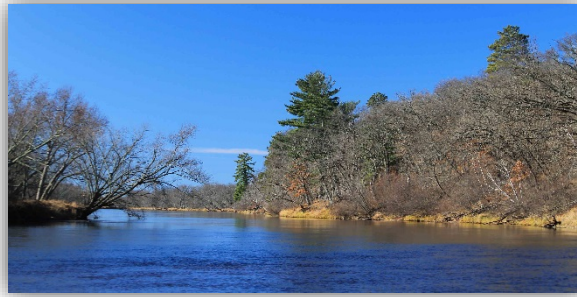


St. Croix State Park

Management Plan





For more information on this management plan, please contact the DNR Division of Parks and Trails at (651) 259-5600.

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This information is available in an alternative format upon request.

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**Department of Natural Resources Approval
of the Management Plan for St. Croix State Park**

Minnesota Statutes, section 86A.09, subd. 1 requires that a master plan be prepared for units of Minnesota's outdoor recreation system, including state parks. The Laws of Minnesota for 1943 established St. Croix State Park as part of Minnesota's Outdoor Recreation System (*Minnesota Statutes*, section 85.012, subd. 49).

The management plan (master plan) received input and comment both within the Department of Natural Resources and from the public.

Erika Rivers

Erika Rivers, Director
MNDNR Division of Parks and Trails

7/28/2017

Date

Minnesota Department of Natural Resources • Division of Parks and Trails
500 Lafayette Road, St. Paul, MN 55155-4039

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Executive Summary

The St. Croix State Park management plan is a 20-year strategic plan to guide the management of park resources and development of facilities and programs for public use.

St. Croix State Park, established in 1943, is Minnesota's largest state park. With nearly 34,000 acres in its statutory boundary, St. Croix State Park encompasses a wide range of natural landscapes and wildlife habitats including forests, savannas, prairies, wetlands and river environments. The park borders on the St. Croix River – a National Wild and Scenic River – and the Kettle River – a state Wild and Scenic River, both of which are important resources and migration corridors for wildlife and historically for people as well.

St. Croix State Park also holds evidence of a long history of people living in the St. Croix River valley - prehistoric sites, historic Ojibwe habitation and fur trade sites, and sites of Euro-American exploration and settlement. The park contains a rich legacy of historic buildings and structures designed by the National Park Service and built by the Civilian Conservation Corps and Works Progress Administration in the 1930s and 1940s.

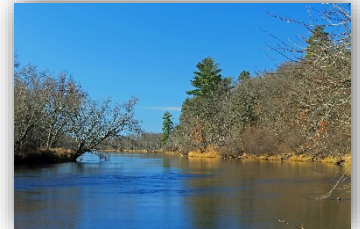
Today, St. Croix State Park offers a wide range of opportunities for visitors to learn about the park's natural resources and history, and to recreate using the park's trails, campgrounds, group centers, water accesses and other facilities. Over 272,000 people visited the state park in 2015, the tenth most visits among Minnesota's state parks, with more than 45,000 overnight visitors, the third most among state parks.

The *Minnesota State Parks and Trails System Plan* (2015) designates St. Croix State Park as a *Destination State Park*. The System Plan identified 16 state parks and state recreation areas in the state park system in this category. These are high priority places for the division to make additional investments over the next 10 years to improve park facilities and amenities, and to offer enhanced experiences for park visitors.

Several overall themes describe the efforts identified in the management plan for pursuing St. Croix State Park's role as a *Destination State Park*:

- Greater diversity of experiences – make changes or improvements to park facilities and programs that create a wider range of experiences for park visitors.

Actions: add more hike-in campsites, renovate one of the park campgrounds to offer larger campsites and camper cabins, build an archery range.



St. Croix River is a designated National Wild and Scenic River

- Get visitors out into the park – create opportunities that encourage park visitors to experience more of the state park than just those areas they are already familiar with.

Actions: work with the canoe rental concessionaire to organize interpretive programs on the rivers for park visitors, create more programs and self-guided experiences that utilize the trail network, create new amenities at locations like the fire tower.

- Get more out of what the state park has – find ways to better utilize the facilities that the state park already has to accommodate more visitors and offer more experiences.

Actions: improve trails by creating shorter loops and smoothing treadways, open St. John's Landing Group Center to more public use.

- Year-round opportunities – offer more opportunities for park visitors to experience St. Croix State Park in all seasons of the year.

Actions: designate some trails in the park for winter fat biking, consider offering more interpretive programming in the winter and shoulder seasons.

The management plan includes recommendations in each section of the plan that lay out the future directions for investments and management of the state park. A complete listing of the plan recommendations is also included in **Appendix A – Management Plan Recommendations**. Examples of the recommendations in each section of the plan are:

Natural and Cultural Resources– continue the pine barrens and oak savanna native plant community restoration efforts, manage invasive plant species, rehabilitate historic buildings at St. John's Landing and Head of the Rapids Group Centers, pursue a programmatic agreement with the State Historic Preservation Office to streamline the process for maintenance and repair projects on historic structures (see **Natural and Cultural Resources recommendations** – p. 27).

Interpretive Services – renovate the visitor center to update the interpretive displays, add more programs and opportunities for visitors to experience the St. Croix and Kettle Rivers, create more staff-led interpretive opportunities for existing groups of visitors (e.g. group centers); create signs, brochures and other tools that teach visitors about the historic buildings at the state park (see **Interpretive Services recommendations** – p. 40).

Recreational Use and Visitor Services – renovate Paint Rock Springs Campground to create more variety in camping experiences, add more remote hike-in campsites, develop new trails for hiking and horseback riding

*For a complete list of all the recommendations in the management plan, see **Appendix A – Management Plan Recommendations***

that create additional trail loops, designate trails for winter fat biking, open St. John's Landing Group Center to more public use (see **Recreational Use and Visitor Services recommendations** – p.51).

Park Boundary – continue to purchase lands within the existing state park statutory boundary from willing sellers, monitor gravel operations adjacent to the state park for potential future development (see **Park Boundary recommendations** – p.60).

Operations – work with the canoe rental concessionaire to enhance education and recreation opportunities for park visitors, work with Conservation Corps Minnesota and Iowa on its facility needs to support its program at the state park (see **Operations recommendations** – p. 66).

Management Plans for state parks and state recreation areas are developed in an open process that includes public involvement. The division utilizes public meetings, online surveys, and park visitor surveys to gather input about the state park and comments on proposals for the management plan. A citizen advisory committee met four times during the planning process to help identify issues and review recommendations for the plan.

Recommendations in the management plan will be implemented over time, and are subject to the availability of adequate capital development and operational funding. The division utilizes these funds across the state park system following the priorities set out in the *Minnesota State Parks and Trails System Plan* (see page 5).

*For more information about the planning process, see the **Introduction and Appendix B – Public Input and Review Summary***

Introduction

State Park Overview

St. Croix State Park was established as a state park in 1943. It is the largest state park in Minnesota, with nearly 34,000 acres within the park's statutory boundary. St. Croix State Park is also one of the most visited state parks in Minnesota— in 2015, 272,065 people visited the park (10th among all Minnesota state parks) with 40,557 visitors staying overnight in the campgrounds and lodging (3rd among Minnesota state parks).

St. Croix State Park is located along the St. Croix River in east central Minnesota. The state park entrance is located on State Highway 48, approximately 16 miles east of the City of Hinckley and Interstate Highway 35 (see Figure 1: State Park Location).

The state park encompasses significant natural and cultural resources, including forested landscapes, savannas and prairie environments, and over 1,800 acres of designated old growth forest. Since the 2011 blowdown event that affected approximately 13,000 acres, the park has undertaken extensive pine barren and oak savanna restoration efforts. The state park also includes a wealth of water resources: wetlands, trout streams, and rivers including the state-designated Wild and Scenic Kettle River and the federally-designated St. Croix National Scenic Riverway. The park's lands and waters support a wide variety of fish and wildlife including 24 federal- and state-listed endangered, threatened or special concern species.

Cultural resources at the park document the long history of peoples in the St. Croix River valley - from early American Indian habitation and historic Ojibwe sites, to the fur trade, Euro-American settlement, logging, and mining sites. Many of the state park's facilities were designed by the National Park Service and built by the Civilian Conservation Corps and Works Progress Administration in the 1930s and 1940s. Over 164 buildings and structures from this era still exist in the park, and are the reason the state park was designated a National Historic Landmark.

The state park offers naturalist-led and self-guided interpretive opportunities for park visitors. Staff-led programs, signs and other materials provide park visitors with opportunities to learn about the park's natural resources and history of the area, as well as outdoor skill-building activities. The park's visitor center hosts interpretive displays as well as provides a location for staff-led programs.

St. Croix State Park supports a wide range of recreational opportunities. The park's overnight facilities include campgrounds, cabins, group camps, group centers, a horse camp, and hike-in campsites. An extensive trail and road

Minnesota has 75 state parks, which are managed by the Minnesota Department of Natural Resources Division of Parks and Trails.

MNDNR Division of Parks and Trails also manages state recreation areas, state waysides, forest recreation areas, state trails, water trails and other water recreation programs.

network supports hiking, biking, horseback riding, cross-country-skiing and snowmobiling. Like many of Minnesota's state parks, visitation to St. Croix State Park peaks in the summer. But, St. Croix State Park is a year-round destination – horseback riding is most popular in the spring and fall, while miles of groomed trails and winter lodging attract snowmobile riders and cross-country skiers in the winter. The state park also manages the Boulder Campground and Day Use Area and Tamarack Horse Campground in the St. Croix State Forest.

Minnesota State Parks and Trails System Plan and St. Croix State Park

The Division of Parks and Trails adopted the *Minnesota State Parks and Trails System Plan* in 2015. The system plan advances new approaches for managing state parks, state recreation areas, state trails, forest recreation areas and water recreation. The plan recommended a differentiated approach to managing these recreation systems – to focus on providing different types of recreational experiences and a range of facilities and levels of services at units across the system. The intended outcome is that visitors will have a wider range of high-quality opportunities from which to choose those that best match their interests and expectations.

The system plan created three investment groups – *Rustic*, *Core*, and *Destination* – to differentiate the types of experiences state parks and state recreation areas offer and to prioritize the kinds of investments to make across the system in the future. Under the investment group framework, St. Croix State Park is one of 16 state parks designated as a *Destination State Park*. As described by the system plan:

Destination State Parks and SRAs offer a destination-quality experience, with an array of outdoor recreation and lodging opportunities, park facilities, and naturalist-led interpretive offerings. They may have year-round camping (or other lodging) and staffing. Parks in this group have high use and attract visitors from across the state. The division will invest in *Destination State Parks and SRAs* at a high level over the next 10 years to enhance campgrounds and group camps, visitor centers, lodging opportunities and other amenities.

The management plan helps determine the types of investments that will fulfill St. Croix State Park's role as a *Destination State Park*. The division utilized four questions with its internal planning group and the public to integrate the system plan perspective into the management plan process:

- Is there anything "missing" at St. Croix State Park – experiences for visitors, types of facilities, amenities, etc. – that would be expected in a *Destination State Park*?
- What facilities or visitor experiences can be enhanced or improved?
- How can the division make better use of the facilities and resources already present at the park?

St. Croix State Park is designated a "Destination State Park" in the Minnesota State Parks and Trails System Plan.

For more information about the system plan, see the MNDNR website.

- Are there new opportunities that could be developed for St. Croix State Park that would support its *Destination State Park* designation?

Climate Change Adaptation and Mitigation at St. Croix State Park

Climate change alters the character of the state's lands, waters, plants, fish and wildlife. It affects the DNR's ability to manage these resources for the long-term benefit of the public. The DNR's responsibility is to use the best available science to implement adaptation strategies that will minimize the negative impacts of climate change on the state's natural resources, outdoor recreation opportunities, and commercial uses of natural resources.

The DNR will develop and implement land management practices that sustain Minnesota's natural resources while helping to reduce future climate change by mitigating the environmental impacts of increased carbon emissions. These efforts will be guided by *Operational Order 131 Climate Adaptation and Mitigation in Natural Resource Management*. The DNR is committed to enhancing ecosystem resilience and reducing the negative impacts of climate change on the state's resources and outdoor recreation opportunities.

Climate change is likely to impact resource management and recreation in state parks. Several potential impacts and associated actions were identified during the planning process and are reflected in the text and recommendations of the management plan. As part of assessing restoration efforts and plant community resilience, the division will monitor the health of native plant communities with an eye toward effects of climate change-related warming temperatures and varying precipitation. Natural and cultural resource management actions may need to adjust to changing conditions over time – timing and frequency for use of prescribed fire, invasive species management techniques, etc.

Communicating these impacts and responses to the public will be an increasingly important part of interpretive services efforts at St. Croix State Park and across the state park system. Longer shoulder seasons and less reliable winter snows will cause changes in visitor patterns, likely resulting in more visitors at the park in the spring and fall while making for shorter or interrupted seasons for winter activities such as cross-country skiing and snowmobiling.

Statutory Authorization

Including creation of St. Croix State Park in 1943, the Minnesota State Legislature has passed five acts related to St. Croix State Park.

Laws of Minnesota 1943, chapter 293

St. Croix State Park was established in 1943 by the Minnesota State Legislature, with the Director of State Parks being authorized to accept land from the United States federal government. An act of the United States

For more information about climate change impacts and the DNR's response, see the MNDNR website.

Congress the previous year had authorized the transfer of the St. Croix Recreation Demonstration Area to the state of Minnesota.

Laws of Minnesota 1945, chapter 356

The Minnesota State Legislature amended the lands listed in 1943 as withdrawn from sale and to be included in St. Croix State Park.

Laws of Minnesota 1969, chapter 524, section 2

The Minnesota State Legislature passed the Outdoor Recreation Act, which includes confirmation of which units that are to be considered state parks – including St. Croix State Park.

Laws of Minnesota 1969, chapter 879, section 1

Lands were added to St. Croix State Park's statutory boundary.

Laws of Minnesota 1991, chapter 275, section 1, subdivision 3

Lands were deleted from St. Croix State Park's statutory boundary.

Planning Process

The St. Croix State Park Management Plan is a 20-year strategic vision for the state 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. The DNR is to prepare and approve a management plan prior to requesting funding 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 state agencies, local government officials, local legislators, and citizens during the planning process.

The management plan process for St. Croix State Park included public engagement opportunities. The process began with an open house, held at the park on June 16, 2016. In addition to the open house, the division used an online survey and interviews with park visitors to gather input about the future development and management of the state park.

A citizen advisory committee (CAC) also provided input during the planning process. The CAC included members of local communities, state park users, and interested citizens. The committee met four times at the state park during the planning process:

- July 13, 2016
- August 18, 2016
- September 15, 2016

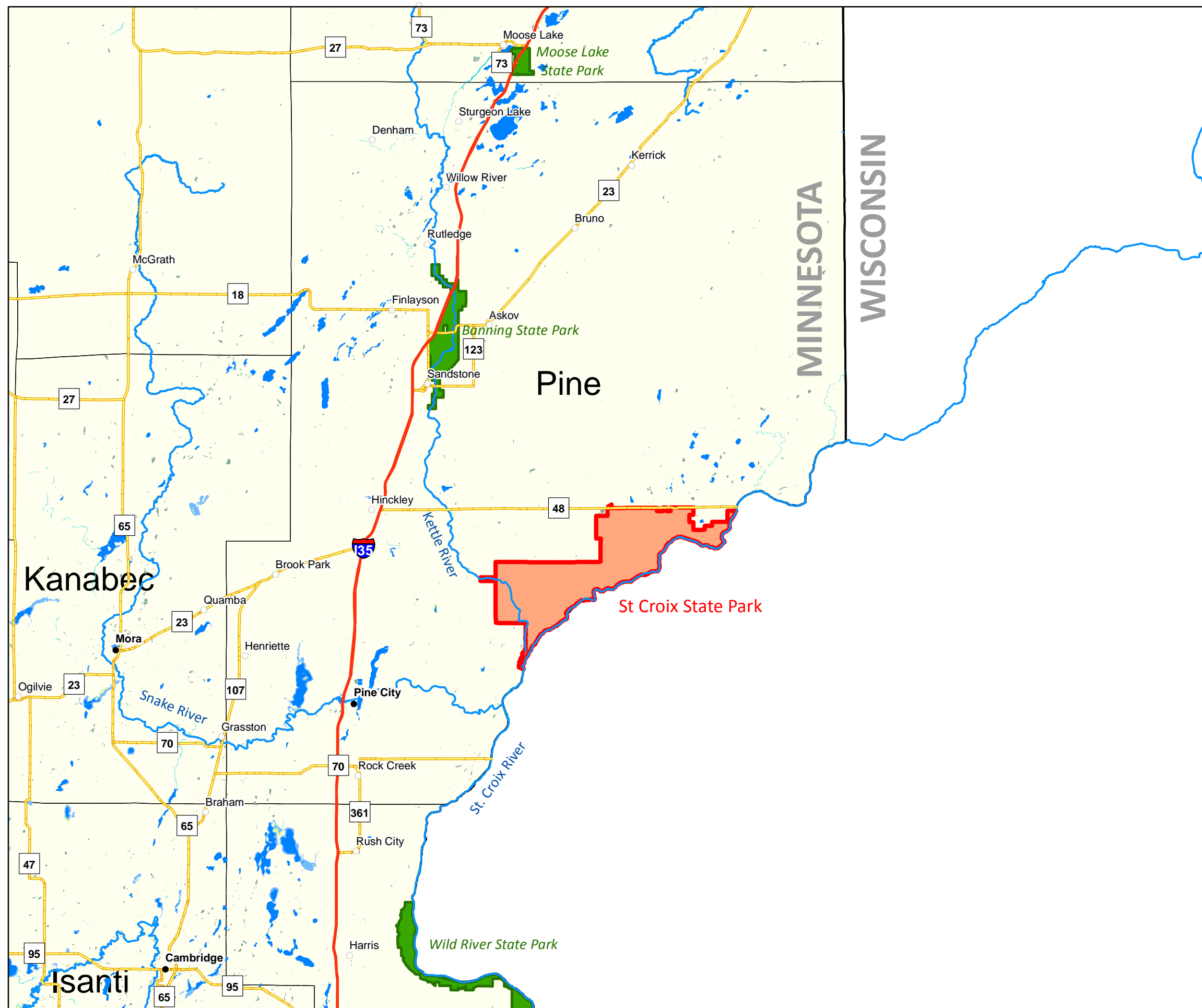
*For more information about public involvement in the planning process, see **Appendix B – Public Input and Review Summary***

- October 27, 2016

The committee reviewed information collected during the planning process, provided input on the natural and cultural resource management issues, interpretive services programs, recreational use and visitor services proposals, and reviewed draft recommendations for the plan.

A draft of the St. Croix State Park management plan was released for public review in May 2017, with an open house held on June 22, 2017 at St. Croix State Park.




For a more detailed summary of the public involvement efforts for the planning process, see **Appendix B – Public Input and Review Summary**.

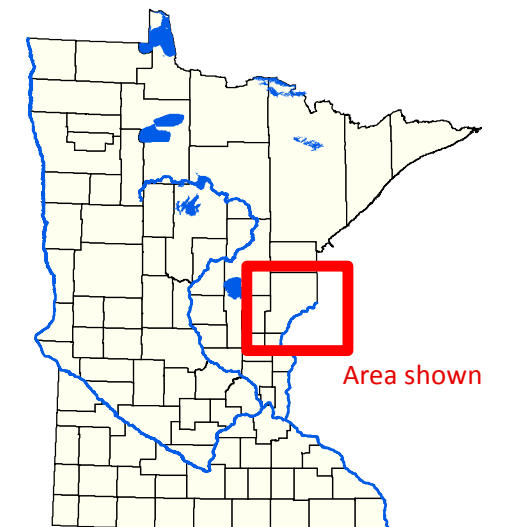


St. Croix State Park

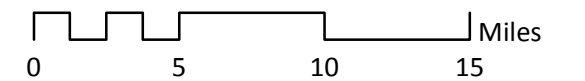
Figure 1: State Park Location

Legend

-  Major rivers
-  St. Croix State Park
-  Other State Parks & State Recreation Areas



Area shown



m DEPARTMENT OF
NATURAL RESOURCES

Regional Setting

Political and Demographic Setting

St. Croix State Park is located in Pine County in east central Minnesota, along the St. Croix River which forms the boundary between Minnesota and Wisconsin. Pine County had a population of 29,750 in 2010, an increase of 12% since 2000. The county seat for Pine County is Pine City, approximately 30 miles south and west of the state park.

The largest municipality near to St. Croix State Park is the city of Hinckley, approximately 16 miles west of the park on State Highway 48. Hinckley's population in 2010 was 1,800, a 39% increase since 2000.

Land use surrounding the state park is primarily agricultural and rural residential, with other publically-owned lands nearby including state forests and county-managed forest lands.

Recreational Opportunities Setting

There are a wide range of recreational opportunities within a 30-mile radius of St. Croix State Park (see Figure 2: Regional Recreation Opportunities). These opportunities include federal and state-managed facilities, as well as numerous local and privately-run facilities. This section lists several major categories of state and federally-managed facilities located in Minnesota within the 30-mile radius of the state park that offer similar nature-based opportunities.

National Scenic Riverways

Over 200 miles of the St. Croix and Namekagon Rivers are designated as the St. Croix River National Scenic Riverway, including the stretch of the St. Croix River that borders the state park. The riverway offers visitors opportunities to paddle, boat, fish and camp along the two rivers. The unit has two visitor centers - St. Croix River Visitor Center in St. Croix Falls, WI and Namekagon River Visitor Center in Trego, WI.

State Scenic Byways

There are two state scenic byways within 30 miles of the state park – the St. Croix Scenic Byway and the Veterans Evergreen Memorial Drive. The scenic byways promote tourism and travel along their routes and nearby communities. The St. Croix Scenic Byway extends from Point Douglas in Washington County to Askov in Pine County. In the vicinity of the state park, the byway follows County Road 61. The Veterans Evergreen Memorial Drive follows State Highway 23 from Banning State Park to Duluth.

State Parks, State Recreation Areas and State Waysides

Three additional state parks are within the 30-mile radius of St. Croix State Park. Moose Lake State Park's facilities include the Agate and Geological Interpretive Center, hiking trails, drive-in campground, rustic group camp, and picnic grounds. The park also includes a fishing pier, swimming beach and boat access on Echo Lake.

Banning State Park's facilities include hiking and biking trails, a drive-in campground, picnic areas, rock climbing areas, and several water accesses and watercraft camping sites on the Kettle River.

Wild River State Park's facilities include trails for hiking, horseback riding, cross-country skiing, snowshoeing. The park has a visitor center, all-season trail center, picnic grounds, and boat access on the St. Croix River. Overnight facilities include a drive-in campground, camper cabins, guesthouse, horse campground, backpack and canoe-in campsites.

State Forests and Forest Recreation Areas

There are seven state forests within 30 miles of St. Croix State Park: St. Croix, Chengwatana, Nemadji, Daughters of the American Revolution (D.A.R.), General C.C. Andrews, Snake River, and Solana. State forest recreation opportunities vary from forest to forest, most include hunting and a range of trail-related activities such as hiking, cross-country skiing, horseback riding, snowmobile and ATV riding.

Seven forest recreation areas – campgrounds and day use areas (DUA) located in state forests - are within the 30-mile radius: Willow River Campground, McCormick Lake DUA and Dago Lake DUA in General C.C. Andrews State Forest; Snake River Campground in Chengwatana State Forest; Gafvert Campground and DUA in Nemadji State Forest; and the Tamarack Horse Campground and Boulder Campground and DUA in St. Croix State Forest. The facilities in St. Croix State Forest are managed by St. Croix State Park (see **Park Operations**).

Wildlife Management Areas (WMA)

Twenty-two state-managed wildlife management areas are located within 30 miles of the state park. These areas primarily offer hunting, trapping, and wildlife viewing opportunities.

