



# Interim Forest Management Plan

---

## Property Identifiers

Property Name: **Pickerel Lake State Natural Area**

Counties: **Portage**

Property Acreage: **143 Acres - Pickerel Lake**

Forestry Property Code: **5003 – Pickerel Lake**

Master Plan Date: **None**

---

## Part 1: Property Assessment

### General Property Description

#### Landscape and Regional Context:

This State property lies within the Central Sand Hills Ecological Landscape.

#### General Property Description

- Landscape and regional context

Pickerel Lake is located in the Central Sand Hills Ecological Landscape and Landtype Association 222Kb01 Arnott-Almond Moraine Complex. It is not found within a Conservation Opportunity Area or an Important Bird Area. Featured in the SNA is a portion of a tunnel channel lake that harbors a significant population of the federally-threatened Fassett's locoweed *Oxytropis campestris var. chartacea*. This lake developed in a tunnel channel created by melt water flowing beneath the glacial ice. The lake basin was created when a buried block of ice remained after the tunnel collapsed.

- History of land use and past management

The vegetation prior to settlement by Europeans was a mix of sand prairie, oak savanna and jack pine forest/barrens. Water levels on the lakes dramatically rise and fall mirroring the precipitation patterns, which provided ideal conditions for development of interior beach communities supporting Fassett's locoweed. Changes due to settlement include converting much of the natural vegetation to row crops and pasture. More recent changes reflect changing agricultural practices with much of the uplands now abandoned from intensive agriculture or planted to pines on the immediate site. Adjacent lands, however, are under much more intensive agriculture utilizing high capacity wells for irrigating row crops. Ground water depletion has affected the lakes in the area with most unable to fill to the centuries old high water marks during periods of heavy precipitation.

In addition, a long-term youth camp occupies the northeast portion of the lake. The camp operates for 3 months in the summer with effects on the SNA limited to water activities.

#### Site Specifics

- Current forest types, size classes and successional stages (percentage represents forest type acres only).



# Interim Forest Management Plan

- Oak ( 36%) – 32 acres of 5-11” is 27 years old, 15 acres of 0 - 5” is also 27 years old, and 4 acres of 0 – 5” is 10 years old. The slow growing trees with a poor site index could be managed for oak barrens characteristics if funds are available.
- Red Maple (10%) – 10 acres are in the 0-5” size class with stand origin being 1986.
- White pine (17%) – all 17 acres are in the 9-15” size class with stand origin being 1960.
- Red pine plantation (18%) – three plantations are in the 9-15” size class with ages ranging from 52 to 66 years.
- One stand of aspen (6%) has a stand origin of 1986.
- Grassy old field and upland brush – 14 acres.
- Fluctuating lake and interior beach communities – these 26 acres are the primary reason for establishing the State Natural Area, because it harbors a large population of the federally-threatened Fassett’s locoweed. Management includes removing invading trees, shrubs, and sweet clovers from the interior beach habitat.
- State Natural Area designations
  - The entire area is a designated State Natural Area
- High Value Conservation Forests (HCVF) or other resources/natural community types limited in the landscape – Pickerel Lake State Natural Area features a hard water seepage lake with a fluctuating shoreline and an associated interior beach natural community. This fluctuating shoreline and interior beach harbor one of the few known populations of the Federally Threatened Fassett’s locoweed.
- Biotic Inventory status. Master plan biotic inventory not complete, however, the Natural Area County Inventory (the precursor to NHI) completed an inventory in 1981.
- Deferral/consultation area designations (refer to the following website): No
- Rare species
  - Fassett’s locoweed (*Oxytropis campestris var. chartacae*)
- Invasive species
  - Yellow and white sweet clovers and spotted knapweed are profusely invading the interior beach habitat.
  - Garlic mustard is scattered and limited to small patches.
  - Bush honeysuckle, common buckthorn, autumn olive, and Japanese barberry are scattered in small populations.
  - Black locust is found in several places on the property.
- Soils – Loamy sand soils of variable particle sizes predominate throughout the property.

## History of Land Use:

Prior to State of Wisconsin ownership, the land use history included hunting, fishing and marginal timber management. This scattered property has been purchased to protect the habitat for a federally-threatened plant species, as well as to provide public hunting, fishing, sightseeing and hiking opportunities.

## **Cultural and Recreational Considerations**

- **Cultural and archeological sites:** There are no cultural, archeological or historic sites that have been identified by the Wisconsin Historical Society on this property.
- **Recreational Uses:** Fishing, hunting, trapping and sightseeing are the primary recreational uses on this property.

