

# Lake Bronson State Park

## Management Plan Amendment

### Horse Trails and Staging Area



**Minnesota Department of Natural Resources**

**Division of Parks and Trails**

**July 2015**



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

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# Minnesota Department of Natural Resources

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## Division of Parks and Trails Approval of Lake Bronson State Park Management Plan Amendment

The Division of Parks and Trails develops plan amendments to update management plans to reflect the current development and operational proposals for a state park or state recreation area. The plan amendment process assists in formulating, evaluating and documenting these proposals.

This amendment to the 1978 Lake Bronson State Park Management Plan addresses the addition of a new use, horseback riding, and development of a horse trail system using existing park trails. A horse trailer parking and staging area will be developed in an existing use area. Impacts of this new use to current park users and natural and cultural resources are addressed.

The amendment received input and feedback both within the Department of Natural Resources and from the public. A 30-day public review period was conducted and an open house was held near the park. The amendment has been reviewed and approved by the Northwest Regional Management Team.

*Erika Rol Rivers*

Erika Rivers, Director  
Division of Parks and Trails

*7/27/2015*

Date



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# Purpose and Summary

The purpose of this management plan amendment is to allow for a new use within Lake Bronson State Park. *Minnesota Statutes*, section 86A.09, subd. 4 requires that the construction of facilities and other development conform to the management plan. This amendment will bring the Lake Bronson State Park Management Plan (1978) into accordance with current development proposals for the park and allow horseback riding.

Recommendations include:

- Open 8 miles of existing trails to horseback riding.
- Develop a staging area for riders at the existing canoe and backpack campsite parking lot.
- Allow horse camping in the group camp by special use permit.
- Consider development and provision of additional horseback riding facilities based on demand, funding, and implementation of the Division of Parks and Trails System Plan.

The 2015 Division of Parks and Trails System Plan designated Lake Bronson State Park as a “Classic” park within the “Core” parks category. The vision for these parks is to provide a diversity of quality recreational experiences typical to what visitors have come to expect across the system.

Lake Bronson State Park provides important recreational activities to local users as well as visitors from neighboring states and Canada. The park has the only lake in the county, many native plant communities of statewide significance, and several historic structures. Horseback riding is expected to add to Lake Bronson State Park’s diversity of experiences without having a significant impact to existing park uses, operations and resources.

## Background

### Park Resources

Lake Bronson State Park is located in Kittson County about 20 miles east of the Red River of the North. The park is one mile east of State Highway 59 and the City of Lake Bronson and is less than 20 miles south of the Canadian border. Lake Bronson State Park contains about 4,300 acres of prairie, oak savanna, and aspen forest which straddle a reservoir on the South Branch Two Rivers. This habitat is important for a variety of wildlife including deer, moose, black bear, elk and sharp-tailed grouse.

The landscape in Lake Bronson State Park was formed as a result of the forces of Glacial Lake Agassiz, which covered the northwest corner of

Minnesota as recently as 8,000 years ago. As the ice blockage to the north melted, Lake Agassiz began to retreat in stages, creating a series of gravel ridges along a generally flat terrain. Streams in the area usually meander quietly except when passing over a former beach ridge where rapids may exist. In time, eroded notches form in the beach ridges. One of these notches was used as the site for the dam which formed Lake Bronson on the South Branch Two Rivers.

### **Park History**

The origin of Lake Bronson State Park can be attributed primarily to the decision to construct a dam on the South Branch Two Rivers. The towns of Hallock and Bronson advocated for creation of a reservoir to alleviate a water shortage in the 1930s. Work on the dam began in 1936 and construction of the combination observation and water tower, beach and bathhouse followed. These structures were completed by the Works Progress Administration (WPA) and they are part of the Lake Bronson State Park WPA/Rustic Style Historic District, listed on the National Register of Historic Places.

The park was briefly managed by the county before being authorized as a state park in 1937. Subsequent state park developments include the campgrounds, manager's residence, and boat launch.

