



Sibley State Park



Sibley State Park Viewing Platform



Prairie Flowers

Glacial Lakes State Trail Extension

New London to Sibley State Park

An Amendment to the Glacial Lakes State Trail Master Plan



Minnesota Department of Natural Resources



Historical Marker

Glacial Lakes State Trail Extension New London to Sibley State Park

An Amendment to the Glacial Lakes State Trail Master Plan

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State of Minnesota, Department of Natural Resources

Purpose of the Amendment

The purpose of this amendment is to recommend development of an asphalt trail extension from the existing Glacial Lakes State Trail in New London to Sibley State Park. The master plan for the existing Glacial Lakes State Trail (1993) recommends this connection.

“Actively pursue a permanent off-road trail alignment into
Sibley State Park.” page 6

This amendment confirms the importance and value of this connection to the state park and state trail system and provides additional direction for the location of the alignment and development and management of the trail.

Legislative Authorization

The trail connection between the Glacial Lakes State Trail and Sibley State Park would be part of the legislatively authorized Glacial Lakes State Trail. (Minnesota Statutes 85.015). See the map on the next page.

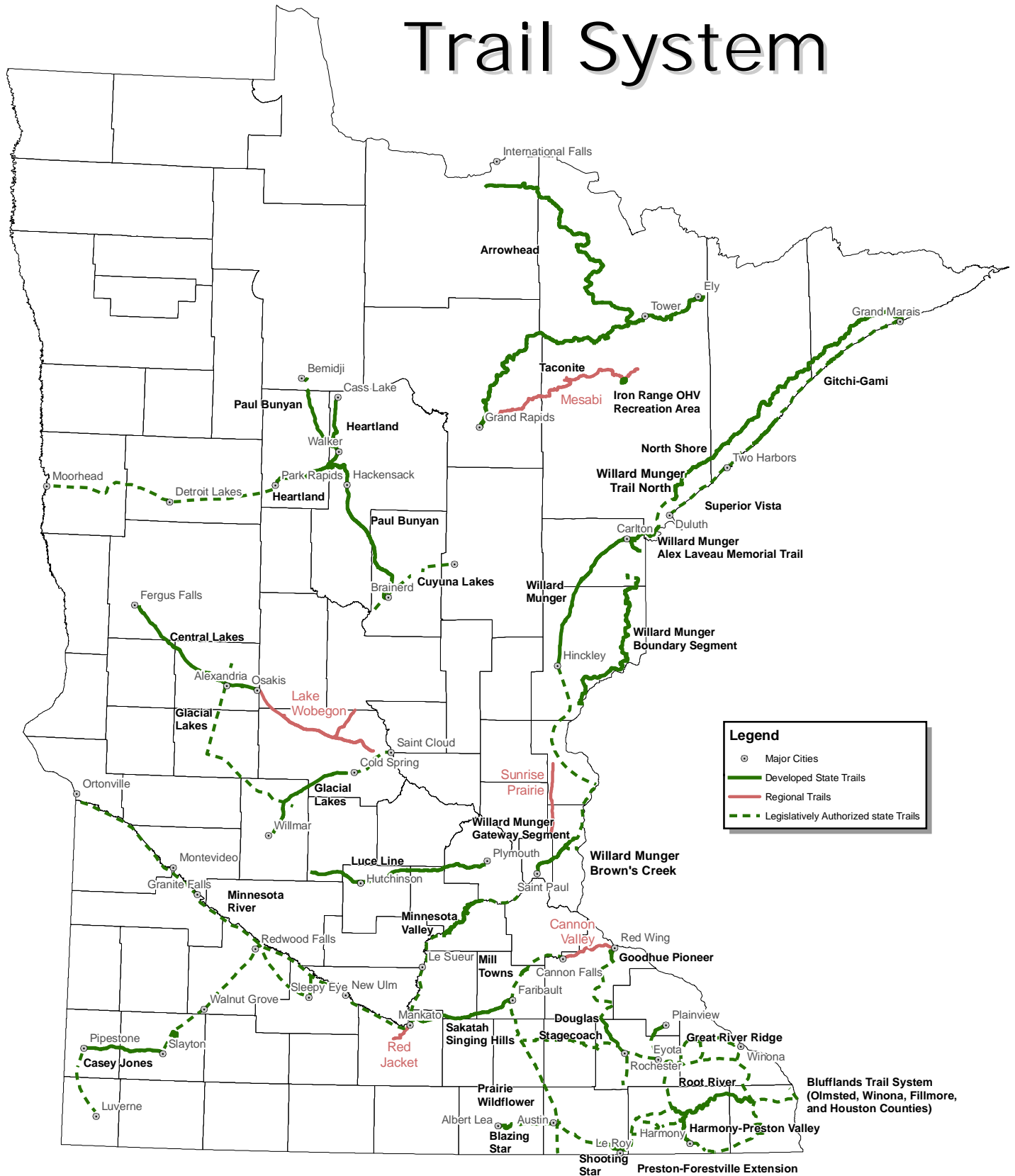
Subd. 5. Glacial Lakes Trail, Kandiyohi, Pope, Stearns, and Douglas Counties.

(a) The trail shall originate at Kandiyohi County Park on the north shore of Green Lake in Kandiyohi County and thence extend northwesterly to Sibley State Park, thence northwesterly to Glacial Lakes State Park in Pope County, thence northeasterly to Lake Carlos State Park in Douglas County, and there terminate.

(b) A segment shall be established beginning in the city of Willmar, Kandiyohi County, and extending northeasterly into Stearns County.

(c) The trail shall be developed primarily for riding and hiking.

Minnesota's State Trail System



Legend

- Major Cities
- Developed State Trails
- Regional Trails
- - - Legislatively Authorized state Trails



Overview of the Glacial Lakes State Trail

Currently, there are 40 miles of trail in DNR ownership from Willmar to 178th Avenue, just east of Richmond.

Willmar to the Kandiyohi/Stearns County Line

The Glacial Lakes State Trail is located on a former Burlington Northern Railroad grade. The trail is paved with asphalt for 22 miles between Willmar, Spicer, New London, Hawick, and the Kandiyohi/Stearns County line. The segment from Willmar to New London has a parallel, grass treadway for horseback riding, while the New London to the Kandiyohi/Stearns County line segment has grass shoulders to accommodate this activity.

Kandiyohi/Stearns County Line to 178th Avenue, just east of Richmond

This segment of trail is currently undeveloped. It is used for snowmobiling in the winter.

178th Avenue to Rockville (Rocori Trail)

A specific alignment for this segment has not been identified at this time. A local group with representatives from Richmond, Cold Spring, and Rockville has formed to identify and acquire a trail alignment. They have named the trail the Rocori Trail. Their intent is to acquire and develop a trail and perhaps turn it over to the DNR to be managed as part of the Glacial Lakes State Trail.

Rockville to the intersection with the Lake Wobegon State Trail

A specific alignment has not been identified for this segment of trail.

MAP EXPLANATION

Trail

- Asphalt
- Parallel grass treadway
- Future Trail (undeveloped)
- Other Trails
- Glacial Lakes Trail Extension-
New London to
Sibley State Park

