



Interim Forest Management Plan

Property Identifiers

Willow River State Park

County: St. Croix

Property Acreage: **2,892**

Forestry Property Code(s): # **5640**

Master Plan Date: Approved in December 1984 and revised April **1985**

Part 1: Property Assessment

General Property Description

- Landscape and regional context

The Willow River State Park is located in the Western Prairie Ecological Landscape and has the following Land Type Associations: 222Md06 St. Croix Prairie. The Landscape was entirely glaciated. The park is about five miles north of the city of Hudson. It straddles the Willow River, a tributary of the St. Croix River. It spreads across two townships: St. Joseph and Hudson. One of the park's key features is the Willow Falls which cascades into a 200 feet deep gorge. The Little Falls Lake, a shallow reservoir on the Willow River, is an attractive feature that draws many visitors annually. The Willow River State Park is very popular with visitors from the Minneapolis-St. Paul Metro area.

More than 50 percent of the land area within the park is forested. The rest is made up of grasslands, open water, open wetlands and camp grounds. The major forest cover types are oak, swamp hardwood, aspen, bottomland hardwood, red pine, white pine and spruce. The park is surrounded by private homeowners.

- History of land use and past management

Santee Sioux and Ojibwa lived in the region, and, in 1840, Louis Massey and Peter J. Bouchea were the first Euro-Americans to settle at the mouth of the Willow River. The pine forests between St. Croix River and Minnesota sparked interest in lumbering, and lumber mills were built in the vicinity of the park. Wheat farming was also common in the Willow River Valley. Christian Burckhardt, a German immigrant, built a grist mill on site in 1868. He also built four hydroelectric power plants and dams on the river, providing electricity to the Hudson area. Northern States Power (NSP) purchased Burckhardt's company in 1945, and liquidated its Willow River Holding in 1963. The Wisconsin Conservation Commission bought the land from NSP in 1967 for a state park that opened in 1971. All but one of the dams, were removed to improve scenery and trout fishery.



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Since acquisition by the state, land management activities have included thinning of some of the conifer stands and prairie plantings. Campgrounds (family and group), picnic areas and playgrounds, hiking trails, and support facilities have been developed over the years.

The park is open for most hunting and trapping activities. Please see the park's website for more details.

SITE SPECIFICS

Current cover types, size classes and successional stages

The current forest cover types are oak, bottomland hardwood, swamp hardwood, conifers, and aspen.

- **Oak (44%):** 1,273 acres in 28 stands. Dominated by white and black oak with other hardwoods present. Dates of origin between 1916 and 1968. Mostly large sawlogs and small sawlogs with poles and saplings present
- **Conifer (4%):** 104 acres in 10 stands scattered throughout the park; consists of red pine, white pine, and spruce; dates of origin between 1930 and 1973 with one stand of natural origin and the remainder plantations. Range from poles to large sawlogs, with most in small sawlogs.
- **Bottomland Hardwoods (0.9%):** 25 acres in one stand. Dominated by silver maple with other hardwoods present. Date of origin 1956. Pole size.
- **Swamp Hardwoods (4%):** 124 acres in one stand. Dominated by green ash. Date of origin 1970. Pole size.
- **Aspen (0.1%):** 3 acres in one stand. Date of origin 1974. Pole size.

State Natural Area designations: none

High value conservation forests (HVCF) or other resource/natural community types limited in the landscape:

The property contains a number of scattered prairie remnants and overgrown oak openings. These natural community types are considered "globally rare" and "globally imperiled" respectively.

Biotic inventory: none

NHI: Endangered, Threatened, Special Concern species:

At the time of this writing, 4 state endangered, 4 state threatened, and 3 special concern species are known from the general vicinity of the property. Negative impacts to these species will be avoided by following DNR's Species Guidance Documents: <http://dnr.wi.gov/topic/EndangeredResources/guidance.asp>. In cases where species guidance documents haven't yet been developed, avoidance to rare species will occur via practices such as time of year restrictions, modified harvest boundaries, and/or consultation with rare species experts. For Species of Greatest Conservation Need, see below under "Wildlife Action Plan Conservation Opportunity Areas".