### **Park Facilities**

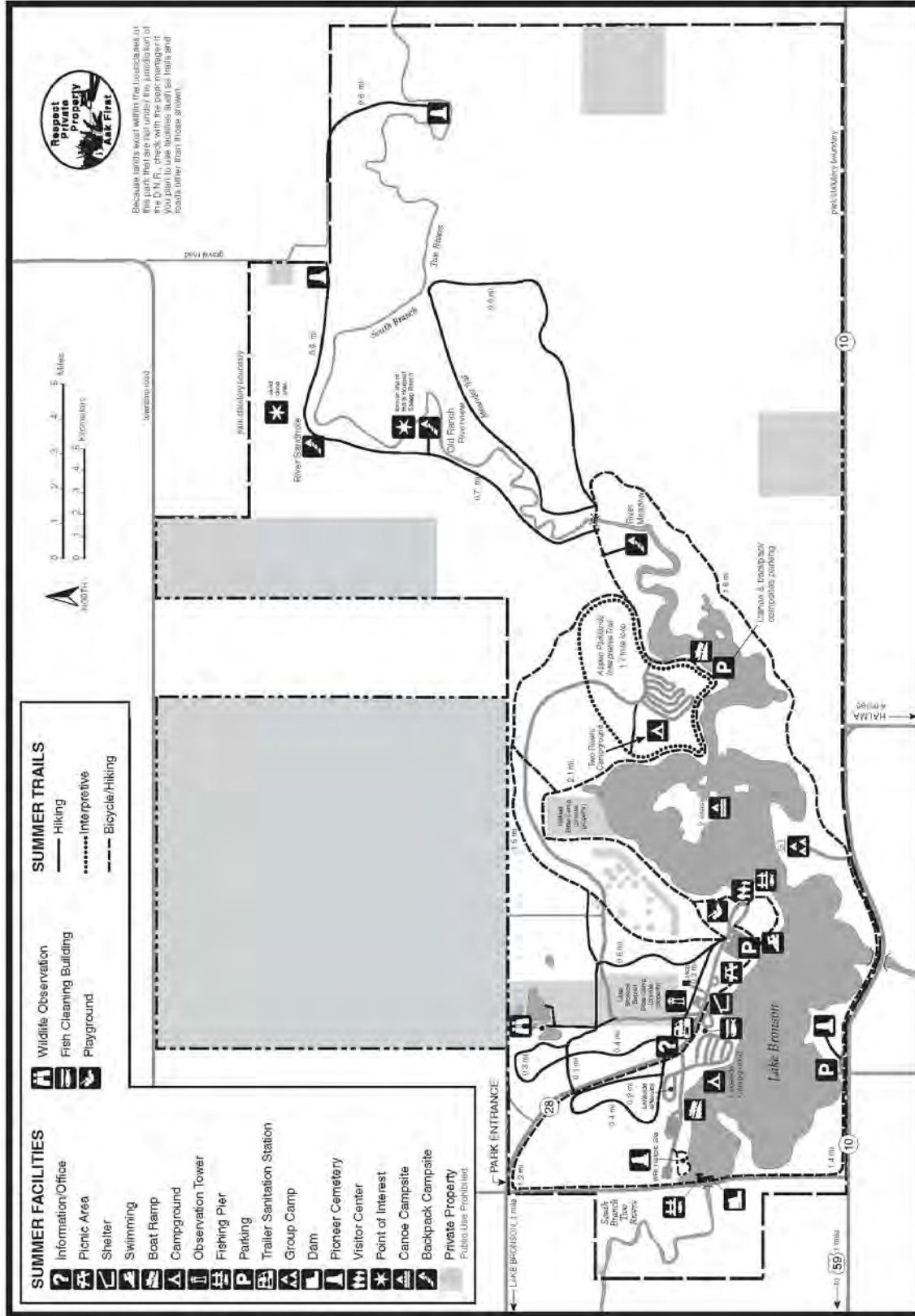
Current state park facilities include the visitor center, picnic area and beach, observation tower, Two Rivers campground, Lakeside campground, primitive group camp, dam, boat launch, and carry-in access and trailhead. Current trails include 14 miles for summer hiking, seven miles for biking, seven miles for cross country skiing, and three miles for snowmobiling. Additional facilities, points of interest and trails are shown in Figure 1.

The addition of horse trails has the potential to attract new park users. The Kittson County Saddle Club has held a riding event at the park the past several years, allowed by special use permit. Designation of a horse trail system would allow local riders to use the park throughout the warm seasons.



Design and construction of the dam in the 1930s required expertise due to 100' of quicksand that was found at the site.

