

# Frontenac State Park

## Management Plan Amendment





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

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(Insert director approval letter)

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## Introduction

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### State Park Overview

Frontenac State Park was established as a state park in 1957. Located along the Mississippi River in southeastern Minnesota, Frontenac State Park is approximately 15 miles southeast of the City of Red Wing on U.S. Highway 61. The park encompasses a rich diversity of natural communities and landscapes: bluffs, prairie, floodplain forests and hardwood forest. It is considered a premier birdwatching destination with over 260 species of resident and migrating birds having been observed there. The park and surrounding area also have a rich cultural history dating back to inhabitation by the Hopewellian culture over 2,400 years ago, through Euro-American exploration and settlement, to when the town of Old Frontenac was a summer resort for steamboat passengers.

Today, the state park offers a range of interpretative and recreational opportunities for visitors. Facilities at the park support activities including camping, picnicking, hiking, cross country skiing, snowshoeing, fishing, bird watching and wildlife observation. In 2020, Frontenac State Park hosted 268,932 visitors with 18,500 staying overnight in the park campground, remote campsites and group camp.

The state park statutory boundary includes 3,327.91 acres, of which 2,499.67 are owned and administered by the Minnesota Department of Natural Resources (DNR). In June 2020, DNR purchased a 158.84 acre parcel from the Parks and Trails Council of Minnesota. The parcel had been added to the park statutory boundary in 2018.

### Statutory Direction

Minnesota state statute provides direction for the purpose of state parks and how they should be developed and managed. As described in *Minnesota Statutes*, section 86A.05:

**Subd. 2. State park; purpose; resource and site qualifications; administration.** (a) *A state park shall be established to protect and perpetuate extensive areas of the state possessing those resources which illustrate and exemplify Minnesota's natural phenomena and to provide for the use, enjoyment, and understanding of such resources without impairment for the enjoyment and recreation of future generations.*

DNR utilized this framework as it developed resource management goals and considered interpretive and recreational opportunities for the property.

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

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

## Minnesota State Parks and Trails System Plan and Frontenac 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, Frontenac State Park is designated as a *Core-Gateway State Park*. As described in the system plan:

*Core State Parks and SRAs* offer the typical visitor experience provided across much of the state park system to date: close-to-home, basic, high-quality facilities that visitors have come to know and expect. As a subset of the Core group, *Core-Gateway* units are intended to provide introductory experiences to underserved populations and those less familiar with the outdoors - especially racial and ethnic minorities, families with children, and young adults.

During the management plan amendment process, DNR considered how the park’s current recreational offerings and proposed new opportunities fit with the *Core-Gateway* designation and would help the park serve this “gateway” function.

## Climate Change Adaptation and Mitigation at Frontenac 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.

*Frontenac State Park is designated a “Core-Gateway State Park” in the [Minnesota State Parks and Trails System Plan](#).*

*For more information about the system plan, see the DNR website.*

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.

As part of the management plan amendment process, the department considered how climate change may affect resource management, interpretive services and recreational offerings at Frontenac State Park. 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. However, winter activities like winter hiking that do not depend on snow cover may increase in popularity over time.

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

## Purpose

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The purpose of this plan amendment is to amend the *Frontenac State Park Management Plan* (November 2008) to reference the addition of the parcel acquired from the Parks and Trails Council of Minnesota.

Master plans (management plans) are required for units of Minnesota's outdoor recreation system, including state parks and state recreation areas, under *Minnesota Statutes*, section 86A.09, subd. 1. The plan amendment will update management plan to address the department's proposals for resource management activities, interpretive services, and recreational opportunities on the recently acquired property and how it will be integrated with existing park management activities and facilities.

## Description

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DNR purchased the 158.84 acre parcel in June 2020. The land was acquired from the Parks and Trails Council of Minnesota (see Figure 1: Project Location). The parcel had previously been added to the park statutory boundary in 2018.

Existing development on the parcel is limited to approximately 2.1 miles of firebreaks that are mowed for use as hiking trails and a storage building.

Following acquisition of the land, the DNR has developed management directions for natural and cultural resource management, interpretive services, and recreational use and visitor services.

In general, DNR's resource management direction at the state park will not significantly change. The natural and cultural resource character of the new parcel is similar to lands the DNR already manages in the rest of the state park. Therefore, DNR will use many of the same tools and techniques – including prescribed fire, native community restoration, timber harvest and thinning, and invasive species control – that it already uses at the park.