Wildlife Action Plan's Conservation Opportunity Areas (COA), Species of Greatest Conservation Need, and Priority Conservation Actions:

Although the property is **not** specifically listed in the Wildlife Action Plan's Implementation document for the Western Prairie Ecological Landscape (WPEL), it is located in close proximity



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to the Prairie Potholes COA (6.02) which is of statewide significance for pothole lakes, surrogate grasslands, and oak openings:

http://dnr.wi.gov/topic/WildlifeHabitat/documents/PriorityRpt_EL6.pdf Specifically, surrogate grasslands are noted as a High Priority for this ecological Landscape. Species of Greatest Conservation Need (SCGN's) listed within this COA are: Blanding's Turtle, Pickerel Frog, American Golden Plover, Black Tern, Blue-winged Teal, Bobolink, Brown Thrasher, Buff-breasted Sandpiper, Dickcissel, Dunlin, Eastern Meadowlark, Field Sparrow, Grasshopper Sparrow, Henslow's Sparrow, LeConte's Sparrow, Northern Harrier, Red-necked Grebe, Short-billed Dowitcher, Short-eared Owl, Trumpeter Swan, Western Meadowlark, Willow Flycatcher, Franklin's Ground Squirrel, and Prairie Vole. Priority Conservation Actions that fit well with this property that are listed for the WPEL are:

- Promote agricultural practices that are compatible with grassland management, such as rotational grazing, greater use of small grains and hay crops and later harvesting of grass hay.
- Restore temporary and seasonal wetlands.
- Develop incentives for private landowners to maintain native prairies and shortgrass habitats.
- Partner with prairie and savanna restoration groups to more efficiently accomplish habitat management.
- Actively manage appropriate patches for oak savanna and woodland restoration using prescribed fire.
- Develop educational tools and demonstration/training areas that promote prescribed fire and other prairie/savanna management practices.
- Protect the ecological gradients from lowlands to uplands, along with protection of the floodplain corridor. This will enlarge the amount of habitat available, allow for the movement of species upslope and downslope as environmental conditions change over time, provide suitable habitat for species that require large areas or are dependent upon a mosaic of interconnected habitats for their long-term survival, and provide migratory bird stopover habitat.

Invasive species: Common buckthorn has been observed throughout all of the forested stands as well as other areas in the park. Buckthorn has the ability to hinder tree regeneration and out-competes native understory vegetation.

Soils: Soils are a mix of loams, sandy loams, loamy sands, and silt loams. Some of slopes range up to 25% and are classified as eroded. There are lesser amounts of mucks, fluvaquents, and udifluvents.

Cultural and Recreational Considerations: There are historical and archeological sites within and around the park.

- **Cultural and archaeological:** Several cultural and archaeological sites have been identified by the Wisconsin Historical Society within the park, including the Scott family cemetery. The former dam sites are of historical significance.
- **Recreational uses:** Willow River State Park provides opportunities for hiking (including 13 miles of developed trails), sightseeing, fishing, picnicking, swimming, boating, camping, cross-country skiing, etc. Little Falls Lake is designated as non-motorized.



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General park information, maps, and hunting information are available on the park's website.

PART 2: IFMP COMPONENTS

Management Objectives:

The goal of vegetative management will be to maintain the health, vigor, and diversity of the vegetation in the park's intensive use areas. Management in other areas will vary with vegetative type and location. Pine plantations will be managed in order to maintain them in a healthy condition. Some of the oak and aspen stands north of the Willow River will be maintained for wildlife.

Property Prescriptions (Identify specific and pertinent prescriptions by area or forest type, including passive management areas, extended rotation, and other information that will help achieve the objectives):

- **Park in general:** the majority of stands are in the no vegetative management zones (see maps below). Within those zones, only management for safety or disease control is allowed.
- **Oak:** Stand 16 is the only oak stand within the successional woodland management zone and will be managed in accordance with that objective. This stand will be regenerated using a combination of coppice, shelterwood, seed tree, clearcut and planting methods.
- **Aspen:** the only aspen stand (stand 46) is within the successional woodland management zone and will be managed in accordance with that objective. This stand will be regenerated using the coppice method.
- **Conifer:** stands will continue to be thinned, when necessary, to encourage growth and maintain good health; thinning will be scheduled in winter to minimize impact on park users.
- **Bottomland hardwoods and swamp hardwoods:** both stands are located in the no vegetative management area.
- **Invasive plant control:** Invasive species control should be part of any timber management that is undertaken, preferably both as pre- and post-harvest activities, as part of this interim forest management plan.