---

## **Part 2: IFMP Components**



# Interim Forest Management Plan

## Site objectives

Manage the site as an aquatic reserve especially focusing on the inland beach that provides habitat for a significant population of Fassett's locoweed. Natural processes will determine the population structure for Fassett's locoweed. Forest types are of secondary concern and can be managed to supplementary site benefits.

## Management approach

The native aquatic species are managed passively, which allows nature to determine the ecological characteristics of the lake. The inland beach community needs regular attention to manage competing vegetation, especially sweet clovers and spotted knapweed. If financial resources are available the oak could be managed toward restoring an oak barrens community. Oak barrens would be managed actively with canopy thinning, understory manipulation and shrub control via harvest, brushing or fire may be needed to mimic natural disturbance patterns. Apply appropriate silvicultural systems when conducting timber management activities.

- Regenerate aspen to keep that component at the site.
- Regenerate appropriate oak stands to oak.
- Conduct sanitation harvests where timber health is poor.
- Continue appropriate thinnings in pine stands to maintain overall health as well as promote further development of tree regeneration.
- Release areas of advanced regeneration where appropriate.
- Allow grass areas to convert to forest. Convert appropriate grass openings to forest through tree planting.
- Eliminate miscellaneous coniferous (Scotch pine and various Christmas tree species) and miscellaneous deciduous (black locust, box elder, etc...) forest types and convert to forest or non-forest type.
- Offer opportunities for outdoor recreation to include hunting, fishing, trapping and nature study.
- Identify invasive plant species and implement control practices such as prescribed fire, hand pulling, chemical and mechanical control to eliminate or reduce negative impacts.
- Utilize BMP's for Invasive Species to help limit the introduction and spread of invasive species when conducting timber sales.
- Utilize BMP's for Water Quality when conducting timber sales.

**Management Objectives** (Outline primary forest management objectives): The primary objective is to maintain or increase the habitat for and population of Fassett's locoweed. In addition, the uplands are proposed to be restored to forest types similar to those found prior to settlement by Europeans (oak, and pine forests).

- 1) Interior Beach does not require any forest management other than managing the stand on the lake's south side to permit enough light for the locoweed to thrive.
- 2) Maintain oaks or thin to promote oak barrens structure.
- 3) Aspen should be maintained in stand 2.
- 4) Pine forest (both natural origin and plantation) - Develop older forests.
- 5) Red Maple – reduce abundance and promote white pine via silvicultural techniques, seeding or planting.

**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):



# Interim Forest Management Plan

**Aspen** – Maintain aspen cover type by regenerating the stand using a simple coppice system. Rotation age is generally 40 - 45 years.

**Grasslands** – Cool and warm-season grasslands will be passively maintained, which will gradually convert via succession to a forest stand.

**Oak** – The oak cover type will be managed to regenerate to oak or to convert to oak barrens. Rotation ages vary from 45 – 90 years depending on if it is a scrub oak, black oak, pin oak or red oak site. Oak will generally be managed using even-aged silvicultural systems to promote maintenance of the oak type. Barrens conversion would require development of firebreaks, thinning of canopy trees, and conducting frequent prescribed fires. This conversion would only be attempted, if funds are available for continued barrens management. . Further evaluation, guidance, and tree marking assistance can be provided by State Natural Area staff or District Ecologist on how to meet barrens management objectives for these stands.

**Red maple** - The red maple stands will be managed as even aged using an array of silviculturally accepted practices to promote the red maple type and possibly promote a variety of age classes within the stands. The management would also look for opportunities to increase the white pine component. Rotation age is generally 40 – 90 years depending on the soil type.

**Red and White pine** – Thin plantations through normal silvicultural order of removal to attain a more natural appearing forest of old pines. Thin white pines stands to promote development of old-growth white pine characteristics. Rotation age range can vary from 65 – 120 years for red pine and 80 – 180 years for white pine depending on soil type. Most red pine stands will naturally convert to oak or white pine through continuous silvicultural thinnings. Eventually the pine will be a component of the newly established stand and may provide opportunity for big tree silviculture with some old growth characteristics. With this in mind, the pine stand may never be completely rotated.

**All stands** - Retain reserve/legacy trees as groups or individuals throughout the property within harvested stands

## Approvals:

\_\_\_\_\_  
District Ecologist West Central District Date

\_\_\_\_\_  
Forester Portage County Date

\_\_\_\_\_  
Property Manager for Pickerel Lake of Portage County Date

\_\_\_\_\_  
Area/Team Supervisor Portage County Date