**Figure 1: Summer Map**



# Description

The following actions and improvements are proposed in this amendment:

## Trails

Approximately eight miles of trails will be opened to horseback riders, as depicted in Figure 2. The initial trail designation includes the snowmobile trail along the northern boundary of the state park, with two loops around the open prairie, and a spur to the trailhead. Additionally, the Meander Trail and the trail leading to the group camp will be designated for horseback riding. Trail development may include clearing and physical improvements to trails to minimize erosion.

These trails will provide riders connections to nearby county and township roads for additional riding opportunities. The north boundary trail will connect to County State Aid Highway 28 and 375th Avenue. The trail to the group camp connects to County State Aid Highway 10, providing the potential to ride on several township roads to the south.

Local user groups desire a trail connection to 240th Street, northeast of the state park, and the DNR has three options for completing this connection. First, the horse trail could follow the existing sand dunes trail past the pioneer cemetery before turning north. Second, a new trail could be developed if additional park land is acquired in this area. Third, the DNR could acquire an easement from private property owners to connect the park's trail system to 240th Street.

DNR will evaluate the level of use and impacts associated with the new use to determine the need for future trail development. Additional horse trails may be developed if level of use justifies additional investment or if new park land is acquired.

## Trailhead

A horse trailer parking and staging area will be developed within the existing parking lot for canoe and backpack campsites. This staging area will include a manure bunker and hitching post. The existing parking area is expected to provide sufficient space for all user groups. A kiosk or panel sign will be placed in the area to provide information and orientation to riders and other park users. Potable water could be provided to the area by extending a water line from the Two Rivers campground. Portable toilets could be placed at this location as well.

DNR will consider development of a new trailhead if levels of use are high or if the trail system is expanded. A new trailhead could provide a higher level



The majority of horse trails will be located on existing trails like this one located northeast of the Two Rivers Campground.



The existing parking lot for canoe and backpack campsites will provide sufficient space to accommodate a horse trail staging area.



Example of a manure bunker (Maplewood State Park).



of service, including a sanitation building and potable water, and would be capable of accommodating a larger number of users.

## Camping

Horse camping will continue to occur in the group camp by special use permit and could be expanded in the future. Expansion would include the length of season and number of days the group camp is available for horse campers. Demand for horse camping is expected to be greatest in the spring and fall. Hitching posts and manure bunkers would be installed to accommodate regular use by horse campers. Traditional users and horse campers will not share occupancy of the group camp at the same time.

The DNR will evaluate expanded horse camping options further if demand for this service warrants it. A long-term option for providing a designated facility for horse camping is rehabilitation of the Two Rivers Campground. Campground rehabilitation to provide more electric and pull-through sites would also provide an opportunity to redesign a portion of the campground to accommodate horseback riders. Rehabilitation would likely result in a reduced number of campsites.