The new parcel offers opportunities to enhance some of the current interpretive and recreational offerings at the park that are characteristic of “Core-Gateway” suite of amenities and experiences. The facilities and use areas developed on the new parcel will provide additional opportunities that complement those already offered in the park.

A number of facilities and use area are proposed for development:

- Hiking trails – designated for summer and winter use
- Scenic overlooks – two sites overlooking the marsh area
- Hike-in campsites – four to six campsites
- Day use area – trailhead, picnic area, and interpretive program site
- Parking – to serve the day-use area and hike-in campsites, including the existing hike-in sites east of County 2 Boulevard/Galia Avenue
- Interpretive trail – a self-guided experience through the planted prairie
- Kiosks and signs – for information and interpretive messaging

### Natural and Cultural Resources Impact

The existing vegetation on the parcel is a mix of native plant communities and disturbed communities (See Figure 2: Existing Land Cover). The two native plant communities on the parcel are fire dependent forest and upland prairie. The fire dependent forest community is Southern Dry-Mesic Oak-Hickory Woodland (FDs38). The upland prairie community is Dry Bedrock Bluff Prairie (Southern) (UPs13c). Over half of the parcel consists of planted prairie. The planted prairie is good quality restoration that used the same seed source and mix as has been used on prairie restorations within the state park. There is also small pine



View of lakelet and Mississippi River from scenic overlook

plantation near the eastern side of the parcel. The plantation is mixed composition, primarily Red pine (*Pinus resinosa*) and Scotch pine (*Pinus sylvestris*). The southernmost portion of the parcel is emergent marsh. The land cover on remainder of the parcel is disturbed forest, old field, building sites or roads.

**Table 1: Existing Land Cover**

Cover type	Acres
Fire dependent forest (FDs38)	19.27
Upland prairie (UPs13c)	2.95
Planted prairie	89.95
Disturbed forest	1.71
Pine plantation	2.68
Old field	27.12
Emergent marsh	11.06
Facilities (roads, buildings, use areas)	4.73

Natural resource management on the parcel will be similar to activities currently conducted throughout the rest of the park. Prescribed fire will be a long-term management tool for both the fire dependent forest and prairie communities. The fire dependent forest communities will require selective tree and shrub cutting and frequent fire to control European buckthorn (*Rhamnus cathartica L.*), Tartarian honeysuckle (*Lonicera tatarica*), and other invasive or undesirable species. The upland prairie communities and planted prairie will require prescribed fire and invasive species control to manage Birdsfoot trefoil (*Lotus corniculatus*) and Crown vetch (*Securigera varia*), as well as needing selective tree and shrub removal. The pine plantation and disturbed forest areas may require timber harvest or thinning to transition these areas toward fire dependent forest. The old field areas will be restored to an upland prairie community.

Invasive species management will be an ongoing effort. European buckthorn, Tartarian honeysuckle, Birdsfoot trefoil and Crown vetch are known to be present. Management actions will be determined for other invasive species if they are identified on the parcel.

Desired future conditions for the land cover call for restoration and management of current old fields and disturbed areas toward fire dependent forest (FDs38) and upland prairie communities (UPs13, UPs13c and UPs14) with the remaining areas of the parcel as emergent marsh and park facilities (roads, buildings, use areas). See Figure 3: Desired Future Conditions.

To date, no wildlife surveys have been conducted on the new parcel. Future wildlife surveys conducted in the park will include the new parcel as well. Resource assessments will be completed prior to any development activities. Information about wildlife gathered from the assessment process will be used to develop strategies to avoid or mitigate impacts to rare populations or species



View of emergent marsh

of concern.

There are no known archaeological sites on the new parcel. However given that there are known sites elsewhere in the park, there is the potential that there are also archaeological resources on the parcel that have not yet been identified. Natural and cultural resource assessments will be conducted as part of any future construction activities such as building parking areas, campsite development, and trail construction. Information gathered during the assessment process will be used to identify archaeological resources and develop strategies for avoiding or mitigating impacts.

