insure that terrestrial invasive plants are not invading them or that these communities are not otherwise being degraded (e.g. lack of fire in fire-dependent communities).
- Conduct resource assessments early in the planning stages of any development projects – ideally before exact locations have been identified.
- Use timber harvest as a resource management tool where appropriate.

#### Wildlife

- Maintain the diversity of ecosystems and their characteristic wildlife populations.
- Preserve or restore populations of native vertebrates and invertebrates in the park, including dragonflies, reptiles, amphibians, birds and mammals.

- Conduct inventories of reptiles, mammals and selected invertebrates.
- Maintain or improve water quality, aquatic habitat, and quality fish populations (both native and stocked).
- If the park ever acquires all lands surrounding the "interior lakes," consider managing one or more of them as a "heritage fishery." This designation restricts the use of all motors and electronic devices while providing a quality fishing opportunity. Lakes in Glendalough and Mille Lacs Kathio state parks have received this designation.
- Manage populations of deer such that native vegetation and tree regeneration are not overly impacted.
- Manage for nesting waterfowl and other cavity nesting bird species by creating new and maintaining existing snags where visitor safety is not an issue.
- Manage for woodland birds by preserving the forest canopy on the west side of the park
- Review and update the status of listed species where necessary.

#### Water resources

- Regularly consult with DNR's Division of Ecological and Water Resources and Fish and Wildlife on how common goals for improving water quality on the park's lakes can be achieved.
- Work with the Chippewa River Watershed Project (CRWP), Minnesota Pollution Control Agency (MPCA), Kandiyohi County, and other interested partners to improve water quality in the Shakopee Creek Sub-Basin.
- Continue to implement Shoreland Best Management Practices (BMPs) at the park, including improvements to the Lake Andrew shoreline that are consistent with visitor use and cultural resource protection.
- Inform nearby landowners of shoreland BMPs and encourage them to implement them.

#### Other resource recommendations

- Publicize resource management activities through various means. For example send out press releases and other bulletins before and during events such as prescribed burns. Develop a series of temporary and onsite interpretive signs that tell the resource management stories in the park, such as prescribed burns, prairie restoration, savanna restoration and management, wildlife species re-introductions, and invasive species management.
- Use energy-efficient designs and practices for current park facilities and for future development. Conservation efforts may include: fuel-efficient vehicles, clean fuel use, energy efficient office equipment and

appliances, energy-conservation in buildings, and landscaping designs that reduce the need for mowing.

### **Cultural Resource Recommendations**

- Protect all known cultural resources within the VCC Historic District, including landscape resources. Seek context-sensitive solutions to shoreline erosion, beach recession and campground overcrowding within the historic district. Manage vegetation in the Cedar Hill picnic area to open up historic views of Lake Andrew.
- Manage historic scenic vistas elsewhere in the park, such as Mount Tom, through targeted vegetation management (see discussion of prairie and oak savanna restoration under Natural Resource Recommendations).
- The stone shelter on the summit of Mount Tom was an important element of the historic district and of the park's cultural landscape. If the Mount Tom lookout tower should require extensive repairs in the future, consideration should be given to returning the structure to its original form. If the surrounding viewshed is restored or improved as planned, consideration should also be given to restoring the structure.
- Conduct resource assessments during the planning stages of any development projects, ideally before exact locations have been identified, so that potential for resource impacts can be identified and avoided or mitigated.

## **Interpretive Services Recommendations**

- Integrate existing division programming, such as the "I Can" outdoor skills program series, into the outdoor education efforts at Sibley State Park.
- Organize an outdoor academy that will offer value added (fee-based) beginning and advanced training in recreational skills (camping, outdoor cooking, fishing, trapping, hunting, canoeing, etc.) and nature skills (photography, native plant gardening, plant identification, etc.)
- Consider acquisition of a pontoon, motor, trailer and dock for fishing, aquatic education and value added tours on Lake Andrew.
- Develop a demonstration area, activities and programs on solar and renewable energy and energy conservation initiatives.
- Integrate new resource information into interpretive programs and materials.
- Investigate partnerships for creating and providing interpretive programs.

- Promote the direct linkage between the park and the Glacial Lakes State Trail, both as an interim bike route and as a future off-road trail connection.
- Provide programs and facilities that meet the emerging needs of younger generations of park visitors.
- Explore and implement outreach activities and programs that specifically target underserved populations, including youth, young families, low-income people, and specifically Latino and Somali communities in the Willmar area
- Provide programs and facilities that meet the outdoor recreation needs of an aging population, with relevant programming and volunteer opportunities.