## Natural Resources Impacts

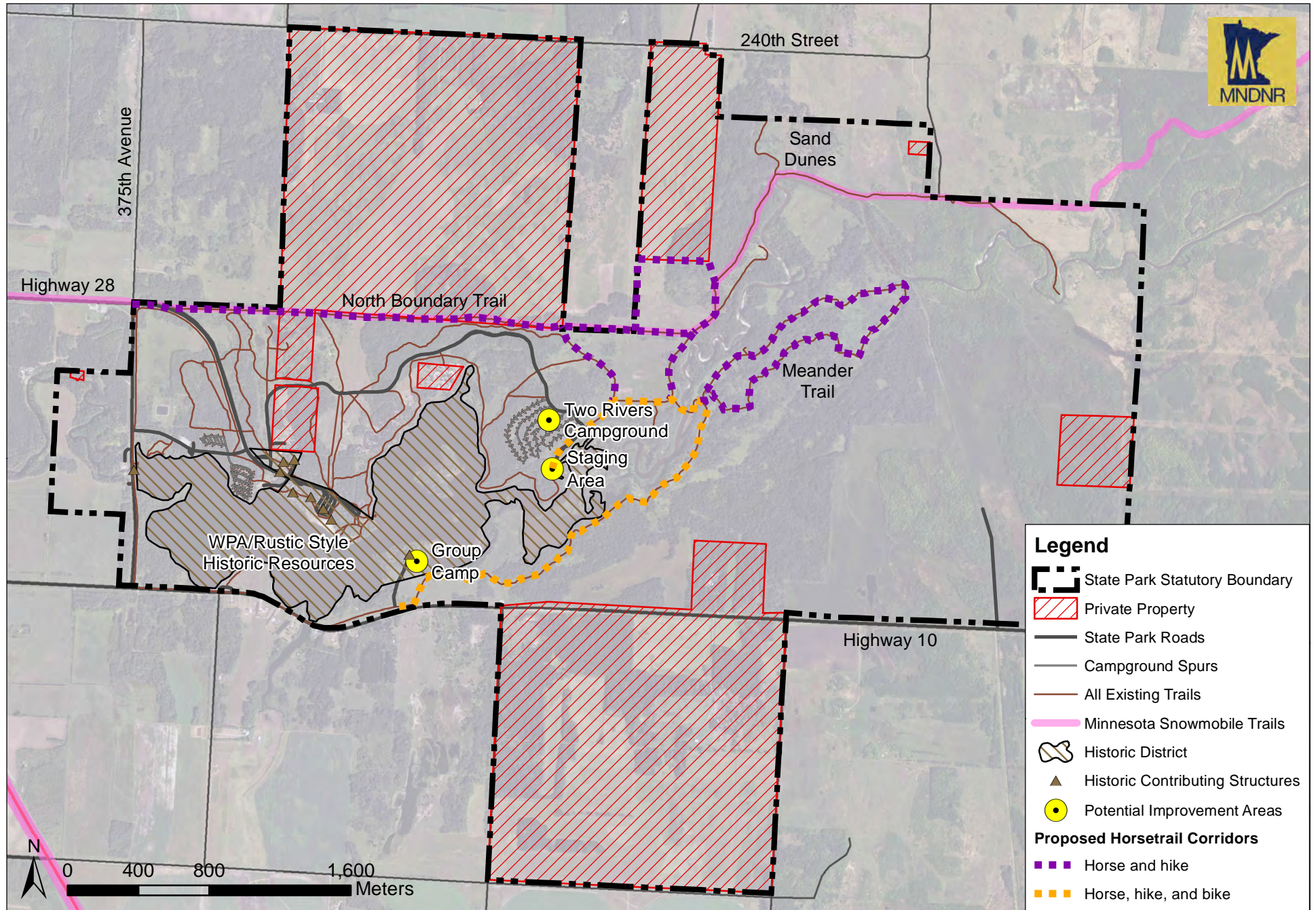
Lake Bronson State Park includes important habitat in a prairie-aspen forest transition zone. The park is located in the Aspen Parkland prairie core area, as identified in the Minnesota Prairie Conservation Plan. Native plant communities of statewide significance, with conservation status ranks of critically imperiled, imperiled, or vulnerable to extirpation, cover about one-third of the park's statutory area.

Lake Bronson State Park provides habitat for several endangered, threatened, or special concern species, as shown in Appendix A. Among these species is the Dakota skipper, which was listed as federally threatened in 2014. The Dakota skipper is a small butterfly native to mixed and tallgrass prairies. The U.S. Fish and Wildlife Service (USFWS) has proposed critical habitat in Lake Bronson State Park for the Dakota skipper. Critical habitat includes areas essential to conserving species protected under the Endangered Species Act.



Example of a picket line (Zumbro Bottoms Unit in Richard J. Dorer Memorial Hardwood State Forest).

**Figure 2: Proposed Trails and Facilities**



- Legend**
- State Park Statutory Boundary
  - Private Property
  - State Park Roads
  - Campground Spurs
  - All Existing Trails
  - Minnesota Snowmobile Trails
  - Historic District
  - Historic Contributing Structures
  - Potential Improvement Areas
- Proposed Horsetrail Corridors**
- Horse and hike
  - Horse, hike, and bike

## Trails

The use of existing trail corridors for horseback riding will minimize potential impacts to natural resources. The majority of the proposed trails are located within upland areas that have hard surfaces or prairie sod. Some of these corridors have durable surfaces and are used for park maintenance and firebreak purposes.

Horse trails are particularly vulnerable to compaction and “trenching,” where the trail deepens to a narrow channel. These conditions can lead to erosion and widening of the trail as users seek routes around disturbed areas. The potential for compaction and erosion will be considered for proposed trails and mitigation techniques will be used as needed. These techniques may include trail hardening and seasonal closures.

The addition of horse trails has the potential to introduce invasive species to the area through manure and imported hay and bedding. Trails will be monitored for invasive species and treated as needed. Manure in the storage bunker will be handled appropriately to avoid spreading invasive species within the park consistent with DNR Operational Order 113 and state park guidelines.