Scientific and Natural Areas (SNA)

Two scientific and natural areas – Black Lake Bog SNA and Kettle River SNA - are within the 30-mile radius. Recreational opportunities at SNAs vary by unit. Kettle River SNA is limited to hiking and wildlife viewing while Black Lake Bog SNA is open to a variety of activities including hunting, fishing, boating and hiking. Facilities such as trails are not typically present at these sites.

For more detailed descriptions of these state-managed recreation facilities and protected areas, see the MNDNR website.

State Trails

Portions of three state trails are within 30 miles of St. Croix State Park: Matthew Lourey State Trail, Willard Munger State Trail, and the Gandy Dancer State Trail. Matthew Lourey State Trail extends approximately 80 miles from CSAH 8 in southern Pine County to Harlis Road in Nemadji State Forest in Carlton County. The multi-use natural and gravel surface trail supports hiking and snowmobiling, along its entire length, with portions of the corridor open to horseback riding, mountain biking, off highway motorcycles (OHM) and all-terrain vehicles (ATV). Twenty-one miles of the trail are within St. Croix State Park with hiking, mountain biking, horseback riding and snowmobiling as allowed uses within the state park.

The 70-mile Hinckley to Duluth segment of the Willard Munger State Trail is a paved trail. Authorized trail uses include hiking, biking, in-line skating, mountain biking, horseback riding and snowmobiling. Currently there is no off-road connection between the state trail and St. Croix State Park. An additional segment of the Munger State Trail system that would extend the trail south from Hinckley, the James L. Oberstar State Trail, has been authorized in state statute but not yet developed.

Gandy Dancer State Trail extends 30 miles along former railroad right-of-way from the St. Croix State Forest to the Nemadji State Forest near the Minnesota-Wisconsin state boundary. The trail is open to ATVs, OHMs, and on some portions to off-highway vehicles (OHV); and connects with trail opportunities across the border in Wisconsin.

State Water Trails

Portions of three state water trails are within the 30-mile radius of the state park - St. Croix River, Kettle River, and Snake River state water trails. Sections of the St. Croix and Kettle River water trails border or cross the state park. Water trails are designated routes for canoeing, kayaking and boating. There are several designated water accesses and watercraft camping sites on the St. Croix and Kettle River water trails within the state park.

Water Access Sites

There are 50 water access sites administered by federal, state, or local governments within 30 miles of St. Croix State Park, including those along the Kettle and St. Croix Rivers with the state park.

Snowmobile Trails

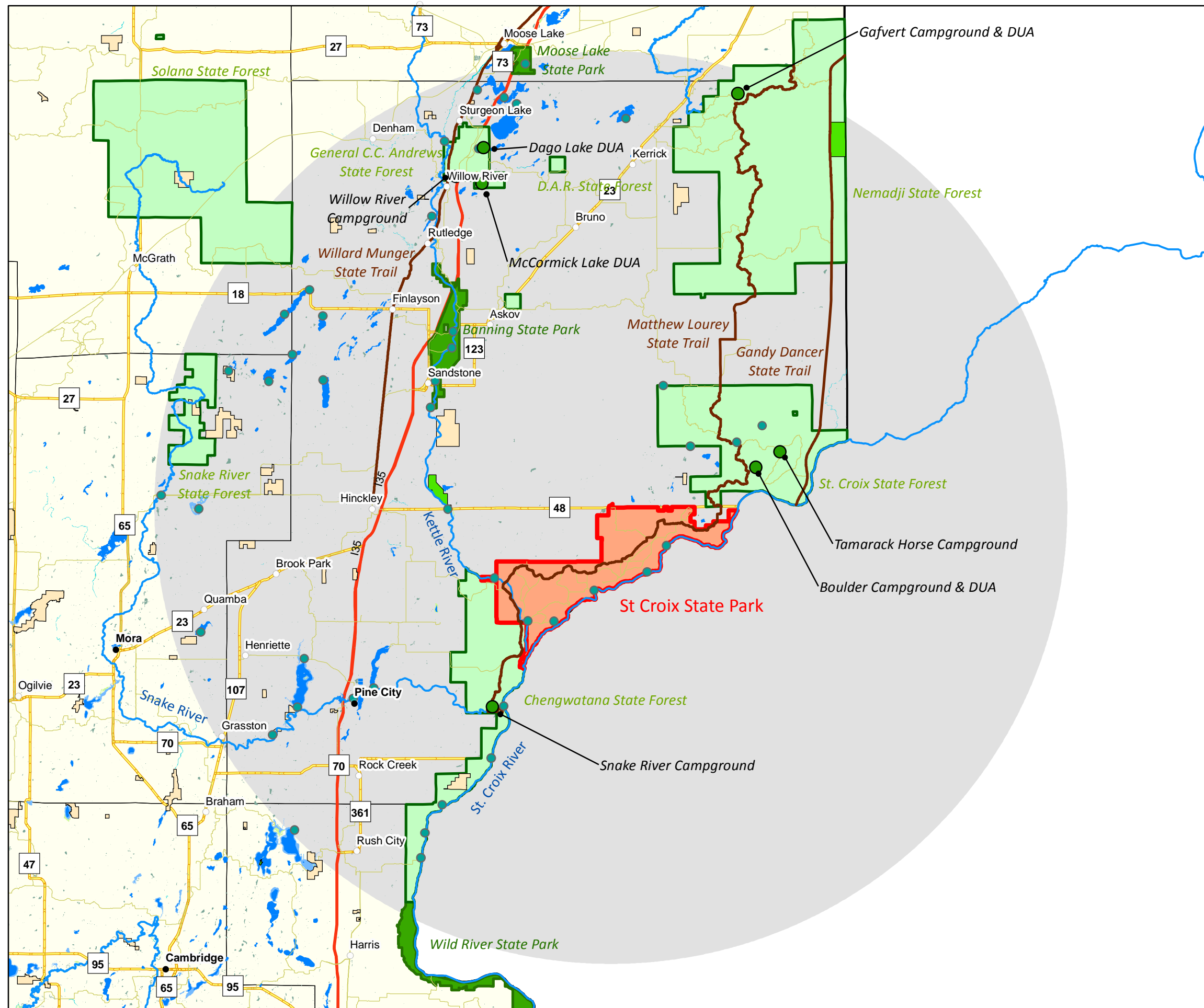
There are approximately 540 miles of snowmobile trails within the 30-mile radius of St. Croix State Park, including the state trails segments and snowmobile trails within the state park.

Off-Highway Vehicle Riding Opportunities

Off-Highway Vehicle (OHV) riding opportunities exist on forest roads and designated trails in several state forests and on other designated routes

within the 30-mile radius of the state park, including several segments of state trails. There are over 60 miles of trails and roads for OHV riding in the Chengwatana and St. Croix State Forests.












There are numerous local parks and recreation sites within a 30-mile radius of St. Croix State Park. These county and municipal parks are usually smaller than state parks, and are more typically focused on active recreation (playgrounds ball fields, etc.) instead of nature-based recreation similar to a state park. The area is also home to privately-run recreational sites including resorts, campgrounds and other amenities. These sites may offer complementary opportunities to the type of experiences offered at St. Croix State Park and have the potential to cross-promote and share visitors with the park, enhancing the tourism attraction of the area.

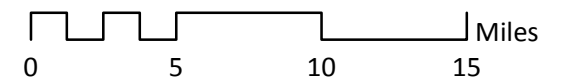


St. Croix State Park

Figure 2: Regional Recreation Opportunities

Legend

-  State Trails
-  Snowmobile trails
-  Major rivers
-  Public Water Accesses
-  Scientific and Natural Areas (SNA)
-  Wildlife Management Areas (WMA)
-  State Forests
-  State Forest Campgrounds & Day Use Areas
-  St. Croix State Park
-  Other State Parks & State Recreation Areas
-  30-mile buffer of St. Croix State Park



Natural and Cultural Resources

The Division of Parks and Trails has several documents that help guide natural and cultural resource management efforts at St. Croix State Park. The division prepared a *Unit Resource Management Plan* for the state park in 2008. The Unit Resource Management Plan inventoried natural and cultural resources and set goals, objectives, and strategies for the division's future efforts. Following the July 2011 windstorm, the division produced a *Restoration Addendum* to the unit resource plan. The addendum focused on management goals for those areas affected by the windstorm.

The information and recommendations below supplement the goals and directions set in the *Unit Resource Management Plan* and the *Restoration Addendum*.

Natural Resources

Climate

St. Croix State Park has a typical continental climate characterized by harsh winters and warm summers. Temperature and precipitation rates for Hinckley, the nearest city, are outlined in the table below.

Table 1 – Climate Data for the City of Hinckley, MN

| | Average Maximum Temperature (F) | Average Minimum Temperature (F) | Average Total Precipitation (inches) | Average Total Snowfall (inches) | Average Snow Depth (inches) |
|--------|--|--|--|--|-----------------------------------|
| Jan | 19.3 | -2.6 | 0.9 | 9.9 | 9.0 |
| Feb | 24.9 | 2.0 | 0.7 | 7.3 | 11.0 |
| Mar | 37.4 | 15.9 | 1.4 | 9.9 | 8.0 |
| Apr | 54.2 | 30.4 | 2.4 | 3.1 | 1.0 |
| May | 67.0 | 41.1 | 3.5 | 0.1 | 0.0 |
| Jun | 75.9 | 50.8 | 4.5 | 0.0 | 0.0 |
| Jul | 81.1 | 56.1 | 3.8 | 0.0 | 0.0 |
| Aug | 79.0 | 53.5 | 4.1 | 0.0 | 0.0 |
| Sep | 69.5 | 44.7 | 3.0 | 0.0 | 0.0 |
| Oct | 56.5 | 33.8 | 2.6 | 1.0 | 0.0 |
| Nov | 39.5 | 21.4 | 1.7 | 7.0 | 1.0 |
| Dec | 24.3 | 5.9 | 1.1 | 9.9 | 5.0 |
| Annual | 52.4 | 29.4 | 29.7 | 48.3 | -- |

Climate change will impact temperature and precipitation patterns. The rate of increase of average annual temperature in Minnesota from 1970-2014 has been 5.0 degrees Fahrenheit per century. Temperatures are expected to continue increasing into the foreseeable future with the greatest change reflected in winter minimums. Annual average precipitation is anticipated to increase by 3-5 inches per century. In addition, the number of heavy

precipitation events has increased, resulting in more frequent and heavier flooding events.

Topography

The topography in St. Croix State Park is characterized by the two river valleys and the rolling elevation in-between. Higher land forms were created by terminal moraines left behind by the last glacier retreat. The lowlands and marsh areas are the result of slump caused by the melting of buried glacial ice blocks. Elevation ranges within the state park from 818 feet above mean sea level (MSL) at the St. Croix River near the confluence with the Kettle River, to 1,024 feet above MSL along the park boundary in the northeast portion of the park (see Figure 3: Topography). The most dramatic changes in elevation are along some of the steep banks leading to the St. Croix River.

Geology

St. Croix State Park's geology has been influenced by flood waters, glacial lakes, and the retreat and advance of glaciers. Most of the glacial deposits on the surface are from the last stage of glaciation - the Wisconsin Episode - from 10,000 to 35,000 years ago. The advance of the Superior Lobe glacier through the Lake Superior basin during that period had the most significant impact on geology of the state park. The glacial lake in front of the lobe covered the park, leaving behind deposits of till, lake sediment and outwash. Evidence of glacial till from older glaciation events can also be found in the state park.

The state park lies at the confluence of the St. Croix River Valley and the Kettle River Valley, which were formed by powerful rivers that drained from Glacial Lake Duluth and Lake Koochiching (or Nemadji, which was an early stage of Lake Superior) respectively about 8,000 to 12,000 years ago. The powerful rivers carved out the present day landscape. The floodwaters covered much larger areas than the present day rivers. Evidence of this can be seen from abandoned channel escarpments, boulder strewn terraces which were once channel floors, and peat deposits which accumulated in channels with poor drainage and form many of the wetlands found within the state park today. The last of the glacial melt waters cleared debris from the Kettle River Valley, exposing basalt and sandstone bedrock which lie beneath glacial deposits in the rest of the park.

Soils

Soil data for Pine County including St. Croix State Park can be found in the *Upper St. Croix Resource Management Plan*. The plan lists 21 different soil associations within the state park. The majority of the land within the state park is composed of granular soils that are well drained or excessively drained. These soils are the result of glacial outwash deposits constructed of laminations of sand and gravel. Other moderately to poorly drained soils lie in lowlands or depressions of the outwash caused by slumping in the land surface when blocks of buried glacial ice melted. Observations from existing

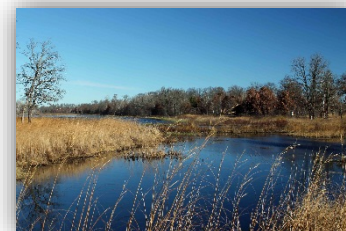


Trail stairs traverse the steep banks along the St. Croix River

wells in the park indicate the average outwash depth in the park is 30 to 35 feet. Impervious glacial lake sediments or red glacial till underlie the outwash and extend 75 to 125 feet. Basalt and sandstone make up the bedrock layer below. The bedrock layer is exposed along the Kettle River and can be seen in the Kettle River Highbanks area.

Water Resources

St. Croix State Park contains nearly 11,500 acres of wetlands, rivers, and streams. The park contains all eight types of wetlands identified in the National Wetlands Inventory (NWI). There are also over 31 miles of rivers and 13 miles of streams within or bordering the state park. The St. Croix River is a federally-designated National Wild and Scenic River, the stretch bordering the state park specifically designated as a scenic river area. The Kettle River is a state-designated Wild and Scenic River, the first one designated by the state of Minnesota. Six streams within the park are designated trout streams, and one additional unnamed stream is a protected tributary of a designated trout stream.



The park contains nearly 11,500 acres of wetlands, rivers, and streams

Table 2 – Designated Trout Streams in St. Croix State Park

| Streams | Designation |
|------------------|--|
| Bang's Brook | Designated Trout Stream |
| Crooked Creek | Designated Trout Stream |
| Hay Creek | Designated Trout Stream |
| Little Hay Creek | Designated Trout Stream |
| Lost Creek | Designated Trout Stream |
| Unnamed | Protected Tributary to Designated Trout Stream |
| Wilbur Brook | Designated Trout Stream |

Vegetation

St. Croix State Park's vegetation has gone through major changes over the years from logging, fire suppression, conversion to farmland, and management as a state park. Land cover in the state park prior to Euro-American settlement can be interpreted from the original land surveyor's notes. Eight different plant communities were identified, primarily by types of forest cover. Tamarack and jack pine conifer forest was recorded as the dominant cover type, accounting for 64% of the state park, with deciduous forest covering 12%. The remaining 24% was a mix of conifer and deciduous communities.

With the development of the Recreation Demonstration Area by the U.S. National Park Service and Civilian Conservation Corps (see **Cultural Resources** below) and the creation of St. Croix State Park, the lands in the state park have been managed to sustain and restore native plant communities. Today, ten ecological systems and 32 native plant communities are represented in the state park (see Figure 4: Land Cover – System Level Classifications). The *Field Guide to the Native Plant Communities of Minnesota: The Laurentian Mixed Forest Province* (MnDNR 2003) describes the ecological systems and native plant communities found within the state park. Descriptions of the ecological systems and native

plant community classes and types are included in **Appendix C - Ecological Systems and Native Plant Community Type Descriptions**. Land within the state park that is not supporting native plant communities is grouped into several other systems – other natural systems (open water such as rivers or lakes), non-natural systems (reconstructed savannas, forest plantations, old fields, or private lands), and facilities systems (state park roads, trails, campgrounds, etc.).

Table 3 – Ecological System-level Land Cover in St. Croix State Park

| System | # of Classes/Types | Acres |
|--|--------------------|--------|
| Acid Peatland (AP) | 5 | 549 |
| Fire-dependent Forest/Woodland (FD) | 3 | 7,709 |
| Floodplain Forest (FF) | 2 | 839 |
| Forested Rich Peatland (FP) | 2 | 176 |
| Marsh (MR) | 1 | 114 |
| Mesic Hardwood Forest (MH) | 7 | 13,394 |
| River Shore (RV) | 1 | 12 |
| Upland Prairie (UP) | 2 | 27 |
| Wet Forest (WF) | 5 | 4,383 |
| Wet Meadow/Carr (WM) | 2 | 4,097 |
| | | |
| Other Natural Systems (open water) | -- | 589 |
| Non-Natural Systems (reconstructions, plantations, old fields, private land) | -- | 2,387 |
| | | |
| Facilities (roads, campground, trails, etc.) | -- | 455 |

Old Growth Forests – Within these native plant communities, the state park encompasses 1,807 acres of designated old-growth forest. The old-growth stand types include black ash forest, lowland hardwoods forest, white cedar swamp, and oak forest. An additional 617 acres of forest stands (black ash, lowland hardwoods, northern hardwoods, and red pine) were also identified as candidate old-growth stands, but did not meet all of the DNR criteria to be designated as old-growth. The division will follow the DNR Old Growth Forests Guidelines for management of old-growth stands in the state park.

Rare Plant Species – The state park contains 13 species of rare vascular plants. One species is state-listed endangered, one is state-listed threatened, nine are state-listed species of special concern, and two species are watch-listed. Watch-listed species have no official protection status, but are tracked to monitor their population and location. There are no federally-listed plants with the state park.

Invasive Plant Species – There are a number of invasive plant species present in the state park that are being actively managed. Management strategies vary depending on the species (how aggressively it spreads, etc.), the season when the work is being done, it's location in the park, or amount of the invasive present at a location. Control methods typically involve a combination of mechanical methods (pulling, mowing, prescribe fire) and

*See **Appendix D – State-listed Protected Species Documented in St. Croix State Park** for the complete list of rare species.*

chemical methods (foliage spraying or spot application of herbicide). The division utilizes the department *Operational Order 113 Invasive Species* and division guidelines to identify appropriate control methods. Invasive plant species currently being managed within the state park are listed in the table below.

Table 4 – Invasive Plant Species in St. Croix State Park

| Common Name | Scientific Name |
|-----------------------------------|---|
| Amur maple | <i>Acer ginnala</i> |
| Hoary alyssum | <i>Berteroa incana</i> |
| Siberian peashrub | <i>Caragana arborescens</i> |
| Plumeless thistle | <i>Carduus acanthoides</i> |
| Spotted knapweed | <i>Centaurea stoebe</i> spp. <i>micranthos</i> |
| Canada thistle | <i>Cirsium arvense</i> |
| Musk thistle | <i>Cirsium nutans</i> |
| Bull thistle | <i>Cirsium vulgare</i> |
| Crown vetch | <i>Coronilla varia</i> |
| Queen Anne’s lace (Wild carrot) | <i>Daucus carota</i> |
| Leafy spurge | <i>Euphorbia esula</i> |
| Glossy buckthorn | <i>Frangula alnus</i> |
| Orange hawkweed | <i>Hieracium aurantiacum</i> |
| Oxeye daisy | <i>Leucanthemum vulgare</i> |
| Butter and Eggs (Common toadflax) | <i>Linaria vulgaris</i> |
| Exotic honeysuckle | <i>Lonicera tatarica</i> , <i>L. morrowii</i> , <i>L. x bella</i> |
| Birdsfoot trefoil | <i>Lotus corniculatus</i> |
| Purple loosestrife | <i>Lythrum salicaria</i> |
| Reed canary grass | <i>Phalaris arundinacea</i> |
| Common buckthorn | <i>Rhamnus cathartica</i> |
| Common tansy | <i>Tanacetum vulgare</i> |
| Hoary alyssum | <i>Berteroa incana</i> |
| Siberian peashrub | <i>Caragana arborescens</i> |

Desired Future Conditions and Resource Management Areas

The July 2011 windstorm caused widespread damage in St. Croix State Park and the surrounding area. Winds estimated between 80 and 100 miles per hour uprooted and snapped trees across the state park. The state park remained closed for nearly 3 months while crews cleared trees from roads, trails and buildings.

Approximately 13,000 acres of forest in the state park were affected by the storm (See Figure 5: 2011 Blowdown Impact Assessment). As part of the recovery efforts, 5,300 acres with downed timber were assessed and the timber was harvested. The timber harvests were conducted to restore road and trail accesses, assist with repair and provide future protection for historic park structures and other park infrastructure, decrease wildfire potential, and to facilitate rare plant community restoration. The remaining 7,700 acres damaged by the windstorm were not logged and will follow natural succession processes with less intensive management.

Moving forward, the division will continue to take advantage of the opportunity created by the windstorm to focus on managing portions of the



Downed timber after the 2011 blowdown

recovering areas for jack pine barrens and oak savanna plant communities – UPs14a1 and UPs14a2 (see **Appendix C: Ecological Systems and Native Plant Community Type Descriptions**). Pine barrens and oak savanna are defined by sparse trees with an understory of prairie grasses, wildflowers and scattered shrubs. These native plant communities are extremely rare worldwide and in Minnesota, having nearly disappeared due to fire suppression and land clearing. St. Croix State Park once contained about 4,000 acres of pine barrens and oak savanna.

Oak savanna restoration efforts in the state park are part of a larger network of restoration activities on lands in the St. Croix Valley. The Division of Parks and Trails and Division of Ecological and Water Resources are collaborating with the Wisconsin DNR on oak savanna restoration in the state park. This work is part of a broader, long term effort between the states of Minnesota and Wisconsin, federal agencies and private conservation groups to leverage additional resources for oak savanna restoration and to build resilience to climate change for SGCN species that utilize these native plant communities.

Efforts to restore pine barrens and oak savanna communities will include activities that support natural regeneration (e.g. prescribed fire, mowing, preserving seed trees), tree planting in selected locations, and treatment of invasive plant species. Restoring these habitats will encourage greater plant and animal biodiversity in the park and restore the landscape to appear more similar to when the historic park facilities were developed in the 1930s and 1940s.

Other areas in the park will be managed less intensively, including some areas following natural forest succession with minimal active management (See Figure 6: Resource Management Areas). Management activities in these areas of the state park will include invasive species control, additional tree and shrub removal around park buildings and use areas to reduce fire risks, maintaining historic vegetative elements (e.g. open viewsheds), selective planting for aesthetic improvements, and thinning of older pine plantations to convert those areas to more natural-appearing forest.

These strategies reflect the division’s current direction for resource management in these areas. However, strategies may evolve over time to respond to changing conditions (e.g. additional blowdown events, forest disease impacts) or to utilize new resource management techniques.

Since the 2011 blowdown, there have been significant natural resource management and restoration accomplishments including:

- 5,300 acres of downed timber harvested using a commercial timber harvester.
- An additional 300 acres cleared by state park staff that because of other sensitive natural or cultural resources could not be logged.
- 3,000 trees and stumps cleared from the state park’s campgrounds.



Prescribed fire is used for pine barrens and oak savanna management

- 800 to 2,000 acres of prescribed burning annually for pine barren and oak savanna management.
- Another 600 acres of windstorm-affected area mowed and mulched for brush control.
- Over 250,000 seedlings planted to help with pine regrowth, and improve aesthetics in public use areas (shade, screening, etc.).

Timber Harvest as a Resource Management Tool - The division may utilize timber harvest as a resource management tool again in the future. Timber harvests are conducted in state parks and state recreation areas to manage or restore native plant communities. Techniques utilize the best available science and knowledge about native plant community disturbance and succession regimes. Examples of when timber harvest may be utilized include:

- Stands of trees or other woody species not native to the state park or SRA may be removed.
- 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 the 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.

At St. Croix State Park, future timber harvests could be conducted for any one or a combination of these purposes including to respond to potential future windstorm events, and to create addition pine barrens or oak savanna plant community restoration opportunities. The division may contract with a commercial operator to conduct timber harvest activities. It is often more efficient and effective for the division to utilize a commercial operator with their specialized equipment for this type of management activity.

Wildlife

The large size of the state park, minimal habitat fragmentation, and wide range of habitats means it has the potential to support many wildlife species.