## Recommendations for Recreational Use and Visitor Facilities

#### Trail improvements and alterations

- Balance protection of the relatively undisturbed native plant communities and other resources of the park's west side with lowimpact visitor access. The goal is to provide a variety of park experiences, including limited access to more remote trails and sites for hiking, birding, and fishing.
- Develop a natural-surface hiking trail linking the "portage trail" with various points on Swann and Henschien lakes and connecting to the informal "County Park" trail on the park's western edge. Trail and surroundings would need to be carefully monitored to avoid spreading invasive plants or otherwise degrading resources.
- Consider possibility of (classic) ski trails on the west side, if they can be accommodated without degrading resources.
- Improve the portage trail landing sites, especially the Henschien Lake access, with a structure such as boardwalk or floating dock, to improve access for boaters.
- Reduce trail density on the east side of the park by consolidating and eliminating poorly designed segments (see Figure 10 for several options). Maximize year-round use of existing seasonal trails where feasible (i.e. snowmobile trails and horse trails, ski trails and hiking trails).
- Expand horse trails to provide more options for riders and to increase use of the equestrian camp. The park's size and sensitive resources create challenges for much expansion of the horse trail network within current park boundaries. The following are possible options:

- Realign and expand horse trails to the west & north of Henschein Lake if privately-owned land becomes available in the future.
- Extend the horse trail to the southeast to connect with the Glacial Lakes State Trail extension to the park.
- Explore options for trail easements on private properties north of Highway 9 and elsewhere around the park.
- Explore options for horse trail expansion to the south of the current statutory boundary, in conjunction with boundary expansion.
- Evaluate the feasibility of additional horse trail connections from the horse camp to the Oak Ridge campground, using existing ski trails.
- Explore options for shared use of certain trails by hikers and off-road cyclists. There is increasing interest in off-road biking options in the park

   not technically demanding mountain bike trails but rather natural-surface trails with gentle gradients. The loop of classic ski trails that extends from the Oak Ridge Campground to the primitive group camp is one potential route. The area identified for a potential new group camp (see below) also has possibilities for trail development.
- Complete the Glacial Lakes State Trail connection to the park.
   Completing this link will require additional land or easement acquisition, as well as a safe crossing of MN Highway 71.
- Determine a preferred route for the Glacial Lakes State Trail through the park. The trail as planned would currently terminate at the Interpretive Center. Options might include a separated path paralleling County Road 48 through the park to County Highway 9. (The trail alignment to the west of the park has not been determined, and future development prospects are uncertain since most of the proposed route to Glacial Lakes State Park is in private ownership.)

#### Campground recommendations

- Reduce the density of campsites at Lakeview Campground to improve circulation and reduce pressure on infrastructure.
- Remove hazard trees and replant shade trees.
- Add overflow parking and improve options for group camping by reconfiguring sites.
- Plan on renewing infrastructure, such as electric and water service, recognizing that these systems are likely to need replacement in the near future.
- Consider development of several canoe-in campsites, primarily in the western half of the park, if appropriate sites can be located.
- Expand group camping opportunities, which are in high demand. Specifically, there is a high demand for the "Class II" type group

campgrounds, which include a sanitation building. The existing group camp is a Class III, or "Primitive" camp, and is in an environmentally sensitive location that would be ifficult to serve with central water and sewer facilities. A potential site for a new Class II group camp is identified on Figure 10 at a location just south and downslope from the existing equestrian camp.

- One option to consider would be to provide a central sanitation building that could serve both the existing equestrian camp and a new group camp.
- Explore the option of upgrading lodging facilities at the Group Center to accommodate user requests and enhance lodging options. Consider adding a few camping sites in the group center for recreation vehicles for groups that wish to also bring RVs. Consider replacing the existing staff quarters building with a year-round accessible lodging/ guesthouse facility. Campsites and guest house could be rented individually during the fall and winter months.
- Add electric sites and additional camper cabins to the Oak Ridge Campground to increase its attractiveness to visitors (compared to the popular Lakeview Campground).
- Explore potential for adding electrical sites to the equestrian camp, within the context of potential horse trail expansion and the creation of a new Class II group camp nearby.
- Explore additional lodging opportunities such as camper cabins at all campgrounds; evaluate the desirability and maintenance requirements of scattered hike-in and boat-in sites elsewhere in park.