### Interpretive Services Impact

Addition of the parcel to the state park creates new opportunities for offering interpretive experiences to park visitors. The existing interpretive themes described in the current park management plan (November 2008) will be used to develop interpretive programming and other resources such as signs, brochures, and website content related to the new parcel:

Overall theme:

- *Frontenac State Park provides opportunities for visitors to learn about and recreate in the blufflands landscape of the Mississippi River valley.*

Additional themes:

- *Mississippi River*
- *Natural communities and wildlife*
- *Human presence and impact in the river valley*
- *Outdoor recreation and nature skills*

The emergent marsh at the southern end of the parcel provides an opportunity for new interpretative themes and messages. There was no natural community of this type within the park prior to the parcel acquisition.

DNR will extend the park's existing interpretive services approach – primarily self-guided experiences and occasional in-person programming – to include opportunities on the new parcel (see Figure 4: Interpretive Opportunities). The additional interpretive opportunities will enhance the park's role as a gateway for connecting with new visitors or those less experienced with the outdoors. Interpretive investments and resources to be developed include:

Interpretive trail – Develop a trail loop through the planted prairie area with interpretive messages focused on prairie and savanna restoration, and the history and role of fire in natural communities.

Marsh boardwalk/deck – Develop a boardwalk or deck along the shore of the emergent marsh with interpretive messages focused on the marsh



Develop interpretive trail in planted prairie

ecosystem and water bird identification.

Day-use area – Develop interpretive messaging for the day-use area, including messaging related to the nearby interpretive trail. The site may also host occasional interpretive programs, although the primary program site will remain at the existing picnic shelter and warming house.

Kiosks and signage – Develop kiosks and interpretive signs at several locations including the parking area, the day-use area, the scenic overlooks along the hiking trails, the hike-in campsite area, and at the emergent marsh boardwalk/deck. Topics will vary by location.

### Recreational Use and Visitor Services Impact

Development of recreational facilities and amenities on the new parcel will increase opportunities for visitors to experience the state park, focusing on offering more of the type of experiences already available in the park (see Figure 5: Recreational Opportunities).

Existing facilities on the parcel are limited - approximately 2.1 miles of firebreaks that are used as mowed hiking trails, two scenic overlooks, and a storage building.

Several recreational use and visitor facilities are proposed for the site:

Hiking trails – Much of the current network of firebreaks will be retained as mowed hiking trails designated for summer and winter use. However, some of the trails may be relocated or additional trail segments created to improve connections with the park's existing trail network. Other trail sections may be moved to better align with the hike-in campsites to provide access to the campsites but not otherwise encroach and negatively impact the privacy of campsite users. Vegetative screening may be planted along some sections of trail near property lines to discourage park visitors from trespassing onto adjacent private lands. The total amount of hiking trail will be close to the current 2.1 miles of firebreak trails, although the development of the interpretive trail will result in an increase in the overall mileage above that figure. With the addition of winter hiking on the new parcel, some sections of existing winter hiking trail on the bluff top area may be closed to reduce user conflicts between winter hikers and cross-country skiers.

Scenic overlooks – The two existing scenic overlooks along the ridge facing south over the marsh area will be retained and improved. The overlooks will have picnic table and/or benches. Interpretive signs will be developed for each site. Signage and barriers may be installed to mark the edge of the overlook areas and reduce informal trails or erosion of the bluff edge.



Existing firebreak & hiking trail

Hike-in campsites – Four to six hike-in campsites will be developed along the top of the ridge of the new parcel. The sites will be spaced around the ridge to maintain privacy from other campsite uses and from day visitors using the trails. The total number and location of the individual campsites will be determined following additional site evaluation and resource assessment. A centrally-located camper orientation area will be developed with an information kiosk, garbage and recycling containers.

Day-use area – A day-use area will be developed to serve as a trailhead and picnic area. This area may also be a site to host interpretive programs, although the park’s existing picnic shelter and warming house will remain the primary interpretive program site. The location for the day-use area is the current location of the storage building.

The storage building is well-constructed and has some interest from the community because of its design emulating a grist mill. However, the building does not have a clear adaptive reuse and limits full utilization of the site for park visitor use. The building is currently used by DNR and Goodhue County for storage of boats and equipment. There is water intrusion along the foundation that results in pooling water on the floor.

In the short term, the DNR will make initial investments in the day-use area to the south and west of the building, with a picnic area and vault toilets to serve the site and the hike-in campsites. The building may continue to be used for storage by DNR and Goodhue County. In the long term, the DNR will seek to sell and relocate the building to allow further development of day-use facilities on the site and address storage needs elsewhere in the state park or surrounding area. Once the building is removed, second-phase day-use area development will include additional picnicking grounds and a picnic shelter at the building site, as well as parking area and “drop off” access improvements. The DNR may also consider adding a small scale bathroom building (without showers) to serve day users and campers using the hike-in campsites.