Facilities

- Parking
- Picnic/Rest Area
- Campground

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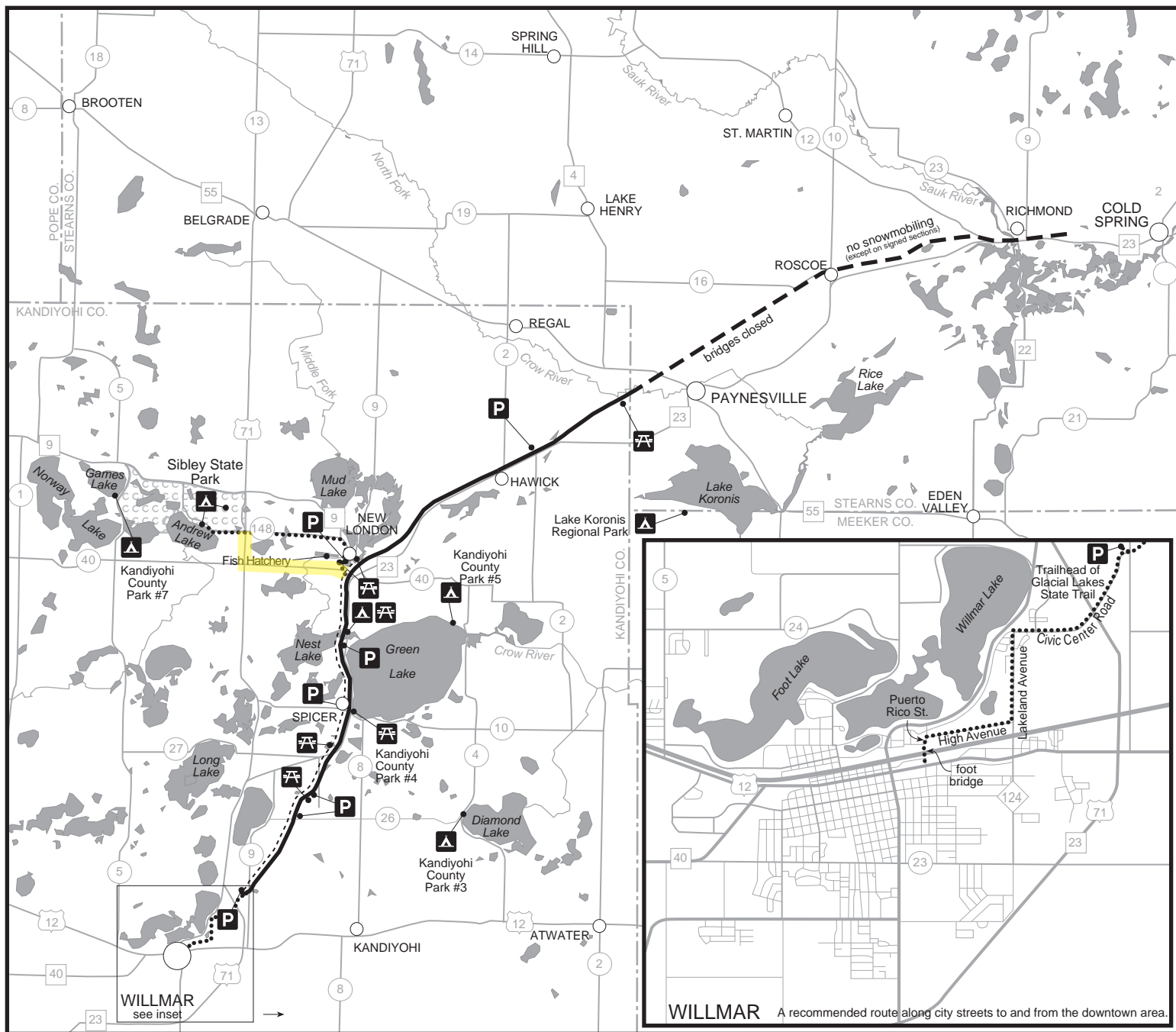
Scale in Miles

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Glacial Lakes State Trail Kandiyohi & Stearns Counties



	6.5	12	18	16	25	36
	5.5	11.5	9.5	18.5	30.5	
		6	4	13	24	
		10	7	18		
			17	28		
				13.5		
Willmar						
Spicer						
New London						
Hawick						
Sibley State Park						
Paynesville						
Richmond						

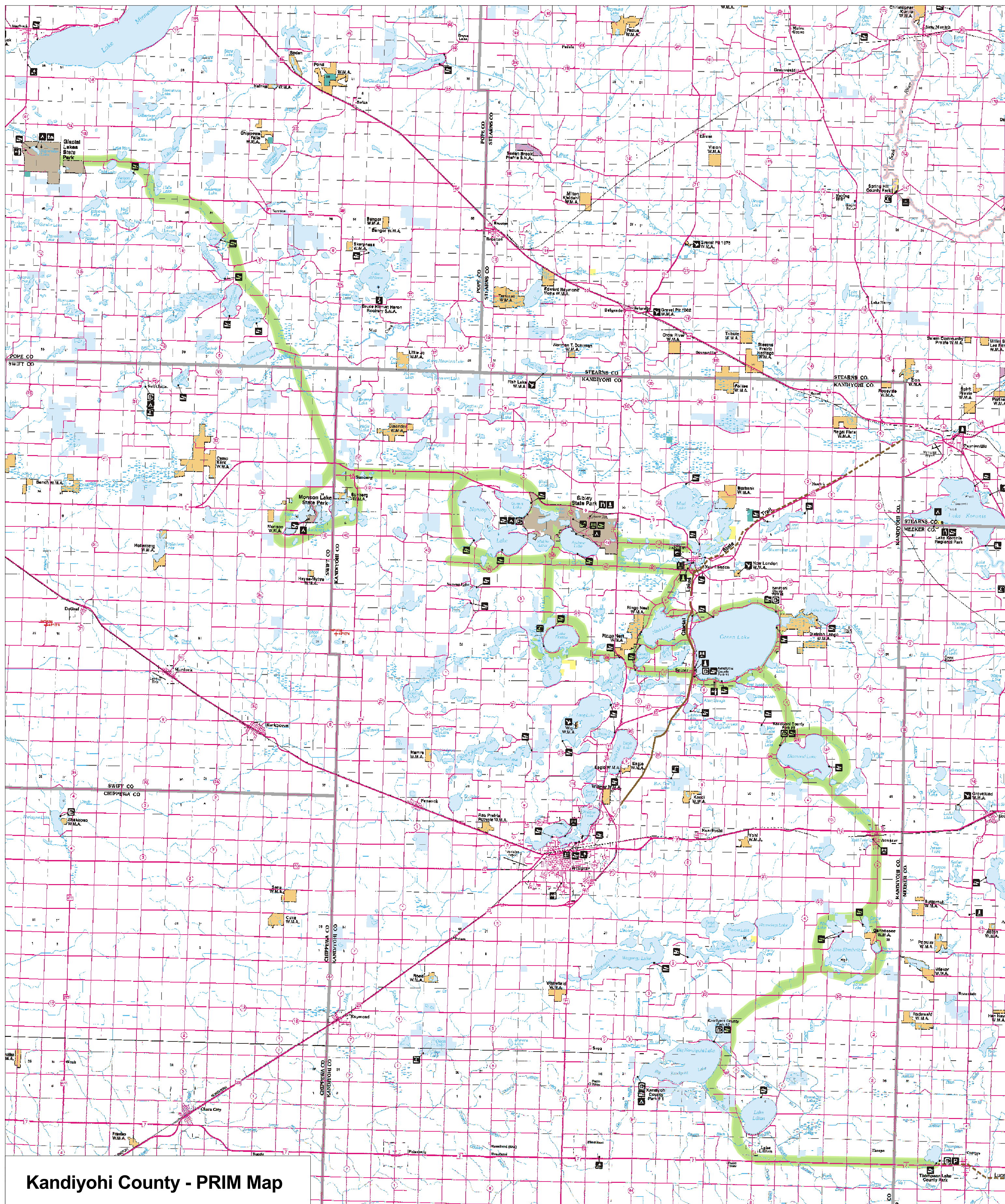


Regional Context

The Glacial Lakes State Trail connection will be an important link in the emerging regional trail system.

A significant amount of trail planning and trail development has occurred in the region since the master plan was written.

The Central Lakes State Trail has been acquired and developed. Stearns County has developed the Lake Wobegon Trails. St. Cloud has developed a system of trails. All these trails have the potential to be connected and form a system. The Sibley Trail Extension Committee developed a trail concept plan for Kandiyohi County. No specific alignments have been determined. The corridor identified on the map is a “search area” for specific alignments. The extension of the Glacial Lakes State Trail will be an important segment in the emerging trail system.



Kandiyohi County - PRIM Map

Glacial Lakes State Trail - Kandiyohi County Area

Potential Trail Corridor

10

0

10 Miles



1/22/07 TAW
mnrvtr1.apr
GLST Proposed corridor

Justification for the Trail Extension

The trail extension meets the criteria for a state trail.

The segment of the Glacial Lakes State that will connect Sibley State Park to New London satisfies the criteria for state trail designation set forth by the Legislature in Minnesota Statutes, Chapter 86A.05, Subdivision 4.