#### Lake Andrew beach / Cedar Hill recommendations:

- Repair and improve the beach area. A redesign of the beach area is needed, within the context of the historic district, to include:
  - Design of a context-sensitive retaining wall around the historic camp store building to protect it from erosion and ice heaving;
  - Shoreland stabilization and restoration around the beach area, focusing on the use of native plant materials and other best management practices for erosion control;
  - Possible redesign of the parking area, potentially reducing its size and moving it further from the lake in order to expand the picnic area;
  - Evaluate stability of the bluff at the Cedar Hill picnic area and reinforce if necessary. Seek a more context-sensitive option to replace the existing wire fence, if needed.

#### Lake-related recommendations:

- Consider re-orientation of the Lake Andrew boat access to avoid ice damage. A more southerly orientation may be preferable.
- Improve the shore fishing area at the Henschien Lake Andrew inlet area, where a fishing pier was recently installed. Currently, off-street parking is scattered in a few small lots on the west side of County Road 38, forcing visitors to cross the road to reach the fishing pier.
   Improvements would include centralizing parking on the east side of County Road 38, as well as improved accessibility and pedestrian safety improvements such as a crosswalk and signage.
- Evaluate options for adding a connection between Norway Lake and Middle Lake, to create a six-lake water trail for canoes and kayaks (The existing five-lake portage trail system includes Lake Andrew and Henschien, Swan, Games and Norway lakes.) Two major concerns are 1) managing invasive species such as Eurasian milfoil; and 2) establishing a safe crossing of County Road 5 between Norway and Middle lakes.

#### Traffic management recommendations

- Improve traffic management within the park. Because the park is crossed by several county roads used by area traffic, traffic management is a challenge. Options for calming and slowing traffic in congested areas such as along County Road 38 on the western shore of Lake Andrew should be considered. Among the options discussed are adding caution signs, striped pedestrian crossings, pedestrian-activated signal lights, and narrowing the striping of travel lanes, a common traffic-calming method. Park and regional staff would need to discuss these options with Kandiyohi County public works staff.
- Work with MnDOT to install a left turn lane at the US 71/County 148 intersection and a right turn lane at the Trunk Highway 9/County Road 48 intersection. High traffic speeds on the two state highways make it difficult to safely turn onto these two primary entrances into the park.

## **Staffing and Funding Recommendations**

- Ensure that resource management staff time is available to fully implement the resource management recommendations.
- Focus future enforcement and visitor service efforts on heavy-use weekends.
- Seek funding for additional staff hours to manage increased visitation as the development projects outlined in this plan are implemented.

## **Park Boundary Recommendations**

- Pursue addition of lands to the park statutory boundary as described above, with the support of property owners.
- Provide local units of government with the opportunity to review statutory boundary proposals.
- Continue to pursue acquisition of private lands within the current park statutory boundary that support the Division of Parks and Trails' mission to protect and perpetuate the diverse natural, scenic and cultural resources for low impact use, education and enjoyment of park visitors.
- Consider acquisition of parcels outside of the park statutory boundary that meet boundary change criteria and are supported by the property owner.
- Support the use of conservation tools like conservation easements and cooperative resource management projects in working with neighboring communities, special interest groups, county and regional units of government, and private property owners.
- Park staff will ensure that common boundaries with property owners are clearly identified to prevent access to private land by park users and prevent trespass issues onto parkland.

# Appendix B: Summary of Public Involvement Efforts

## **Open Houses and Outreach Efforts**

An open house was held at the park on October 18, 2011 to explore issues that the management plan should address. About 35 people attended; many were horse trail riders and expressed interest in expanding horse trails and facilities. A petition by a group of trail riders identified desired improvements, including improved trail maintenance, day use parking, and electrification of equestrian campground sites.

The Sibley State Park Improvement Association (SSPIA) also provided a list of recommended improvements. These included road improvements, boundary expansion, and improvements to visitor facilities and trails.

Many of the items identified by both groups have been incorporated into this plan's recommendations.

Park interpretive staff and planners also met with representatives of the West Central Integration Collaborative and the Multicultural Business Center in Willmar discuss ways in which outreach efforts and park programs could be tailored to the needs of the Latino and Somali communities in the Willmar area, especially youth and families.