Mammals – The state park provides extensive habitat for mammal populations and serves as a corridor for mammals to move throughout the surrounding region. Little formal survey work has been done to document mammals or mammal ecology within the state park, however a wide range of mammals have been observed in the park including white-tailed deer,



Timber harvest following the 2011 blowdown

gray wolves, coyotes, red and gray foxes, bobcats, otters, black bears, porcupines, and raccoons. There are no mammals documented as Species of Greatest Conservation Need (SGCN) found within the state park.

Two mammal species are actively managed within the park: white-tailed deer and beaver. White-tailed deer are managed using controlled hunts to reduce deer browse impacts on pine regeneration and understory vegetation. Deer hunting is utilized as a resource management tool, and is not considered a recreational activity in state parks. State parks are designated as game refuges in state statute, and are typically not open to hunting. Details for the controlled hunts (length of hunt, allowed hunting method, number of hunters permitted, etc.) are based on observations of deer browse impacts, deer population surveys, and hunt success rates of previous years. Beaver can negatively impact native trout - dams restrict water flows, raise water temperatures and impede trout movement. For the last several years, Division of Fish and Wildlife has contracted with a federally-licensed trapper to remove beaver and has removed dams along Hay Creek within and upstream of the state park.

Birds – Surveys have documented 160 species of birds, of which 135 are summer residents and potential breeding species within the park. The St. Croix River Valley and the federal and state protected lands along it are an important bird migration corridor. Survey records show that significant numbers of birds migrate through St. Croix State Park, with bird species diversity doubling during the spring and fall migration periods. The number of bird species recorded in the park is lowest in the winter. Five bird species found in the state park are state-listed species, 4 are listed as special concern and one is watch-listed. A total of 40 species are classified as SGCN.

Reptiles and Amphibians – Several surveys have been completed within the state park to document reptiles and amphibians. Amphibian species found include green, wood, western chorus and leopard frogs; spring peepers; American toads; and several species of salamander. Reptiles include Blanding's, map, painted, snapping, and wood turtles; eastern hognose snake and bull snake. Six reptiles and one amphibian species found within the state park are identified as SGCN. There are two species of turtles found in the park that are state-listed threatened species. One snake species is identified as state-listed special concern, and a second one is watch listed.

Invertebrates – In 2006 and 2007, a Lepidoptera (the order of insects including moths and butterflies) survey was conducted in St. Croix State Park as part of a larger survey effort covering 23 Minnesota state parks. The survey verified 52 Lepidoptera species in the state park, 28 of them considered "unique" because they were recorded only at St. Croix State Park and not at any of the other state parks surveyed. None of the 52 verified Lepidoptera species are listed as SGCN or federal or state-listed



White-tailed deer are managed via special hunts to reduce impacts on vegetation

protected species, in part because of a lack of data on the abundance and distribution of these species across the state.

Two other insect species found in the state park are considered rare and are state-listed – one dragonfly species is state-listed threatened, and one beetle species is state-listed special concern.

Nine species of rare mussels have been documented in the St. Croix River and tributaries in the state park. All nine species are listed as SGCN – one is state-listed endangered, four are listed as threatened, three listed as special concern, and two are watch-listed. The St. Croix River watershed is an important drainage for mussel conservation and has been widely surveyed and studied. The mussel species in the St. Croix River are actively managed, studied, and monitored by the US Fish & Wildlife Service (USFWS), Minnesota Department of Natural Resources and the Wisconsin Department of Natural Resources.



Mussel samples collected from the St. Croix River

Fisheries

Based on recent department fish surveys, there are likely 66 species found in waters within or bordering the state park, seven of which are designated as SGCN. Three of the 6 river habitat types designated by the DNR are present within or bordering the state park:

- Headwater – warm
- Headwater – cold
- Moderate – warm

The state park's streams provide seasonal spawning habitats for northern pike and other fish species that migrate to shallow or flowing waters for reproduction. Other than beaver dams and the Lake Clayton dam, there are no structural barriers to inhibit fish movement in the streams within the state park.

The state park is one of the few places in the St. Croix River watershed with native, naturally reproducing brook trout (*Salvelinus fontinalis*). There are six state-designated trout streams within the state park (see *Water Resources*), although because of flow regimes and increased beaver activity over the last half century, only Hay Creek and Little Hay Creek currently support viable brook trout populations. The Division of Fish & Wildlife contracts with a federally-licensed trapper to remove beaver and beaver dams from Hay Creek to maintain habitat conditions that support trout.

There are four non-native fish species in the waters within or bordering the state park. Common carp (*Cyprinus carpio*) is a widespread non-native fish found in many locations. Muskellunge (*Esox masquinongy*) have been stocked in the St. Croix River by the Wisconsin DNR as a sport fish. Division of Fish & Wildlife utilizes a pond in the park near Lake Clayton as a rearing pond for muskellunge. Two other non-native species, rainbow trout (*Oncorhynchus mykiss*) and brown trout (*Salmo trutta*), are stocked in

Crooked Creek upstream from the park boundary and may occasionally swim downstream.

Endangered, Threatened and Special Concern Species

There are 14 plant and 24 animal (including birds, fish, mussels, and insects) federal- or state-listed species documented within the state park (see **Appendix D - State-listed Protected Species Documented in St. Croix State Park**). The division monitors the known locations of these species and uses its resource assessment process to determine if development projects or other management actions may impact listed species.

Cultural Resources

St. Croix State Park bears evidence of a long history of people living in the area that now constitutes the state park – early American Indian habitation, fur trade, Euro-American settlement, logging, mining, and finally development as a recreational site. There has not been a comprehensive archaeological survey of the state park, only small surveys conducted for review of development and natural resources management projects. The potential for discovering additional sites within the state park is high.

The state park contains archaeological evidence of American Indian habitation and seasonal use of multiple areas. The St. Croix and Kettle rivers were important travel and trade routes both before and after the arrival of Euro-Americans to the area. There are eleven archaeological sites documented in the state park. Additional archaeological sites including portages and logging-related railroad grades are likely to be found in the state park but have not been verified.

Table 5 – Archaeological Sites within St. Croix State Park

| Description | Cultural Period(s) |
|---|--|
| 21PN72 - habitation site, cemetery site, logging camp | Pre Euro-American contact (Lithic), Historic |
| 21PNf - copper artifacts | Pre Euro-American contact |
| 21PN16 - habitation site | Pre Euro-American contact, Historic |
| 21PN68 - trade axe (fur trade) | Euro-American Contact |
| Kettle River crossing | Historic |
| Copper mine - test shaft | Historic |
| Copper mine - shaft, tailings | Historic |
| 21PN54 - logging camp | Historic |
| 21PN74 - logging camp | Historic |
| Gitchell logging camp | Historic |
| Yellowbanks CCC camp | Historic |

Evidence from the arrival of Euro-Americans and their influence on the landscape of the state park is also present. Evidence of early settlement (building depressions and other artifacts) has been documented up and down the St. Croix River. Logging operations throughout the St. Croix River Valley started as early as the 1850s and changed the forest landscape. Several logging



Projectile point found within the state park

camps were located within what is now the state park. Exploratory mining also occurred in the 1880s, including mining for copper at the mouth of the Kettle River. Depressions left from exploratory mines can be found in several areas within the park.

Large-scale logging of white pine opened the area to settlement for farming. However the soil conditions were not conducive to the farming practices of the day. Combined with the impact of prolonged drought of the 1920s and 1930s (known as the Dust Bowl), by the Great Depression many of the farms had failed. Several homestead sites from this era have been documented within the park.

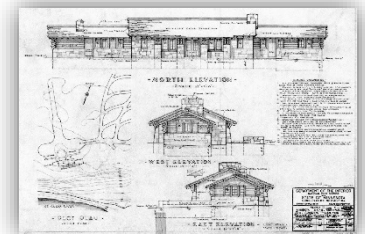
St. Croix State Park also contains numerous cultural resources related to its development as a recreational area and state park. Many of the state park's facilities were originally constructed as part of the St. Croix Recreational Demonstration Area (RDA). One of 46 in the country, RDAs were developed as part of the New Deal programs during the 1930s and 1940s. The RDA program was intended to convert sub-marginal agricultural lands to recreational use. The buildings, roads, trails, and landscaping were designed by the National Park Service, and constructed by the Civilian Conservation Corps (CCC) and Works Progress Administration (WPA) between 1936 and 1942. With the completion of the facility development, the RDA was transferred to the State of Minnesota and designated as a state park by the Minnesota State Legislature in 1943.

The historic nature of the buildings and other facilities, as well as the overall design concept for the RDA, resulted in the site being nominated to the National Register of Historic Places as a historic district in 1989 and designated as a National Historic Landmark (NHL) in 1997. National Historic Landmark designation is the highest level of recognition that can be given to a historic site in the United States. The historic district and NHL boundary encompasses nearly the entire land base of the state park. As cited in the nomination for St. Croix State Park's designation as a National Historic Landmark:

Retaining almost complete integrity to the period, the park remains an exceptional example of the innovative National Park Service design principles of master planning and group camp design (Anderson, Begley & Carr, 1997 p. 80).

The St. Croix State Park RDA remains significant on a national scale as well. Of the 46 RDAs, 34 sites included group camp facilities – the hallmark of the RDA program. Two of those 34 RDAs are considered the finest examples of RDA program and are designated as National Historic Landmarks – St. Croix State Park and Mendocino Woodlands State Park in California:

Of the 34 RDA sites with group camps, however, two are outstanding for the artistic significance of their original design and planning, combined with extraordinary integrity and excellent condition. These two RDAs also continue to serve their original functions – as organized



National Park Service designed the park's layout and many of its buildings

camps and public day use areas – and have done so virtually without interruption since the late 1930s. The first, St. Croix State Park in Minnesota, was the largest of all the RDAs and one of the most beautiful in terms of its setting. It was built by the CCC and the WPA. The other, Mendocino Woodlands, was one of the only two RDAs developed for the West Coast. . . . Both are being nominated as NHLs as part of this study because of their significance as the finest remaining results of the RDA program (Anderson, Begley & Carr, 1997 p. 52-3).

The design and construction style on display in the elements built for the RDA is referred to as *Minnesota State Park CCC/WPA/Rustic Style Historic Resources*. Characteristics of this development style include stone and log construction with shingle roofing, crafted largely by hand utilizing local materials.

The NHL nomination identifies 164 contributing elements – including buildings, structures, roads, bridges and trails – that are important resources to the historic district. These contributing elements are located mainly in five areas of concentrated development: the Park Headquarters, the Riverview Campground, and the state park’s three group camps – St. John’s Landing, Norway Point, and Head of the Rapids. The remaining contributing elements are scattered throughout the historic district (See Figure 7: National Historic Landmark Resources).

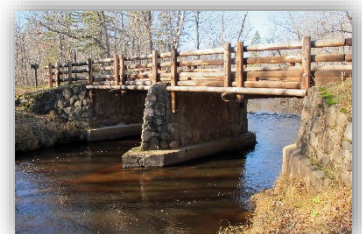
Table 6 – National Historic Landmark Contributing Element Locations

| Concentration Area | # of Contributing Elements |
|--|----------------------------|
| Park Headquarters | 13 |
| Riverview Campground | 11 |
| St. John's Landing | 49 |
| Norway Point | 48 |
| Head of the Rapids | 20 |
| Remaining scattered elements, roads, bridges, trails, etc. | 23 |

These historic resources comprise the bulk of the recreational and administrative facilities used by park visitors and state park staff today. The division works to maintain the historic integrity of the buildings and other elements while allowing for their continued use by the public. The division works with the State Historic Preservation Office (SHPO) to evaluate development and management actions that may affect historic resources in the state park. Repair and rehabilitation projects for historic buildings and structures utilize information from the original designs, historic photographs and other resources during project development to assure that the resource’s historic appearance and character is preserved.



Historic structures include maintenance buildings and public use buildings



Rehabilitated historic bridge over Bear Creek

Natural and Cultural Resource Recommendations

General

- Utilize the 2008 Unit Resource Management Plan and 2011 Restoration Addendum to guide resource management efforts. The division will continue to follow the directions for natural and cultural resource management set out in these documents, as supplemented with the recommendations in this management plan.
- Conduct resource assessments prior to any development or project. The division will utilize its resource assessment process to identify natural and cultural resources impacts and devise avoidance and mitigation strategies.
- Follow the directions established in the Department of Natural Resources' Operational Order 131 Climate Adaptation and Mitigation in Natural Resource Management. The division will utilize the department's operational order and its own division guidelines to enhance ecosystem resilience and reduce the negative impacts of climate change on its natural resources.
- Adjust resource management efforts and other park activities to protect rare plants and animals. The division will utilize information about the presence of rare plants and animals within the state park to evaluate division management and park visitor activities impacts, and devise changes to protect these species and critical habitat.

Vegetation management

- Continue native plant community restoration efforts in the state park, with a focus on pine barrens and oak savanna communities. The division will continue its restoration efforts for native communities throughout the park, with the continued efforts to restore the pine barrens and oak savanna communities in the blowdown-affected areas being a high priority. The division will utilize *Operational Order 124 Plant Materials Standards for Native Plant Community Restorations* and its own division-level guideline to identify local sourced materials appropriate for the state park.
- Monitor restored pine barrens and oak savanna communities. The division will conduct plant and animal inventories and other assessments to gauge the progress of the restoration efforts and overall health of these communities.
- Monitor the existing wet meadow communities in the state park. More research and field study is needed to understand ongoing changes and

possible succession of the wet meadow communities within the state park.

- Continue tree planting projects as part of the blowdown recovery effort. The division will continue to plant trees to augment natural regeneration for native plant community restoration projects where necessary, and selectively plant trees around facilities and use areas to provide shade and other resource and visitor benefits.
- Naturalize existing plantation forest stands. The division will use thinning, prescribed fire and other techniques to transform formerly planted forest stands to a more natural appearance consistent with the surrounding forest areas in the park.
- Utilize timber harvest as a resource management tool. Timber harvest, including the possible use of a commercial timber operator, may be used to pursue resource management goals such as native plant community restorations, thinning plantation forest stands, or cleaning up following a future blowdown event.
- Follow department guidance on managing old growth forest stands within the state park. The department old growth forest guidelines and subsequent amendments provide direction for management activities in old growth forest stands. The focus of the department's guidance is to promote regeneration and maintain or restore the integrity of the old-growth communities.
- Manage invasive plant species within the state park. The division will utilize the directions in the department *Operational Order 113 Invasive Species* and its own division-level guideline to continue invasive plant species monitoring and management efforts.
- Conduct forest insect and disease monitoring and management activities. Currently, the division manages for oak wilt found within the state park. State park and division resource staff also monitor the park for evidence of emerald ash borer and other invasive insects or disease.

Wildlife and fisheries management

- Work with the Division of Fish and Wildlife on trout management. The division will continue to partner with the Division of Fish and Wildlife to support and propagate native brook trout, including the use of beaver trapping and dam removal to enhance trout habitat on select streams within the state park.



Planting trees to augment natural regeneration

- Work with the Division of Fish and Wildlife on the use of the fish rearing pond for muskellunge production. The divisions will work together for the continued use of the pond as a muskellunge rearing site.
- Manage white tail deer to reduce impacts on native plant communities. The division utilizes special hunts to control the population of deer within the park to minimize the impacts of deer browsing on forest regeneration efforts and understory plant communities.
- Conduct research for select rare wildlife species in the state park. Research needs have been identified for several SGCN listed species. Research for species currently found in the state park such as Blanding's and Wood turtles will focus on ensuring preservation of these species there. Other research will involve assessing habitat to support repopulation by species not currently present in the state park such as Karner blue butterflies and sharp-tailed grouse. The division may seek partners to help conduct some research efforts.

Cultural resources management

- Manage vegetation in National Historic Landmark (NHL) resource areas to protect historic structures and maintain cultural landscapes. For areas with contributing elements to the NHL nomination, the division will use historic photos, plan sets and other resources to identify plantings and landscape features. Vegetation will be managed to protect structures, facilitate public use, and to retain the historic appearance of these sites. Vegetation management activities may include tree and shrub removal, pruning, mowing, and prescribed fire.
- Identify Civilian Conservation Corps-era forest plantations within the state park. Documenting the locations of plantings done by the CCC prior to plantation naturalization efforts will help the division preserve representative samples of the CCC's work and provide material for further interpretation.
- Complete the repair or replacement of the two remaining bunkhouses at St. John's Landing Group Center damaged during the blowdown event. Two bunkhouses in Village D have not been repaired and remain unusable. The division will work with the State Historic Preservation Office (SHPO) to select the appropriate action and will document the original structures as part of the removal and replacement or repair project.
- Complete the repairs to one of the sanitation buildings at Head of the Rapids Group Center. The sanitation building in Village B is unusable because of water damage from a plumbing failure. The division will



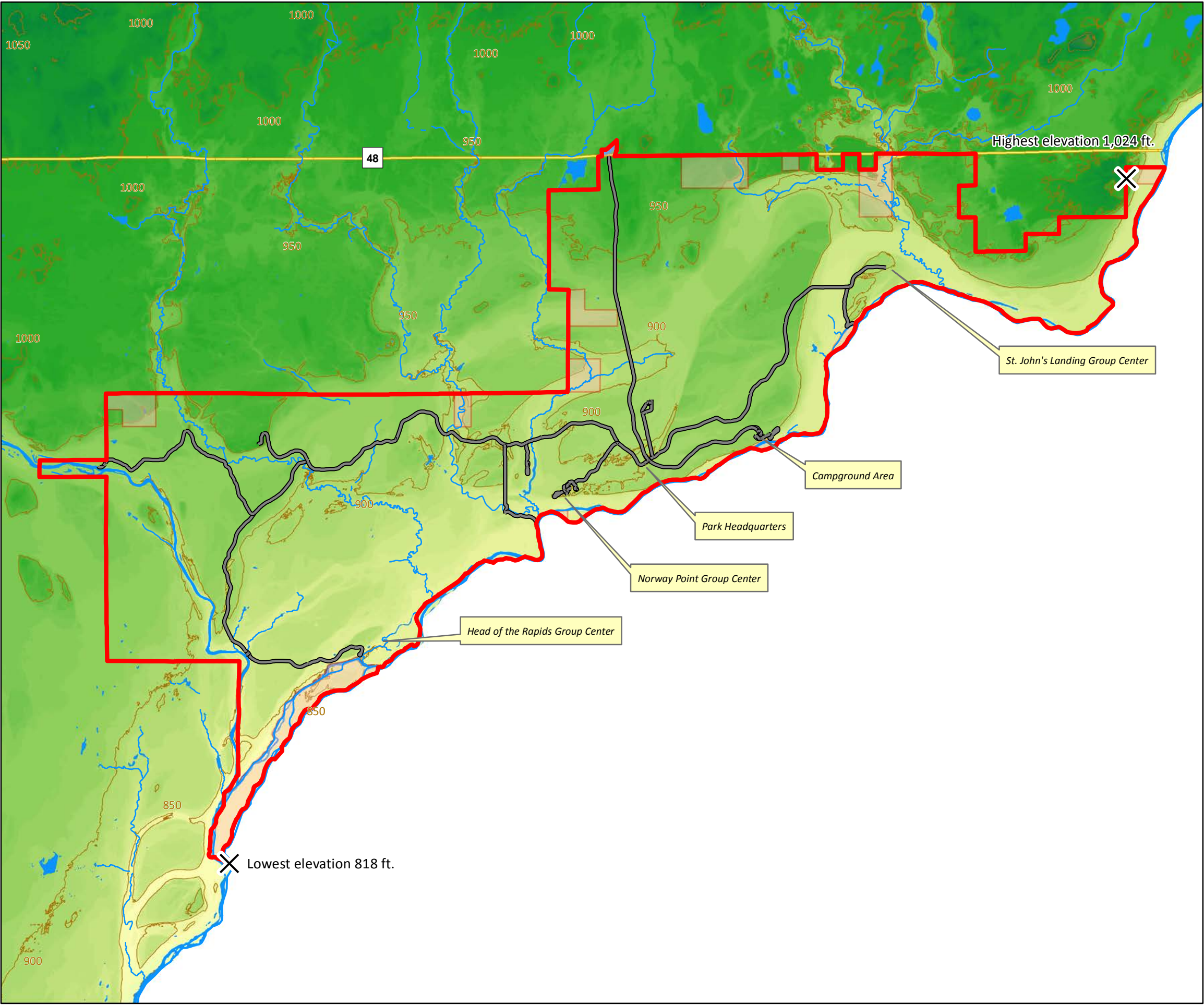
Complete repair or replacement of St. John's Landing bunkhouses

work with SHPO as part of determining how to conduct the building rehabilitation.

- Rehabilitate the Lake Clayton spillway and overflow structure to restore its historic appearance. Repairs to the spillway and overflow structure were necessary because of damage from multiple flood events. The repairs were conducted to stabilize the structure but have affected its historic appearance. The division will work with SHPO to develop a proposal for restoring a more historically appropriate appearance to the spillway and overflow structure.
- Pursue a programmatic agreement with SHPO for routine maintenance and repair of historic structures within the state park. The goal of a programmatic agreement would be to streamline the review and approval processes for general maintenance and repair work on historic structures in the state park. The division will work with SHPO on the development of the programmatic agreement and procedures for implementation.
- Reopen several historic trail routes and viewsheds related to the Recreation Demonstration Area (RDA) development. Two trail segments originally built as part of the RDA that have since been allowed to grow closed will be cleared and reopened for public use – one trail connecting St. John’s Landing Group Center to the Little Yellowbanks canoe landing, and a second trail connecting Norway Point Group Center to the St. Croix River (see also *Trails and Trail Use* recommendations in **Recreational Use and Visitor Services**).
- Document the early logging-related locations within the state park. The purpose of the research is to gain a better understand the logging history of the park and the effects of logging on the park’s landscape.