1. Permits travel in an appropriate manner along a route which provides at least one of the following recreational opportunities.

i. Permits travel along a route which connects areas or points of natural, scientific, cultural and historical interest;

Sibley State Park contains points of interest including Mount Tom, prairie, forest, lakes, and granite stone buildings built by the Veterans Conservation Corps.

ii. Travel through an area which possesses outstanding scenic beauty;

The four-mile extension will provide views of wetlands and rolling hills of the landscape.

iii. Travel over a route designed to enhance and utilize the unique qualities of a particular manner of travel in harmony with the natural environment;

The trail will be designed and built with slower modes of travel in mind. Features such as carefully designed vistas and views, variations in horizontal and vertical alignment, and attention to trailscape detailing will all be incorporated to enhance the trail users interaction with the natural environment.

iv. Travel along a route which is historically significant as a route of migration, commerce, or communication;

v. Travel between units of the state outdoor recreation system or the national trail system.

The Glacial Lakes State Trail extension will connect the existing Glacial Lakes State Trail to Sibley State Park, two units of the outdoor recreation system.

2. Utilizes to the greatest extent possible consistent with the purpose of this subdivision, public lands, rights-of-way and the like.

County road rights-of-way and state highway rights-of-way will be used for segments of the trail.

3. Provides maximum potential for the appreciation, conservation, and enjoyment of significant scenic, historical, natural, or cultural qualities of the areas through which the trail may pass.

Interpretation of the natural and cultural resources along the extension will be developed.

4. Takes into consideration predicted public demand and future use.

Demand for trail opportunities and visitation data for Sibley State Park were analyzed as predictors of future use.

There is demand for trail recreation

Two recent DNR studies document the use and demand for trails statewide. *The Outdoor Recreation Participation in Minnesota Study* conducted in 2004 indicated that walking and hiking were the activities that the greatest number of Minnesotans participated in (54% of the population 20 years and older). Biking ranked 7th with 20 % of the population participating. A second study, *The 2004 Outdoor Recreation Facility Survey of Minnesota Cities, Counties, and School Districts* identified paved trails for walking, hiking, skating and biking as the number 1 most needed facility. Community leaders in New London are strong advocates for this trail extension. Other communities in Kandiyohi County are supportive as well. This demand and support for trails has fueled trail planning and development.

The trail extension will increase safety

Development of this extension will provide a safe walking and bicycling opportunity between three destination points – New London, the Glacial Lakes State Trail and Sibley State Park.

There is broad based support for the trail extension

Local trail users, users of the state trail system, adjacent communities, and economic and tourism organizations have supported the concept of developing this trail extension.

The trail extension will promote health

The trail will provide an additional opportunity for people to exercise. According to an action guide by the Centers for Disease Control and Prevention, “Research has shown that modifying the living and working environment by creating or enhancing access to places where people can be physically active, along with providing related informational outreach activities, is an effective intervention to help people incorporate healthier behaviors into their daily lives.” (Partnership for Prevention, 2008)

Vision for the Trail

Development of a trail connection between New London and Sibley State Park will enhance and extend the Glacial Lakes State Trail. Sibley State Park users will be connected to New London and the existing Glacial Lakes State Trail. This segment will enhance tourism in the area and create synergy between the park, the trail, and the community.

Development and management of the trail will engage existing and new park and trail users in outdoor recreation and create an interest in and passion for conservation and protection of the state's natural, cultural, and scenic resources.

Trail Alignment and Trail Development Recommendations

Recommendation 1: Develop a trail connection from the existing Glacial Lakes State Trail in New London to Sibley State Park. The trail corridor will follow the CSAH 40 corridor west beginning near the intersection of the existing Glacial Lakes State Trail with CSAH 40 and TH 9. The trail alignment would follow a corridor along CSAH 40 west to TH 71, then follow the TH 71 corridor north to the park.

Recommendation 2: Work with the Kandiyohi Highway Department, the Department of Transportation and willing landowners to create a contiguous alignment that provides a scenic trail experience and avoids wetlands. The entire trail segment could be developed in road rights-of-way. However, opportunities to leave the right-of-way will create a more scenic, diverse and satisfying trail experience.

Recommendation 3: Develop an underpass under TH 71.

Recommendation 4: Develop an asphalt trail 10 feet wide.

Recommendation 5: Connect the Glacial Lakes State Trail to the new Veterans Memorial Park, located at the dam, which will serve as a gateway to downtown.

Recommendation 6: Conduct periodic trail user surveys to obtain data on trail use and visitor satisfaction in order to inform management decisions.

Recommended Trail Uses

Bicycling, mountain biking, hiking/walking, dog walking, running/jogging, in-line skating/skate skiing, horseback riding, and education and interpretation are envisioned as uses of this trail. These uses are currently allowed on the Glacial Lakes State Trail.

No existing trail uses should be displaced by the development of this extension.

**Glacial Lakes State Trail Extension -
New London to Sibley State Park**

Legend:

- Glacial Lakes State Trail
- Local Trail / Path
- School District Trail
- GIA Snowmobile Trail
- Search Area Location for Specific Trail Alignment
- State Park
- Wildlife Management Area
- Municipal Boundary
- Parking
- Proposed Parking
- Proposed Water Access
- Park

Map Labels:

Sibley State Park

Middle Lake

Lake Andrew

Bear Lake

Mud Lake

New London

Middle Fork Crow River

Nest Lake

Ringo-Nest WMA

5th, 10th, 13th, 15th, 16th, 17th, 18th, 19th, 20th, 21st, 22nd, 23rd, 24th, 25th, 26th, 27th, 28th, 29th, 30th, 31st, 32nd, 33rd, 34th, 35th, 36th, 37th, 38th, 39th, 40th, 41st, 42nd, 43rd, 44th, 45th, 46th, 47th, 48th, 49th, 50th, 51st, 52nd, 53rd, 54th, 55th, 56th, 57th, 58th, 59th, 60th, 61st, 62nd, 63rd, 64th, 65th, 66th, 67th, 68th, 69th, 70th, 71st, 72nd, 73rd, 74th, 75th, 76th, 77th, 78th, 79th, 80th, 81st, 82nd, 83rd, 84th, 85th, 86th, 87th, 88th, 89th, 90th, 91st, 92nd, 93rd, 94th, 95th, 96th, 97th, 98th, 99th, 100th













71, 9, 40, 23

0 1 2 Miles



Sibley State Park

New London

-  Glacial Lakes State Trail
-  Local Trail / Path
-  School District Trail
-  GIA Snowmobile Trail
-  Search Area Location for Specific Trail Alignment
-  State Park
-  Wildlife Management Area
-  Municipal Boundary
-  Parking
-  Proposed Parking
-  Proposed Water Access
-  Park

Ringo-Nest
WMA

Sibley State Park

Park Highlights

Sibley State Park, 3,015 acres in size, was established in 1919 and named after Minnesota's first governor, Henry Hastings Sibley. Sibley is one of the most visited state parks. In the last five years, it ranked in the top 11 most visited state parks. Its popularity is due to the numerous and diverse recreational opportunities available there as well as the scenic and diverse natural resources.

Table 1: Sibley State Park Visitors and Rank

Year	Total Visitors	Rank
July 2003 – June 2004	206,279	11
July 2004 – June 2005	217,701	11
July 2005 – June 2006	220,640	10
July 2007 – June 2008	219,357	9

Natural Resources

Most of the park is forested, dominated by oak, ironwood, basswood, hackberry, green ash and aspen. Remnants of prairie are found on hilltop knolls. Prairie has been restored on old farm fields located within the park. One of the most popular and significant features in the park is Mount Tom. One of the highest points for fifty miles, it provides scenic vistas of the surrounding landscape. Lakes, ponds and wetlands are also significant features of this park.

Historic Resources

Much of the park was developed by the Veterans Conservation Corps in the mid-1930s. Beautiful granite buildings are one of their legacies.

Recreation Opportunities

Sibley State Park provides a diversity of recreation opportunities. A large picnic area with a shelter is located on Lake Andrew. A swimming beach is located nearby. A boat access, fishing pier, and canoeing route provide water recreation opportunities. Boat and canoe rentals are available. The 74-site Lakeview Campground is also located on the shores of Lake Andrew. An additional 58 campsites are located in the Oak Ridge Campground along with four camper cabins. A total of 53 campsites in the park have electricity. A group center has the capacity to accommodate 128 people. There are three primitive group campsites and a horseback riding camp. Summer trail opportunities include 18 miles of hiking trail, 8.7 miles of horseback riding trail, and 5 miles of bicycle trail. Winter trail opportunities include 8 miles of cross-country ski trail, 6.1 miles of snowmobile trail and 2.5 miles of skate-ski trail. Park visitors can learn about the natural resources and history of the park at the interpretive center. Naturalist led programs are also presented in the park.