The draft management plan was released for public comment on October 31, 2012 and was available for a 30-day period. During this period an open house was held at the park, on November 13, 2012, to review and discuss the draft management plan. About 25 people attended, including members of the Citizens Advisory Committee and SSPIA. As at the previous open house, a number of attendees were equestrian users interested in expanding the horse trail system and improving the equestrian campground. Participants also discussed the need to protect the park's sensitive natural resources as the trail system is expanded. Comments received at the open house and by e-mail reflected interest in horse trail expansion, equestrian campground improvements, ski trail maintenance, and concern over potential off-road bike and equestrian conflicts on trails.

## **Survey Summary**

In an effort to increase public involvement in the planning process, a short survey was posted on the Sibley State Park planning webpage from September 2011 to June 2012. A total of 37 park users filled out the survey. While this small sample size is not representative of all users of the park, the respondents seemed to represent a wide variety of park users and are likely among those users who are very engaged and connected with Sibley State Park.

A vast majority of respondents visit Sibley State Park at least once a year – only 6.5% said that it was their first visit. The majority of visitors – about 68% – stayed for more than a day. Over 51.6% of respondents' permanent homes were within 0-50 miles (one-way driving distance) from the park and 32.3% were within 51-100 miles. This indicates that the park draws the majority of its users from within the region.

Survey respondents participated in a variety of activities while at the park. Over 90% of respondents hiked or walked, 58.1% observed or photographed nature, and 54.8% viewed nature center exhibits. Many other activities also had high levels of participation. Respondents also listed many different reasons for visiting the Sibley State Park, with "enjoying nature" and "spending time with family/friends" receiving the highest percentage of responses. All of the respondents rated their visit overall as either good (48.4%) or excellent (51.6%).

When asked to rate the current conditions of some of Sibley's attributes, all respondents listed the conditions as fair or better. The only exceptions were that 74.2% were unfamiliar with the overall quality of horse riding trails and 43.3% said the same of bike trails, presumably because they did not use these trails.

When asked what they liked most about the park, responses included scenery, wildlife, wildflowers, birds, trees (87.1%); quiet, peaceful (74.2%); well-maintained, clean (67.7%); close to home (58.1%); and affordable (61.3%).

An open ended question asked about activities or facilities that respondents would like to see added to the park, or any additional comments they had about the park. Twenty-two responses were collected on a wide variety of topics. The comments summarized here are representative of the comments received, but do not include all of the comments submitted. Many comments addressed the desire for additional activities at Sibley including disc golf, mountain biking, canoe camping, and more events and programs. Other comments relate to equestrian users' desires for more miles of horse trails and improvements to the equestrian campground, including electricity, water and more sites. Other comments addressed issues on the west side of the park, including additional trails, canoe campsites and portage trails, and habitat restoration and protection.

These responses will be used, along with input from public meetings, to help inform decision making regarding visitor needs and desires.

# Appendix C: Species of Sibley State Park

#### Amphibians and Reptiles

SCIENTIFIC NAME	PRIMARY COMMON NAME
Ambystoma laterale	Blue-spotted Salamander
Ambystoma tigrinum	Tiger Salamander
Ambystoma cinereus	Red-backed Salamander
Bufo americanus	American Toad
Hyla versicolor	Gray Treefrog
Pseudacris triseriata	Western Chorus Frog
Rana pipiens	Northern Leopard Frog
Rana clamitans	Green Frog
Rana palustris	Pickerel Frog
Pseudacris crucifer	Spring Peeper
Rana sylvatica	Wood Frog
Hyla chrysoscelis	Cope's Gray Treefrog
Bufo cognatus	Great Plains Toad
Notophthalmus viridescens	Eastern Newt
Necturus maculosus	Mud Puppy
Chelydra serpentina	Common Snapping Turtle
Chrysemys picta	Western Painted Turtle
Eumeces septentronalis	Northern Prairie Skink
Storeria occipiomaculata	Northern Redbelly Snake
Thamnophis sirtalis	Common Garter Snake
Thamnophis radix	Plains Garter Snake
Opheodrys vernalis	Smooth Green Snake
Storeria dekayi	Brown (Dekay's) Snake
Pituophis catenifer sayi	Bull (Gopher) Snake
Heterodon nasicus	Western Hog-nose Snake
Apalone spinifera	Spiny Softshell Turtle (Crow River, New London)

#### Birds

SP (Spring) = March, April, May
Su (Summer) = June, July
Fa (Fall) = August, September, October, November
Wi (Winter) = December, January, February
C = Common – present, relatively easy to find