Parking area – a parking area will be developed on the north side of County 2 Boulevard/Galia Avenue. The parking area will be sized to support the day-use area and hike-in campsites – both the proposed campsites on the new parcel as well as the existing hike-in campsites east of County 2 Boulevard/Galia Avenue. The parking area development should include a road into the day-use area to provide a “drop off” loop and accessible parking at the day-use area.

The proposed facilities and other investments outlined above are consistent with the “Core-Gateway” classification for Frontenac State Park. These developments will enhance the types of traditional state park experiences like hiking, camping, and nature/wildlife observation that are the most popular activities for state park visitors. These activities are also among those that the DNR is using in its outreach efforts to connect with groups under-represented



Storage building in proposed day-use area

among current park visitors and others less experienced in the outdoors.

The addition of a bathroom building in the day-use area will further support Frontenac State Park's role as a gateway park. Running water bathrooms provide a higher level of service and are an important consideration for many people – especially families with children and people less likely to be current state park visitors. The department will need to balance the potential to attract new visitors with the additional cost of developing and maintaining another bathroom building at the park.

Combined with the additional interpretive opportunities, these recreational improvements will attract additional visitors to the state park and help Frontenac State Park fulfill its role as a gateway park.

### **Management Plan Text Revisions**

The plan amendment text supplements portions of the current *Frontenac State Park Management Plan* (November 2008) including *Natural and Cultural Resources*, *Interpretive Services*, and *Recreational Use and Visitor Services* sections of the current management plan. Locations of existing and proposed trails, use areas, facilities and other development in this amendment supersede those shown in the management plan if there is any discrepancy. Descriptions and maps of the park boundary and ownership in the management plan are superseded by those in amendment which include the recent property acquisition and land administration changes.

## Public Review

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In accordance with *Minnesota Statutes*, section 86A.09 subdivision 3, the plan amendment was released for a 30-day public review period in November 2021 with an open house held at the Frontenac Sportsman Club on November 30<sup>th</sup>, 2021. The public comment period closed on December 17<sup>th</sup>, 2021.

(This section will be updated at the completion of the public review period.)