Role of the Park

Sibley State Park will serve as a trailhead for the Glacial Lakes State Trail. Because of the diversity of camping facilities, the park will be an ideal location for overnight stays and as a base for trail users to begin and end their trip on the Glacial Lakes State Trail. Also, because of its proximity to New London, it is anticipated there will be significant use of the trail by community residents for family outings or group events.

Trail Alignment

A specific alignment for the trail in the park has not been identified. The trail will approach the park in the southeastern corner, then connect to the existing bike trail.

Criteria for the Location of the Trail Alignment

The following objectives were identified to guide the location of the trail through the park:

Provide parking for trail users

Provide a rest area for trail users

Provide trail and park orientation information

Provide a connection to the campground

Protect archaeological resources

Minimize impact to wetlands

Use existing corridors whenever possible

Avoid severing plant communities

Avoid impacts to native plant communities and listed species

Sibley State Park



Trail distances are shown in miles.

0 0.5 1.0 Miles
0 0.5 1.0 Kilometers

SUMMER TRAILS

..... Hiking

----- Horse Riding/Hiking

----- Interpretive Hiking

----- Biking/Hiking

~~~~~ Canoeing Route

3

Summer trails are named and numbered

## FACILITIES

? Information/Office

⛺ Picnic Area

🏖 Beach

🚤 Boat Ramp

🎣 Fishing Pier

👁 Overlook

🏠 Shelter

P Parking

☎ Telephone

👥 Group Center

🏕 Campground

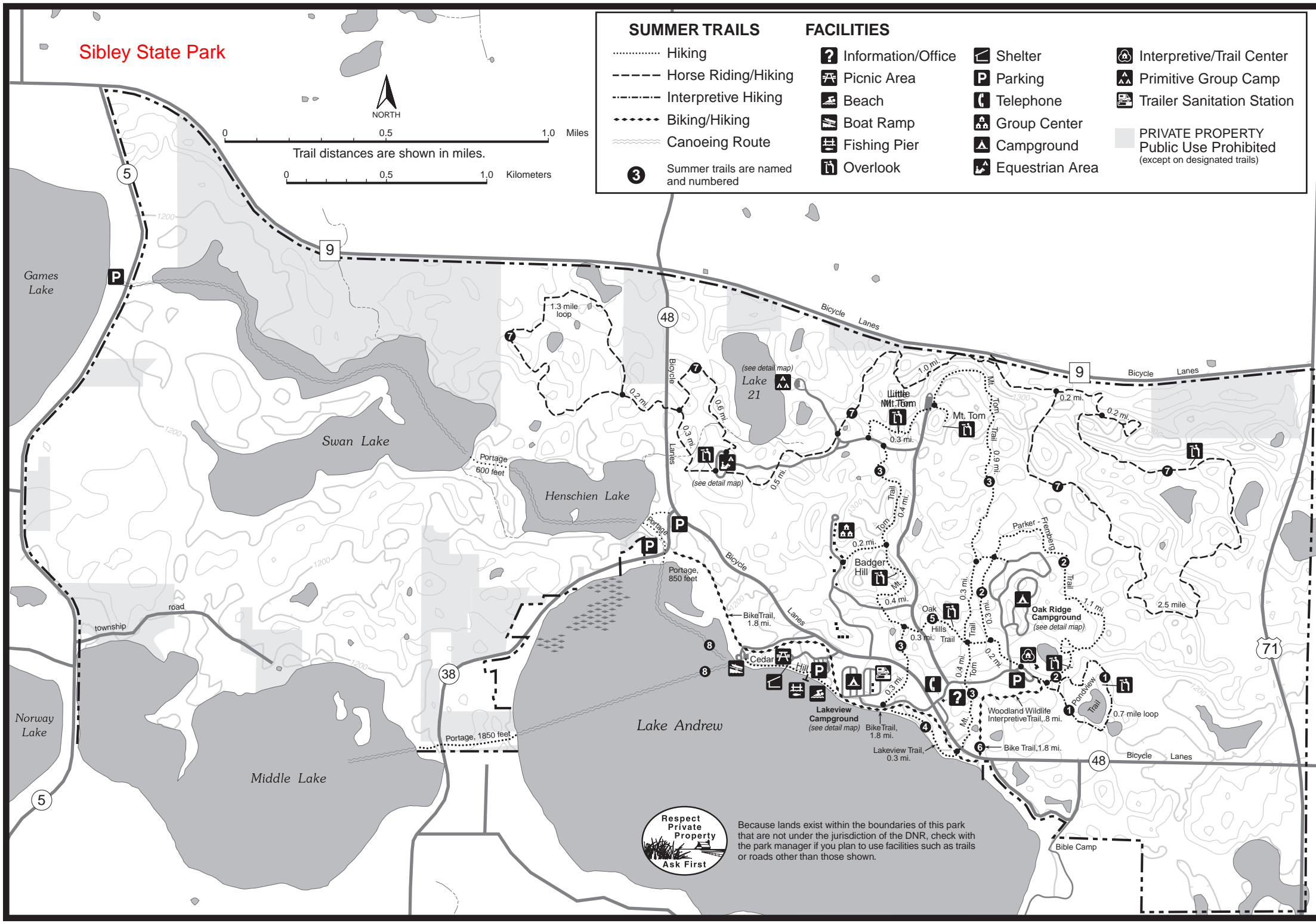
🐎 Equestrian Area

🏠 Interpretive/Trail Center

⛺ Primitive Group Camp

🚻 Trailer Sanitation Station

PRIVATE PROPERTY  
Public Use Prohibited  
(except on designated trails)



Because lands exist within the boundaries of this park that are not under the jurisdiction of the DNR, check with the park manager if you plan to use facilities such as trails or roads other than those shown.

# Sibley State Park

## WINTER TRAILS

- ..... Cross-Country Ski
- Skate Ski
- - - - - Snowmobile
- Walking Trail

### Ski Trail Levels of Difficulty

- easy
- more difficult
- most difficult
- one-way trail
- two-way trail

## FACILITIES

- Information/Office
- Interpretive/Trail Center
- Overlook
- Parking
- Telephone
- Campground

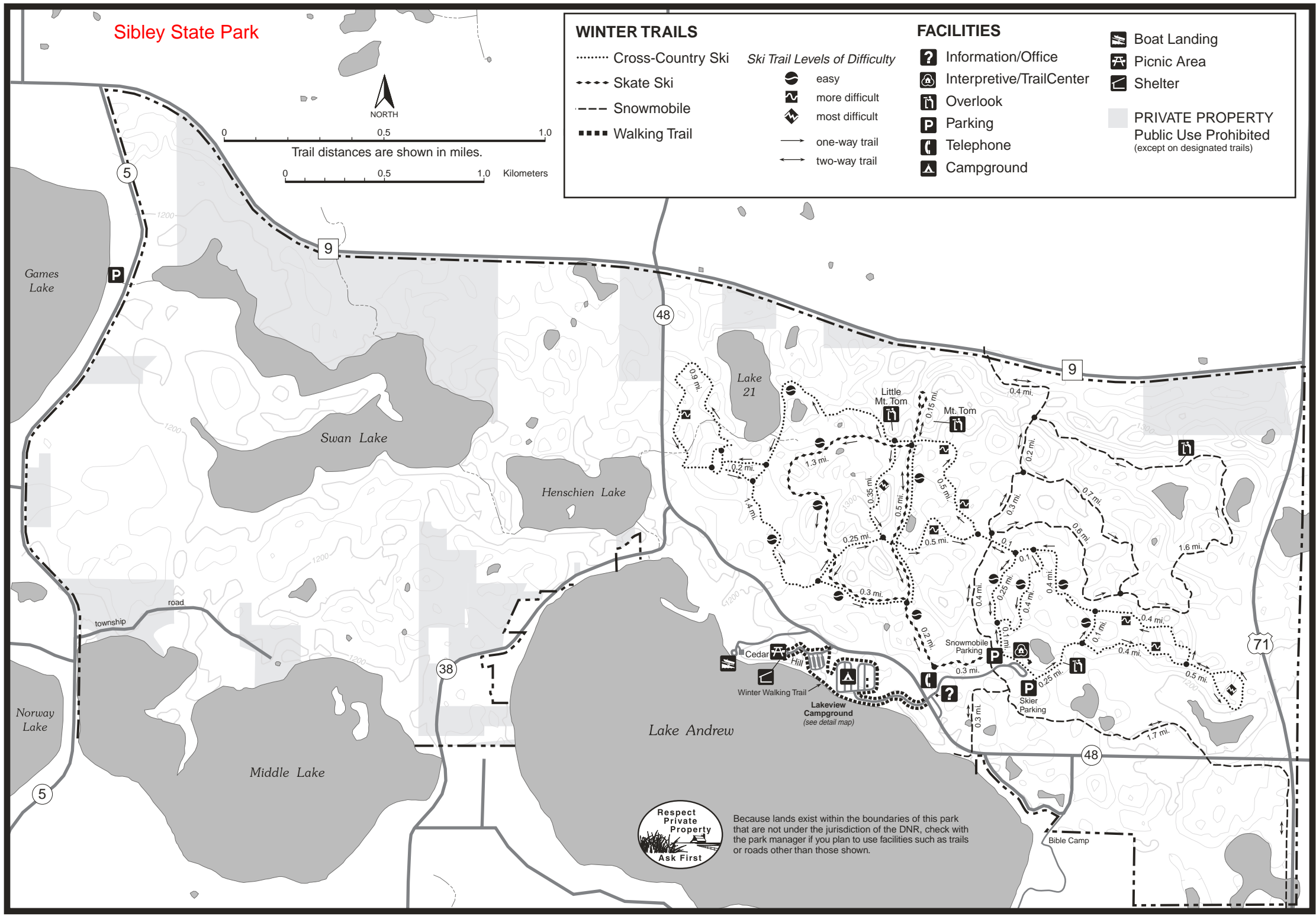
- Boat Landing
- Picnic Area
- Shelter

PRIVATE PROPERTY  
Public Use Prohibited  
(except on designated trails)

Trail distances are shown in miles.

0 0.5 1.0 Kilometers

NORTH



Because lands exist within the boundaries of this park that are not under the jurisdiction of the DNR, check with the park manager if you plan to use facilities such as trails or roads other than those shown.



## **New London**

### **History**

New London, founded in 1860 by Swedish emigrant Louis Larson, was the first village in Kandiyohi County. Recognizing that the falls on the Crow River offered a source of waterpower, he built a cabin and started building a dam and sawmill. The Dakota War of 1862 delayed the project. In 1865, the dam, sawmill, and gristmill were operational. The town was named New London after New London, Wisconsin. By 1868, forty people, three stores, and a blacksmith shop were present. The courthouse of Monongalia County was located in New London and for four years from 1866 – 1870, New London served as the county seat of Monongalia County. Monongalia County merged with Kandiyohi County in 1870. The original courthouse still stands on Main Street.

### **The Community Today**

Highlights of New London, population 1,141, include the scenic millpond, hospitable downtown, and access to nearby lakes and recreational opportunities – camping, boating, and trails. The mill pond is more than just a scenic amenity, it is the site of a variety of recreational and educational opportunities. New London City Park and Swimming Beach are located on the southwestern shore of the lake and across the lake to the north, a boat access is located.

There are five city parks in addition to the New London City Park described above. Neer Park, located on the Crow River has a picnic area, docks, trails, a screen porch, grandstand area and is home to the Little Crow Ski Show. Holm Park includes a picnic area and band shell. The annual New London Music Festival is held here. Rodvik Park includes a picnic area, gazebo, grills, playground equipment and a dock for fishing on the river. A fishing tournament is held here every year. Lil Rascal and Old Grey parks provide playground equipment.

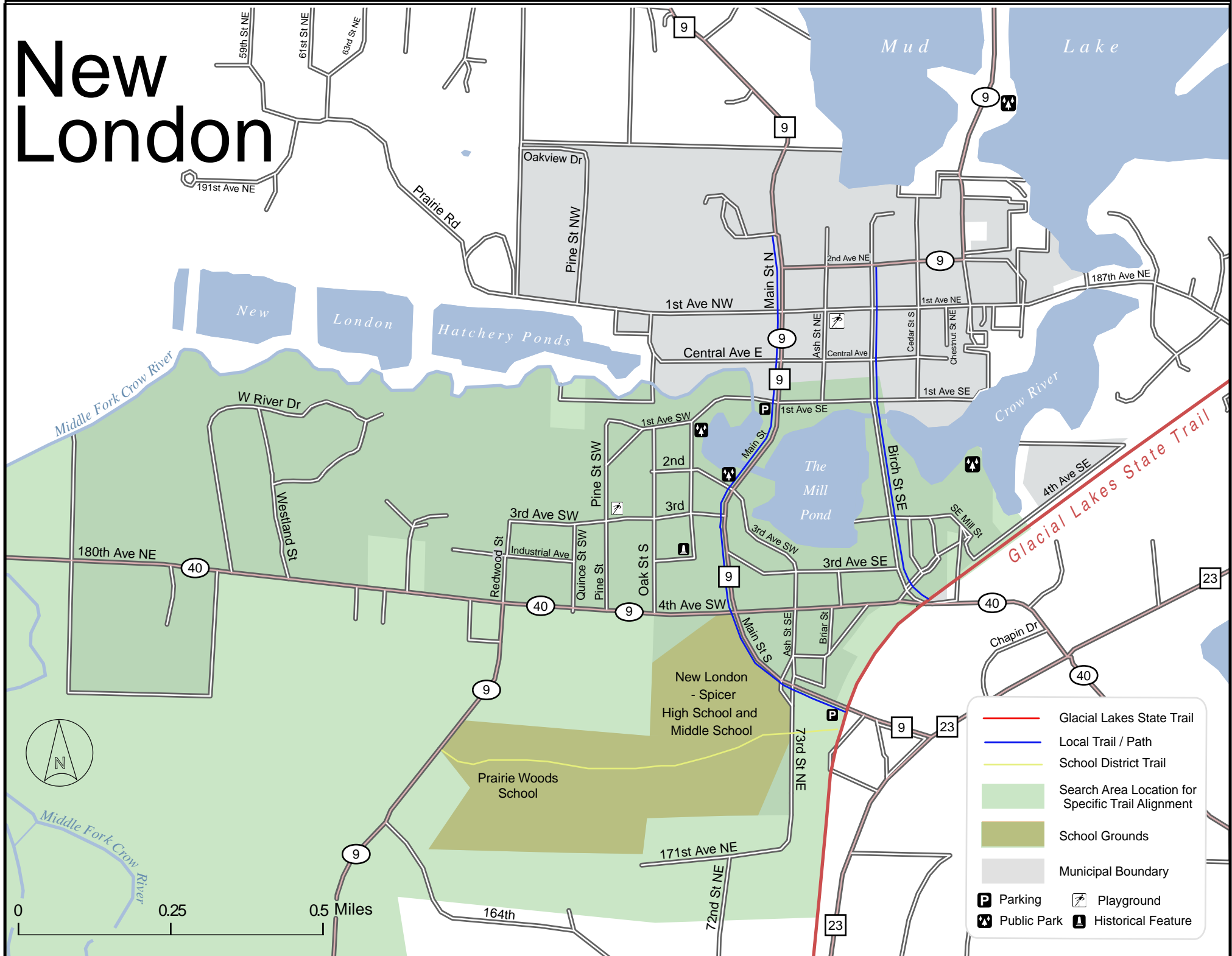
Historic buildings, unique shopping experiences, and good food are hallmarks of the downtown.

Not too far from the millpond, the Lebanon Lutheran Church houses the Monongalia Historical Society. An 1870s log cabin sits outside the building. Also, the millstone from the New London Flour Mill can be seen. Another historic landmark is the monument in the Lebanon Cemetery developed in memory of people killed in the 1862 Dakota War.

A walking tour of these sites is available on the New London website.