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Approvals:

Regional Ecologist Date

Forester Date

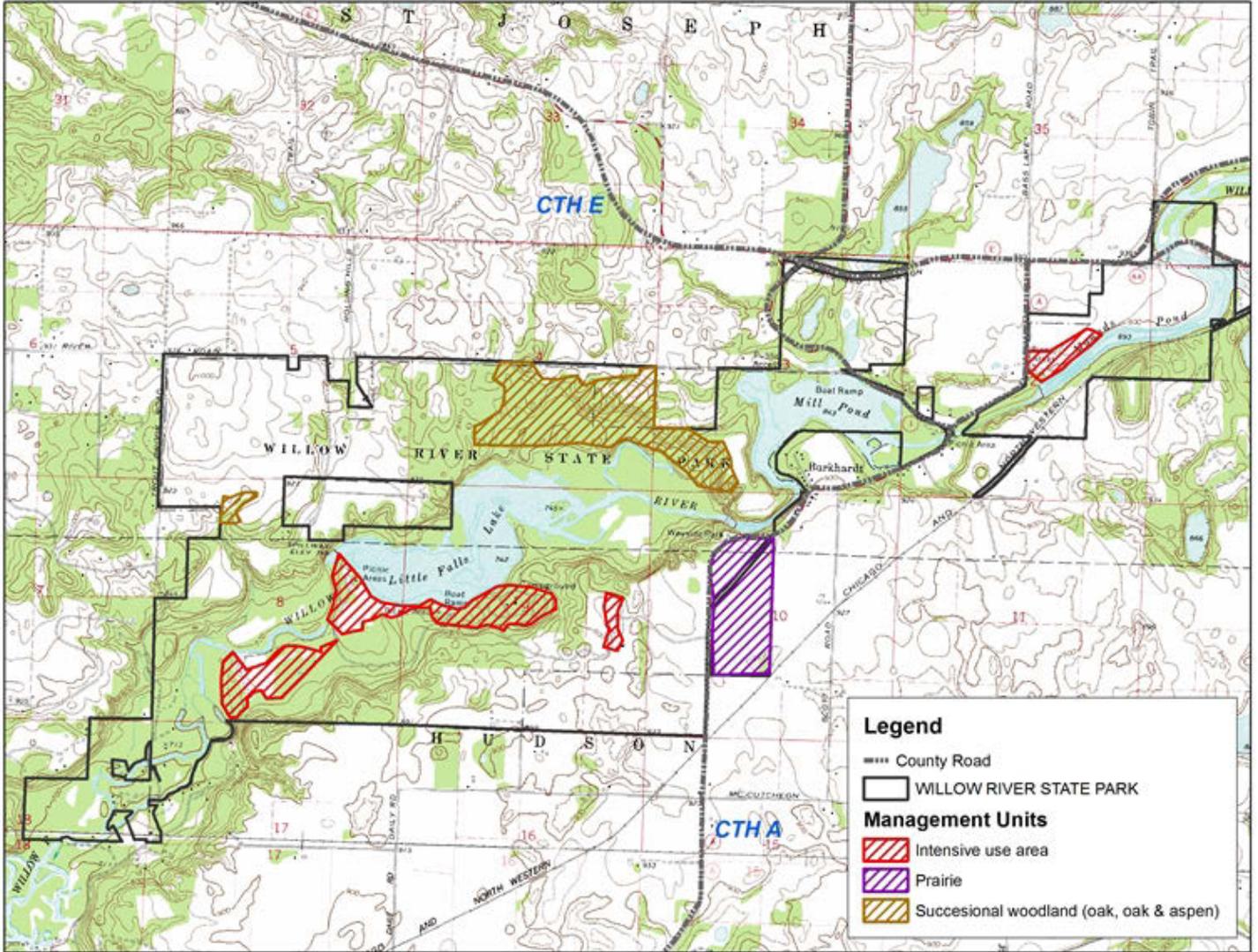
Property Manager Date

Area/Team Supervisor Date



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Management units for Willow River State Park





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Management units and forestry stands for Willow River State Park.