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## Bibliography

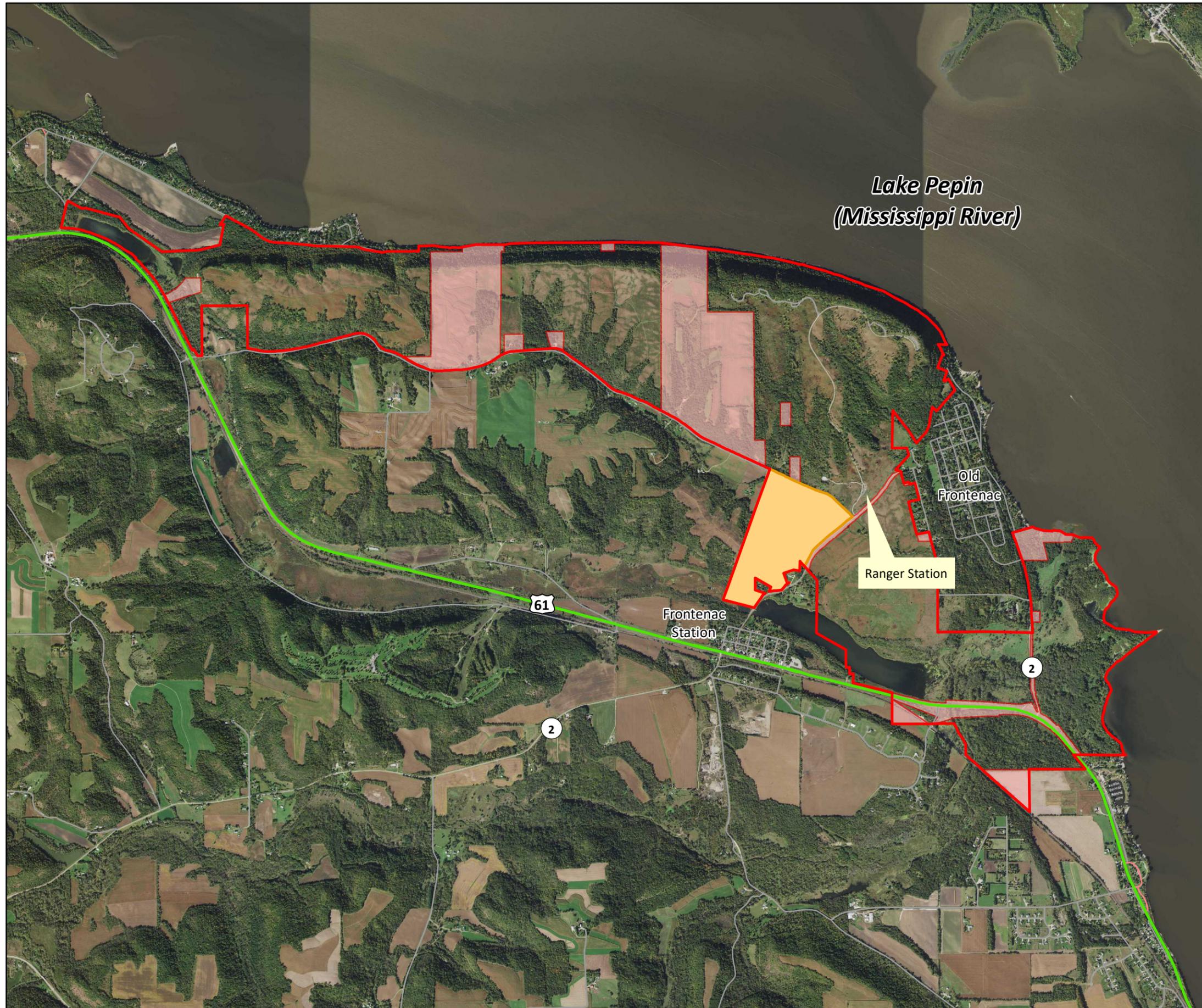
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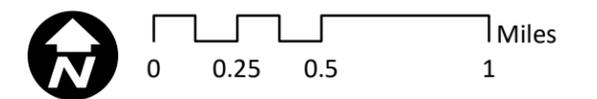