U = Uncommon – observed, may be difficult to find

O = Occasional – may or may not be present in any year

R = Rare – has occurred at least once, may or may not be expected to recur

PRIMARY COMMON NAME	Spring	Summer	Fall	Winter	Status
Common loon	U	U	U		
Pied-billed grebe	С	С	С		
Horned grebe	U		U		THR
Red-necked grebe	U	U	U		
Eared grebe	0		0		
Western grebe	0	0	0		
American white pelican	С	С	С		SPC
Double-crested cormorant	С	С	С		
American bittern	0		0		
Great blue heron	С	С	С		
Great egret	С	С	С		
Green heron	С	С	С		
Black-crowned night-heron	U	U	U		
Turkey vulture	U		U		
Snow goose	U		U		
Canada goose	С	С	С		
Tundra swan	U		U		
Wood duck	С	С	С		
Gadwall	С		С		
American widgeon	С		С		
Mallard	С	С	С		
Blue-winged teal	С	С	С		
Northern shoveler	С		С		
Northern pintail	С		С		
Green-winged teal	С		С		
Canvasback	С		С		
Redhead	С		С		
Ring-necked duck	С		С		
Lesser scaup	С	0	С		
Bufflehead	С		С		
Common goldeneye	С		U		
Hooded merganser	С	U	U		
Common merganser	С		С		
Red-breasted merganser	U		U		
Ruddy duck	С	С	С		
Osprey	U	U	U		
Bald eagle	U	U	U		SPC
Northern harrier	U	U	U		
Sharp-skinned hawk	U		U		

PRIMARY COMMON NAME	Spring	Summer	Fall	Winter	Status
Cooper's hawk	U	U	U		
Red-shouldered hawk	0	0	0		SPC
	_		_		
Swainson's hawk	0	0	0		
Rough-legged hawk	U		U	U	
American kestrel	<u>с</u>	С	C	U	
Gray partridge	U	U	U	U	
Ruffed grouse	U	U	U	U	
Virginia rail	С	С	U		
	-		-		
American coot	С	С	С		
Killdeer	С	С	С		
Kindeer	C	L	L		
Lesser yellowlegs	С	С	С		
	-	-	-		
Upland sandpiper	0				
Least sandpiper	U	U	U		
	-		-		
Common snipe	С	U	С		
Franklin's gull	С	U	С		SPC
	C	0	C		JFC
Ring-billed gull	С	U	С		
Common tern	U		U		THR
Black tern	С	С	С		
	_				
Mourning dove	С	С	С	U	
Yellow-billed cuckoo	U	U	0		
	0	0	0		
Great horned owl	U	U	U	U	
	-	-	-	-	
Northern saw-whet owl	0				

PRIMARY COMMON NAME	Spring	Summer	Fall	Winter	Status
Common nighthawk	U	U	U		
Chimney swift	С	С	С		
Belted kingfisher	С	С	С		
Red-bellied woodpecker	U	U	U		
Downy woodpecker	С	С	С	С	
Northern flicker	С	С	С	0	
Olive-sided flycatcher	U		U		
Yellow-bellied flycatcher	0		0		
Eastern phoebe	С	С	С		
Western kingbird	0	0			
Northern shrike	0		0	0	
Blue-headed vireo	U		U		
	-		-		
Philadelphia vireo	0	_	0	_	
	<u>_</u>	<u>^</u>	<u>^</u>	<u>^</u>	
Blue jay	C	C	C	C	
American crow	С	С	С	С	
Horned lark	С	С	С		
Purple martin	С	С	С		
Tree swallow	С	С	С		
Northern rough-winged swallow	С	С	С		
Bank swallow	С	С	С		
Cliff swallow	С	С	С		
Barn swallow	C	C	C		
Black-capped chickadee	С	С	С		
Red-breasted nuthatch	U	_	U		
White-breasted nuthatch	С	С	С		
Brown creeper	С		С		
House wren	С	С	С		
Sedge wren	U	U	U		
Marsh wren	С	С	С		