The city is currently working on plans to create a boulevard park (Veterans Memorial Park) at the dam site in conjunction with replacement of the dam. Their goal is to create an attractive public space that will encourage use of the area and serve as a gateway to downtown. The park will include an overlook, seating, and veterans' memorial. The Glacial Lakes State Trail should be connected to this park, which will serve as a trailhead.

# New London



## **Minnesota River Prairie Subsection – the setting for the trail**

The Glacial Lakes State Trail Extension – New London to Sibley State Park is located in the Minnesota River Prairie subsection of the state's ecological classification system. A subsection is a distinct landscape of Minnesota defined by vegetation, geology and other resource criteria. See the map on the next page for the location of the Minnesota River Prairie subsection. The source of the following description of the subsection is found on the DNR website:[http://www.dnr.state.mn.us/ecs/prairie/ecs\\_q.html](http://www.dnr.state.mn.us/ecs/prairie/ecs_q.html)

Large till plains form the boundary on both sides of the Minnesota River. The unit is bounded to the southwest by the Prairie Coteau. A series of end moraines define the eastern boundary, starting with the Alexandria Moraine to the northeast and ending with end moraines associated with the Des Moines lobe in the southeast. This subsection consists of a gently rolling ground moraine about 60 miles wide (Hobbs and Goebel, 1982). The Minnesota River occupies a broad valley that splits the unit in half. It was created by Glacial River Warren, which drained Glacial Lake Agassiz. (Matsch and Wright 1967).

### **Landform**

Loamy ground moraine (till plain) is the dominant landform, but end moraines, and lake plains also occupy a significant area (Hobbs and Goebel 1982). Ground moraine topography is level to gently rolling. The steepest topography of the subsection is along the Minnesota River and on the Big Stone Moraine, which has both steep kames and broad slopes.

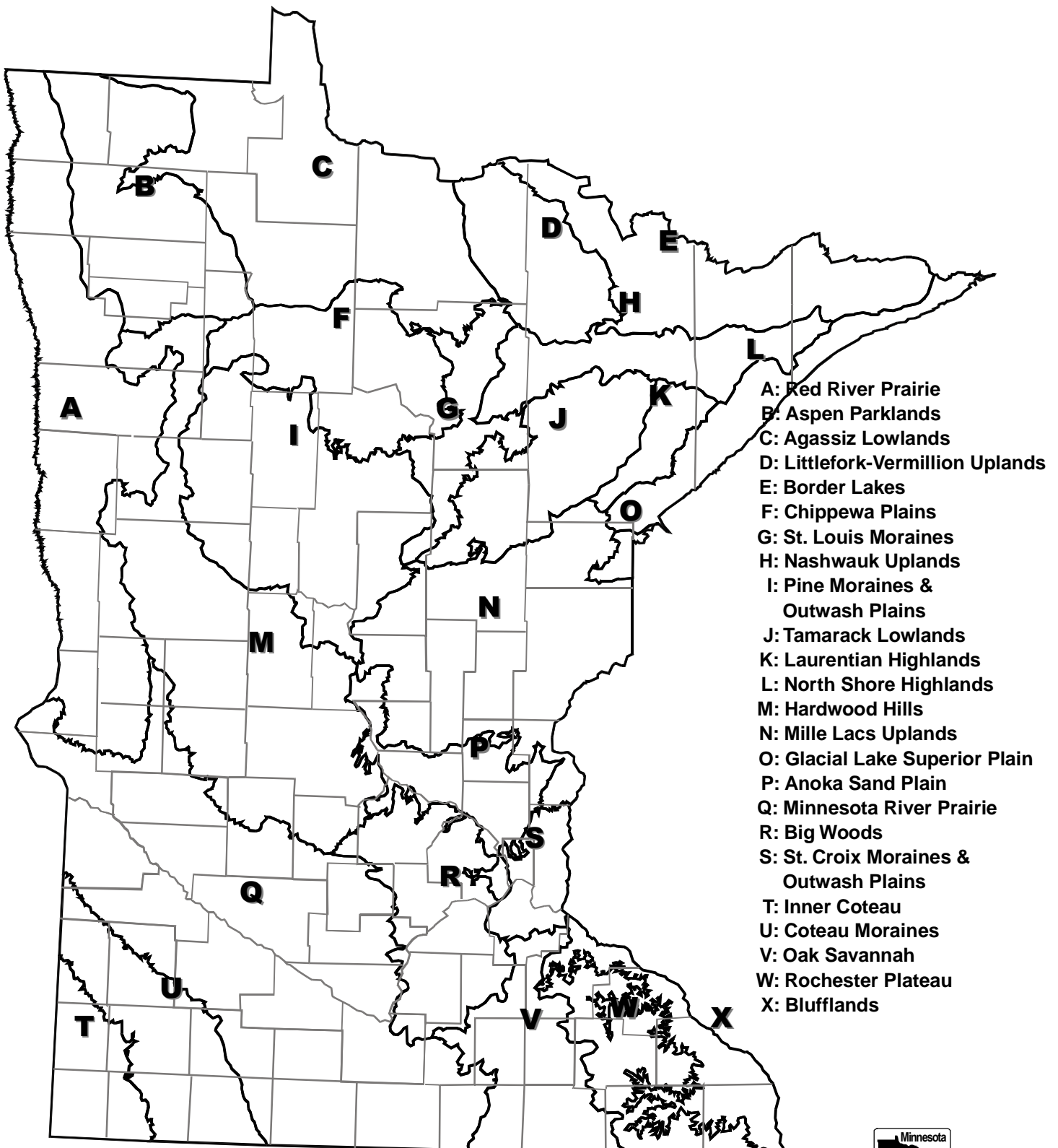
### **Bedrock geology**

Most of this unit has a 100 to 400 foot covering of glacial drift (Olsen and Mossler 1982). Cretaceous shales, and sandstones are the most common kinds of bedrock. Ordovician dolomite underlies the extreme southeastern edge (Morey 1976). There is a major area of exposed granite bedrock scoured by Glacial River Warren near Ortonville (Wheeler et al. 1992).

### **Soils**

Well to moderately well drained loamy soils formed in gray calcareous till of Des Moines Lobe origin are dominant. Some soils are clayey and locally there are sandy and gravelly soils, but these account for only a small percentage of the subsection (Dept. of Soil Science, Univ. of Minnesota 1969, 1979, 1981). Cummins and Grigal (1981) show most of the division as Udolls and Aquolls on relatively level topography, generally with 15 feet or less of local relief. Dry prairie soils (primarily Ustolls) are also found on level to gently rolling topography. They occupy convex knobs on the landscape.

# ECS Subsection Map



## **Climate**

The climate is typical continental with extremes in temperature from summer to winter. Annual precipitation ranges from 25 inches in the west to 30 inches in the east, with 11 to 13 inches of growing season precipitation. Growing season length is approximately 147-152 days. Eleven percent of annual precipitation falls from November through February (Midwest Climate Center 1992). This results in extreme desiccation of most woody plants, and contributes to prairie grass dominance (Albert 1993).

## **Hydrology**

This subsection is drained by the Minnesota River. Most smaller rivers and streams eventually empty into the Minnesota or the Upper Iowa Rivers. There is a poorly developed drainage network due to landscape characteristics. This unit has 150 lakes greater than 160 acres in size (Dept. of Soil Science, Univ. of Minnesota 1969, 1979, 1981a). However, many of these are shallow perched lakes. Wetlands were very common before settlement. Most are now drained and used for crop production.

## **Presettlement vegetation**

The presettlement vegetation was primarily tallgrass prairie, with many islands of wet prairie (Kratz and Jensen 1983, Marschner, 1974). Forests of silver maple, elm, cottonwood, and willow grew on floodplains along the Minnesota River and other streams. Portions of the Big Stone Moraine supported dry and dry-mesic prairie (Wheeler et al. 1992). There were also dry gravel prairies on kames (Albert 1993).

## **Present vegetation and land use**

Agriculture is the dominant land use. This unit is the heart of the Minnesota Cornbelt (Wright 1972). Wheeler et al. (1992) found upland prairie species to be common throughout most of the subsection (based on herbarium records). Remnant stands of tallgrass prairie are rare.

## **Natural disturbance**

Fire was the most common natural disturbance before settlement. Fire suppression has allowed woodlands to develop from what was originally oak openings or brush prairies (Wheeler et al. 1992). Other causes of disturbance are floods and tornados.