# Frontenac State Park

Figure 1: Project Location

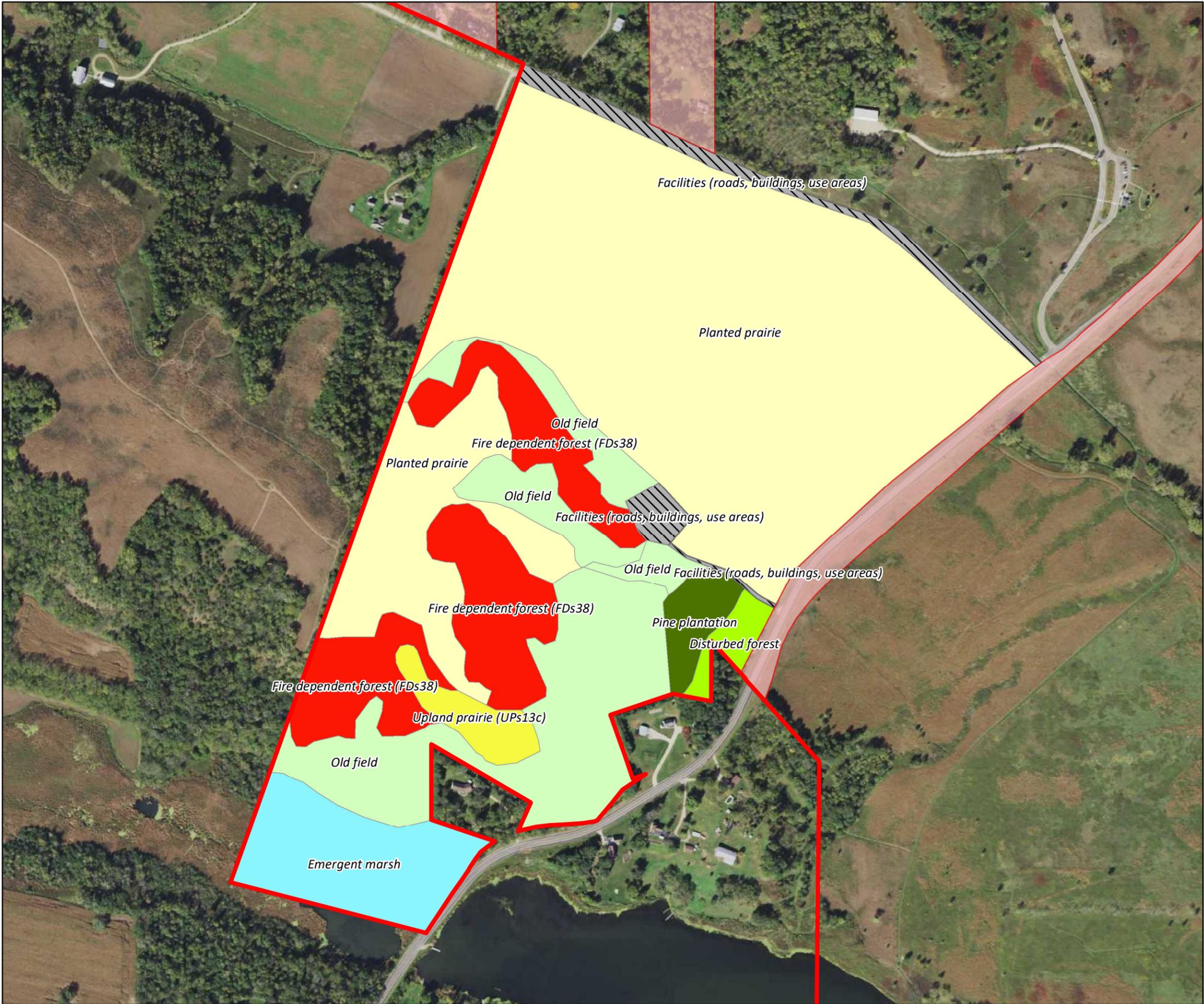
## Legend

- New Parcel
  - added to park statutory boundary in 2018
  - purchased in 2020
- State Park statutory boundary
- Private land within park boundary



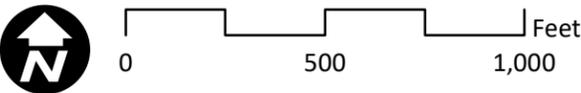
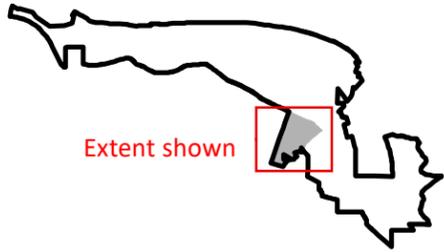
**Frontenac State Park**