Rehabilitate Lake Clayton spillway and overflow structure

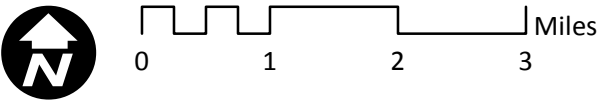


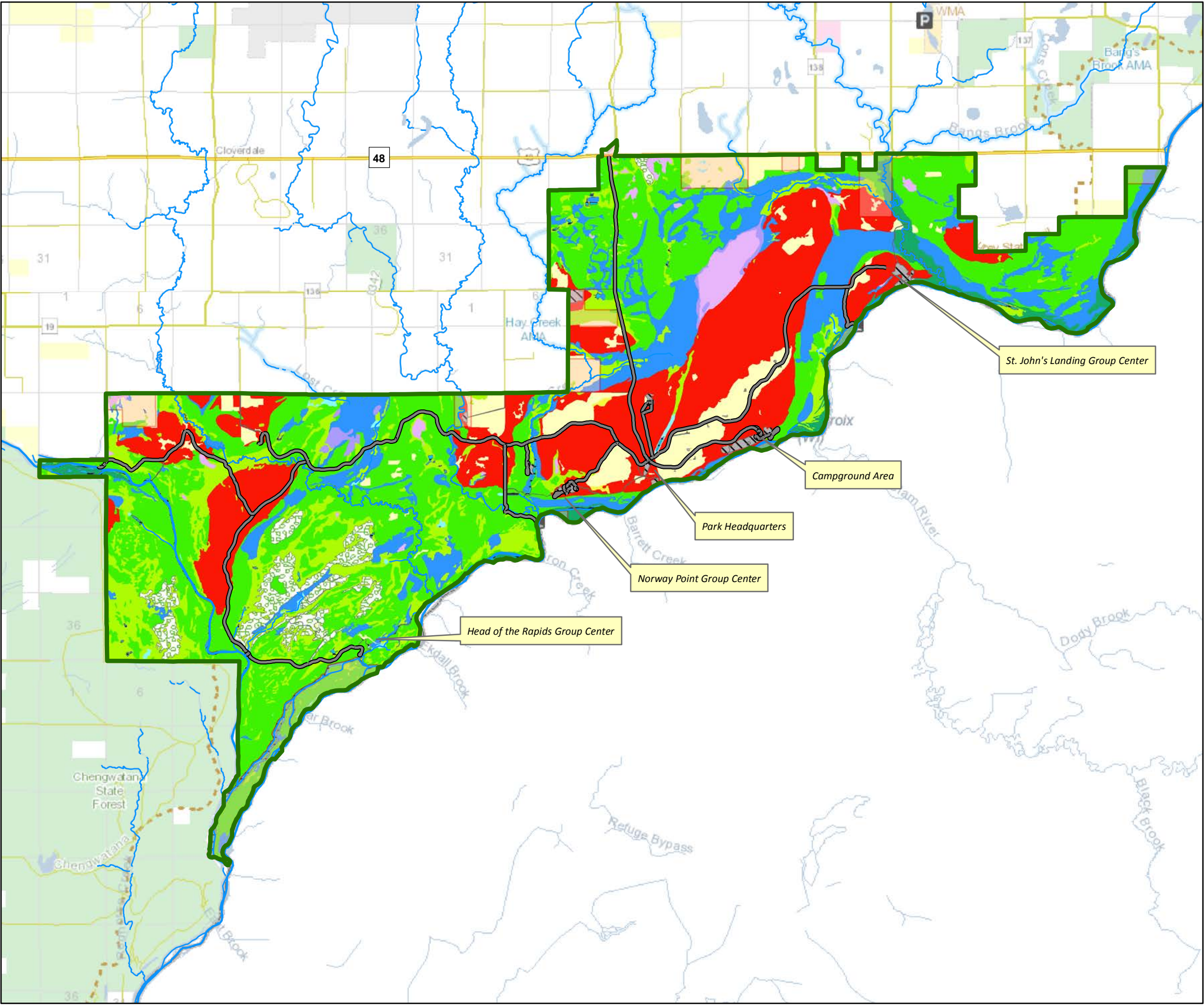
St. Croix State Park

Figure 3: Topography

Legend

- 50 foot contour lines
- State park roads
- River & perennial stream centerlines
- State park statutory boundary
- Private land within park boundary



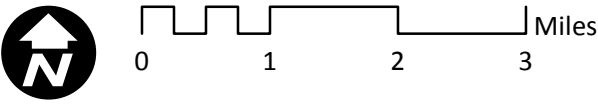


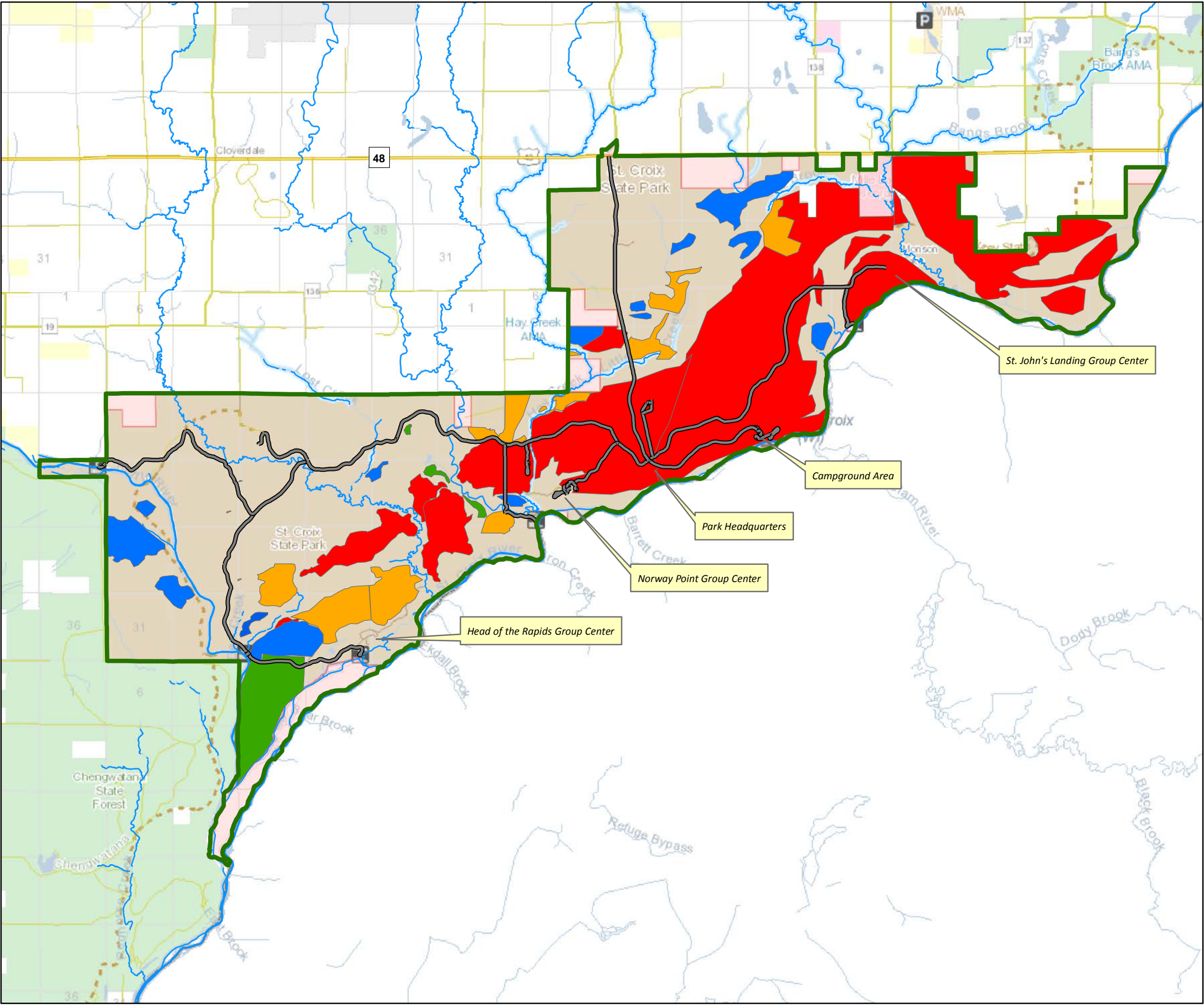
St. Croix State Park
Figure 4: Land Cover - System Level Classifications

Legend

System-Level Classifications

- Acid Peatland System
- Fire-Dependent Forest/Woodland System
- Floodplain Forest System
- Forested Rich Peatland System
- Marsh System
- Mesic Hardwood Forest System
- River Shore System
- Upland Prairie System
- Wet Forest System
- Wet Meadow/Carr System
- Complex community
- Other Natural System
- Non-Natural System
- Facilities System
- State park roads
- State park statutory boundary
- Private land within park boundary





St. Croix State Park

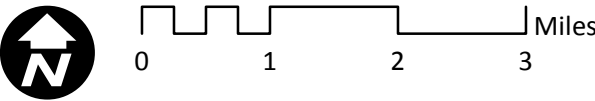
Figure 5: 2011 Blowdown Impact Assessment

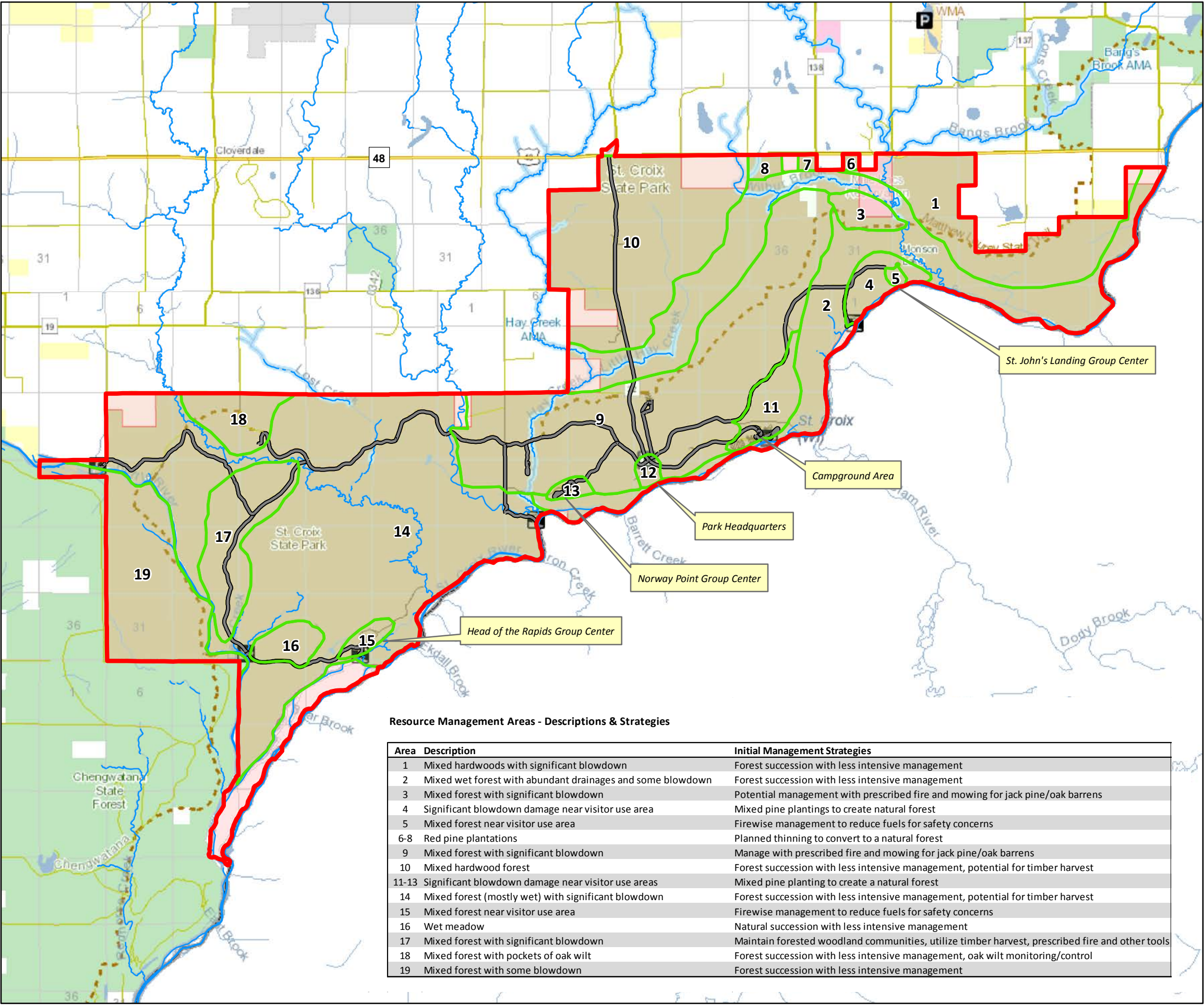
Legend

Percent of timber down - July 2011

- 5% - 25%
- 25% - 50%
- 50% - 75%
- 75% - 100%

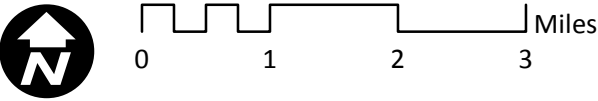
- State park roads
- River & perennial stream centerlines
- State park statutory boundary
- Private land within park boundary

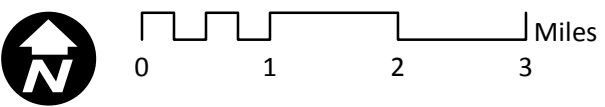
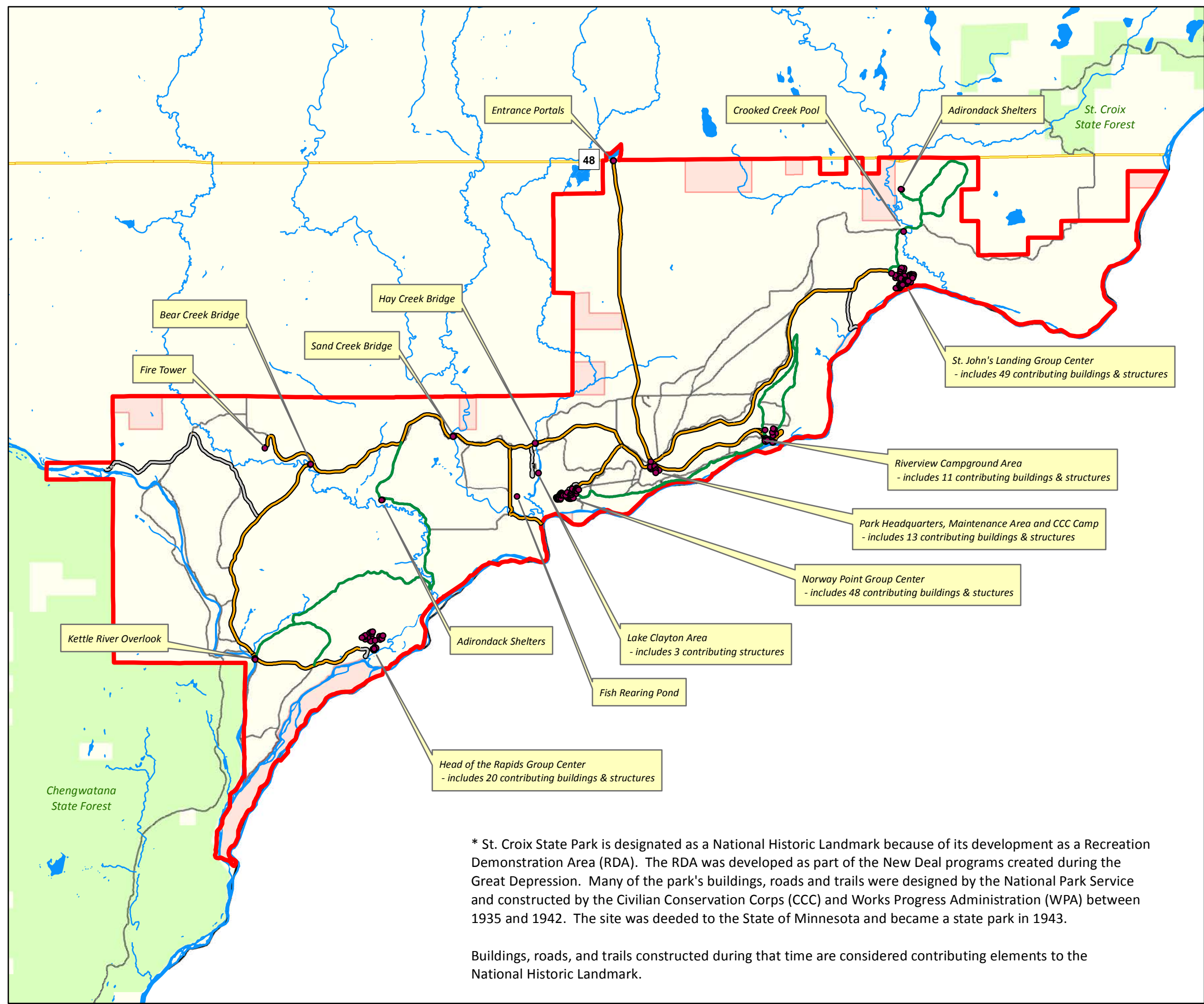




St. Croix State Park
Figure 6: Resource Management Areas

- Legend**
- 1 Resource management areas
 - State park roads
 - River & perennial stream centerlines
 - State park statutory boundary
 - Private land within park boundary





Interpretive Services

The DNR Division of Parks and Trails interpretive program forges emotional and intellectual connections to Minnesota's natural, cultural and recreational heritage by provoking curiosity, encouraging discovery, and inspiring stewardship across generations.

The division's interpretive services program connects people with the outdoors with self-guided and staff-led experiences. Professional interpreters present in a variety of ways: personal experiences such as naturalist-led talks, special events and outdoor skills building programs; at community and other outreach events; and self-guided experiences such as interpretive trails, exhibits, brochures and electronic media.

Goals for Interpretation & Outreach

- All programs and activities will be based on the park's interpretive themes.
- Activities will be scheduled when and where they can best interpret the resource and when visitors are most likely to attend.
- Information and presentation techniques will be appropriate for the audience.
- Interpretive activities will inspire, educate and engage visitors.
- Interpretation will be enjoyable.
- Interpretive services will be available to all park visitors.
- The visitor center will contain interpretive displays, exhibits and activities that relate to the resources found in the state park or that connect the park to a larger story, such as the St. Croix River National Wild and Scenic Riverway, the fur trade, or the watershed.
- Interpretation will be dynamic and respond to changing trends among users, new ideas and technologies and developments with the area's resources.
- Outreach efforts will attract new users, promote the relevance of state parks and trails, and encourage resource stewardship.



Interpretive activities will inspire, educate and engage visitors.

Interpretive Themes

Geology:

Geological forces: *The Midcontinent Rift and glaciers formed the groundwork for the natural, cultural and recreational diversity that exist at St. Croix State Park today.*

Natural Resources:

River Systems: *The St. Croix and Kettle Rivers, both Wild and Scenic Rivers, provide integral habitat for plants and animals that are resilient to the changing dynamics of their watersheds.*

Changing Landscapes: *Impacts of changing climate and human use have, and continue to, alter the park's landscape. St. Croix State Park adapts to these impacts by actively managing a mix of natural communities including red and white pine stands, oak savanna and jack pine barrens.*

Rare Species: *Situated on the eastern edge of the Mille Lacs Uplands, St. Croix State Park's 32 native plant communities provide refuge for a multitude of Species of Greatest Conservation Need.*

Cultural Resources:

Confluence of Cultures: *Built upon the St. Croix and Kettle River confluence, the area of St. Croix State Park has been an intersection of exploration, trade routes, industries and cultures since 3000 BC.*

Civilian Conservation Corps: *Credited as a National Historic Landmark, the National Park Service together with New Deal work programs transformed a landscape too poor to farm into a wildlife refuge and destination park for generations to come.*

Outdoor Recreation:

Opportunity for Connection: *Over 100 miles of multi-use trails traverse 34,000 acres of wilderness at St. Croix State Park. Visitors are welcome to stay in a variety of lodging options while they explore the park's expansive opportunities for adventure and discovery.*

Existing Interpretive Programs and Services

Programs and Special Events

Interpretive programming at St. Croix State Park is offered mainly Thursday through Monday during the summer season. Program types include campfire interpretive talks, hikes, bike trips, canoe caravans, walks, craft-making activities and outdoor skill-building activities. The park organizes several theme weekends each summer, designed to help draw new visitors to the state park. Groups visiting the state park, such as Group Center users or local schools, may also request a program be presented to them during their visit. Information about interpretive programming is shared through the division's statewide program publications, the department's online events calendar, the state park's weekly calendar and special event fliers.



River systems as a theme for interpretive services



Staff-led interpretive program at the Visitor Center

Self-Guided Interpretive Opportunities

Self-guided interpretive opportunities at the state park include a seasonally-staffed Visitor Center with interpretive exhibits, the Sundance self-guided interpretive trail and accompanying brochure, and various interpretive exhibits throughout the park. Other interpretive information and brochures are also available in the visitor center and park headquarters.

Outreach

The interpretive naturalist's position description identifies that 5% of their time is spent coordinating and providing outreach services to foster community support. Outreach programs are both initiated by the area naturalist and requested by other organizations and agencies. This has included working with the National Park Service, working with local community groups, and providing interpretive programming at local festivals, libraries and schools.

Interpretive Facilities

Park Headquarters – This facility is the main point of contact for division staff with park visitors. It is an important location for distributing information including park rules, public services and interpretive program schedules. The Ranger Station located at the entrance to the campground area also served some of these functions previously. The Ranger Station is currently not operated due to reductions in staff.

St. Croix Lodge Visitor Center – Located adjacent to the park campgrounds, the historic lodge houses the visitor center which includes an interpretive display area and public counter/desk. Interpretive displays include both permanent and temporary exhibits on history of the area and the state park, resource management, maps, a reading area, aquariums, a video display, birding corner, touch screen stations and mounted birds and mammals. The visitor center also includes employee office space and a workroom. A remodel of this space and the interpretive exhibits to allow for less dependence on staffing has been proposed. In addition to the interpretive area, the lodge also contains a larger room with benches, tables, a fireplace, a pull-down projection screen, and restrooms. The space can accommodate 60 people, and is often used for day and evening interpretive programs.

Amphitheater – The amphitheater is located adjacent to the St. Croix Lodge and the Riverview Campground, well placed to host interpretive programs. The amphitheater seats approximately 250 people. Although in an ideal location, the facility needs upgrades to improve accessibility as well as utilities that support interpretive programs (electrical systems, projection systems).

Trails – The Sundance Trail is a self-guided interpretive trail. Originally developed as part of the RDA by the National Park Service and CCC, interpretive materials for the trail include signage and a brochure.



Park Headquarters



Fireplace in Visitor Center gathering room



Amphitheater adjacent to Visitor Center

Information for the trail was updated to match the changing vegetation and landscape since the blowdown event. There are some interpretive signs along other trails, including the bicycle trail at the Yellowbanks CCC Camp. Many existing trail signs are old and in poor repair.

Information Kiosks – Kiosks are located at each campground, the St. Croix Lodge, All Seasons Trail Center, Lake Clayton Beach Picnic Area and each Group Center. The kiosks provide orientation, enforcement and emergency information, as well as interpretive messages to park visitors.

Interpretive Staffing

Current interpretive staffing at St. Croix State Park includes one position - an 80% year-round Area Interpretive Naturalist. Based at the state park, this person is responsible for staff-guided and self-guided interpretation at St. Croix and Banning State Parks, the Willard Munger and Matthew Lourey State Trails, the St. Croix and Kettle River State Water Trails, and outreach efforts for the area. Forty percent of this position's time (concentrated in the winter season) is dedicated to work on self-guided interpretive projects for the northeast region and statewide efforts. A part-time visitor center host position that staffed the visitor center from May through September was eliminated in 2014. A seasonal Naturalist Corps position that assisted the area naturalist with programming from May through September was replaced with a work study student position in 2016. Both position changes were part of broader, division-wide budget reductions. However, demand for interpretive programming from park visitors and area community groups continues to grow.

Audiences

The division has identified several target markets for its efforts to attract and retain visitors to state parks. The primary target market is Minnesota residents age 28 to 49 with children age 5 to 14. The secondary target market is those who are also second- or third- generation immigrants comprised mainly of individuals from the Hispanic/Latino/Latina community. The tertiary market focus is adults age 50 to 65 who regularly participate in outdoor recreation, particularly at Minnesota state parks and trails – current loyal, core customers for the division.

For St. Croix State Park, there are several audiences for interpretive programming among existing park visitors and in the communities surrounding the state park. Area schools (both through off-site outreach and in-park programs), social organizations (senior citizen clubs, church groups) and other natural resource and environmental education groups (master gardeners, local environmental learning center) already make up the majority of requests for interpretive programs by the St. Croix Naturalist. The park is also highly visited by large groups utilizing the group centers and group camp. Focusing on these



Kiosk near Visitor Center

groups (family reunions, church groups, social organizations, etc.) can increase participation in interpretive activities.

Partnerships

Partnerships can enhance interpretive services in several ways, from assisting with program design or supporting programs directly to providing avenues for reaching specific audiences, such as working with school districts to better reach youth. One partnership opportunity is with Pardun's Canoe Rental, which operates as a concession with St. Croix State Park. The division can work with the concessionaire to integrate interpretive opportunities as a part of canoe rental packages, and cross-promote canoe rentals and interpretive offerings in the state park to park visitors.

Other potential partners identified during the planning process include other organizations that offer interpretive opportunities along the St. Croix River such as National Park Service (Upper St. Croix National Waterway), Minnesota Historical Society (Northwest Company Fur Post), Burnet County Historical Society (Fort Folle Avoine), Hinckley Fire Museum, and Audubon Center of the North Woods. The division will actively seek partnerships to expand the potential topics and reach of the interpretive services program at St. Croix State Park.