PRIMARY COMMON NAME	Spring	Summer	Fall	Winter	Status
Golden-crowned kinglet	С		С		
Ruby-crowned kinglet	C		C		
Blue-gray gnatcatcher	U	U	U		
Eastern bluebird	С	С	С		
Townsend's solitaire				0	
Veery	U	0	0		
Gray-cheeked thrush	U		U		
Swainson's thrush	U		U		
Hermit thrush	С		С		
Wood thrush	0	0	0		
American robin	С	С	С		
Gray catbird	С	С	С		
Brown thrasher	С	С	С		
European starling	С	С	С		
Cedar waxwing	С	С	С		
Blue-winged warbler	0	0			
Golden-winged warbler	0		0		
Tennesee warbler	С		С		
Orange-crowned warbler	U		U		
Nashville warbler	С		С		
Norther parula warbler	0		0		
Yellow warbler	С	С	С		
Chestnut-sided warbler	С	U	U		
Magnolia warbler	U		U		
Cape May warbler	0		0		
Yellow-rumped warbler	С		С		
Black-throated green warbler	0		0		
Blackburnian warbler	U		U		
Yellow-throated warbler	0	0	0		
Pine warbler	0		0		
Palm warbler	С		С		
Bay-breasted warbler	U		U		
Blackpoll warbler	U		U		
Cerulean warbler	0	0			SPC
Black-and-white warbler	С		С		
American Redstart	С	С	С		
Worm-eating warbler	0				
Ovenbird	С	U	С		
Northern waterthrush	U		U		
Connecticut warbler	0		0		
Mourning warbler	0		0		

PRIMARY COMMON NAME	Spring	Summer	Fall	Winter	Status
Common yellowthroat					
Wilson's warbler	U		U		
Scarlet tanager	U	U	U		
American tree sparrow	С		С	С	
Clay-colored sparrow	U	U	U		
Vesper sparrow	U	U	U		
Grasshopper sparrow	U	U	0		
Song sparrow	С	С	С		
Swamp sparrow	С	С	С		
Harris's sparrow	С		С		
Dark-eyed junco	С		С	U	
Snow bunting	U		<u> </u>		
Rose-breasted grosbeak	С	С	С		
Dickcissel	0	0			
Red-winged blackbird Western meadowlark	С	С	С		
Yellow-headed blackbird	С	С	С		
Brewer's blackbird	U	U	U		
Brown-headed cowbird Orchard oriole	С	С	U		
Baltimore oriole	С	С	С		
Purple finch	U	-	U	U	
House finch	U	U	U	U	
Common redpoll					
Pine siskin	U		U	U	
American goldfinch					
U U U U U U U U U U U U U U U U U U U					

PRIMARY COMMON NAME	Spring	Summer	Fall	Winter	Status
Evening grosbeak	0		0	0	

## Mammals

SCIENTIFIC NAME	PRIMARY COMMON NAME
Didelphis virginiana	Virginia opossum
Scalopus aquaticus	Eastern mole
Condylura cristata	Star-nosed mole
Cryptotis parva	Least shrew
Sorex cinereus	masked shrew
Sorex arcticus	Arctic shrew
Blarina brevicauda	Northern short-tailed shrew
Lasiurus borealis	Eastern red bat
Lasionycteris noctivagans	Silver-haired bat
Myotis septentriolalis	Northern long-eared myotis
Eptesicus fuscus	Big brown bat
Pipistrellus subflavus	Eastern pipistrel bat
Lasiurus cinereus	Hoary bat
Myotis lucifugus	Little brown bat
Lepus townsendii	White-tailed jackrabbit
Sylvilagus floridanus	Eastern cottontail
Marmota monax	Woodchuck
Spermophilus tridecemlineatus	Thirteen-lined ground squirrel
Spermophilus franklinii	Franklins' ground squirrel
Tamias striatus	Eastern chipmunk
Sciurus vulgaris	Red squirrel
Sciurus carolinensis	Eastern gray squirrel
Sciurus niger	Fox squirrel
Glaucomys sabrinus	Northern flying squirrel
Glaucomys volans	Southern flying squirrel
Thomomys talpoides	Northern pocket gopher
Perognathus flavescens	Plains pocket mouse
Castor canadensis	Beaver
Peromyscus maniculatus	Deer mouse
Peromyscus leucopus	White-footed mouse
Onychomys leucogaster	Northern grasshopper mouse
Reithrodontomys megalotis	Western harvest mouse
Microtus ochrogaster	Prairie vole
Microtus pennsylvanicus	Meadow vole
Ondatra zibethicus	Muskrat
Mus musculus	House mouse

