



# Interim Forest Management Plan

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## Property Identifiers

Property Name: Glacial Habitat Restoration Area (Fond du Lac and Winnebago County properties)

Property Designation or Type: Wildlife Management

DNR Property Codes: #7534- GHRA, #9604- Oakfield Ledge SNA

Forestry Property Code: #7103- GHRA, #2001- Oakfield Ledge SNA

Property Location:

Fond du Lac County, Towns of- Alto, Waupun, Springvale, Rosendale, Ripon, Oakfield, Metomen, Lamartine, Eldorado.

Winnebago County, towns of- Nepeuskun, Utica, Omro, Rushford, Poygan, and Winneconne.

Property Acreage:

Fond du Lac- 8,520

Winnebago- 6,109

Master Plan Date: None; Environmental Impact Statement and Feasibility Study 1990

Property Manager: James Christopoulos (south), Rachel Brookins (north)

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## Property Assessment

The following should be considered during the property assessment:

A. Ecological Landscape description and property context:

The GHRA is located within the Southeast Glacial Plains Ecological Landscape. This Ecological Landscape is made up of glacial till plains and moraines. Most of this Ecological Landscape is composed of glacial materials deposited during the Wisconsin Ice Age, but the southwest portion consists of older, pre-Wisconsin till with more dissected topography. Soils are lime-rich tills overlain in most areas by a silt-loam loess cap. Agricultural and residential interests throughout the landscape have significantly altered the historical vegetation. Most of the rare natural communities that remain are associated with large moraines or in areas where the Niagara Escarpment occurs close to the surface.

Historically, vegetation in the Southeast Glacial Plains consisted of a mix of prairie, oak forests and savanna, and maple-basswood forests. Wet-mesic prairies, southern sedge meadows, emergent marshes and calcareous fens were found in lower portions of the landscape. Drainage in the GHRA consists of some streams which empty into the Fox River Lakes and Lake Winnebago in Winnebago and Fond du Lac Counties. Most of the streams in southern Fond du Lac County and in Dodge and Columbia Counties are tributaries to the Rock River. Two major lakes, Fox and Beaver Dam, are located in Dodge County and Rush Lake is in Winnebago County.



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The Southeast Glacial Plains has the highest aquatic productivity for plants, insects, invertebrates, and fish of any Ecological Landscape in the state. In addition to Horicon Marsh, this Ecological Landscape contains important fens, tamarack swamp, wet prairies, and wet-

mesic prairies that contain rare plants and wildlife. However, most wetlands have experienced widespread ditching and infestation by invasive plants. This landscape offers excellent opportunities to expand and restore numerous habitat types.

## B. General property description –

The Glacial Habitat Restoration Area (GHRA) is a landscape scale approach to habitat management to incorporate a mosaic of wetlands and grasslands with cropland to create habitat conditions more favorable for self-sustaining wildlife populations in the glacial moraines area of east central Wisconsin. The GHRA encompasses a 24 township area in Columbia, Dodge, Fond du Lac and Winnebago Counties. The intent of the project is to scatter these habitat types amongst the predominantly agricultural lands, restoring 10% of the available uplands and 10% of the drained wetlands using both fee title and perpetual conservation easement acquisitions. Soils are mostly silt loams with areas of clay and sandy soils.

The GHRA is located in the historic center of the state's best duck range and due to its importance to breeding and migratory waterfowl, this area is targeted as Priority I Habitat for a Wisconsin Joint Venture as part of the North American Waterfowl Management Plan. The GHRA also lies in the heart of Wisconsin's historic pheasant range. Despite the dramatic decline in pheasant numbers throughout the pheasant range, the GHRA still offers some of the best potential to restore pheasant populations.

To accomplish the upland nest cover goal of 10% of the available uplands, fields would be retired from crop production and planted to nest cover. Upon soil type determination warm or cool season grass mixtures will be planted. Sharecropping, marsh hay, grazing, prescribed burning, mowing and herbicide applications are tools used to achieve and maintain desired nesting cover. To accomplish the restored wetland goal of 10% of the available wetlands, plugging ditches and breaking tile lines would occur. Water control structures will be installed to allow for water level manipulations for generally areas larger than 10 acres.

## C. Current forest types, size classes and successional stages:

Total forested acreage on these parcels according to the most updated WisFirs data is 557 acres. Bottomland hardwoods and swamp hardwoods account for 138 acres or 23 percent of the total forested acreage. Central hardwoods account for 181 acres or 32 percent of the forested acreage. Oak accounts for 107 acres or 19 percent of the forested acreage. Aspen accounts for 55 acres or 10 percent of the total forested acreage. Northern hardwoods account for 17 acres or 3 percent of the forested acreage. Walnut accounts for 34 acres or 6 percent of the total forested acres and the remaining acreage is comprised of miscellaneous hardwoods and conifers which account for 25 acres or 7 percent of the total forested acres.