The north boundary trail is currently open for winter use only. Drainage improvements will be made as needed to make the trail passable in the warm seasons. Temporary closures may be used to prevent damage to any trails that experience wet conditions during these seasons.

The trail to the group camp and the Meander Trail have unique concerns due to their remote location and proximity to USFWS proposed critical habitat for the Dakota skipper. Any trail expansion or realignment in this area may be subject to Federal review to determine impacts to natural resources. These trails also pass through backcountry portions of the park where macrofauna including bear, moose and cougar have been known to occur. Signage, orientation and information will be used to communicate the potential for interactions with macrofauna.

A potential trail connection to 240th Street may have impacts to sensitive resources. The existing hiking trail corridor traverses a critically imperiled native plant community (dry barrens prairie). This plant community contains several rare species and is susceptible to erosion. This trail connection is not included in the initial trail proposal and appropriate mitigation measures must be implemented if horseback riding is extended into this area.

## Trailhead and Camping

The trailhead and camping sites will be located within existing use areas. The existing trailhead will provide adequate space for trailer parking and staging. Installation of additional facilities at this site will have minimal impacts to natural resources. Natural resource impacts at the group camp will be minimized by concentrating activity within the existing use area.

The division will complete resource assessments prior to development of new trails and facilities to determine the impacts to natural and cultural resources. Impacts to sensitive resources will be avoided. If the impact cannot be avoided, it will be minimized and mitigated. Other agencies and DNR divisions may be involved in review depending on the scope of the project and the type of resource being impacted.

## Cultural Resources Impacts

The Lake Bronson State Park WPA/Rustic Style Historic District surrounds and includes Lake Bronson. The historic district includes the water tower, dam, picnic shelter, bath house and mess hall. Construction of these facilities was completed by a WPA transient camp located on the northwest shore of the lake, near the dam site. The proposed facilities and trails are unlikely to affect any structures within the historic district.

There are 18 known archaeological sites within the park, including the WPA camp area and pioneer cemeteries, and it is likely that additional resources exist. The use of existing trail corridors will minimize impacts to cultural resources. Archaeological surveys will be conducted prior to development of new facilities or trails.



The combination water and observatory tower is a contributing structure to the historic district.