Figure 2: Existing Land Cover



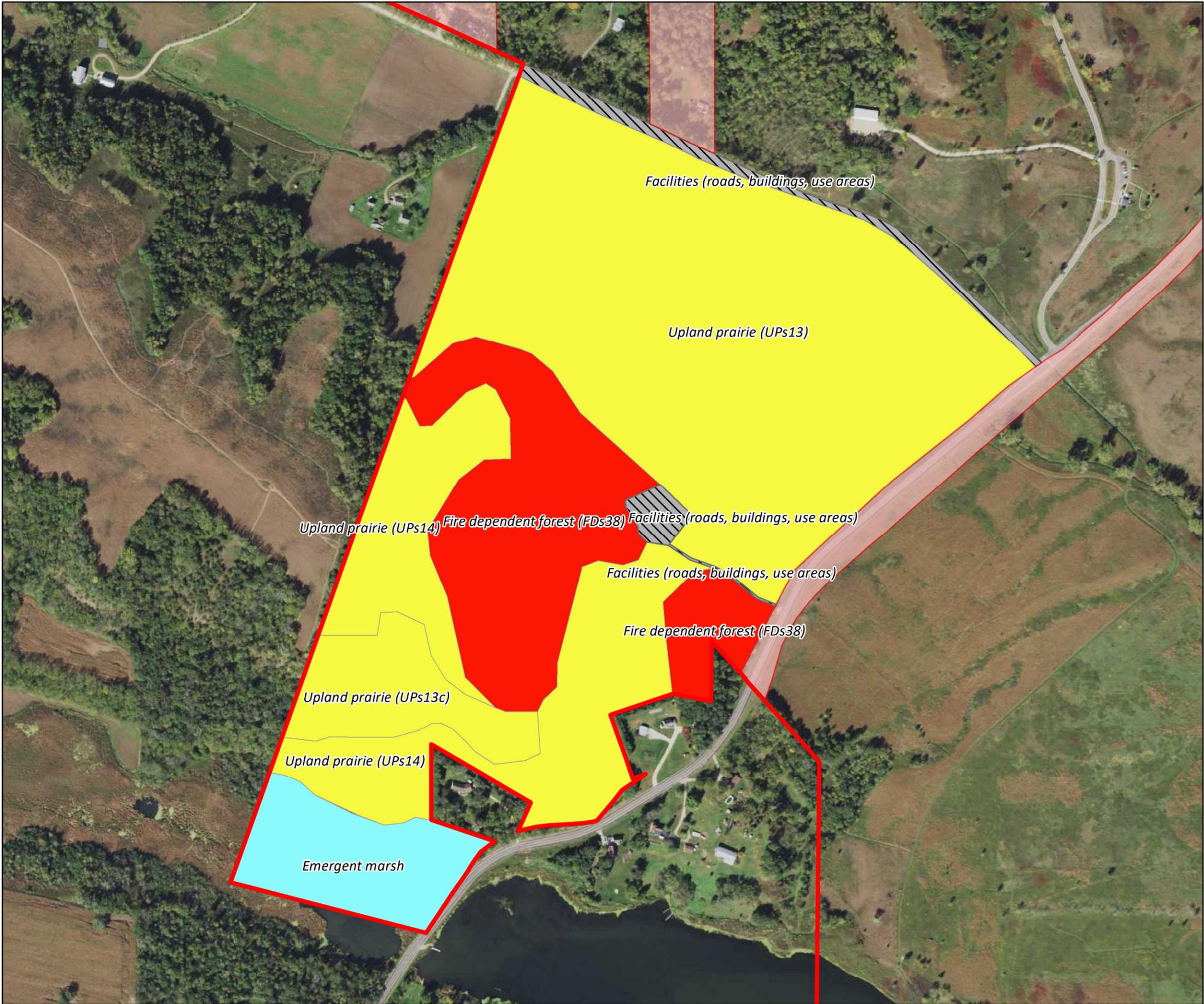
**Legend**

-  Fire dependent forest (FDs38)
-  Upland prairie (UPs13c)
-  Planted prairie
-  Disturbed forest
-  Pine Plantation
-  Old field
-  Emergent marsh
-  Facilities (roads, buildings, use areas)
-  State Park statutory boundary
-  Private land within park boundary



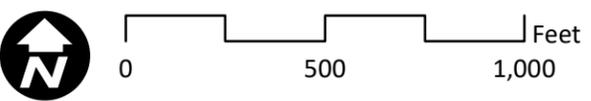
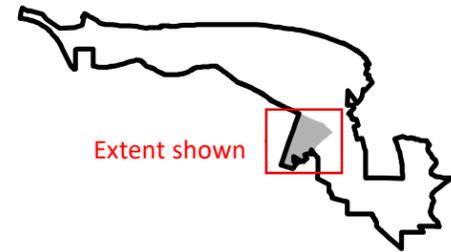
**Frontenac State Park**

Figure 3: Desired Future Conditions



**Legend**

-  Fire dependent forest (FDs38)
-  Upland prairie (UPs13, UPs13c, UPs14)
-  Emergent marsh
-  Facilities (roads, buildings, use areas)
-  State Park statutory boundary
-  Private land within park boundary



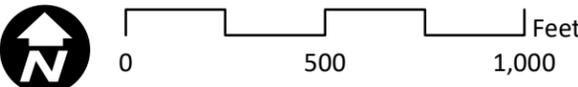
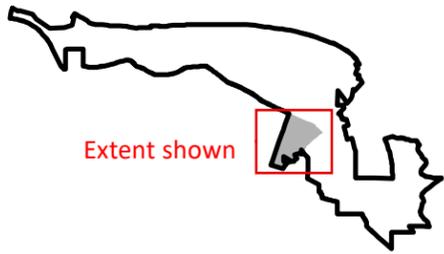
**Frontenac State Park**