SCIENTIFIC NAME	PRIMARY COMMON NAME
Rattus norvegicus	Norway rat
Procyon lotor	Common raccoon
Mustela frenata	Long-tailed weasel
Mustela nivalis	Least weasel
Mustela vison	Mink
Mephitis mephitis	Striped skunk
Martes pennanti	Fisher
Spilogale putorius	Eastern spotted skunk
Taxidea taxus	Badger
Vulpes vulpes	Red fox
Vulpes cinereoargenteus	Gray fox
Canis latrans	Coyote
Odocoileus virginianus	White-tailed deer
Zapus hudsonius	Meadow jumping mouse

### Fish

SCIENTIFIC NAME	PRIMARY COMMON NAME
Ameiurus melas	Black bullhead
Ameiurus natalis	Yellow bullhead
Ameiurus nebulosus	Brown bullhead
Amia calva	Bowfin
Aplodinotus grunniens	Freshwater drum
Catostomus commersonii	White sucker
Culaea inconstans	Brook stickleback
Cyprinus carpio	Common carp
Esox lucius	Northern pike
Esox masquinongy	Muskellunge
Etheostoma exile	Iowa darter
Etheostoma nigrum	Johnny darter
Fundulus diaphanus	Banded killifish
Hybognathus hankinsoni	Brassy minnow
Ictiobus bubalus	Smallmouth buffalo
Ictiobus cyprinellus	Bigmouth buffalo
Lepisosteus osseus	Longnose gar
Lepisosteus platostomus	Shortnose gar
Lepomis cyanellus	Green sunfish
Lepomis gibbosus	Pumpkinseed
Lepomis hybrid	Hybrid sunfish
Lepomis macrochirus	Bluegill
Luxilus cornutus	Common shiner

SCIENTIFIC NAME	PRIMARY COMMON NAME	
Micropterus salmoides	Largemouth bass	
Moxostoma macrolepidotum	Shorthead redhorse	
Notemigonus crysoleucas	Golden shiner	
Notropis anogenus	Pugnose shiner	
Notropis atherinoides	Emerald shiner	
Notropis heterolepis	Blacknose shiner	
Notropis hudsonius	Spottail shiner	
Notropis gyrinus	Tadpole madtom	
Perca flavescens	Yellow perch	
Phoxinus eos	Northern redbelly dace	
Pimephales notatus	Bluntnose minnow	
Pimephales promelas	Fathead minnow	
Pomoxis nigromaculatus	Black crappie	
Sander vitreus	Walleye	
Umbra limi	Central mudminnow	

## Dragonflies

SCIENTIFIC NAME	PRIMARY COMMON NAME
Anax junius	Common green darner
Aeshna interrupta interrupta	Variable darner
Epitheca (Epicordulia) princeps	Prince baskettail
Epitheca (Tetragoneuria) spinigera	Spiny baskettail
Cordulia shurtleffii	American emerald
Dorocordulia libera	Racket-tailed Emerald
Arigomphus cornutus	Horned clubtail
Gomphus (Gomphus) graslinellus	Pronghorn clubtail
Perithemis tenera	Eastern amberwing
Leucorrhinia intacta	Dot-tailed Whiteface
Leucorrhinia hudsonica	Hudsonian whiteface
Libellula julia	Chalk-fronted corporal
Libellula quadrimaculata	Four-spotted skimmer
Libellula luctuosa	Widow skimmer
Libellula (Plathemis) lydia	Common whitetail
Libellula pulchella	Twelve-spotted skimmer
Celithemis eponina	Halloween pennant
Sympetrum costiferum	Saffron-winged meadowhawk
Sympetrum obtrusum	White-faced meadowhawk
Sympetrum rubicundulum	Ruby meadowhawk
Sympetrum semicinctum	Band-winged meadowhawk
Erythemis simplicicollis simplicicollis	Eastern pondhawk

SCIENTIFIC NAME	PRIMARY COMMON NAME	
Pachydiplax longipennis	Blue dasher	
Tramea lacerata	Black saddlebag	
Sympetrum vicinum	Autumn meadowhawk	
Tramea onusta	Red saddlebag	
Lepidoptera		
SCIENTIFIC NAME	PRIMARY COMMON NAME	
Ancyloxypha numitor	Least skipper	_
	··· · · ·	