## **Conservation concerns**

The major conservation concern is water quality in the Minnesota River drainage area. There is a significant pollution problem throughout the unit. It is caused by intensive agricultural activities (fertilizers, pesticides, and animal waste). Another concern is preservation of existing wetlands and restoration of former wetlands that are presently drained. A description of conservation concerns can be found at the following: *Species in Greatest Conservation need for the Minnesota River Prairie Subsection*

<http://www.dnr.state.mn.us/cwcs/strategy.html>



## Resources in the Trail Corridor

### Water Resources

The Middle Fork of the Crow River is located within the trail corridor. It is a significant water resource in the New London area providing the source of water for the New London Fish Hatchery. The dam in New London also impounds water used for recreation. There are no lakes within the trail corridor, although the southern end of Bear Lake touches the search area. There are several lakes in the vicinity. All or part of five lakes are located within Sibley State Park.

### Water Resources Recommendations

***Recommendation 1: Minimize trail development and maintenance impacts to adjacent water resources through the use of mulching, geo-textiles, silt screens and seeding to establish vegetation.***

***Recommendation 2: Strive to limit water crossings and obtain appropriate permits for any crossings.***

### Vegetation

#### Presettlement vegetation

The proposed corridor lies along the western border of the Eastern Broadleaf Forest Province. The western border was bounded by expansive prairies of the Prairie Parkland Province. Between the prairies, that burned regularly, and the mesic hardwood forests, which rarely burned, were lands that burned occasionally favoring resprouting of trees and brush. Land surveyors described them as barrens, savanna, prairie openings, thickets and woodland groves. Natural remnants of this vegetation have developed into woodlands and forests following the decline of fire frequency after European settlement. Pockets of rich hardwood forests existed in the fire protected hillsides of the rolling glacial landscape. Numerous lakes and wetlands were also part of this landscape.

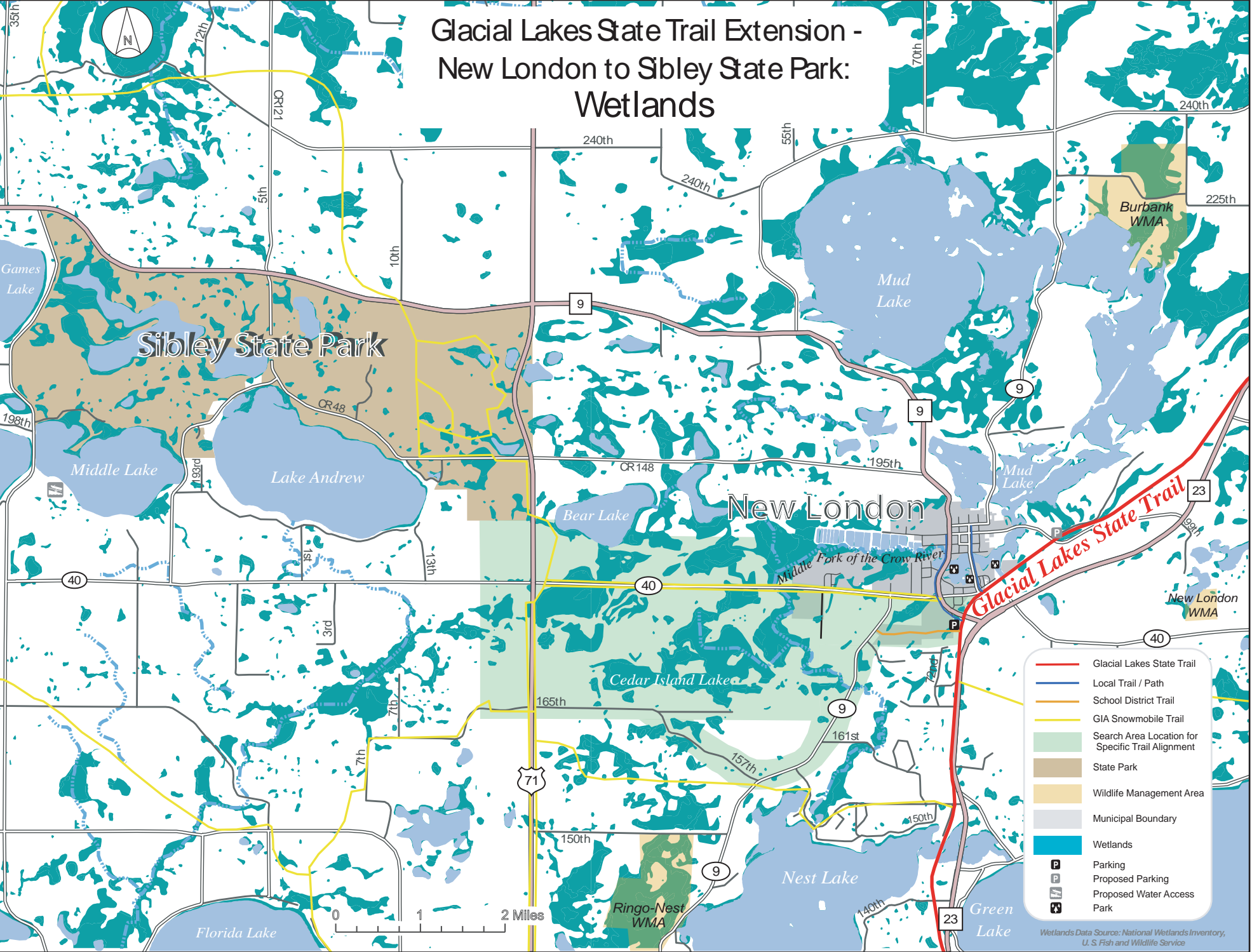
#### Present vegetation and land use

Agriculture is the predominant land use within the trail corridor, both cultivated and hay/pastureland. There are also patches of forested land within the corridor. Wetlands are located throughout the trail corridor.

#### Wetlands

There are a number of wetlands within the trail corridor search area. The map on the next page illustrates the location of wetlands identified in the National Wetlands Inventory. It is a goal to identify a specific trail alignment that avoids wetlands. Any wetland impacts must meet the requirements of the Wetland Conservation Act (avoid, minimize, mitigate). After a specific alignment is determined a wetland delineation report will be

# Glacial Lakes State Trail Extension - New London to Sibley State Park: Wetlands



submitted to the appropriate parties. A wetland replacement plan will address potentially affected wetlands, and unavoidable impacts, if permitted, must be minimized and any wetland loss must be mitigated to yield no net-loss of wetlands. It would be desirable to replace wetlands within the watershed.

### Native Plant Communities

The Minnesota County Biological Survey (MCBS) surveyed and mapped Kandiyohi County, the location of the proposed trail corridor, from 2000-2002. A Heritage Database search was completed for the trail corridor and revealed three native plant communities were located in the vicinity of the proposed corridor (*Minnesota's Native Plant Community Classification (version 2.0)*).

A shrub swamp is located in the SW corner of the corridor. The shrub swamp is dominated by willows and red-twigged dogwood. Sedges, joe-pye weed and boneset are found in the herbaceous layer, with cattails scattered throughout. (Element Occurrence Rank B)

A dry mesic forest, part of Sibley State Park, is located along US 71. The dry mesic forest has a patchy canopy dominated by open grown bur oak, and a few northern pin oak on considerable topographic relief. The sub canopy consists of ironwood, prickly ash and currants with a groundcover of woodland sedges, northern bedstraw, white avens, and various ferns. (Element Occurrence Rank BC)

A mesic forest is located in the NE corner of the corridor on a north-facing slope. The canopy is dominated by large multi-stemmed basswood, with scattered green ash and red oak. The sub canopy consists of ironwood and some red elm, with a shrub layer of prickly ash and pasture gooseberry. The herbaceous layer is dominated by Virginia waterleaf and wild sarsaparilla. There are some large patches of Pennsylvania sedge. There is some common buckthorn in areas that were logged. (Element Occurrence Rank BC)

Impact to these communities is not likely.