## D. NHI: Endangered, threatened, Special Concern species, Species of Greatest Conservation Need (SGCN):

There are a number of threatened and endangered species associated with the properties, most of which are associated with grassland or wetland habitats. These include 16 avian species, 4 herps, 10 plants, and numerous natural communities. For the purpose of implementing forest management practices on the property, NHI records for proposed sites are evaluated when projects are developed. If a threatened or endangered species is documented within 1 mile of the proposed management site, a determination is made as to whether the species listed will actually be affected by the proposed management actions. If the species could be negatively impacted, steps will be taken to minimize or mitigate any impacts. Specific management guidelines have been



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developed for many species by the Bureau of Natural Heritage Conservation, and guidelines are continuously being developed for additional species.

## E. Wildlife Action Plan Conservation Opportunity Areas (COA):

Niagara Escarpment – Global Significance-  
Cliff, bedrock communities, and bat hibernacula  
**COA(s):** *Oakfield Ledge*

High Quality Wetland Communities – State Significance-  
Immense cattail marsh, impounded areas with the ability to manipulate water levels and upland grass.  
**COA(s):** *Horicon Marsh (9.09)*

High Conservation Value Forests (HCVF) or other resources/natural community types limited in the landscape: Niagara Escarpment, remnant prairie, oak savanna associated with the SNAs described below.

F. Significant cultural or archeological features: The State Historical Society has inventoried 484 archeological sites within the entire 4 county GHRA area, with many of these located in Fond du Lac and Winnebago counties. These sites include campsites, cemeteries, mounds, villages, and other misc.

## G. Invasive species:

Invasive species are prevalent on the wildlife areas. Species that are abundant and problematic on forested portions of the property include common buckthorn, Asian honeysuckle, garlic mustard, black locust, autumn olive, wild parsnip, and reed canary grass. Herbicides are typically used to control invasive exotic plants for a variety of reasons, but most often to facilitate regeneration of desirable native vegetation. The Emerald Ash Borer was first detected in Fond du Lac County in 2013. This invasive exotic pest is expected to kill 99 percent of all ash trees within the county over time. Those forest stands that are dominated by ash will be identified and managed in such a way to encourage establishment of tree species other than ash. Management of these stands may include timber harvesting and control of invasive exotic plants. Some areas that are not easily accessible or are already degraded may not be capable of being effectively managed.

## H. Existing State Natural Areas (SNA) designations/natural community types limited in the landscape:

Oakfield Ledge SNA- provides a unique moist cliff habitat along exposed portions of the Niagara Escarpment.

Waupun Park Maple Forest- contains excellent examples of southern dry-mesic, mesic, and wet-mesic forest.

Ripon Prairie- is a small tract containing characteristic dry prairie species.

## I. Primary public uses (recreation):

Hunting, trapping, fishing, hiking, wildlife viewing, cross country skiing and bird watching are all uses that are allowed on the GHRA.



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## IFMP components

### Management Objectives:

1. Identification of viable forest acreage that is to be managed in a manner that will maintain that acreage in a productive forested cover type.
2. Identification of forested acreage that may potentially be converted to other cover types that could improve upon habitat that is otherwise fragmented or lacking from the property.
3. Maintain forest health and species diversity across the properties to the greatest extent possible.
4. Favor hard mast producing species such as oak and hickory where they exist.
5. Allow for regeneration of aspen in those areas where aspen is currently present and it does not negatively affect other habitat or cover types.
6. Prepare the property for introduction of emerald ash borer by reducing the proportion of ash in stands where it is present while also encouraging establishment of other appropriate species that are capable of growing in similar conditions.
7. Reduce the prevalence and dominance of invasive exotic species and control them to the extent possible with the knowledge and resources available.

### Oakfield Ledge SNA

- 1) Oak Forest & Central Hardwood (Stands 1)
  - a. Restore the forest to a more open, oak woodland community that historically persisted at this site.
  - b. Retain open grown oak, hickory and red cedar for legacy trees, wildlife, aesthetics and future downed woody debris.
  - c. Long term objective: minimal regeneration, slow conversion to oak savanna
  - d. Restore ground layer composition.
  - e. Minimize introduction and spread of invasive species.

### Property Prescriptions:

All forest management prescriptions will follow the forest management principles outlined in the "Wisconsin Forest Management Guidelines" and the "Silviculture Handbook" for those stands where continuation of the forested habitat type is the goal. For those areas where forested acreage may be converted to grassland or other cover types those guidelines will not apply.