Other DNR divisions are also potential partners for providing interpretive services. Programming could be developed and offered cooperatively with other divisions on topics including archery & fishing skills, forest management, river fisheries, and nearby Scientific and Natural Areas.

Interpretive Services Recommendations

Self-Guided Interpretive Opportunities

- Create interpretive materials about the blowdown event and division's restoration efforts. Materials may include signage, an interpretive path, and videos that describe division efforts including timber removal, tree plantings, prescribed fire, and other resource management and infrastructure repair projects.
- Create interpretive materials about the changing natural landscapes of the state park and the impacts on habitat and species present. The materials will highlight how the division's restoration work and resource management efforts, storm events, climate change, and other factors affect the type and quality of habitat in the park and their impacts on representative plant and animal species.



Canoe rental concession
located in the St. Croix Store

- Create interpretive materials about the buildings and other structures that are part of the National Historic Landmark. Topics for the materials include the history of the Civilian Conservation Corps and its role in developing St. Croix State Park, the Recreation Demonstration Area as a National Historic Landmark (NHL), the 164 historic elements associated with the NHL within the park, and how those building, structures, roads and trails are still used today.
- Develop an advanced geocaching course. The advanced course would provide a new and more challenging opportunity for park visitors. The course may replace the existing self-guided trail or be incorporated with the blowdown restoration interpretive path.
- Add interpretive signage at the fire tower area. Renovation of the fire tower and addition of hiking trails will draw more visitors to the area. Interpretive themes and content for the displays will be determined as part of the project development (see Figure 8: Interpretive Services Opportunities and Proposals).
- Add interpretive signage along the bike trail between the campground and swimming beach. Possible interpretive content includes resource management (barrens and prairie restoration) and Civilian Conservation Corps history in the state park. Additional interpretive signage should be considered with the extension of the trail around Lake Clayton.
- Develop nature play areas that encourage free play activities and include interpretive themes and messages. Two opportunities identified during the planning process were a small scale Nature Play Space adjacent to the Visitor Center and a larger scale Nature Playscape to be designed as part of the Paint Rock Springs Campground renovation (See **Recreational Use and Visitor Services** recommendations). The division will utilize its *Nature Play Guidance* handbook to design nature play elements, and identify and evaluate additional locations for nature play areas.



Add interpretive signage at the fire tower area



Add interpretive signage along the bike trail

Staff-guided Interpretive Opportunities

- Develop additional river-related interpretive programs and opportunities. The intent is to provide visitors with more opportunities to experience the St Croix and Kettle Rivers while at the state park. Possible programs may include staff-guided canoeing programs for group center users. Programs will utilize the park's interpretive themes, and may include a "healthy watersheds" topic that draws on geology, biology, land use, and other factors underlying the rivers' health.
- Evaluate the need for additional interpretive programming and staffing during the winter season. Currently the state park has limited interpretive resources available to offer programs in the winter. The

direction set out in the management plan is to promote more winter use at St. Croix State Park. Both in response to more visitation and as part of the efforts to increase winter use at the park, the division will need to consider additional interpretive resources for the state park during the winter season.

- Pursue relationships with volunteers to offer additional interpretive opportunities to state park visitors. Park staff will work with members of the public to develop and host interpretive programs in line with the state park's interpretive themes and the division's outreach goals.

Interpretive Services Facility Developments and Improvements

- Renovate the interpretive elements in Visitor Center. The renovation would include updating the interpretive displays and a redesign of the layout to be less staff-dependent. The renovation may also include interpretive signage about the St. Croix Lodge – the building that houses the visitor center is a contributing element to the NHL.
- Renovate the Amphitheater. Changes to the facility will include accessibility improvements and utilities improvements (upgraded electrical systems, projection system, etc.)
- Integrate interpretive features into the development of the Archery Range. The design of the archery range should include features to support use of the facility for interpretive and skills-building programs such as benches, storage for equipment, shade, and separation and screening from nearby activity areas.

Partnerships and Outreach

- Pursue outreach and educational efforts with school districts and community groups. Strong ties with school districts and community groups will help build awareness and participation in interpretive programs at the state park.
- Investigate partnerships for creating and providing interpretive programming. The division will seek partnerships with institutions and groups with an outdoor education interest – such as National Park Service, Minnesota Historical Society, Burnett County Historical Society, and Audubon Center of the North Woods – to collaborate on designing, supporting and providing interpretive opportunities to state park visitors and visitors throughout the area.
- Work with other divisions within DNR to develop additional education and outreach efforts that can be offered at the state park. Possible



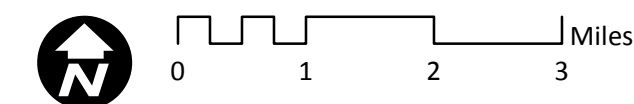
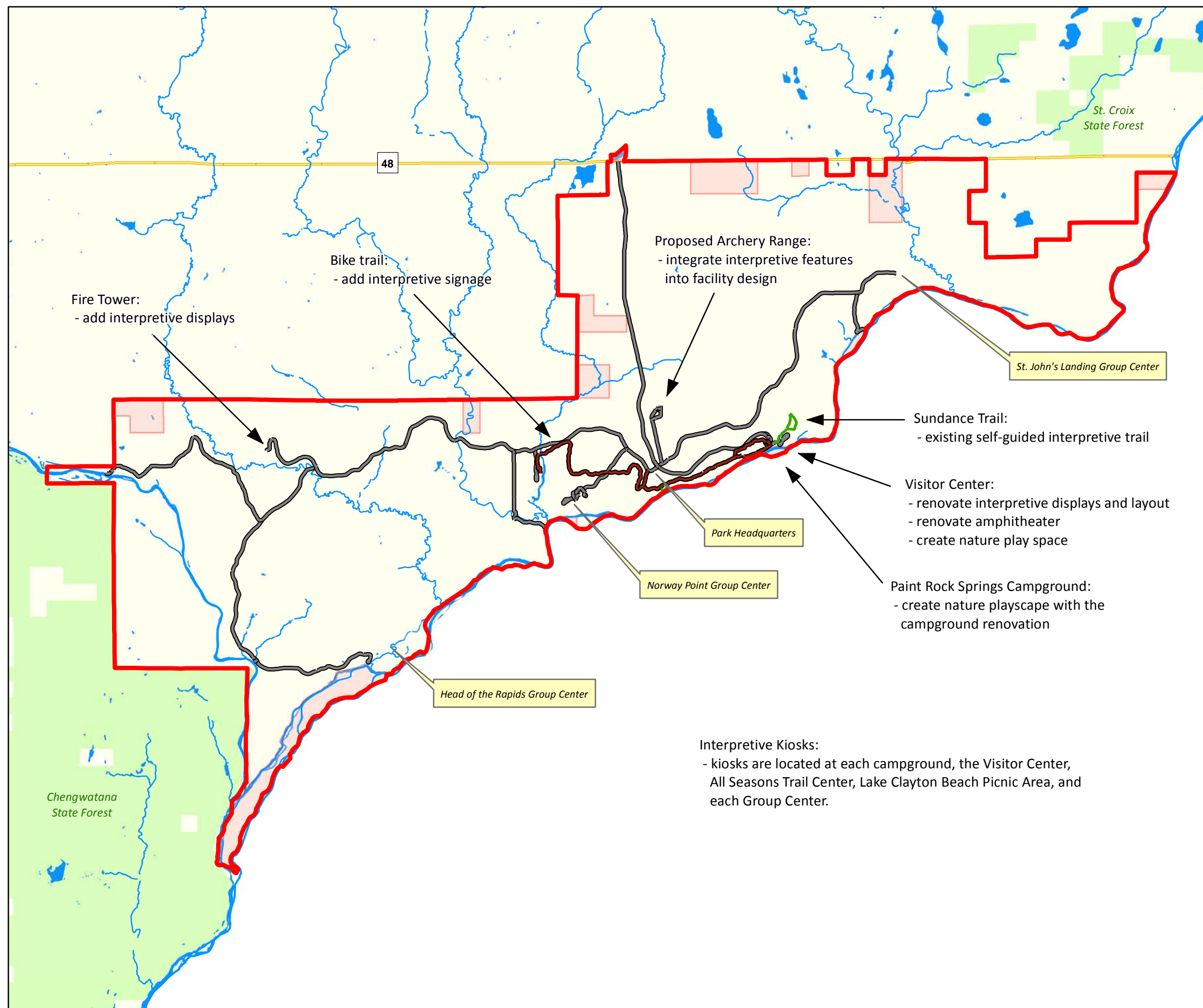
Renovate interpretive elements in Visitor Center

topics include forest management, river fisheries, and nearby Scientific and Natural Areas.

- Work with DNR Division of Fish and Wildlife to develop and offer archery skills programming. Development of an archery range (see Recreational Use & Visitor Services) will provide a location to offer more programming than possible at other state parks. The divisions will work together to support programs that utilize the range to promote archery for recreation as well as for hunter education. Additional interpretive resources would need to be devoted to support this activity.



Offer more archery skills programming



Recreational Use and Visitor Services

St. Croix State Park offers a wide array of recreational opportunities for visitors. The state park has substantial facilities and use areas including campgrounds, cabins, group centers, a visitor center, a trail center, as well as a trail network that supports many summer and winter trail activities.

The state park also connects with several other state-designated recreational units. The Matthew Lourey State Trail crosses through the state park, with 21 miles of designated state trail route comprised of a mix of state park trails and roads. Hiking, mountain biking, horseback riding, and snowmobiling are allowed uses on the state trail within the park. The Kettle River and St. Croix state water trails provide additional ways to experience the park from the water.

Building on its designation as a *Destination State Park*, the division will look at making additional investments in St. Croix State Park. The management plan identified several directions for investments to improve visitor experiences:

- Enhancement – improvements to existing facilities or for existing visitor uses that will increase the quality of the visitor’s experience or draw additional users, e.g. repaving trails, adding new trail segments, etc.
- Diversification – renovating existing or creating new facilities that provide visitors more choice or a wider array of options, e.g. more variety in campsites (larger sites, pull-thru sites, more hike-in sites).
- Utilization – changing the way facilities are managed and promoted to gain more use from what already exists at the park, e.g. group centers and trail systems.

Prior to developing any new facility or rehabilitation projects, the division will utilize its resource assessment process to identify natural and cultural resource impacts that may result from the project and devise avoidance and mitigation strategies.

Overnight Use Facilities – Camping and Lodging

St. Croix State Park has a variety of camping and lodging facilities that support overnight use for park visitors (see Figure 9: Existing Recreational Facilities).

Riverview, Paint Rock Springs, and Old Logging Trail Campgrounds

The three campgrounds are located along the St. Croix River approximately 2 miles east of the Park Headquarters. Riverview Campground was designed and constructed as part of the Recreation Demonstration Area, and is a contributing element to the National Historic Landmark. The other two campgrounds were built later and are not considered contributing elements. Each campground has a sanitation building. Riverview’s sanitation building (known as the Combination Building) is a historic structure built by the CCC in 1937. Old Logging Trail’s sanitation building



Riverview Campground

was built in 2010, replacing an older building from 1973. Paint Rock Spring's sanitation building was built in 1967 and is in need of updating. The campgrounds include a total of 211 drive-in campsites and 4 walk-in campsites. Riverview campground also includes 3 historic cabin buildings with a total of 6 lodging units. The layout of all the campsites in the three campgrounds are very similar – the sites are all small and spaced close together, with little or no vegetation or other screening separating the sites. There are no pull-through sites that would accommodate larger camping vehicles.

Group Campsites

There are 8 group campsites located adjacent to the All Season Trail Center. Each site can accommodate 25 people. The sites are in an open area, with little screening or other indicators to define the boundaries between the sites. The sites are exposed and have little shade. Group campers can access the restrooms, showers, and gathering space in the All Season Trail Center.

Remote Campsites

The state park has hike-in and boat-in remote camping opportunities. There are 2 hike-in campsites located along the trail network, each site has a fire ring and 2 Adirondack shelters. There are also 10 canoe/boat-in campsites located along the Kettle and St. Croix Rivers. These sites are only accessible from the water. These sites serve boaters on the St. Croix River as well as canoeists and kayakers using the Kettle River and St. Croix state water trails.

Horse Campground

The horse campground is located adjacent to the All Season Trail Center. The campground includes 40 drive-in sites, a corral area, overhead ties, and drinking water. Visitors using the horse campground can access the restrooms, showers, and gathering space in the All Season Trail Center. The horse campground has highest use during the spring and fall, when horseback riding in the park is at its peak for the season.

Group Centers

The state park has 3 group centers, 2 of which are currently open to public use. The group centers include a dining hall, bunkhouses, sanitation buildings, and other administration or activity buildings. Norway Point Group Center, located just east of Lake Clayton, can accommodate 215 people and has its own swimming beach area on the lake. Head of the Rapids Group Center, on the west side of the park, accommodates 125 people and includes a swimming pond and a carry-in access to the St. Croix River. The group centers are very popular, and are occupied on all weekends and most weekdays throughout their May-September season.

St. John's Landing, located on the east side of the park, is roughly the same size as Head of the Rapids. St. John's Landing has a carry-in access on the St. Croix River. The group center is currently not open to the public – it is



Group campsites near All Season Trail Center



Bunkhouse at Head of the Rapids Group Center

leased to the Conservation Corps Minnesota and Iowa (CCMI) to host youth and young adult natural resource crews that assist with state park and state trail development and maintenance projects in the park and statewide.

Guesthouses

Two guesthouse buildings are located near Norway Point Group Center. The guesthouses include kitchens, bathrooms, bedrooms, and living space. One guesthouse accommodates 15 people, while the other guesthouse can accommodate 12 people. The guesthouses have access to the summer and winter trail networks. The guesthouses are available year-round.

Day Use Facilities and Areas

St. Croix State Park includes several day use facilities and areas that provide recreational opportunities, as well as support other activities in the park.

All Season Trail Center

The year-round facility includes a gathering space with two fireplaces and bathrooms with showers. The center is the sanitation building for visitors staying in the Horse Campground and the Group Campsites. It also serves as a warming house for snowmobilers and other winter trail users.

Lake Clayton Day Use Area

The Lake Clayton day use area includes a swimming beach, picnic area, a picnic shelter, a sanitation building, a playground, volleyball court and horseshoe pits, and parking area. The paved bike trail links the day use area with the park's campground area, providing campers a way to get to the day use area without using their vehicles. The day use area's slope toward the lake shore and the paved trail's lack of connection to the sanitation building, picnic shelter or beach area limits the accessibility of the area.

Fire Tower

Amenities at the site are currently limited to the fire tower and a small parking area. The fire tower is open to the public and provides scenic views of the state park and surrounding area.

Kettle River Trailheads

Two trailhead accesses – Kettle River Highbanks and Kettle River Overlook – provide access to the trails along the Kettle River. The accesses include small parking areas and scenic overlooks of the river corridor. A carry-in access and access to the river for fishing are possible from Kettle River Overlook. Parking at both trail accesses is limited.

Campground Boat Launch

The campground boat launch, located just east of the campground, is the main boat launch on the St. Croix River within the state park. The launch includes a paved access road and parking area, a concrete boat ramp, and



All Season Trail Center interior



Campground Boat Launch

an interpretive/orientation kiosk. The boat launch is a primary launch area for the canoe rental concessionaire – canoe racks are located adjacent to the parking area.

Carry-in Water Access Sites

There are three carry-in water access sites – Little Yellowbanks and Sand Creek on the St. Croix River, and Maple Island on the Kettle River. These accesses are in addition to those that are a part of the St. John's Landing and Head of the Rapids group centers. The sites are accessible by vehicle and include a carry-in access, parking, and information kiosks. There are also remote canoe/boat-in campsites at or nearby all three access. Including these sites, there are 10 canoe/boat-in campsites which are listed in *Remote Campsites*.

St. Croix Store

The St. Croix Store is located in the campground and hosts the canoe rental concessionaire. The store also includes a gift shop that sells souvenirs and convenience items. There is a picnic shelter located adjacent to the store.

St. Croix Lodge Visitor Center

The visitor center is located next to the park main campgrounds. The building is a historic log and stone building that includes bathrooms available year-round and a gathering space with a fireplace and seating for indoor programs. The building also includes interpretive displays and staff office space (see **Interpretive Services** for a more detailed description).

Trails and Trail Uses

St. Croix State Park supports a wide range of trail opportunities for park visitors in all seasons. The trail network enables visitors to experience the varied landscapes within the park and to access park facilities. Portions of the trail system were developed by the National Park Service and Civilian Conservation Corps in the 1930s and 1940s as part of the Recreation Demonstration Area and are considered contributing elements to the National Historic Landmark. Changes to the trail system for summer uses will focus on adding additional opportunities for current trail uses and improving visitor experiences. The division will continue recent efforts to improve trail surfaces on those trails along the Kettle River (smoothing treadways, removing rocks, etc.) that make for a better hiking experience for visitors. These trail surface improvements also reduce maintenance costs – i.e. trail brushing can be done with mowing equipment instead of by hand.

Winter trail use at St. Croix is predominately snowmobiling, with cross-country skiing and snowshoeing opportunities also available. To create additional opportunities for park visitors and to increase winter use of the park, the division will add winter fat biking as an authorized use on some trails within the state park.



Little Yellowbanks carry-in access site



St. Croix Lodge Visitor Center

The division also explored the possibility of allowing ATV use on park trails in the winter. The addition of winter ATV use was not supported by the citizen advisory committee, responses to the online management plan questionnaire or previous state park visitor surveys and was therefore not included in this plan's recommendations. ATV riding in state parks is prohibited by state park rules. Also, there are other opportunities to ride ATVs in the area, with over 180 miles of trails and roads open to motorized use in the nearby Nemadji, St. Croix and Chengwatana State Forests. If the division seeks to pursue this possibility in the future, it would need to do so through rulemaking and a management plan amendment process.

Hiking

Current mileage: 127 miles (including some on-road segments)

The park has a wide array of hiking trails that extend through much of the park and connect park facilities. Among the most popular are the Sundance Trail and trail segments along the St. Croix River near the campground. Trails along the Kettle River provide the some of the best hiking experiences in the park, with scenic views as the trails follow up and down the banks of the river. However, the trail network also includes some long sections with few loop opportunities and on-road sections which result in lower use. Proposed improvements to the hiking trails include creating more loops, moving sections off of the roadways, erosion repair, interpretive signage, and additional trailhead parking.

Biking

Current mileage: 5.5 miles

The primary biking experience in the park is a paved bike path from the campground area to the Lake Clayton day use area. Portions of the current trail are scheduled to be repaved in 2017. The bike trail offers visitors a quality recreational experience and an important connection for visitors between these two use areas. Given the size of the park and number of visitors, the division is proposing to add additional paved biking opportunities: creating a loop around Lake Clayton and adding a paved shoulder along the park road between Park Headquarters and the campground area. The division will also promote the use of park roads as additional biking opportunities: the roads within the park are low traffic and are appropriate for biking. The Matthew Lourey State Trail includes biking as an allowed use and provides a non-paved surface biking opportunity within the park.



Bike trail near the Norway Point Group Center

Horseback Riding

Current mileage: 75 miles

Horseback riding use in the state park is highest in the spring and fall, when there is less heat and fewer insects. The trailhead access for horseback riding is at the All Season Trail Center and adjacent Horse Campground. The presence of the Horse Campground supports horseback riding use in the park. Trails within the state park are fairly wide and flat, in contrast to many

horseback riding trails in the nearby St. Croix and Chengwatana State Forests. Some horseback riders have requested narrower trails to improve riding experiences. Many state park horseback riding trails in the park are shared use trails - cross-country skiing and snowmobiling in the winter - resulting in wider trails to accommodate winter trail grooming equipment.

Snowmobiling

Current mileage: 80 miles

Snowmobiling is the primary winter trail use in the state park. The snowmobile trails in the park connect with state forest trails, grant-in-aid trails and other local trails via the Matthew Lourey State Trail. However, connections to the south via the Matthew Lourey State Trail are only open with sufficient ice on the Kettle River – there is no bridge at the river crossing. The trails also connect to the guesthouses at Norway Point, providing a winter lodging opportunity for snowmobiling visitors. A lack of snow cover has reduced the snowmobile season in several recent winters.

Cross-country Skiing

Current mileage: 11 miles

Skiing trails in the state park are groomed for classic skiing. There are no trails groomed for skate skiing. Like the snowmobile trails, the cross-country ski trails connect to the guesthouses at Norway Point. The trails are flat, and all are rated as “easy” level of difficulty. Cross-country skiing is not a high use activity at St. Croix State Park - the park is not a top tier location for skiing in the state park system.

Accessibility

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.



Signs help identify accessible opportunities for park visitors

Recreational Use and Visitor Services Recommendations

Overnight Use Facilities

- Renovate the Paint Rock Springs Campground to provide more diverse camping experiences. The campground would be redesigned with a new sanitation building and larger use areas and spurs that can accommodate larger camping units, including some pull-through sites (see Figure 10: Proposed Development – Facilities). More space between campsites would provide greater privacy than in existing campsites. A cluster of camper cabins and/or wall tents would be integrated into the layout to be available to rent individually or as a group. The overall design will likely include fewer campsites than the current layout. A nature play space should be considered as part of the campground redesign.
- Redesign layout of the existing group campsites at the All Season Trail Center. The new layout would provide additional spacing and screening between sites, while still accommodating groups who wish to reserve and use all the sites together.
- Consider development of a rustic group camp. The group camp would be designed to accommodate smaller groups (25-50 people) than the state park's existing group facilities and located away from other use areas for privacy. Adding a rustic group camp would increase the diversity of camping opportunities in the park. Facilities would include a tent camping area, picnic shelter and vault toilets. Possible sites for the rustic group camp include the Big Eddy area.
- Develop additional hike-in campsites. The existing hike-in sites are well-used, and the large size of the park offers opportunities to create additional remote sites along the existing trail network. The additional hike-in sites would increase the diversity of camping opportunities in the park and help mitigate the potential loss of campsites in the Paint Rock Springs Campground renovation.
- Develop smaller corrals at the Horse Campground. Smaller corrals serving a group of campsites could allow visitors to corral their horses closer to their sites than using the existing large corral. As an alternative or in addition to the smaller corrals, the division could clear areas for visitors to bring and set up temporary corrals.
- Open St. John's Landing Group Center to more public use. The division will coordinate with Conservation Corps Minnesota and Iowa to maintain CCMI's presence in the park and use of St. John's Landing, while opening the group center for more public use. Some CCMI crew and staff lodging and equipment storage may be relocated elsewhere in



Replace the sanitation building as part of renovating the Paint Rock Springs Campground



Existing large corral at the Horse Campground

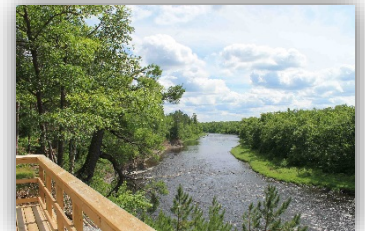
the park. Additional building renovation and repairs may be necessary to open the group center to public use – including repair of 2 bunkhouses damaged during the 2011 blowdown. (see also **Park Operations**).

Day Use Facilities and Areas

- Develop additional day use amenities at Fire Tower area. Improvements to this area will include interpretive and orientation signage, picnic tables, a vault toilet and hiking trail loops (see Trails & Trail Uses).
- Create additional trailhead parking for the trails along the Kettle River. The available parking areas at Kettle River Highbanks and Kettle River Overlook are relatively small. A new trailhead parking area will be developed in conjunction with construction of the new trail segment that connects with the park road between the two existing trailhead areas. Additional parking can be created east of the park road just north of the existing Kettle River Highbanks trailhead.
- Improve access for fishing along Hay and Bear Creeks. Both creeks support populations of trout and other fish species. Hay Creek is accessible from the Matthew Lourey State Trail north of Lake Clayton and the main park road – formalizing paths from the trail to the river edge and benches at those locations will improve fishing access and protect other areas along the trail and riverbank. Fishing sites along Bear Creek can be accessed from the Bear Creek Trail – creating a path along Bear Creek that links to the existing trail will improve access for fishing.
- Develop an archery range. The facility should be designed to host skill-building interpretive programs (including Archery in the Parks) as well as for individual use by park visitors. The proposed site for the archery range is north of the All Season Trail Center to take advantage of the existing parking area and amenities of the trail center (restrooms, shelter and gathering space).