### **Vegetation Restoration and Management Recommendations**

***Recommendation 1: Complete a comprehensive inventory of existing vegetation as segments of the trail are identified and acquired.***

***Recommendation 2: Revegetate areas disturbed by construction or in need of rehabilitation with plant species native to the area. Native shrubs and trees will be used in landscaping trail access sites and waysides.***

***Recommendation 3: Efforts will be made to avoid impacting wetlands. Wetlands will be inventoried and a wetland mitigation plan will be prepared to address any identified impacted wetlands.***

**Recommendation 4: Educate trail users about invasive plants and what actions they can take to avoid spreading seed. Provide information on problem weeds via signs and brochures so users can recognize them.**

**Recommendation 5: Use aggressive control measures in high use areas such as trailheads and parking lots.**

**Recommendation 6: Avoid negative impacts on rare and endangered species, and avoid fragmentation or disturbance of native plant communities identified by the Minnesota County Biological Survey.**

**Recommendation 7: Identify and record invasive species before construction and control to avoid spreading them. (See list below). DNR Operational Order #113 and associated discipline guidelines require DNR to control the spread of invasive species, control existing patches, monitor construction and import of construction material and control new invasions promptly.**

#### LIST OF INVASIVE SPECIES

|                                  |                               |                                        |
|----------------------------------|-------------------------------|----------------------------------------|
| Bull Thistle*                    | <i>Cirsium vulgare</i>        | Prohibited noxious weed (M.R. 1505)    |
| Canada Thistle*                  | <i>Cirsium arvense</i>        | Prohibited noxious weed (M.R. 1505)    |
| Field bindweed*                  | <i>Convolvulus arvensis</i>   | Prohibited noxious weed (M.R. 1505)    |
| Garlic Mustard*                  | <i>Allaria petiolaria</i>     | Prohibited noxious weed (M.R. 1505)    |
| Leafy Spurge*                    | <i>Euphorbia escula</i>       | Prohibited noxious weed (M.R. 1505)    |
| Musk Thistle*                    | <i>Carduus nutans</i>         | Prohibited noxious weed (M.R. 1505)    |
| Perennial Sowthistle*            | <i>Sonchus arvensis</i>       | Prohibited noxious weed (M.R. 1505)    |
| Plumeless Thistle                | <i>Carduus acanthoides</i>    | Prohibited noxious weed (M.R. 1505)    |
| Purple Loosestrife*              | <i>Lythrum salicaria</i>      | Prohibited noxious weed (M.R. 1505)    |
| Spotted Knapweed*                | <i>Centaurea maculosa</i>     | Prohibited noxious weed- some counties |
| European Buckthorn               | <i>Rhamnus cathartica</i>     | Restricted Noxious Weed (M.R. 1505)    |
| Glossy Buckthorn (all cultivars) | <i>Frangula alnus</i>         | Restricted Noxious Weed (M.R. 1505)    |
| Amur Maple*                      | <i>Acer ginnala</i>           | MISAC Moderate Threat – established    |
| Autumn Olive*                    | <i>Eleagnus umbellata</i>     | MISAC Severe Threat – established      |
| Bela Honeysuckle*                | <i>Lonicera x bella</i>       | MISAC Severe Threat – established      |
| Bird's-foot trefoil*             | <i>Lotus corniculatus</i>     | MISAC Severe Threat – established      |
| Black Locust*                    | <i>Robinia pseudoacacia</i>   | MISAC Severe Threat – established      |
| Crown Vetch*                     | <i>Coronilla varia</i>        | MISAC Severe Threat – established      |
| Giant Knotweed*                  | <i>Polygonum sachalinense</i> | MISAC Severe Threat – established      |
| Grecian Foxglove*                | <i>Digitalis lanata</i>       | MISAC Severe Threat – established      |
| Japanese knotweed*               | <i>Falopia japonica</i>       | MISAC Severe Threat – established      |
| Morrow's Honeysuckle*            | <i>Lonicera morrowii</i>      | MISAC Severe Threat – established      |
| Norway Maple*                    | <i>Acer platanoides</i>       | MISAC Severe Threat – established      |
| Reed canary grass*               | <i>Phalaris arundinacea</i>   | MISAC Severe Threat – established      |
| Siberian Elm*                    | <i>Ulmus pumila</i>           | MISAC Not yet assessed                 |
| Siberian Pea Shrub*              | <i>Caragana arborescens</i>   | MISAC Not yet assessed                 |
| Tansy*                           | <i>Tanacetum vulgare</i>      | MISAC Severe Threat – established      |
| Tartarian Honeysuckle*           | <i>Lonicera tatarica</i>      | MISAC Severe Threat – established      |
| Wild Parsnip*                    | <i>Pastinaca sativa</i>       | MISAC Not yet assessed                 |

## **Fisheries**

### **New London Fish Hatchery**

The Department of Natural Resources New London Fish Hatchery is located northwest of New London, parallel to the Middle Fork of the Crow River. The function of the hatchery is the production of walleye. Walleye eggs are hatched at this facility in the spring. Walleye fry are stocked into ponds at the hatchery and Spicer area natural rearing ponds to grow to frylings and/or fingerlings. (Fry are newly hatched walleye, just a few days old, hatched in May. Frylings are 1 inch to 1 ½ inches long and usually harvested in June. Fingerlings are 4 inches to 6 inches long and usually harvested between September and November). Walleye fry are also hatched for stocking Spicer area lakes as well as other lakes throughout the state. The hatchery has an annual production capacity of 59,000,000 walleye fry.