Figure 3: Land Cover

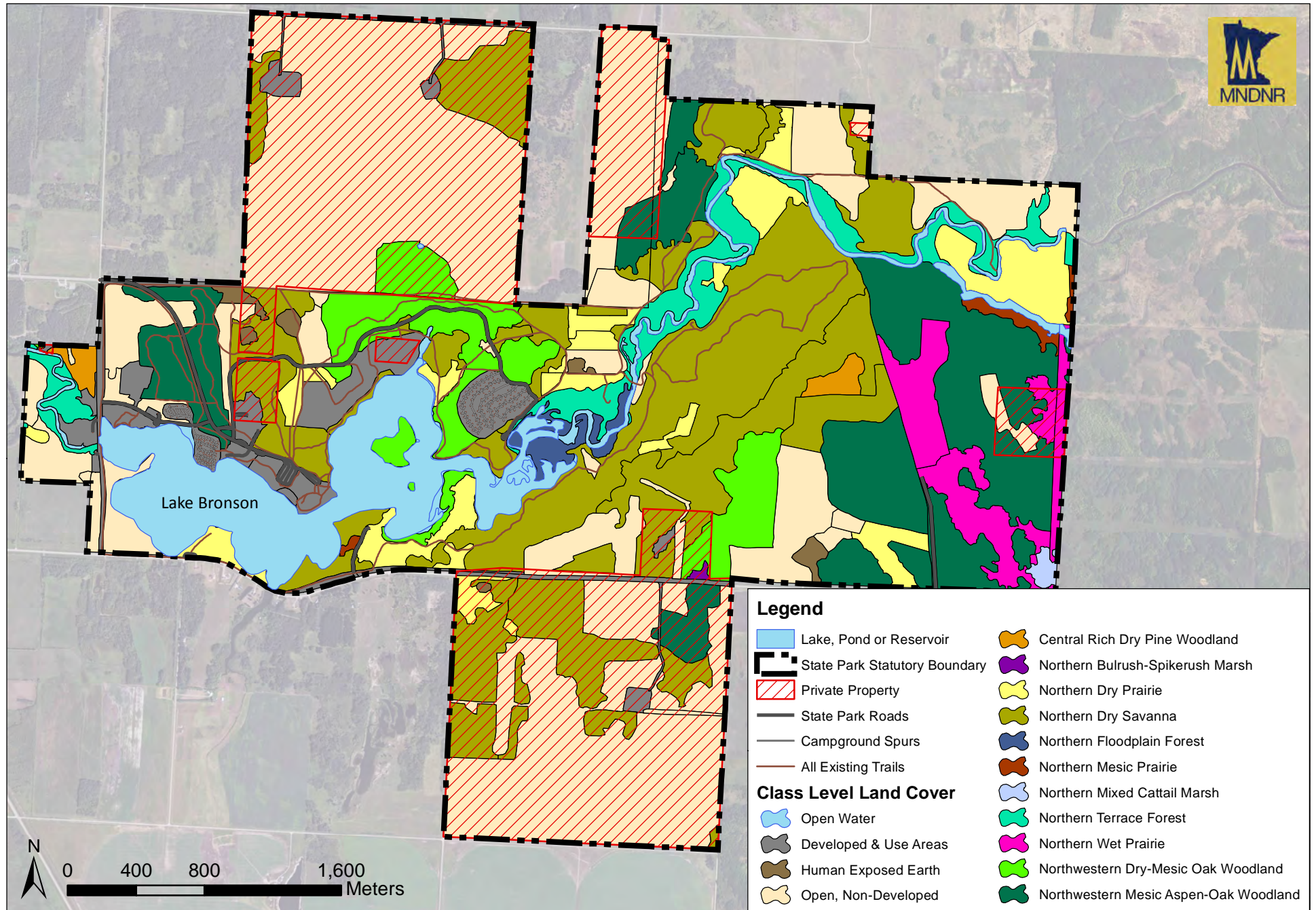
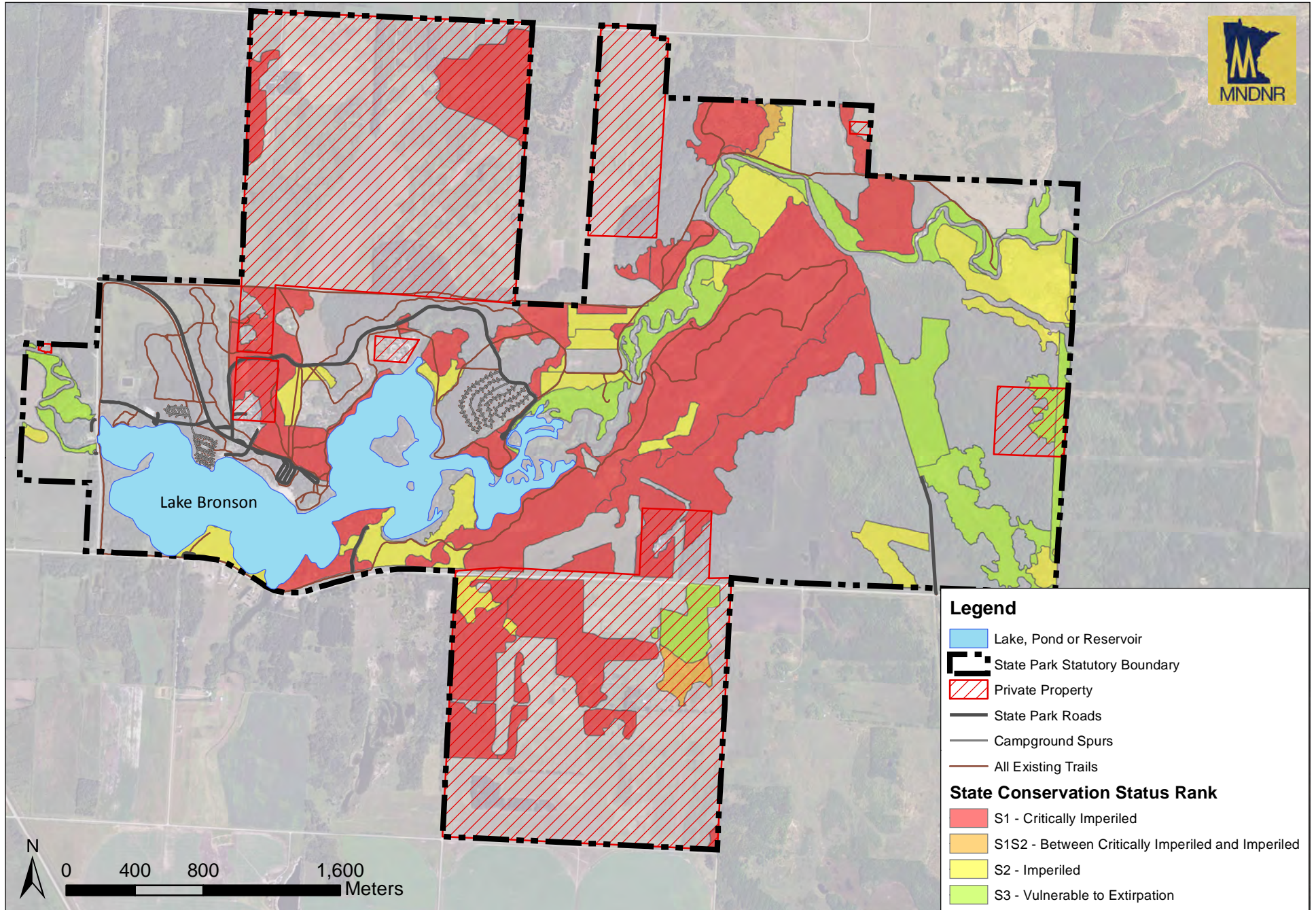