Trails & Trail Uses

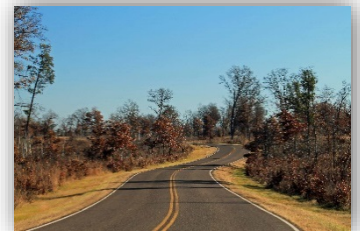
- Develop additional segments of hiking trail to create shorter loops and improve hiking experiences for park visitors. New trail segments in the west side of the park near the Kettle River will connect existing trails to create shorter loops (see Figure 11: Proposed Development – Summer Trails). Trail segments in the area currently on park roads will be relocated away from the road edge to improve the hiking experience. At the fire tower, two new trail loops will be created (utilizing an existing segment of the Matthew Lourey State Trail) as part of the day use area improvements. Former hiking trails that connected the St.



Add parking at trail accesses along the Kettle River

John's Landing Group Center with the Little Yellowbanks water access site will be reestablished as part of the improvements with the planned increased public use of the group center. The total distance of these additional hiking trails is 6.3 miles.

- Extend the existing paved bike trail to form a loop around Lake Clayton. The loop would increase the overall miles of paved trail and create a new experience for park visitors. The trail will be sited to parallel the lake shore and provide scenic views of the lake. Construction of the trail will also be an opportunity to make ADA improvements with connections to buildings, parking area, and other facilities in the Lake Clayton Beach Area. The loop would be approximately 2.4 miles. Final layout of the loop would be determined during design.
- Add a bike lane to the shoulder of the park road between the Park Headquarters Area and the Campground Area. A significant number of park visitors bike along this section of park road. A paved and striped bike lane would improve safety for bicyclists. It would also create a loop from the campground with a connection to the existing bicycle trail near the Park Headquarters. The distance of the bike lane would be approximately 2.2 miles.
- Promote the use of park roads as additional bicycling opportunities. Other than the main park entrance road to the campground, the roads within the state park have low traffic volume and are suitable for bicycle riding - especially west of Lake Clayton Beach Area. The division may install "share the road" or similar signage to raise awareness of vehicle drivers to expect bicyclists on the roads.
- Open selected trail segments to winter fat biking. For trail segments currently used for cross-country skiing, a treadway for biking would be packed alongside the groomed ski track. The short loop of trail segments west of Norway Point currently used for snowmobiling would be converted to winter fat biking, with snowmobiles still able to use the larger loop formed by the Bear Creek Trail and Matthew Lourey State Trail. The change proposed will open 17 miles for winter fat biking in the park (see Figure 12: Proposed Development – Winter Trails). Access points for fat biking would be at the Visitor Center, the All Season Trail Center, and the guesthouses at Norway Point.



Add a bike lane along the road between the campground and Park Headquarters

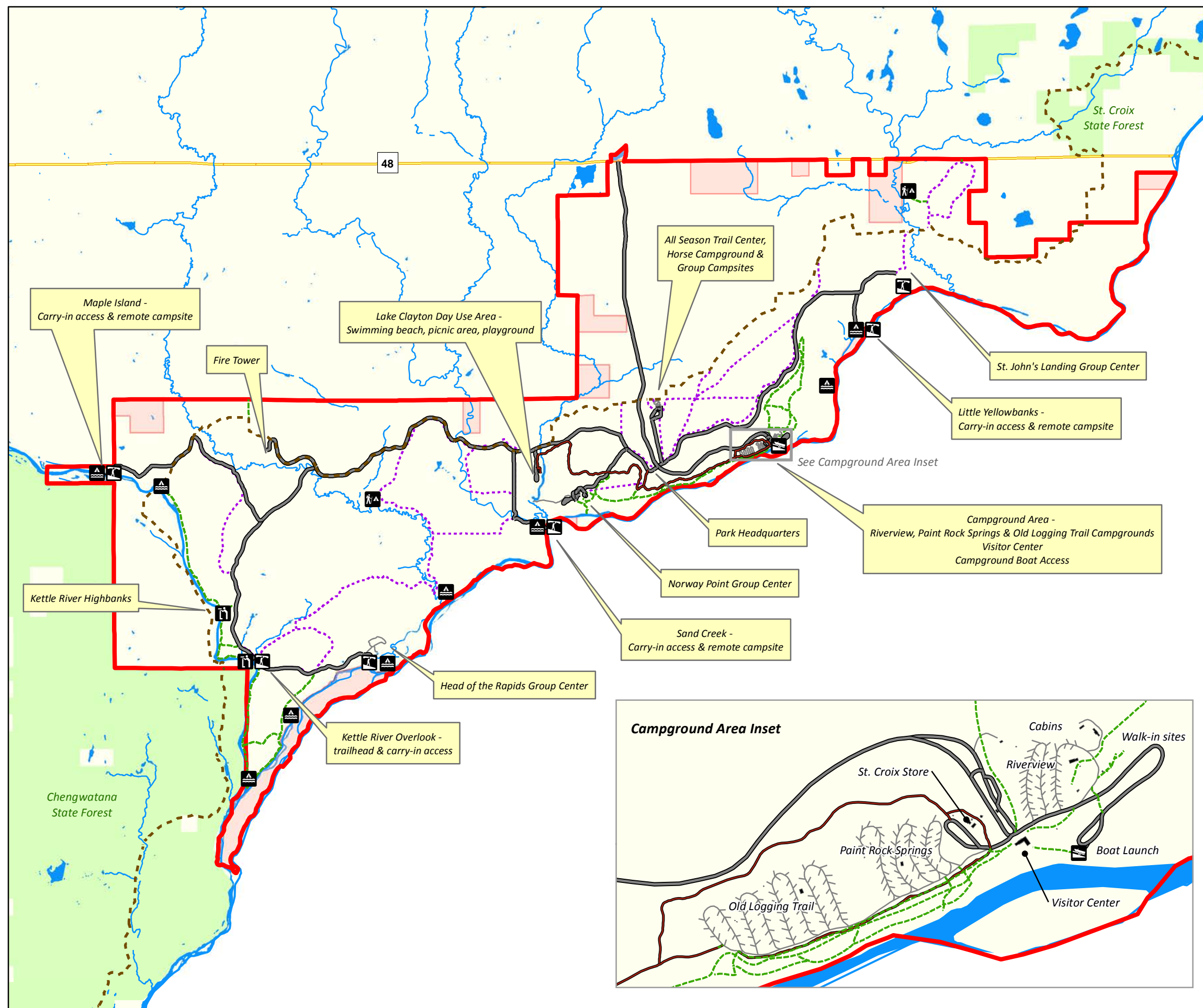


Guesthouses will be a lodging opportunity for winter fat bikers

- Develop additional horseback riding opportunities. The majority of horse trails within the state park are shared use trails – serving as snowmobile trails in the winter. These trails tend to be wider than needed for horseback riding to accommodate snowmobile grooming equipment in the winter. Horse trail users have expressed an interest in narrower trails and loops to create more variety and to improve the riding experience. The changes proposed would add 4.2 miles of horse trail not shared with winter snowmobile use. These new trail segments are primarily existing firebreaks already kept open for resource management activities. These trails would also be open to hiking.



Utilize firebreaks as horseback riding trails.

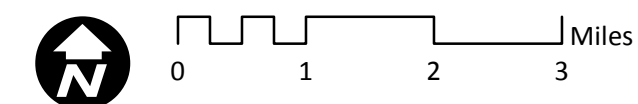


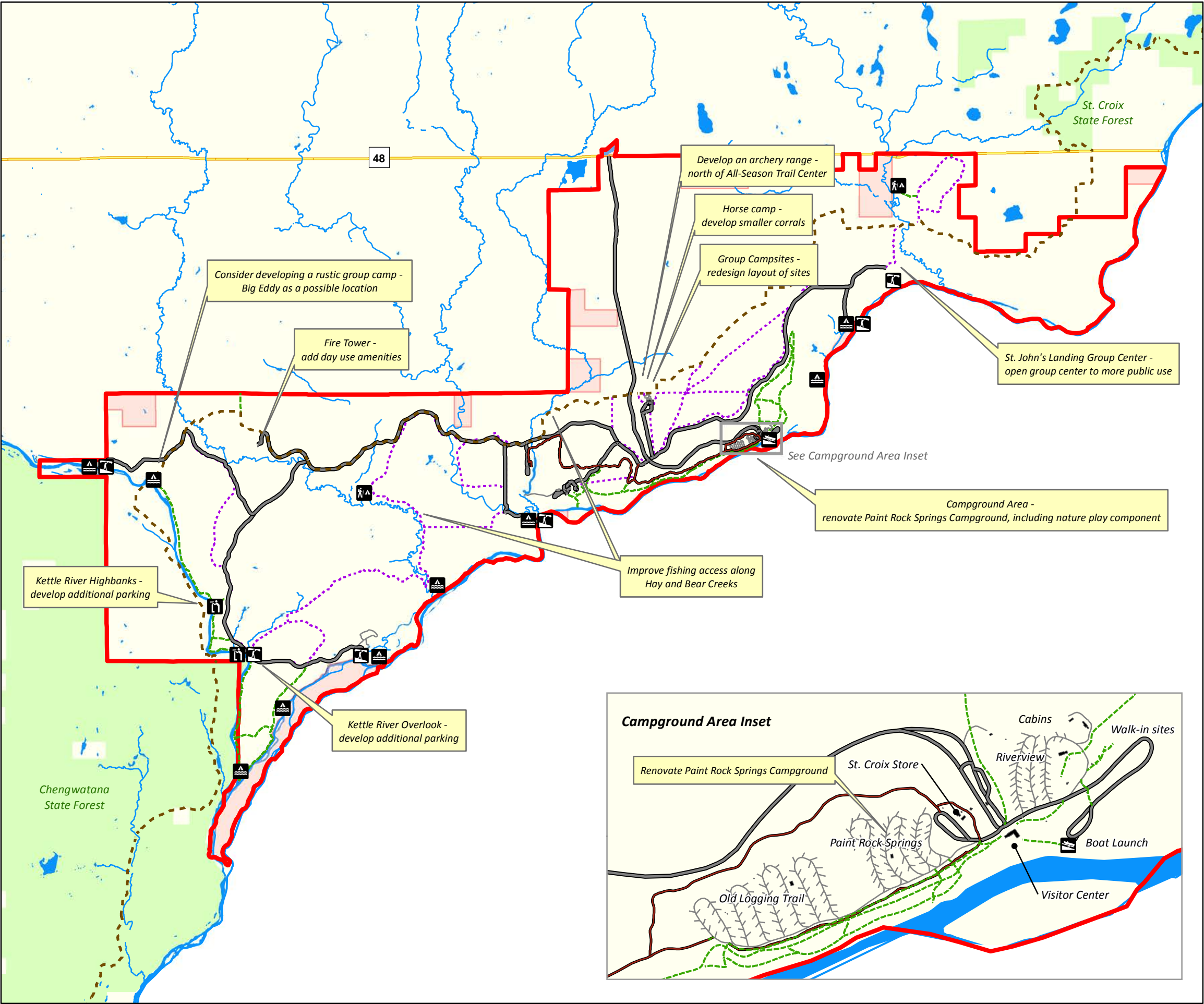
St. Croix State Park

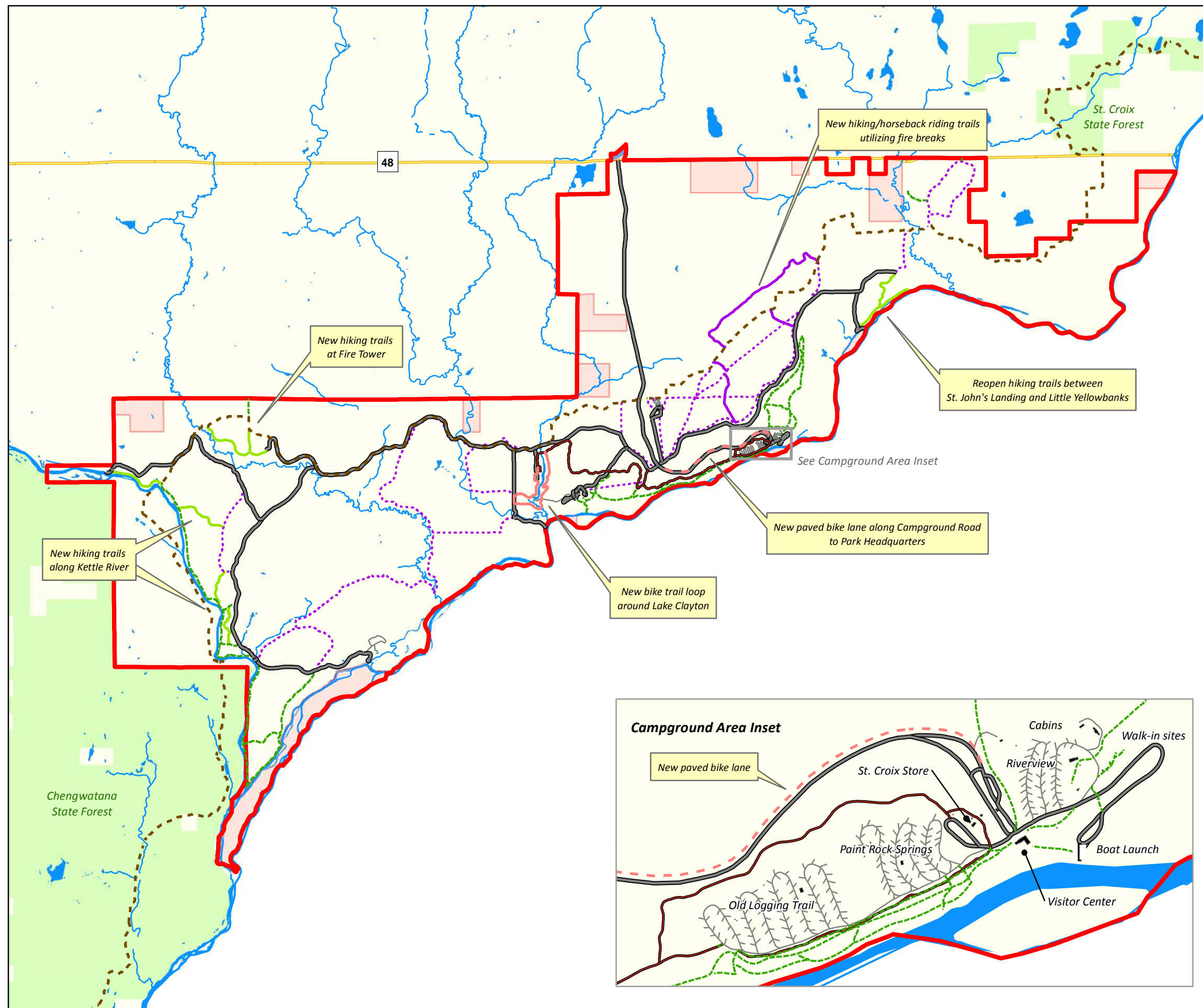
Figure 9: Existing Recreational Facilities

Legend

- Campground boat launch
- Canoe/boat-in campsite
- Carry-in access
- Hike-in campsite
- Trailhead
- Hiking trail
- Hiking/horseback riding trail
- Bike trail (paved)
- Matthew Lourey State Trail
- State park roads
- Campsite spurs and access paths
- River & perennial stream centerlines
- State park statutory boundary
- Private land within park boundary





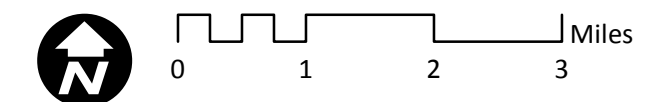


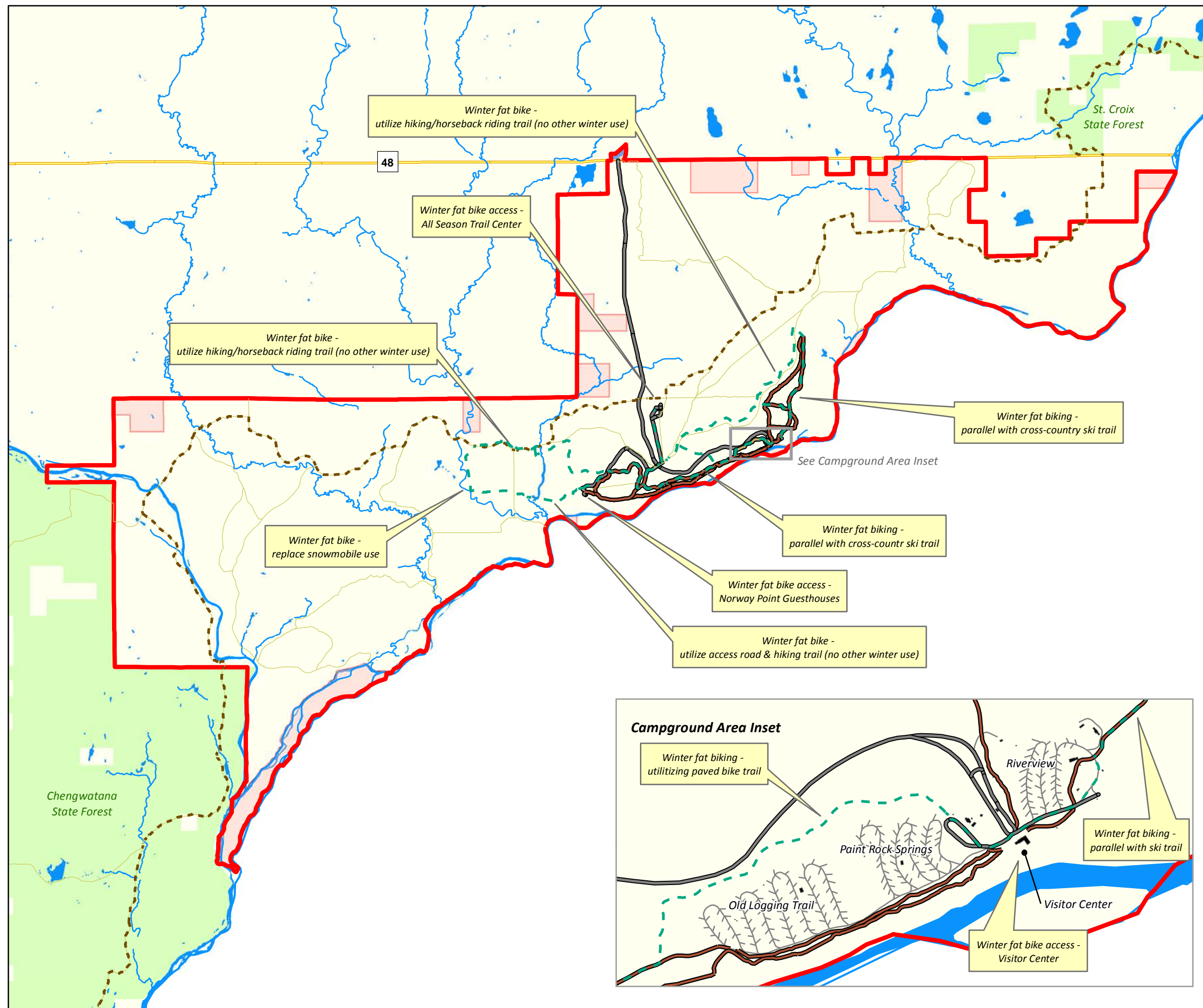
St. Croix State Park

Figure 11: Proposed Development - Summer Trails

Legend

- New hiking trails
- New hiking/horseback trails
- New bike trail (paved)
- - - New bike lane
- - - Hiking trail
- - - Hiking/horseback riding trail
- Bike trail (paved)
- - - Matthew Lourey State Trail
- State park roads
- - - Campsite spurs and access paths
- River & perennial stream centerlines
- ▬ State park statutory boundary
- Private land within park boundary



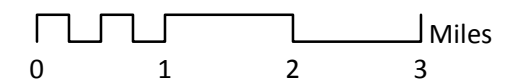


St. Croix State Park

Figure 12: Proposed Development - Winter Trails

Legend

- Proposed winter fat biking opportunities
- Cross-country ski trails
- Snowmobile trails
- Matthew Lourey State Trail
- State park roads - open in winter
- Campsite spurs and access paths
- River & perennial stream centerlines
- State park statutory boundary
- Private land within park boundary



Park Boundary

The Minnesota State Legislature establishes the boundaries for state parks. A 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 state park. It is the policy of the DNR Division of Parks and Trails to include within a statutory boundary only those lands the landowner has agreed to be included. The DNR is then authorized to negotiate with willing sellers for acquisition of lands contained within that statutory boundary.

Being within a statutory boundary does not affect the landowner's use of their property. They retain full ownership and rights to the land until they sell their land to the state or another private owner.

Current State Park Statutory Boundary

The current St. Croix State Park statutory boundary includes 33,886.14 acres, of which 31,826.97 acres are owned and administered by the Division of Parks and Trails (see Figure 13: Park Boundary). Additional land within the boundary is owned or administered by other government agencies – 736.93 acres by the National Park Service (mainly islands along the St. Croix River) and 13.40 acres administered by the Division of Forestry.

The remaining 1,308.84 acres within the statutory boundary are in private ownership, including 280 acres owned by the Mille Lacs Band of Ojibwe.

The state park is bounded by the St. Croix River to the south, and the Chengwatana State Forest to the southeast. State Highway 48 marks a portion of the park's northern boundary. The majority of the lands surrounding the state park are privately owned.

Proposed Boundary Modifications

No large-scale modifications to the state park statutory boundary are being proposed. Two small boundary modifications were identified during the planning process. The division will recommend deleting two parcels totaling 20.16 acres along the state park's northern boundary. The parcels are north of State Highway 48 and are largely wetland and road right-of-way. Deleting the parcels would not impact resource management efforts or recreational use, and would simplify the boundary by aligning it with the roadway. The division will also recommend the addition of one parcel to the state park statutory boundary – a 64.41 acre parcel located along State Highway 48 and surrounded on the other three sides by state park-owned property. Acquiring this parcel would



The state park's statutory boundary includes public and private land

allow the division to conduct resource management activities up to the county road corridor and use the roadway as an easily definable state park boundary.

One other area of interest is at the northeastern corner of the state park statutory boundary. Currently, several parcels in the area are being mined for gravel, both by a private owner and by Pine County on two tax-forfeit parcels. The Matthew Lourey State Trail exits the state park near this location, crossing private land before connecting into the St. Croix State Forest north of State Highway 48. Having more land within the state park would provide additional options for relocating the state trail corridor if it becomes necessary in the future. The division will monitor these parcels and, if in the future the gravel operations cease, may approach the landowners concerning the possible inclusion of some of these lands within the state park statutory boundary. The division will also work with Pine County concerning the long-term planning for the two tax-forfeit parcels adjacent to the state park.