There are 17 ponds at the hatchery ranging in size from 1.0 – 5.4 acres with maximum depths ranging in size from 4 – 7 feet. All but two of the ponds have two water intakes. The New London Mill pond is the source of water for the hatchery. Each pond has a kettle structure inside for draining and harvesting fish produced.

A building on site houses rearing and incubation units. There are two separate egg batteries (egg hatching containers), one holding up to 96 hatching jars with a three quart capacity, the second holding up to 25 cannons with a 20 to 30 quart egg capacity. There are two concrete raceways used as fry holding tanks, each with a volume of approximately 680 gallons. There are ten other 680 gallon raceways inside the hatchery, but only four of them are available for holding fish. The other eight raceways are covered by eight fiberglass tanks, (approximately 300 gal capacity) used for intensive tank culture of walleye fry. There is a larger concrete raceway outside of the hatchery (recently covered with a pole building), used for holding walleye broodstock during spring spawn take and fingerlings prior to shipment to lakes in other fish management areas in the state.

DNR Fisheries staff conduct tours of the facility on request for groups such as school groups and scout groups. Tours for Sibley State Park campers are conducted every two weeks during the summer.

### **Middle Fork of the Crow River**

The Middle Fork of the Crow River provides seasonal angling opportunities in the New London area. Anglers fish the larger and deeper pools in the spring, early summer and fall. Walleye, black crappie, bullheads, bluegills and northern pike are caught.

### **Fisheries Recommendations**

***Provide information to trail users regarding the tours available of the New London Fish Hatchery through Sibley State Park.***



## **Wildlife**

The species found in Sibley State Park are an indicator of what can be found in the area.

### *Birds*

A diversity of bird species can be observed in the area. Approximately 200 species of birds have been observed in Sibley State Park including the scarlet tanager, yellow-throated warbler, cerulean warbler, common loon, eastern bluebird and bald eagle.

### *Mammals*

Approximately 34 species of mammals have been identified in Sibley State Park. These include white-tailed deer, coyote, red fox, mink, masked shrew, and beaver.

### *Reptiles*

Approximately ten species of reptiles have been identified within or near the park. Spiny softshell turtles; western hognose, green, brown, red-bellied snakes; and prairie skink are some examples.

### *Amphibians*

Approximately ten species of amphibians have been observed in Sibley State Park including blue-spotted salamander, central newt and wood frog.

### *Special Concern, Threatened or Endangered Animal Species*

A search of the Minnesota Natural Heritage database indicated that there were no endangered, threatened, or special concern species documented within the trail corridor.

### *Species in Greatest Conservation Need (SGCN)*

The DNR publication, *Tomorrow's Habitat for the Wild & Rare* identifies habitat loss and degradation as the primary problem facing species in greatest conservation need in Minnesota. It recommends a simple and direct approach to this problem: conserve key habitats used by Minnesota's SGCN in order to conserve the majority of Minnesota's wildlife.

*Tomorrow's Habitat* has three goals to address the needs of Minnesota's species in greatest conservation need:

1. Stabilize and increase populations of species in greatest conservation need populations
2. Improve knowledge about species in greatest conservation need
3. Enhance people's appreciation and enjoyment of species in greatest conservation need.

### **Wildlife Recommendations**

***The role the trail could play in fulfilling the above goals should be identified as the trail is acquired, developed and managed.***

## References

Partnership for Prevention, 2008. *Places for Physical Activity: Facilitating Development of a community Trail and Promoting Its Use to Increase Physical Activity Among Youth and Adults – An Action Guide*. *The Community Health Promotion Handbook: Action Guides to Improve Community Health*. Washington, DC.

Minnesota Department of Natural Resources, 1993. *Master Plan for an Addition To The Glacial Lakes State Trail*. Division of Trails and Waterways, Minnesota Department of Natural Resources.

Minnesota Department of Natural Resources, 2006. *Tomorrow's Habitat for the Wild and Rare: An Action Plan for Minnesota Wildlife, Comprehensive Wildlife Strategy*. Division of Ecological Services, Minnesota Department of Natural Resources.

[http://www.dnr.state.mn.us/ecs/prairie/ecs\\_q.html](http://www.dnr.state.mn.us/ecs/prairie/ecs_q.html)