### Oakfield Ledge SNA

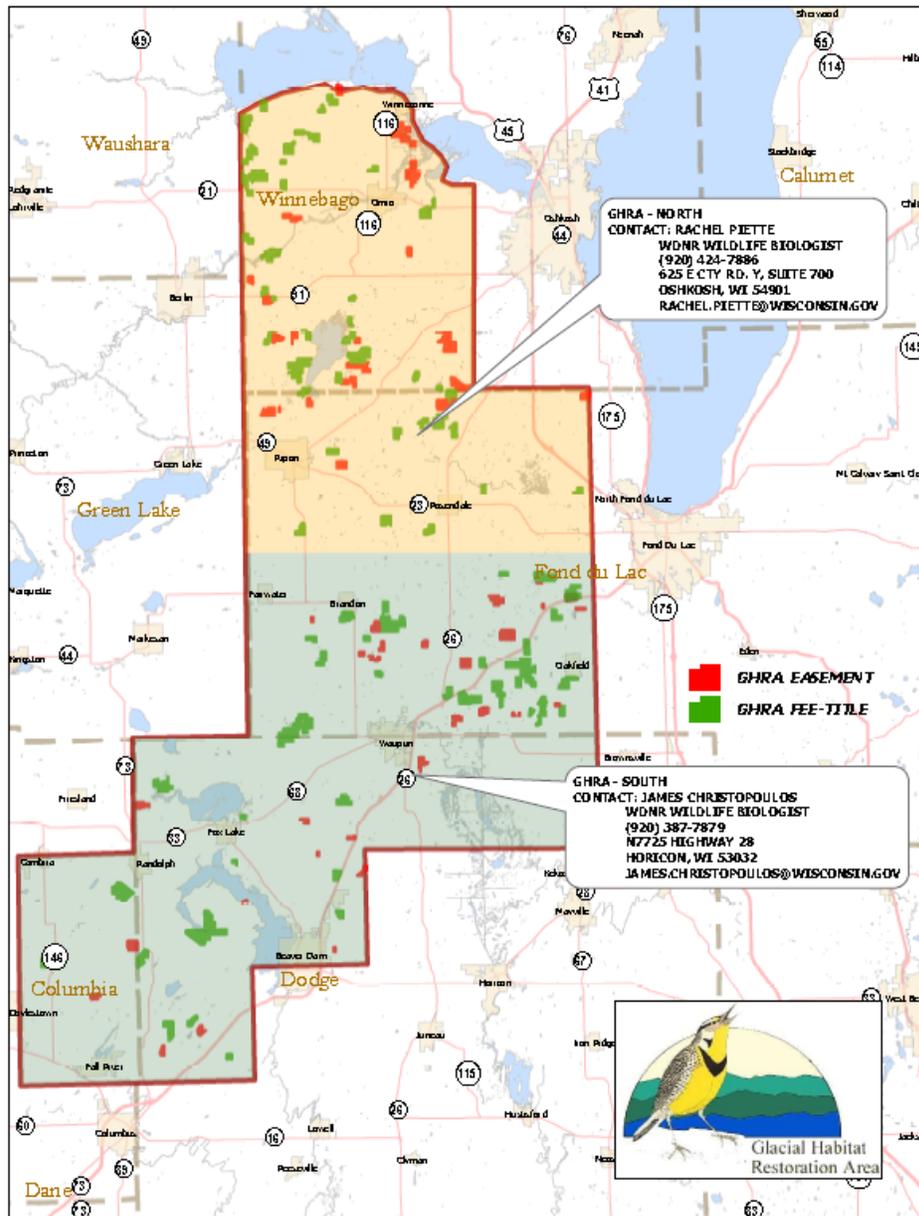
#### **Oak Forest & Central Hardwoods**

- a. Convert the oak forest to an oak savanna/woodland community type, by maintaining a canopy coverage of 25-60%. Favor dominant tree species of this community type: bur oak, shagbark hickory and white oak.
- b. Several large vigorous trees, decadent trees, snags, and downed logs will be retained to enhance structural complexity and provide specialized habitat for numerous species.



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- c. Restore ground layer composition by removing invasive shrubs and augmenting the ground layer with oak woodland species (legumes, grasses and composites). Occasional fires of moderate to high intensity will be crucial in maintaining this community type (limiting regeneration, to prevent succession into an oak forest). Under this fire regime, shrub and sapling representation in oak woodlands would be minimal. The herbaceous layer will convert to legumes, grasses, composites and other forbs that are best adapted to light conditions of high filtered shade.
- d. The oak woodland will be managed to permit individual oak trees and small patches to attain old-growth characteristics. This management will be accomplished by thinning to 50-80% canopy closure, then assessing where young vigorous oaks are regenerating and selectively removing canopy oaks over these patches to permit some regeneration of the oak woodland canopy trees, while still retaining some trees to attain old-growth status. Focus will be to keep existing oak on the landscape for as long as possible. Long term, limited timber production will occur.





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**PREPARED BY:**

James Christopoulos, Rachel Brookins, and Joe Henry

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Property Manager

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Date

**APPROVED:**

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Area Program Supervisor

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Date

**REVIEWED BY:**

\_\_\_\_\_  
Forester

\_\_\_\_\_  
Date

\_\_\_\_\_  
District Ecologist

\_\_\_\_\_  
Date



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**PREPARED BY:**

James Christopoulos, Rachel Brookins, Tom Vanden Elzen, and Joe Henry

*[Signature]* Rachel Brookins 12/1/15 12/7/15  
Property Manager Date

**APPROVED:**

*[Signature]* 12/1/15  
Area Program Supervisor Date

**REVIEWED BY:**

*[Signature]* 12/7/15  
Forester Date

*[Signature]* 12/15/15  
District Ecologist Date