



Interim Forest Management Plan

Property Identifiers

Property Name: **Willow River Wildlife Area (WRWA)**

DNR Property Code: **8890**

Forestry Property Code(s): **5610**

Property Location – County: **St. Croix**

Property Acreage: **833 acres**

Master Plan Date: **N/A**

Property Manager: **Ryan Haffele**

Property Assessment

General Property Description

- **Ecological Landscape and Property Context**

The WRWA lies within the Western Prairie Ecological Landscape (WPEL) in the Towns of Warren and St. Joseph, in western St. Croix County located ~ 5 miles east of Hudson, 4 miles northwest of Roberts, and is within 10 miles of the Twin Cities, MN metro. The property lies within the heart of the Western Prairie Habitat Restoration Area, a landscape-scale project focused on restoring 20,000 acres of prairie and wetlands in St. Croix and Polk Counties. The ecological landscape was entirely glaciated and includes Land Type Associations 222Md06 and 222Md07. These land type associations consist of outwash plain with well drained soils. The dominate land use in the landscape is agriculture, however, extreme development pressure exists around the wildlife area with the expansion of the Twin Cities, MN metro area into western St. Croix County. A private hunting club and shooting range borders the property to the northwest.

The Willow River Wildlife Area consists of extensive restored prairie, mixed pine plantations, lakes, marsh, wetlands, and aspen. The property consists of gently rolling hills associated with the last glaciation. Ecological management opportunities on the property include Emergent Marsh, surrogate grasslands, mesic prairie, oak savanna maintenance/restoration, and management/protection of wildlife, fish, herptiles, and invertebrates associated with these habitat types.

- **History of Land Use and Past Management**

Pre-settlement vegetation consisted of prairie and brush prairie. After settlement, the property was predominantly row cropped with grazing likely being a minor use. Currently, the WRWA is dominated by a mix of restored prairie and wetlands. Dominant timber types include white and red pine plantations. The Hennessey Springs are located



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on the southeast portion of the property and flow into a system of wetlands throughout the property. Acquisition of the property through the Willow River State Park Expansion project and later the Willow River Wildlife Area started in 1985. Primary management of the property has been the conversion of agricultural lands into native prairie and restoration of wetlands. Timber management has consisted of thinning pine plantations, restoring oak savanna habitat, and converting planted pine plantations into native prairie. Invasive species control is conducted as needed on the property by Wildlife staff.

Site Specifics

- **Current forest types, size classes and successional stages –**
 - Upland Grass – 614 acres (74%)
 - Wetland – 150 acres (18%)
 - White Pine – 24 acres (3%)
 - Red Pine – 36 acres (4%)
 - Aspen – 7 acres (<1%)
 - White Spruce – 2 acres (<1%)
- **State Natural Area designations –** None present
- **High Value Conservation Forests (HCVF) or other resources/natural community types limited in landscape –** None present
- **Biotic Inventory status –** A biotic inventory has not been conducted on this property.
- **Deferral/consultation area designations –** None designated
- **Rare Species –** The NHI database indicated 1 state endangered bird, 1 state threatened bird, 3 species of special concern and 2 community types in the wildlife area or surrounding buffer. Negative impacts to these species will be avoided by following DNR's Species Guidance Documents. 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 Conservation Opportunity Areas (COA), Species of Greatest Conservation Need, and Priority Conservation Actions –**
 - COA: This property is located within the Western Prairie Habitat Restoration Area which is specifically identified in the Wildlife Action Plan Implementation document for the Western Prairie Ecological Landscape (WPEL) as being located in the Prairie Potholes COA which is of statewide significance for pothole lakes, surrogate grasslands, and oak opening, all of which occur on the property. Specifically, surrogate grasslands are noted as a High Priority for this ecological landscape.
 - SGCN: Species of Greatest Conservation Need 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



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Dowitcher, Short-eared Owl, Trumpeter Swan, Western Meadowlark, Willow Flycatcher, Franklin's Ground Squirrel, and Prairie Vole.

PCA: 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 education tools and demonstration/training areas that promote prescribed fire and other prairie/savanna management practices.
- **Invasive Species –**
Reed canary grass, buckthorn, honeysuckle, wild parsnip, and crown vetch are known to occur on this property.
 - **Soils –**
Soil types are dominated by sandy loams, loams, silt loams, and loamy sands. All soils are well drained to excessively drained. An extensive part of the property is associated with water and hydric soils.
 - **Cultural and Recreation Considerations**
 - **Cultural**
No archeological or historic sites are known to exist on this property.
 - **Recreational**
This property receives significant hunting, trapping, and outdoor recreational use pressure due to its close proximity to Hudson and the Twin Cities Metro area. Other uses include trapping, hiking, dog walking, and other forms of nature-based recreation. A Class 2 dog training area has been established on the property.



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IFMP components

Management Objectives: (Outline primary forest management objectives):

1. **Sustainably manage open landscapes to provide habitat for grassland birds**
 - Habitat: Provide habitat for a wide variety of wildlife and plants, especially grassland species.
 - Aesthetics: Encourage the growth of large diameter long lived savanna oak species to enhance oak savanna habitat.
 - Forest Health: Apply Forestry Best Management Practices for Invasive Species to manage invasive plant and animal species.
 - Water quality: Apply Forestry Best Management Practices for Water Quality to sustain the water resources.
 - Recreation: Maintain quality grassland habitat that sustains and enhances hunting, fishing, trapping, hiking, etc.
 - Education and research: Provide opportunities for interpretation, education, and scientific research.

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)

1. Pine Plantations - Pine plantations on the property will be thinned according to BMP's to produce quality timber. However, priority will be given to finding readily available markets for pine biomass. All pine plantings will be clear cut and lands restored to native prairie to meet the goals and objectives of the Western Prairie Habitat Restoration Area.
2. Aspen – The small aspen stand will be managed for aspen regeneration to benefit wildlife species that utilize early successional species on a 20 year rotation. Once resources become available to convert the pine plantations to grasslands, the aspen stand will be converted to grassland as well to promote an open landscape for grassland wildlife.
3. Grasslands – Grasslands will be maintained by periodic prescribed burning, grazing, haying, or mowing.
4. Oak Savanna – Savanna habitat will be restored through chemical and mechanical treatment to remove unwanted woody species. Savannas will be maintained through periodic prescribed burning, mowing, and grazing. Bur oak plantings will be considered on suitable sites.
5. The property will continually be monitored for invasive plant species and control practices such as prescribed fire, hand pulling, chemical and mechanical control will be implemented to eliminate or reduce negative impacts.

Summary of Public Involvement and Comments Received



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PREPARED BY:

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Property Manager

8/5/15
Date

APPROVED:

Stanley Nakwon
Area Program Supervisor

8-5-2015
Date

REVIEWED BY:

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Forester

8-10-15
Date

Dunnekin
District Ecologist

8-5-15
Date



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