Figure 4: Significant Plant Communities



# Recreational and Visitor Use Impacts

## Trail Users

The addition of horseback riding could detract from other trail users' experience and may discourage their future use. DNR will evaluate, and may revise, trail designations over time to minimize conflicts between different user groups. Information and orientation will be used to mitigate potential user conflicts.

However, potential conflicts between different user groups are expected to be minimal due to current use patterns. Use by hikers and bikers on some of the proposed horse trails is currently low. Also, horseback riders are expected to use the trail system primarily in the spring and fall, when trail use by these other groups is minimal.

A portion of the horse trail will be shared with the existing Aspen Parklands Interpretive Trail. There is potential to separate the two uses within this segment by locating hikers on the trail and horses on the road to the trailhead. It is unlikely that horse trails would impact other interpretive services in the park.

There is local interest in completing a paved bike trail loop around the lake. This loop would likely include the trail segment between the group camp and the Two Rivers Bridge, which will be shared between hikers, bikers and horseback riders. This segment has limited expansion potential for separate treadways due to potential natural resource impacts. This bike loop will be evaluated further when funding becomes available.

Corridors shared between snowmobilers and horseback riders will be reserved for snowmobile use and associated maintenance activities during their normal winter period.

## Trailhead

The existing canoe and backpack campsite parking area has relatively low use and is expected to be sufficient to accommodate horseback riders as well. Impacts to existing users will be minimal due to the seasonal use patterns – the peak period for existing users is the summer while the peak for horseback riders will be in the spring and fall. Any new facilities provided at this site would benefit existing users in addition to horseback riders.



There is potential to separate horseback riders from hikers by directing horseback riders to the road, on the left, and hikers to the interpretive trail, on the right.

## **Campers**

Some users of the group camp could be displaced by horse campers if use of this facility is expanded. However, the impacts are likely to be small due to the seasonal nature of user groups. Demand for horse camping is expected to be higher in spring and fall when occupancy by other groups is typically lower. Rehabilitation of the Two Rivers campground would likely improve the facilities for all park users.

## **Other Park Users**

Visitors to the swimming area, picnic areas and historic sites in the park should experience few if any changes as a result of the addition of horse trails.

# **Management Plan Text**

## **Revisions**

In general, information in this amendment updates and supplements the entire management plan from 1978.

The 1978 management plan did not include horseback riding as a proposed use within the park. This amendment supplements the “Recreation Management” section (pages 99-134) to include horseback riding as a designated use and identifies trails and facilities for riders.

## **Public Review**

In accordance with *Minnesota Statutes* 86A.09 subd. 3 and subd. 6, the plan amendment was released in the spring of 2015 for a 30 day public review period. The plan amendment was available for review online, at the park office, and at an open house meeting. The open house was held at the Lake Bronson State Park Visitor Center on May 9, 2015 and DNR staff were available to answer questions and take comments.