Park Boundary Recommendations

Acquisitions & Boundary Modifications

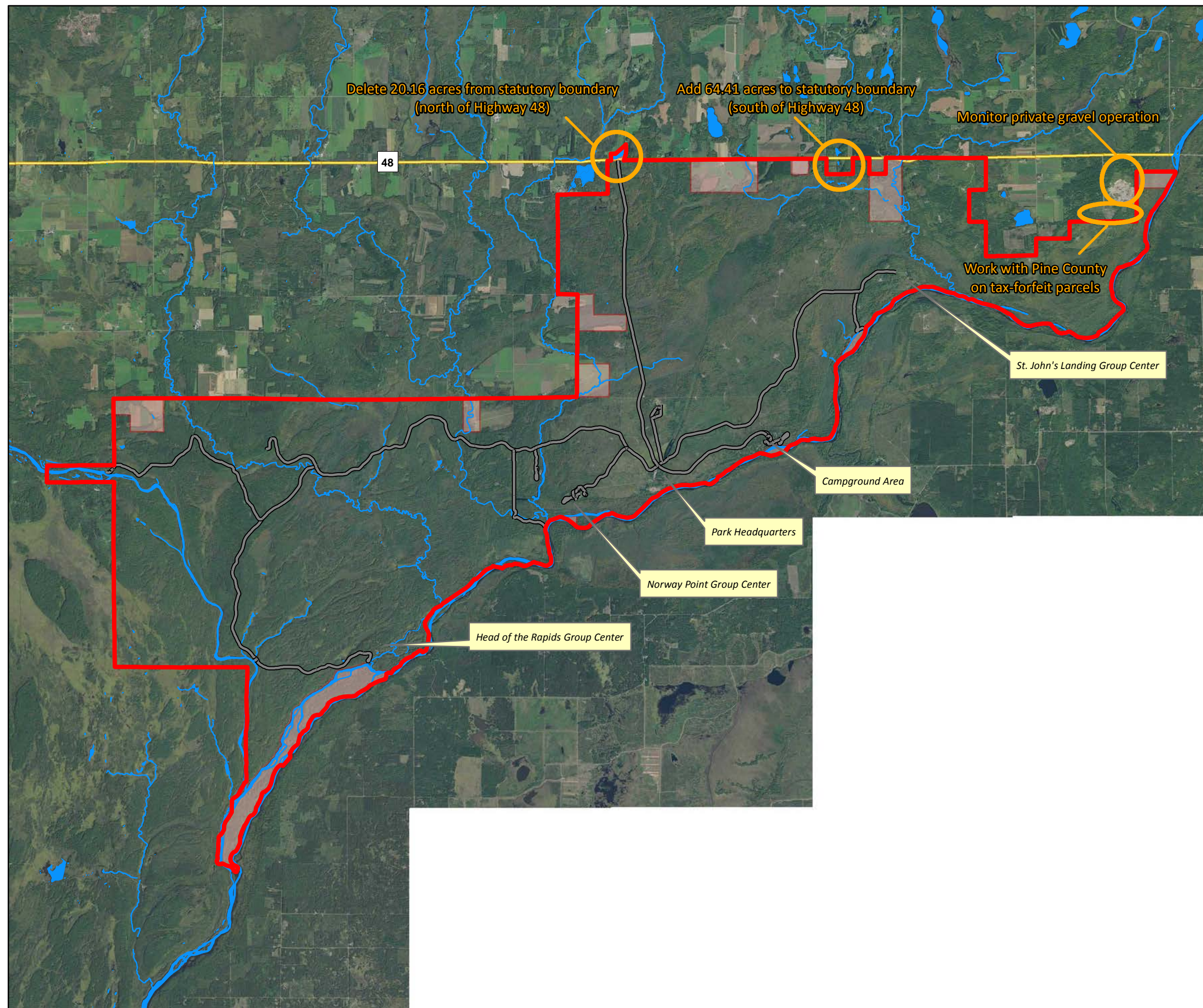
- Continue to pursue acquisition of private lands within the park statutory boundary. DNR purchases land for state parks from willing sellers within established statutory boundaries. The division will work with the owners of the private lands within the park statutory boundary to purchase inholdings as owners are ready to sell their property.
- Propose modification of the park statutory boundary to include an additional 64.41 acres. The division was approached by a landowner to include their property within the state park. The parcel includes frontage on State Highway 48 and is surrounded by state-owned park property on 3 sides. State ownership of the parcel would help create a clearly definable park boundary (Highway 48) in this area and provide opportunities for natural resource restoration and management.
- Propose modification of the park statutory boundary to delete 20.16 acres. Two privately owned parcels are north of State Highway 48 and largely open water and road right-of-way. The parcels do not have any important natural or cultural resource value for the state park or potential for recreational development.

Monitoring

- Monitor private gravel mining operation near northeastern edge of the state park. If gravel operations cease, the division should consider discussing with the landowners their future plans for the property and

the possibility of including some of the land within the park statutory boundary.






- Work with Pine County concerning tax forfeit lands adjacent to the state park boundary. Two tax forfeit parcels abut state-owned park land in the northeastern corner of the state park. Pine County is currently utilizing a portion of the land for gravel mining. The division will work with Pine County to evaluate possible state trail routing options through these parcels, cooperative resource management activities, and the possible future inclusion of the parcels within the park statutory boundary.

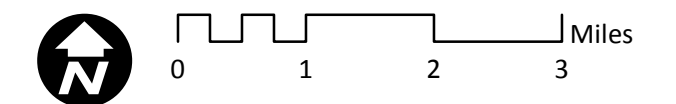


St. Croix State Park

Figure 13: Park Boundary

Legend

-  Statutory boundary areas to address
-  State park roads
-  River & perennial stream centerlines
-  State park statutory boundary
-  Private land within park boundary



Park Operations

Park staff are responsible for park administration, resource management, recreation management, interpretive services, public safety and general facility and building maintenance. Park staff also oversee forest recreation areas in the St. Croix State Forest (see **State Forest Responsibilities** below). The state park's full time and seasonal staff are supplemented with a Greenview employee, Conservations Corps Minnesota and Iowa summer youth workers, and volunteers when available.

In 2016, St. Croix State Park has 36 staff positions. These positions are a mix of full time, part time, and seasonal positions.

- 9 full time, year round positions
- 2 part time unlimited positions (80%, year round)
- 1 part time unlimited position (70%, year round)
- 2 full time seasonal positions (7 months)
- 13 part time seasonal positions (5 months)
- 1 part time manager trainee position (5 months)
- 2 part time seasonal positions (66 days)
- 4 full time temporary positions (student workers/interns)

The number of year-round full time and part time positions well-represents the scale and complexity of the state park's operations across all seasons. The large number of seasonal positions reflects the significant demand on operations and maintenance during the busy summer season when park visitation is highest and all of the park's facilities are open to the public (campgrounds, group camps, etc.).

The park manager, assistant park manager, operations supervisor and operations specialist are certified as Park Rangers and have limited law enforcement authority to enforce natural resource and state park rules and regulations within the boundaries of the state park. Two of the four full time temporary positions are also trained as Security Rangers to augment the state park's rule enforcement and visitor safety efforts. State park staff will also call on other law enforcement agencies, particularly DNR Conservation Officers, as needed to assist with fishing, hunting, trail use, traffic and other laws and regulations.

The Division of Parks and Trails also utilizes assistance from other divisions within the Department of Natural Resources to accomplish specific management actions. Examples include the Division of Forestry, which provides technical assistance and staff support for timber management and prescribed burn activities; the Division of Fish and Wildlife assisting with deer management special hunts; and Management Resources Division's assistance for building and facility maintenance.



Park staff provide customer service and enforce rules

St. Croix State Park provides support to other divisions, including the Division of Forestry. The state park has 14 staff trained for prescribed fire and wildfire response that can participate as part of the “Ready Reserve” for firefighting activities. The state park also has equipment and staff available to help with road maintenance and repair in St. Croix State Forest.

Operations and Staffing Needs

Operational costs for managing resources, maintaining facilities and providing programming and other visitor services increase over time with inflation and as new opportunities are created. Building and facility modifications recommended in the plan are also likely to have initial start-up expense and long-term maintenance obligations.

The Division of Parks and Trails estimates that implementing the recommendations included in the management plan will require additional resources. Resources may be provided by additional staff, partnerships and/or volunteers. The division will need to consider filling the existing vacant positions as well as possibly adding new positions to support the facility improvements and program enhancements envisioned in the management plan. Other DNR disciplines may also experience increased workload with the implementation of certain recommendations. For example, the Division of Forestry may be called upon to aid with general timber planning.

State Forest Responsibilities

St. Croix State Park staff oversee the state forest campgrounds in the St. Croix State Forest. Park staff conduct operations and maintenance activities for the Boulder Campground and Day Use Area (DUA) and Tamarack Horse Campground (see also **Regional Setting**). Boulder Campground and DUA includes a rustic campground with 20 drive-in campsites and a picnic area. Tamarack Horse Campground is a rustic campground with 55 drive-in sites, picket lines, and manure bunkers. The campground also offers parking for day use visitors.

Operations activities include revenue collection, trash removal and patrolling. Maintenance activities include mowing, trail maintenance within the campground areas and road maintenance (graveling and grading). Park staff also coordinate work and, on occasion, share responsibilities with division area staff for maintenance of day use facilities within the state forest.

Trail Grooming Responsibilities

St. Croix State Park staff groom the winter hiking trails, cross-country ski trails and most of the 80 miles of snowmobile trails in the state park. Typically, snowmobile trail grooming within state parks is done by local grant-in-aid snowmobile clubs. Because of the high number of miles of snowmobile trails and central position of the park maintenance area in the trail network, having park staff groom these trails is a more efficient approach than utilizing a grant-in-aid club.

However, the snowmobile trails within the state park on the west side of the Kettle River are groomed by a local grant-in-aid club. Otherwise park staff would need to transport its grooming equipment into the Chenowatana State Forest to access these trails since there is no trail bridge across the Kettle River. On occasion, park staff will also coordinate with division area staff to groom snowmobile trails within the St. Croix State Forest to help balance high-priority work needs for park and area staff.

Relationship with Canoe Rental Concessionaire

The division has a concessionaire agreement with a private company to provide canoe and kayak rentals and shuttle services for park visitors. The concessionaire rents watercraft for day and overnight trips on the St. Croix River, and offers shuttle services to take visitors upriver for paddling trips that return to the state park. In the past, the concessionaire also rented bicycles, but discontinued that service because of low demand – many park visitors already bring their own bicycles. The concessionaire leases a portion of the state park nature store as an office location and a second building for storage. Canoe racks at the campground boat launch are used to stage and store canoes and kayaks. The concessionaire operates in the state park from early May to early September.

The concessionaire provides valuable additional recreational opportunities for park visitors, allowing visitors without their own watercraft to experience the river environments bordering the state park. The presence of the concessionaire also creates opportunities for the division to expand its interpretive services by partnering with the concessionaire on water-related education and skills-building programming.

Relationship with Conservation Corps Minnesota and Iowa

The Division of Parks and Trails has a long relationship with Conservation Corps Minnesota and Iowa (CCMI) at St. Croix State Park, dating to 1981. At one time a part of the Minnesota Department of Natural Resources, CCMI is now an independent non-profit organization. CCMI describes its mission as:



Canoe racks at the
campground boat launch

Conservation Corps provides hands-on environmental stewardship and service-learning opportunities to youth and young adults while accomplishing conservation, natural resource management and emergency response work.

Over the past 35 years, CCMI has played an important role at St. Croix, training and connecting young people to the outdoors, and accomplishing important natural resources work in the park and at other sites across the state. CCMI has operated a base camp at St. John's Landing Group Center in the park, using the facility for crew orientation, training sessions, and to lodge its crews.

The division supports the CCMI partnership by providing the use of the group center at a discounted lease rate and providing operations and maintenance support for the group center by park staff. This support enhances CCMI summer program's ability to work at state park and trail locations across the state.

CCMI's use of St. John's Landing Group Center and its crew's presence in the park continues to change over time. CCMI crew orientation and training sessions fully utilize the group center for several weeks of the summer. During the rest of the season, a small number of CCMI professional staff are the group center, while CCMI crews working the park routinely set up spike-camps in the park campground instead of the group center. The division is interested in working with CCMI to evaluate how to continue to support CCMI's program and partnership and at the same time accommodate more public use of the St. John's Landing Group Center.

Park Operations Recommendations

- Work with the canoe concessionaire to enhance the recreational and educational opportunities for park visitors. The division will work with the concessionaire to identify additional ways to coordinate interpretive programming, marketing and other efforts that encourage more visitors to experience the water resources surrounding the state park.
- Work with Conservation Corps Minnesota and Iowa to evaluate CCMI's ongoing facility needs. The division will work with CCMI to identify their facility needs to support their large-scale orientation and training; and their ongoing operational needs. Explore alternative ways to accommodate the DNR-CCMI partnership that may allow rental use of the St. John's Land Group Center by other groups. (see also **Recreational Use and Visitor Services**).

Plan Modification

Management plans document a partnership-based planning process and the recommended actions resulting from that process. While management plans are written to be flexible enough to accommodate changing natural resource conditions, evolving scientific understanding, changing funding considerations and emerging social considerations, periodic adaptations to these plans are necessary. As such, 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 is approved through 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
2. Is controversial among elected officials and boards, park user groups, the public, 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:

1. 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.
2. 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 may be established to assist with identifying issues and reviewing the proposed change.
5. Public notice and approval of the plan amendment follows the process for management plans as described in *Minnesota Statutes* Chapter 86A.09.

All plan amendments are 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 “areas” for development rather than specific locations. For the most part, plans are conceptual, not detail-oriented. Prior to development, proposed development sites are examined for the presence of protected Minnesota Natural Heritage Program elements and historical/archaeological artifacts. If any are found, the planned project may have to be revised to accommodate the protection of these resources.

Program Revisions

The resource management 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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Appendices

Appendix A – Management Plan Recommendations

Natural and Cultural Resource Recommendations

General

- Utilize the 2008 Unit Resource Management Plan and 2011 Restoration Addendum to guide resource management efforts. The division will continue to follow the directions for natural and cultural resource management set out in these documents, as supplemented with the recommendations in this management plan.
- Conduct resource assessments prior to any development or project. The division will utilize its resource assessment process to identify natural and cultural resources impacts and devise avoidance and mitigation strategies.
- Follow the directions established in the Department of Natural Resources' Operational Order 131 Climate Adaptation and Mitigation in Natural Resource Management. The division will utilize the department's operational order and its own division guidelines to enhance ecosystem resilience and reduce the negative impacts of climate change on its natural resources.
- Adjust resource management efforts and other park activities to protect rare plants and animals. The division will utilize information about the presence of rare plants and animals within the state park to evaluate division management and park visitor activities impacts, and devise changes to protect these species and critical habitat.

Vegetation management

- Continue native plant community restoration efforts in the state park, with a focus on pine barrens and oak savanna communities. The division will continue its restoration efforts for native communities throughout the park, with the continued efforts to restore the pine barrens and oak savanna communities in the blowdown-affected areas being a high priority. The division will utilize *Operational Order 124 Plant Materials Standards for Native Plant Community Restorations* and its own division-level guideline to identify local sourced materials appropriate for the state park.

- Monitor restored pine barrens and oak savanna communities. The division will conduct plant and animal inventories and other assessments to gauge the progress of the restoration efforts and overall health of these communities.
- Monitor the existing wet meadow communities in the state park. More research and field study is needed to understand ongoing changes and possible succession of the wet meadow communities within the state park.
- Continue tree planting projects as part of the blowdown recovery effort. The division will continue to plant trees to augment natural regeneration for native plant community restoration projects where necessary, and selectively plant trees around facilities and use areas to provide shade and other resource and visitor benefits.
- Naturalize existing plantation forest stands. The division will use thinning, prescribed fire and other techniques to transform formerly planted forest stands to a more natural appearance consistent with the surrounding forest areas in the park.
- Utilize timber harvest as a resource management tool. Timber harvest, including the possible use of a commercial timber operator, may be used to pursue resource management goals such as native plant community restorations, thinning plantation forest stands, or cleaning up following a future blowdown event.
- Follow department guidance on managing old growth forest stands within the state park. The department old growth forest guidelines and subsequent amendments provide direction for management activities in old growth forest stands. The focus of the department's guidance is to promote regeneration and maintain or restore the integrity of the old-growth communities.
- Manage invasive plant species within the state park. The division will utilize the directions in the department *Operational Order 113 Invasive Species* and its own division-level guideline to continue invasive plant species monitoring and management efforts.
- Conduct forest insect and disease monitoring and management activities. Currently, the division manages for oak wilt found within the state park. State park and division resource staff also monitor the park for evidence of emerald ash borer and other invasive insects or disease.

Wildlife and fisheries management

- Work with the Division of Fish and Wildlife on trout management. The division will continue to partner with the Division of Fish and Wildlife to support and propagate native brook trout, including the use of beaver trapping and dam removal to enhance trout habitat on select streams within the state park.
- Work with the Division of Fish and Wildlife on the use of the fish rearing pond for muskellunge production. The divisions will work together for the continued use of the pond as a muskellunge rearing site.
- Manage white tail deer to reduce impacts on native plant communities. The division utilizes special hunts to control the population of deer within the park to minimize the impacts of deer browsing on forest regeneration efforts and understory plant communities.
- Conduct research for select rare wildlife species in the state park. Research needs have been identified for several SGCN listed species. Research for species currently found in the state park such as Blanding's and Wood turtles will focus on ensuring preservation of these species there. Other research will involve assessing habitat to support repopulation by species not currently present in the state park such as Karner blue butterflies and sharp-tailed grouse. The division may seek partners to help conduct some research efforts.

Cultural resources management

- Manage vegetation in National Historic Landmark (NHL) resource areas to protect historic structures and maintain cultural landscapes. For areas with contributing elements to the NHL nomination, the division will use historic photos, plan sets and other resources to identify plantings and landscape features. Vegetation will be managed to protect structures, facilitate public use, and to retain the historic appearance of these sites. Vegetation management activities may include tree and shrub removal, pruning, mowing, and prescribed fire.
- Identify Civilian Conservation Corps-era forest plantations within the state park. Documenting the locations of plantings done by the CCC prior to plantation naturalization efforts will help the division preserve representative samples of the CCC's work and provide material for further interpretation.
- Complete the repair or replacement of the two remaining bunkhouses at St. John's Landing Group Center damaged during the blowdown event. Two bunkhouses in Village D have not been repaired and remain unusable. The division will work with the State Historic Preservation

Office (SHPO) to select the appropriate action and will document the original structures as part of the removal and replacement or repair project.

- Complete the repairs to one of the sanitation buildings at Head of the Rapids Group Center. The sanitation building in Village B is unusable because of water damage from a plumbing failure. The division will work with SHPO as part of determining how to conduct the building rehabilitation.
- Rehabilitate the Lake Clayton spillway and overflow structure to restore its historic appearance. Repairs to the spillway and overflow structure were necessary because of damage from multiple flood events. The repairs were conducted to stabilize the structure but have affected its historic appearance. The division will work with SHPO to develop a proposal for restoring a more historically appropriate appearance to the spillway and overflow structure.
- Pursue a programmatic agreement with SHPO for routine maintenance and repair of historic structures within the state park. The goal of a programmatic agreement would be to streamline the review and approval processes for general maintenance and repair work on historic structures in the state park. The division will work with SHPO on the development of the programmatic agreement and procedures for implementation.
- Reopen several historic trail routes and viewsheds related to the Recreation Demonstration Area (RDA) development. Two trail segments originally built as part of the RDA that have since been allowed to grow closed will be cleared and reopened for public use – one trail connecting St. John’s Landing Group Center to the Little Yellowbanks canoe landing, and a second trail connecting Norway Point Group Center to the St. Croix River (see also *Trails and Trail Use* recommendations in **Recreational Use and Visitor Services**).
- Document the early logging-related locations within the state park. The purpose of the research is to gain a better understand the logging history of the park and the effects of logging on the park’s landscape.

Interpretive Services Recommendations

Self-Guided Interpretive Opportunities

- Create interpretive materials about the blowdown event and division’s restoration efforts. Materials may include signage, an interpretive path, and videos that describe division efforts including timber removal, tree

plantings, prescribed fire, and other resource management and infrastructure repair projects.

- Create interpretive materials about the changing natural landscapes of the state park and the impacts on habitat and species present. The materials will highlight how the division's restoration work and resource management efforts, storm events, climate change, and other factors affect the type and quality of habitat in the park and their impacts on representative plant and animal species.
- Create interpretive materials about the buildings and other structures that are part of the National Historic Landmark. Topics for the materials include the history of the Civilian Conservation Corps and its role in developing St. Croix State Park, the Recreation Demonstration Area as a National Historic Landmark (NHL), the 164 historic elements associated with the NHL within the park, and how those building, structures, roads and trails are still used today.
- Develop an advanced geocaching course. The advanced course would provide a new and more challenging opportunity for park visitors. The course may replace the existing self-guided trail or be incorporated with the blowdown restoration interpretive path.
- Add interpretive signage at the fire tower area. Renovation of the fire tower and addition of hiking trails will draw more visitors to the area. Interpretive themes and content for the displays will be determined as part of the project development.
- Add interpretive signage along the bike trail between the campground and swimming beach. Possible interpretive content includes resource management (barrens and prairie restoration) and Civilian Conservation Corps history in the state park. Additional interpretive signage should be considered with the extension of the trail around Lake Clayton.
- Develop nature play areas that encourage free play activities and include interpretive themes and messages. Two opportunities identified during the planning process were a small scale Nature Play Space adjacent to the Visitor Center and a larger scale Nature Playscape to be designed as part of the Paint Rock Springs Campground renovation (See **Recreational Use and Visitor Services** recommendations). The division will utilize its *Nature Play Guidance* handbook to design nature play elements, and identify and evaluate additional locations for nature play areas.

Staff-guided Interpretive Opportunities

- Develop additional river-related interpretive programs and opportunities. The intent is to provide visitors with more opportunities

to experience the St Croix and Kettle Rivers while at the state park. Possible programs may include staff-guided canoeing programs for group center users. Programs will utilize the park's interpretive themes, and may include a "healthy watersheds" topic that draws on geology, biology, land use, and other factors underlying the rivers' health.

- Evaluate the need for additional interpretive programming and staffing during the winter season. Currently the state park has limited interpretive resources available to offer programs in the winter. The direction set out in the management plan is to promote more winter use at St. Croix State Park. Both in response to more visitation and as part of the efforts to increase winter use at the park, the division will need to consider additional interpretive resources for the state park during the winter season.
- Pursue relationships with volunteers to offer additional interpretive opportunities to state park visitors. Park staff will work with members of the public to develop and host interpretive programs in line with the state park's interpretive themes and the division's outreach goals.

Interpretive Services Facility Developments and Improvements

- Renovate the interpretive elements in the Visitor Center. The renovation would include updating the interpretive displays and a redesign of the layout to be less staff-dependent. The renovation may also include interpretive signage about the St. Croix Lodge – the building that houses the visitor center is a contributing element to the NHL.
- Renovate the Amphitheater. Changes to the facility will include accessibility improvements and utilities improvements (upgraded electrical systems, projection system, etc.)
- Integrate interpretive features into the development of the Archery Range. The design of the archery range should include features to support use of the facility for interpretive and skills-building programs such as benches, storage for equipment, shade, and separation and screening from nearby activity areas.

Partnerships and Outreach

- Pursue outreach and educational efforts with school districts and community groups. Strong ties with school districts and community groups will help build awareness and participation in interpretive programs at the state park.
- Investigate partnerships for creating and providing interpretive programming. The division will seek partnerships with institutions and

groups with an outdoor education interest – such as National Park Service, Minnesota Historical Society, Burnett County Historical Society, and Audubon Center of the North Woods – to collaborate on designing, supporting and providing interpretive opportunities to state park visitors and visitors throughout the area.

- Work with other divisions within DNR to develop additional education and outreach efforts that can be offered at the state park. Possible topics include forest management, river fisheries, and nearby Scientific and Natural Areas.
- Work with DNR Division of Fish and Wildlife to develop and offer archery skills programming. Development of an archery range (see Recreational Use & Visitor Services) will provide a location to offer more programming than possible at other state parks. The divisions will work together to support programs that utilize the range to promote archery for recreation as well as for hunter education. Additional interpretive resources would need to be devoted to support this activity.