Figure 4: Interpretive Opportunities



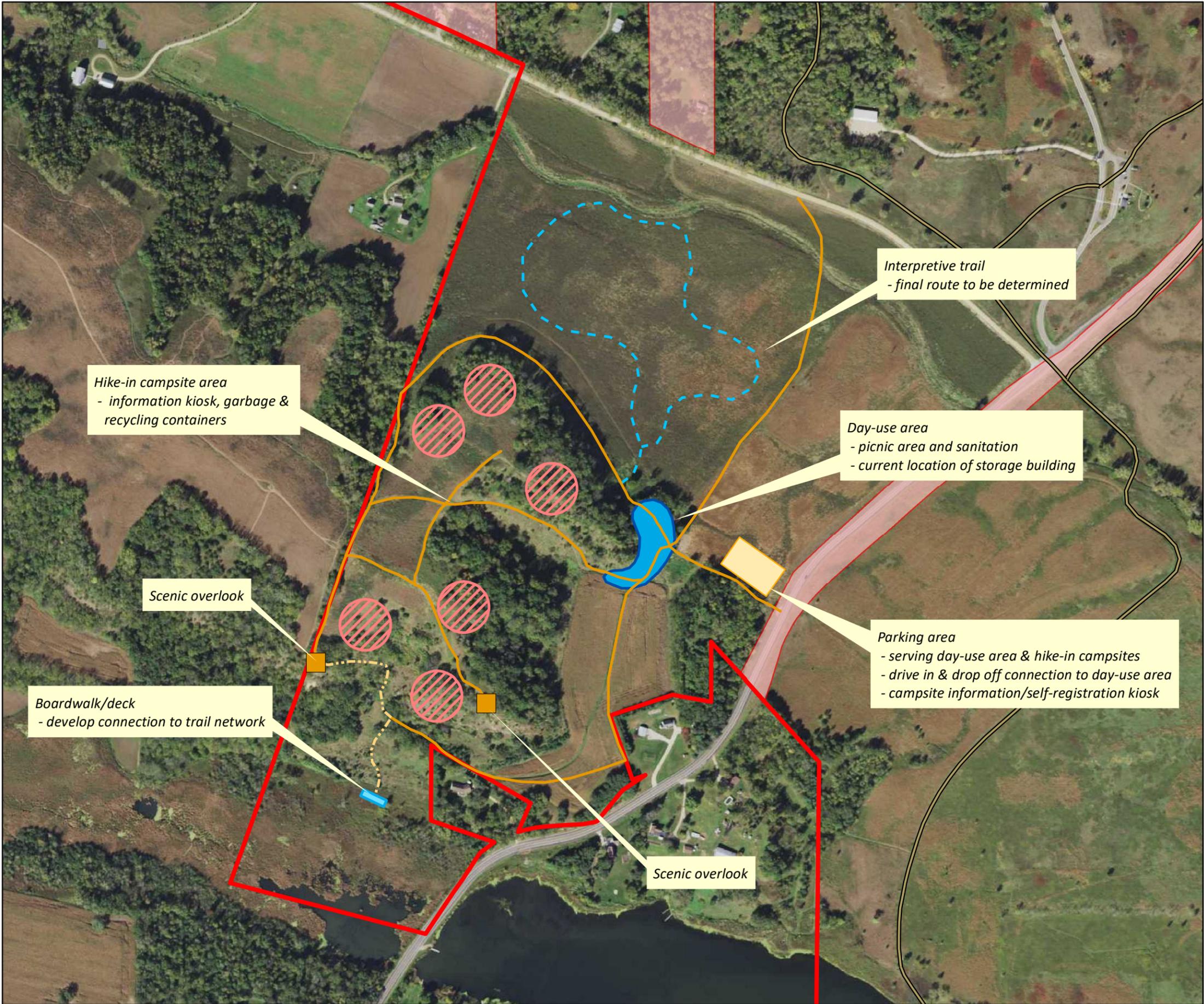
**Legend**

-  Proposed interpretive kiosks or signs
-  Proposed day-use area
-  Proposed boardwalk/deck
-  Proposed interpretive trail
-  Existing firebreaks/hiking trails
-  Possible new trail segments
-  Proposed parking area
-  Existing state park trails
-  State Park statutory boundary
-  Private land within park boundary



# Frontenac State Park

Figure 5: Recreational Opportunities



## Legend

- Scenic overlook
- Potential hike-in campsite search area
- Proposed day-use area
- Proposed boardwalk/deck
- Proposed interpretive trail
- Existing firebreaks/hiking trails
- Possible new trail segments
- Proposed parking area
- Existing state park trails
- State Park statutory boundary
- Private land within park boundary