About 20 comments were received regarding the proposal via phone, email or comment card. The majority of commenters were in favor of the proposal while several opposed horseback riding in Lake Bronson State Park. Commenters opposed the proposal because of potential impacts to other park users, possible introduction of invasive species, the cost of additional facilities, and impacts to sensitive natural resources. Comments from those in favor of the amendment emphasized the importance of providing horse camping facilities and adequate trail signage.



## References

Anderson, Rolf T. (1989). *Lake Bronson State Park WPA/Rustic Style Historic Resources*. Lake Bronson, Kittson County, MN. National Register #89001659.

Minnesota Department of Natural Resources. (1978). *A Management Plan for Lake Bronson State Park*. St Paul, MN: Minnesota Department of Natural Resources.

Minnesota Prairie Plan Working Group. (2011). *Minnesota Prairie Conservation Plan*. Minneapolis, MN.

U.S. Fish and Wildlife Service. (2015). *Endangered Species, Dakota skipper (Hesperia dacotae)*. USFWS Midwest Region.

<http://www.fws.gov/midwest/Endangered/insects/dask/index.html>

## Appendix A: Rare Plants, Animals and Native Plant Communities

This list is drawn from DNR’s Natural Heritage Information System database. All species located within the statutory boundary of Lake Bronson State Park are included in this list. Terrestrial communities are listed because they are representative of high-quality habitats or are important natural features, but have no legal protection.

SPC Special Concern  
 THR Threatened  
 END Endangered

Common Name	Scientific Name	Type	MN Legal Status	Federal Status
assiniboia skipper	<i>Hesperia assiniboia</i>	Invertebrate Animal	END	
creek heelsplitter	<i>Lasmigona compressa</i>	Invertebrate Animal	SPC	
Dakota skipper	<i>Hesperia dacotae</i>	Invertebrate Animal	END	THR
garita skipper	<i>Oarisma garita</i>	Invertebrate Animal	THR	
poweshiek skipperling	<i>Oarisma poweshiek</i>	Invertebrate Animal	END	END
Forster's tern	<i>Sterna forsteri</i>	Vertebrate Animal	SPC	
purple martin	<i>Progne subis</i>	Vertebrate Animal	SPC	
sandhill crane	<i>Grus canadensis</i>	Vertebrate Animal	Watchlist	No Status
upland sandpiper	<i>Bartramia longicauda</i>	Vertebrate Animal	Watchlist	
blanket-flower	<i>Gaillardia aristata</i>	Vascular Plant	SPC	
blunt sedge	<i>Carex obtusata</i>	Vascular Plant	SPC	

Common Name	Scientific Name	Type	MN Legal Status	Federal Status
clustered broomrape	<i>Orobanche fasciculata</i>	Vascular Plant	THR	
creeping juniper	<i>Juniperus horizontalis</i>	Vascular Plant	SPC	
dry sedge	<i>Carex xerantica</i>	Vascular Plant	SPC	
Frenchman's bluff moonwort	<i>Botrychium gallicomontanum</i>	Vascular Plant	END	No Status
Holboell's rock-cress	<i>Boechea retrofracta</i>	Vascular Plant	THR	
least moonwort	<i>Botrychium simplex</i>	Vascular Plant	SPC	
long-stalked chickweed	<i>Stellaria longipes ssp. longipes</i>	Vascular Plant	SPC	
northern androsace	<i>Androsace septentrionalis</i>	Vascular Plant	SPC	
oat-grass	<i>Avena hookeri</i>	Vascular Plant	SPC	
prairie moonwort	<i>Botrychium campestre</i>	Vascular Plant	SPC	
small white lady's-slipper	<i>Cypripedium candidum</i>	Vascular Plant	SPC	
western prairie fringed orchid	<i>Platanthera praeclara</i>	Vascular Plant	END	THR
dry barrens oak savanna (northern)	UPn13b	Terrestrial Community		
dry sand - gravel oak savanna (northern)	UPn13c	Terrestrial Community		
dry sand - gravel prairie (northern)	UPn12b	Terrestrial Community		
green ash - bur oak - elm forest	MHw36a	Terrestrial Community		
mesic prairie (northern)	UPn23b	Terrestrial Community		
prairie meadow/carr	WMP73a	Terrestrial Community		
wet brush-prairie (northern)	WPn53b	Terrestrial Community		