Recreational Use and Visitor Services Recommendations

Overnight Use Facilities

- Renovate the Paint Rock Springs Campground to provide more diverse camping experiences. The campground would be redesigned with a new sanitation building and larger use areas and spurs that can accommodate larger camping units, including some pull-through sites. More space between campsites would provide greater privacy than in existing campsites. A cluster of camper cabins and/or wall tents would be integrated into the layout to be available to rent individually or as a group. The overall design will likely include fewer campsites than the current layout. A nature play space should be considered as part of the campground redesign.
- Redesign layout of the existing group campsites at the All Season Trail Center. The new layout would provide additional spacing and screening between sites, while still accommodating groups who wish to reserve and use all the sites together.
- Consider development of a rustic group camp. The group camp would be designed to accommodate smaller groups (25-50 people) than the state park's existing group facilities and located away from other use areas for privacy. Adding a rustic group camp would increase the diversity of camping opportunities in the park. Facilities would include a tent camping area, picnic shelter and vault toilets. Possible sites for the rustic group camp include the Big Eddy area.

- Develop additional hike-in campsites. The existing hike-in sites are well-used, and the large size of the park offers opportunities to create additional remote sites along the existing trail network. The additional hike-in sites would increase the diversity of camping opportunities in the park and help mitigate the potential loss of campsites in the Paint Rock Springs Campground renovation.
- Develop smaller corrals at the Horse campground. Smaller corrals serving a group of campsites could allow visitors to corral their horses closer to their sites than using the existing large corral. As an alternative or in addition to the smaller corrals, the division could clear areas for visitors to bring and set up temporary corrals.
- Open St. John's Landing Group Center to more public use. The division will coordinate with Conservation Corps Minnesota and Iowa to maintain CCMI's presence in the park and use of St. John's Landing, while opening the group center for more public use. Some CCMI crew and staff lodging and equipment storage may be relocated elsewhere in the park. Additional building renovation and repairs may be necessary to open the group center to public use – including repair of 2 bunkhouses damaged during the 2011 blowdown. (see also **Park Operations**).

Day Use Facilities and Areas

- Develop additional day use amenities at Fire Tower area. Improvements to this area will include interpretive and orientation signage, picnic tables, a vault toilet and hiking trail loops (see Trails & Trail Uses).
- Create additional trailhead parking for the trails along the Kettle River. The available parking areas at Kettle River Highbanks and Kettle River Overlook are relatively small. A new trailhead parking area will be developed in conjunction with construction of the new trail segment that connects with the park road between the two existing trailhead areas. Additional parking can be created east of the park road just north of the existing Kettle River Highbanks trailhead.
- Improve access for fishing along Hay and Bear Creeks. Both creeks support populations of trout and other fish species. Hay Creek is accessible from the Matthew Lourey State Trail north of Lake Clayton and the main park road – formalizing paths from the trail to the river edge and benches at those locations will improve fishing access and protect other areas along the trail and riverbank. Fishing sites along Bear Creek can be accessed from the Bear Creek Trail – creating a path

along Bear Creek that links to the existing trail will improve access for fishing.

- Develop an archery range. The facility should be designed to host skill-building interpretive programs (including Archery in the Parks) as well as for individual use by park visitors. The proposed site for the archery range is north of the All Season Trail Center to take advantage of the existing parking area and amenities of the trail center (restrooms, shelter and gathering space).

Trails & Trail Uses

- Develop additional segments of hiking trail to create shorter loops and improve hiking experiences for park visitors. New trail segments in the west side of the park near the Kettle River will connect existing trails to create shorter loops. Trail segments in the area currently on park roads will be relocated away from the road edge to improve the hiking experience. At the fire tower, two new trail loops will be created (utilizing an existing segment of the Matthew Lourey State Trail) as part of the day use area improvements. Former hiking trails that connected the St. John's Landing Group Center with the Little Yellowbanks water access site will be reestablished as part of the improvements with the planned increased public use of the group center. The total distance of these additional hiking trails is 6.3 miles.
- Extend the existing paved bike trail to form a loop around Lake Clayton. The loop would increase the overall miles of paved trail and create a new experience for park visitors. The trail will be sited to parallel the lake shore and provide scenic views of the lake. Construction of the trail will also be an opportunity to make ADA improvements with connections to buildings, parking area, and other facilities in the Lake Clayton Beach Area. The loop would be approximately 2.4 miles. Final layout of the loop would be determined during design.
- Add a bike lane to the shoulder of the park road between the Park Headquarters Area and the Campground Area. A significant number of park visitors bike along this section of park road. A paved and striped bike lane would improve safety for bicyclists. It would also create a loop from the campground with a connection to the existing bicycle trail near the Park Headquarters. The distance of the bike lane would be approximately 2.2 miles.
- Promote the use of park roads as additional bicycling opportunities. Other than the main park entrance road to the campground, the roads within the state park have low traffic volume and are suitable for bicycle riding - especially west of Lake Clayton Beach Area. The division may install "share the road" or similar signage to raise awareness of vehicle drivers to expect bicyclists on the roads.

- Open selected trail segments to winter fat biking. For trail segments currently used for cross-country skiing, a treadway for biking would be packed alongside the groomed ski track. The short loop of trail segments west of Norway Point currently used for snowmobiling would be converted to winter fat biking, with snowmobiles still able to use the larger loop formed by the Bear Creek Trail and Matthew Lourey State Trail. The change proposed will open 17 miles for winter fat biking in the park. Access points for fat biking would be at the Visitor Center, the All Season Trail Center, and the guesthouses at Norway Point.
- Develop additional horseback riding opportunities. The majority of horse trails within the state park are shared use trails – serving as snowmobile trails in the winter. These trails tend to be wider than needed for horseback riding to accommodate snowmobile grooming equipment in the winter. Horse trail users have expressed an interest in narrower trails and loops to create more variety and to improve the riding experience. The changes proposed would add 4.2 miles of horse trail not shared with winter snowmobile use. These new trail segments are primarily existing firebreaks already kept open for resource management activities. These trails would also be open to hiking.

Park Boundary Recommendations

Acquisitions & Boundary Modifications

- Continue to pursue acquisition of private lands within the park statutory boundary. DNR purchases land for state parks from willing sellers within established statutory boundaries. The division will work with the owners of the private lands within the park statutory boundary to purchase inholdings as owners are ready to sell their property.
- Propose modification of the park statutory boundary to include an additional 64.41 acres. The division was approached by a landowner to include their property within the state park. The parcel includes frontage on State Highway 48 and is surrounded by state-owned park property on 3 sides. State ownership of the parcel would help create a clearly definable park boundary (Highway 48) in this area and provide opportunities for natural resource restoration and management.
- Propose modification of the park statutory boundary to delete 20.16 acres. Two privately owned parcels are north of State Highway 48 and largely open water and road right-of-way. The parcels do not have any important natural or cultural resource value for the state park or potential for recreational development.

Monitoring

- Monitor private gravel mining operation near northeastern edge of the state park. If gravel operations cease, the division should consider discussing with the landowners their future plans for the property and the possibility of including some of the land within the park statutory boundary.
- Work with Pine County concerning tax forfeit lands adjacent to the state park boundary. Two tax forfeit parcels abut state-owned park land in the northeastern corner of the state park. Pine County is currently utilizing a portion of the land for gravel mining. The division will work with Pine County to evaluate possible state trail routing options through these parcels, cooperative resource management activities, and the possible future inclusion of the parcels within the park statutory boundary.

Park Operations Recommendations

- Work with the canoe concessionaire to enhance the recreational and educational opportunities for park visitors. The division will work with the concessionaire to identify additional ways to coordinate interpretive programming, marketing and other efforts that encourage more visitors to experience the water resources surrounding the state park.
- Work with Conservation Corps Minnesota and Iowa to evaluate CCMI's ongoing facility needs. The division will work with CCMI to identify their facility needs to support their large-scale orientation and training; and their ongoing operational needs. Explore alternative ways to accommodate the DNR-CCMI partnership that may allow rental use of the St. Joh's Land Group Center by other groups. (see also **Recreational Use and Visitor Services**).

Appendix B – Public Input and Review Summary

There were multiple opportunities for public input and review during the development of the St. Croix State Park Management Plan. Comments and input from the public were utilized throughout the planning process to help identify issues and evaluate potential management actions. The division used news releases, the DNR websites, the Parks and Trails Facebook page, and other media coverage to communicate about the planning process and opportunities for the public to participate.

In addition to the formal input or review opportunities highlighted below, the department received comments from the public throughout the planning process.

Plan Initiation

Several methods were used to communicate with the public and collect input at the beginning stages of the planning process. An introductory open house was held at the St. Croix Lodge Visitor Center in St. Croix State Park on June 16, 2015. Information about the park was shared with the public and comments were collected about future resource management activities and recreation opportunities.

An online questionnaire was also established to collect comments about the state park. The questionnaire remained open during the planning process so individuals could provide comments or submit questions. Seventy responses to the questionnaire were received. The questionnaire responses reflected the wide range of activities available at the state park – many comments focused on activities they enjoy at the park and suggestions for improving them (more hiking or horseback riding trails, add more hike-in camping opportunities, etc.)

Citizen Advisory Committee (CAC)

A citizen advisory committee provided input during the planning process. The committee was made up of members of local communities, state park visitors, and interested citizens. The committee met four times during the planning process:

First CAC meeting – July 13 201

Agenda items included an overview of the management plan process, an overview of St. Croix State Park, discussion of the Minnesota State Parks and Trails System Plan and St. Croix's role as a *Destination State Park*, and Natural and Cultural resource issues and directions. Division staff led the committee through an exercise to help identify overall themes for St. Croix

State Park as a *Destination State Park*, the strengths of the park, and future opportunities. The committee also reviewed natural and cultural resource issues and proposals, expressing support for the park's natural resource restoration efforts and historic building maintenance work.

Second CAC meeting - August 15, 2012

Agenda items included a recap of the first meeting and discussion of the National Historic Landmark, Interpretive Services issues and directions, and Recreational Use and Visitor Services – overnight facilities issues and directions. The committee encouraged the division to consider developing interpretive programs focused on timber harvest, habitat impacts of the blowdown and restoration efforts, and water quality. Members of the committee expressed concern about the possible loss of campsites as part of the renovation of Paint Rock Springs Campground.

Third CAC meeting – September 18, 2016

Agenda items included a recap of the second meeting and discussion about potential Horse Campground improvements, Recreational Use and Visitor Services – day use facilities issues and directions, Recreational Use and Visitor Services – trail use issues and directions, and Park Boundaries. The committee expressed support for the proposed trail improvements for hiking, biking and horseback riding, and for the addition of winter fat biking as a trail use. The committee strongly opposed the possibility of winter ATV use within the state park.

Fourth CAC meeting – October 27, 2016

The committee reviewed a draft of the management plan, focusing on the recommendations within each section of the plan. Among the topics discussed by committee about the draft plan: including American Indian and Euro-American settlement history in park interpretive programs, making accessibility improvements to park facilities, and ways to minimize or replace the loss of campsites with the Paint Rock Springs Campground renovation.

Campground Interviews

Another effort to collect input from park visitors for the management plan involved interviewing campers staying in the park campgrounds. Division staff conducted “campground walk-arounds” - asking campers at their sites if they would like to provide input for the management plan. Short interviews were conducted with campers who agreed and all campers contacted were encouraged to visit the DNR website for more information about the planning process and to fill out the online questionnaire. Approximately 20 campers were interviewed.

Responses from the campers interviewed focused largely on their experiences as campers – quality and condition of the campgrounds, ability to get a

reservation, and the reservation system and reservation process. Campers were also asked about their experience and interest in interpretive services. Responses included the topics they would be interested in, as well as how programs were scheduled to make them more convenient for campers to attend.

Public Review

The draft management was released for public review and comment on May 25, 2017. A 30-day public review period, including an open house, is required by state statute before a management plan is adopted. The draft plan was available online at the DNR website, with copies also available for review at St. Croix State Park and the DNR Regional Headquarters in Grand Rapids.

An open house was held on June 22, 2017 at the St. Croix Lodge Visitor Center in St. Croix State Park. Public comments were accepted via email and mail, as well as in person at the open house.

Responses received during the comment period were positive, including support for continued barrens and savanna restoration and other resource management activities, interest in more programs and information about the historic structures and other cultural resources in the park, support for proposed facility and trail improvements and questions about when the proposed changes will be implemented. The comments received were considered during the preparation of the final version of the management plan.

Appendix C – Ecological Systems and Native Plant Community Type Descriptions

Below are the descriptions of the system-level native plant communities that have been identified in St. Croix State Park and the classes and types within each system. The descriptions are from *Field Guide to the Native Plant Communities of Minnesota: the Laurentian Mixed Forest Province (MnDNR 2003)*.

Acid Peatland (AP) System

AP system is characterized by conifer-, low-shrub-, or graminoid-dominated communities that develop in association with peat-forming *Sphagnum*. AP communities are acidic (pH < 5.5), extremely low in nutrients, and have hydrological inputs dominated by precipitation rather than groundwater.

Native Plant Community Classes and Types within the AP System:

- APn80a2 – Northern Spruce Bog: Black Spruce Bog Semi-Treed Subtype
- APn81a – Northern poor Conifer Swamp: Poor Black Spruce Swamp
- APn81b2 – Northern Poor Conifer Swamp: Poor Tamarack Spruce Swamp Tamarack Subtype
- APn90a – Northern open Bog: Low Shrub Bog
- APn91a – Northern Poor Fen: Low Shrub Poor Fen

Fire-dependent Forest/Woodland (FD) System

Fire-dependent Forest/Woodland communities are common across the Laurentian Mixed Forest (LMF) Province, even after nearly 100 years of wildfire suppression. These communities are strongly influenced by wildfires. Many plants that occur in FD communities have seeds or vegetative structures designed to survive fire or are opportunists that can take advantage of short periods when nutrients are relatively abundant and light levels are high.

Along the St. Croix River Valley, the fire-regime of the mid-1800s appears to have been strongly influenced by humans. The St. Croix River Valley is also the only area in the LMF Province where fire-dependent vegetation is dominated mostly by deciduous trees rather than pines. Here, the estimated rotation of stand-replacing fires was about 80 years. The rotation of surface fires in the St. Croix River Valley was very short, just 10 years, and the frequency of all fires is estimated to be nine years. (MNDNR 2003)

Native Plant Community Classes and Types within the FD System:

- FDc25 – Central Dry Oak-Aspen (Pine) Woodland
- FDc25a – Central Dry Oak-Aspen (Pine) Woodland: Jack Pine – Oak Woodland

- FDc25b – Central Dry Oak-Aspen (Pine) Woodland: Oak – Aspen Woodland

Floodplain Forest (FF) System

Floodplain Forest communities are present on occasionally or annually flooded sites on terraces and floodplains of streams and rivers. They are dominated by deciduous trees tolerant of saturated soils, prolonged inundation, and frequent erosion or deposition of sediment. The understory is often open, with few shrubs or saplings.

Native Plant Community Classes and Types within the FF System:

- FFn57a – Northern Terrace Forest: Black Ash – Silver maple Terrace Forest
- FFn67a – Silver Maple – (Sensitive Fern) Floodplain Forest

Forested Rich Peatland (FP) System

Communities are conifer- or tall shrub-dominated wetlands on deep [>15 in (40 cm)], actively forming peat. They are characterized by a mossy ground layer, often with abundant shrubs and forbs. The cool climate, abundant precipitation, and presence of poorly drained basins and glacial lake plains result in extensive peat development in the region.

Native Plant Community Classes and Types within the FP System:

- FPn72a – Northern Rich Tamarack Swamp (Eastern Basin): Rich Tamarack Swamp (Eastcentral)
- FPn73a – Northern Alder Swamp: Alder (Maple – Loosestrife) Swamp

Marsh (MR) System

Communities in the MR System are tall forb- and graminoid-dominated wetlands that have standing (or slow flowing) water present through most of the growing season. The maximum water depth is typically sustained at 20-60 inches (50-150 cm) but may be higher, especially in marshes where the vegetation is rooted in floating mats.

Native Plant Community Classes and Types within the MR System:

- MRn83 – Northern Mixed Cattail Marsh: Northern Mixed Cattail Marsh

Mesic Hardwood Forest (MH) System

Mesic Hardwood Forest system communities are found on upland sites with moist soils, usually in settings protected from fire. They are characterized by continuous, often dense, canopies of deciduous trees, including sugar maple, basswood, paper birch, and northern red oak, and understories with shade-adapted shrubs and herbaceous species. Plants in MH communities have access to predictable supplies of water and nutrients, but are often limited by light because of the dense forest canopy.

Native Plant Community Classes and Types within the MH System:

- CMH_CX – Central Dry-Mesic Wet-Mesic Hardwood Complex
- MHc26 – Central Dry-Mesic Oak-Aspen Forest
- MHc36 – Central Mesic Hardwood Forest (Eastern)
- MHc47 – Central Wet-Mesic Hardwood Forest
- MHc47a – Central Wet-Mesic Hardwood Forest: Basswood – Black Ash Forest
- MHn44 – Northern Wet-Mesic Boreal Hardwood-Conifer Forest
- MHn46 – Northern Wet-Mesic Hardwood Forest

River Shore (RV) System

River Shore communities occur along the shorelines of rivers and streams in the riparian zone between annual low water level and the upper limit of impacts from currents and ice scouring. RV communities are inundated annually during spring flooding and following heavy rains. Most RV communities are sparsely vegetated due to the absence of well-developed soils and frequent disturbance.

Native Plant Community Classes and Types within the RV System:

- RVx32a – Sand/Gravel/Cobble River Shore: Willow Sandbar Shrubland (River)

Upland Prairie (UP) System

Upland Prairie communities found within the state park fall in the Southern Dry Savanna class. These are sparsely treed communities with grass-dominated herbaceous ground layers on nearly level to steeply sloping sites with droughty soils. Moderate growing season moisture deficits occur during most years, and severe moisture deficits are frequent, especially during periodic regional droughts. Trees are open grown, typically small and gnarled. The savanna communities form where fire recurs frequently and intensely enough to prevent trees and shrubs from dominating and shading out sun-loving herbaceous plants, but where frequency and severity are low enough to allow fire-tolerant trees to become established and sometimes reach maturity. Bur oak and northern pin oak are the principal trees on savannas in SCSP.

Native Plant Community Classes and Types within the UP System:

- Ups14a1 – Southern Dry Savanna: Dry Barrens Oak Savanna (Southern) Jack Pine Subtype
- Ups14a2 – Southern Dry Savanna: Dry Barrens Oak Savanna (Southern) Oak Subtype

Wet Meadow/Carr (WM) System

Communities are graminoid- or shrub-dominated wetlands that are subjected annually to moderate inundation following spring thaw and heavy rains and to periodic drawdowns during the summer. Peak water levels are

high and persistent enough to prevent trees (and often shrubs) from becoming established. However, there may be little or no standing water present during much of the growing season.

Native Plant Community Classes and Types within the WM System:

- WMn82a – Northern Wet Meadow/Carr: Willow – Dogwood Shrub Swamp
- WMn82b – Northern Wet Meadow/Carr: Sedge Meadow

Wet Forest (WF) System

Wet Forest System communities occur commonly in narrow zones along the margins of lakes, rivers, and peatlands; they also occur in shallow depressions or other settings where the groundwater table is almost always within reach of plant roots but does not remain above the mineral soil surface for long periods during the growing season. WF communities are dominated mostly by black ash or white cedar, with understories characterized by patches of shrubs, mosses and upland forest herbaceous species on raised hummocks, and sedges and wetland forbs in wet or mucky hollows.

Native Plant Community Classes and Types within the WF System:

- WFn53b – Northern Wet Cedar Forest: Lowland White Cedar Forest (Northern)
- WFn55b – Northern Wet Ash Swamp: Black Ash – Yellow Birch – Red Maple – Basswood Swamp (Eastcentral)
- WFn64b – Northern Very Wet Ash Swamp: Black Ash – Yellow Birch – Red Maple – Alder Swamp (Eastcentral)
- WFn74a – Northern Alder Swamp: Alder – (Red Currant – Meadow-Rue) Swamp
- WFs57a – Southern Wet Ash Swamp: Black Ash – (Red Maple) Seepage Swamp

Appendix D – State-listed Protected Species Documented in St. Croix State Park

Rare Plants

| Scientific Name | Common Name | MN Protection Status |
|--|--------------------------|----------------------|
| <i>Botrychium rugulosum</i> | St. Lawrence Grapefern | SPC |
| <i>Cirsium pumilum</i> var. <i>hillii</i> | Hill's Thistle | SPC |
| <i>Hydrocotyle americana</i> | American Water-pennywort | SPC |
| <i>Lycopus virginicus</i> | Virginia Water Horehound | WL |
| <i>Lysimachia quadrifolia</i> | Whorled Loosestrife | SPC |
| <i>Malaxis monophyllos</i> var. <i>brachypoda</i> | White Adder's-mouth | SPC |
| <i>Najas gracillima</i> | Slender Naiad | SPC |
| <i>Panax quinquefolius</i> | American Ginseng | SPC |
| <i>Poa paludigena</i> | Bog Bluegrass | THR |
| <i>Polygonum arifolium</i> | Halberd-leaved Tearthumb | WL |
| <i>Potamogeton bicupulatus</i> | Snailseed Pondweed | END |
| <i>Torreyochloa pallida</i> | Torrey's Manna-grass | SPC |
| <i>Waldsteinia fragarioides</i> var. <i>fragarioides</i> | Barren Strawberry | SPC |

For more information about Minnesota's List of Endangered, Threatened and Special Concern Species, see the MNDNR website.

Rare Animals

| Scientific Name | Common Name | MN Protection Status |
|------------------------------------|-------------------------------|----------------------|
| Birds | | |
| <i>Accipiter gentilis</i> | Northern Goshawk | SPC |
| <i>Buteo lineatus</i> | Red-shouldered Hawk | SPC |
| <i>Haliaeetus leucocephalus</i> | Bald Eagle | WL |
| <i>Parkesia motacilla</i> | Louisiana Waterthrush | SPC |
| <i>Setophaga cerulea</i> | Cerulean Warbler | SPC |
| Fish | | |
| <i>Acipenser fulvescens</i> | Lake Sturgeon | SPC |
| <i>Cycleptus elongatus</i> | Blue Sucker | SPC |
| <i>Ichthyomyzon gagei</i> | Southern Brook Lamprey | SPC |
| <i>Percina evides</i> | Gilt Darter | SPC |
| Mussels | | |
| <i>Actinonaias ligamentina</i> | Mucket | THR |
| <i>Alasmodonta marginata</i> | Elktoe | THR |
| <i>Cyclonaias tuberculata</i> | Purple Wartyback | END |
| <i>Elliptio dilatata</i> | Spike | THR |
| <i>Lasmigona compressa</i> | Creek Heelsplitter | SPC |
| <i>Lasmigona costata</i> | Fluted-shell | THR |
| <i>Ligumia recta</i> | Black Sandshell | WL |
| <i>Obovaria olivaria</i> | Hickorynut | WL |
| <i>Pleurobema sintoxia</i> | Round Pigtoe | SPC |
| Tiger Beetles | | |
| <i>Cicindela patruela patruela</i> | Northern Barrens Tiger Beetle | SPC |
| Dragonflies | | |
| <i>Ophiogomphus susbehcha</i> | St. Croix Snaketail | THR |
| Reptiles | | |
| <i>Glyptemys insculpta</i> | Wood Turtle | THR |
| <i>Emys blandingii</i> | Blanding's Turtle | THR |
| <i>Heterodon platirhinos</i> | Eastern Hognose Snake | WL |
| <i>Pituophis catenifer</i> | Gopher Snake | SPC |

Protection Status Definitions

END – endangered

A species is considered **endangered** if the species is threatened with extinction throughout all or a significant portion of its range within Minnesota.

THR – threatened

A species is considered **threatened** if the species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range within Minnesota.

SPC – species of special concern

A species is considered a **species of special concern** if, although the species is not endangered or threatened, it is extremely uncommon in Minnesota, or has unique or highly specific habitat requirements and deserves careful monitoring of its status. Species on the periphery of their range that are not listed as threatened may be included in this category along with those species that were once threatened or endangered but now have increased or protected, stable populations.

WL – watch list

A species that is on the **watch list** does not have any protection status, but is tracked by the department to assess the population's stability and overall health.