Ancyloxypha numitor	Least skipper
Asterocampa celtis	Hackberry butterfly
Asterocampa clyton	Tawny emperor
Basilarchia archippus	Viceroy
Basilarchia arthemis	White admiral
Basilarchia arthemis astyanax	Red-spotted purple
Celastrina neglecta	Spring azure
Cercyonis pegala	Common wood nymph
Colias eurytheme	Alfalfa butterfly
Coenonympha tullia	Ringlet
Danaus plexippus	Monarch
Enodia anthedon	Northern pearly eye
Epargyreus clarus	Silver-spotted skipper
Euptoieta claudia	Variegated fritillary
Hyllolycaena hyllus	Bronze copper
Megisto cymela	Little wood satyr
Nymphalis antiopa	Mourning cloak
Papilio polyxenes asterius	Black swallowtail
Phyciodes tharos	Pearl crescent
Pieris rapae	Cabbage butterfly
Polites mystic dacotah	Dakota long dash
Polites peckius	Peck's skipper
Polygonia comma	Hop merchant
Polygonia interrogationis	Question mark
Speyeria cybele	Great spangled fritillary
Vanessa atalanta rubria	Red admiral
Vanessa cardui	Painted lady
Papilio glaucus	Eastern tiger swallowtail
Pontia protodice	Checkered white
Pieris rapae	Cabbage white
Colias philodice	Clouded sulphur
Colias eurytheme	Orange sulphur
Satyrium calanus	Banded hairstreak
Callophrys gryneus	Juniper hairstreak

SCIENTIFIC NAME	PRIMARY COMMON NAME
Strymon melinus	Gray hairstreak
Cupido comyntas	Eastern tailed blue
Lycaeides melissa	Melissa blue
Lycaeidis idas	Northern blue
Lycaena helloides	Purplish copper
Speyeria aphrodite	Aphrodite fritillary
Boloria bellona	Meadow fritillary
Phyciodes tharos	Northern pearl crescent
Polygonia progne	Gray comma
Aglais milberti	Milbert's tortoiseshell
Junonia coenia	Common buckeye
Asterocampa celtis	Hackberry emperor
Satyrodes eurydice	Eyed brown
Coenonympha tullia	Common ringlet
Erynnis martialis	Mottled skipper
Pholisora catullus	Common sootywing
Carterocephalus palaemon	Arctic skipper
Polites mystic	Long dash skipper
Wallengrenia egeremet	Northern broken dash
Anatrytone logan	Delaware skipper
Poanes massasoit	Mulberry skipper
Poanes hobomok	Hobomok skipper
Poanes viator	Broad-winged skipper
Euphyes bayensis	Byssus skipper
Euphyes vestris	Dun skipper
Xenophanes tryxus	Little glassy wing
Polites themistocles	Tawny-edged skipper

## Fungi

SCIENTIFIC NAME	PRIMARY COMMON NAME	
Agaricus diminutivus	Little agaricus	
Agaricus silvicola	Woodland agaric	
Lepiota cristata	Malodorus lepiota	
Lepiota naucina	Smooth lepiota	
Amanita vaginata	Grisette	
Amanita virosa (verna)	Destroying angel	
Conocybe lactea	White dunce cap	
Boletinellus merulioides	Ash tree bolete	
Boletus edulis	King bolete	
Strobilomyces floccopus	Old man of the woods	
Suillus luteus	Slippery Jack	

SCIENTIFIC NAME	PRIMARY COMMON NAME
Suillus sp.	
Cantharellus cibarellus	Golden chanterelle
Clavicorona pyxidata	Crown-tipped coral
Thelophora anthocephela	
Coprinus comatus	Shaggy mane
Psathyrella candolleana	Common psathyrella
Inocybe calospora	Fiber head
Inocybe fastigata	Straw-colored fiber head
Clitopilus prunulus	Sweetbread
Hygrophorus russula	Russulalike waxy cap
Morchella esculenta	Morel
Morchella angusticeps	Black morel
Laetiporus (Polyporus) sulphureus	Chicken mushroom, sulpher shelf
Polyporus squamosus	Dryad's saddle
Lactarius argillaceifolius	
Lactarius chrysorheus	Yellow milky
Lactarius piperatus	Peppery milky
Lactarius torminosis	Pink-fringed milky
Russula brevipes	Short-stalked white russula
Russula densifolia	
Russula emetica	Emetic russula
Russula paludosa	
Stropharia coronilla	Garland stropharia
Tremellodendron pallidum	Jellied false coral
Clitocybe (Lepista) nuda	Blewit
Collybia dryophila	Oak-loving collybia
Laccaria ochropurpurea	Purple-gilled laccaria
Leucopaxillus laterarius	Leucopax
Marasmius oreades	Fairy ring
Marasmius scorodonius	Garlic marasmius
Pleurotus ostreatus	Oyster mushroom