



Interim Forest Management Plan

Property Identifiers

Property Name and Designation (multiple small properties can be grouped): **Plainfield Tunnel Channel Lakes State Natural Area**

County: **Waushara**

Property Acreage: **323**

Forestry Property Code): **7020 – compartment 901**

Master Plan Date: **A Non-NR44 compliant Management Plan approved January 22, 1999**

Part 1: Property Assessment (1-2 pages maximum)

The following items should be considered during the property assessment. Not all sections may be relevant for all properties.

General Property Description

- Landscape and regional context

Plainfield Tunnel Channel lakes are 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 are all or portions of six tunnel channel lakes that harbor most of the state's population of the federally-threatened Fassett's locoweed *Oxytropis campestris var. chartacea*. These tunnel channel lakes are part of a string of 13 lakes that developed in a tunnel channel created by melt water flowing beneath the glacial ice. Each lake basin was created when buried blocks 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.

Site Specifics

- Current forest types, size classes and successional stages
 - Oak (14%) – 4 acres of 5-11" is 45 years old, 7 acres of 11-15" is 105 years old, 23 acres of 15+ is 67 years old, in addition 11 acres of oak not in the recon is scheduled to be managed as lakeside oak savanna..
 - Miscellaneous deciduous (10%) – all 32 acres are in the 5-11" size class and range from 32 to 42 years old.
 - Jack pine (6%) – all 20 acres is in the 5-9" size class with 3 acres 22 years old and the remainder 54 years old.



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- White pine (9%) – 19 acres is in the 9-15” size class and 10 acres is 15+. One 10 acre stand is 56 years old and the other two range from 56 to 87 years.
- Red pine plantation (20%) – three plantations are in the 5-9’ size class with ages ranging from 22 to 54 years. Two stands are in the 9-15” size with ages ranging from 55 to 70 years.
- Grassy old field (22%) – 72 acres will be planted to a sand prairie mix that will help with the recovery of the federally-endangered Karner Blue Butterfly. A population occurs within 1.5 miles of the site.
- Fluctuating lake and interior beach communities (16%) – these 54 acres are the primary reason for establishing the State Natural Area, because it harbors the largest 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 - NO
- Biotic Inventory status. Master plan biotic inventory not complete, however, the Natural Area County Inventory (the precursor to NHI) completed an inventory in 1978.
- Deferral/consultation area designations (refer to the following website): No
- Rare species
 - Fassett’s locoweed (*Oxytropis campestris var. chartacae*)
 - Karner Blue butterfly (*Lycaeides Melissa samuelis*) – potential habitat
- Invasive species
 - Yellow and white sweet clovers are profusely invading the interior beach habitat.
 - Garlic mustard is scattered and limited to small patches.
 - Spotted knapweed is primarily found in the road ditches and the former scots pine plantation.
 - Bush honeysuckle and common buckthorn are scattered in small population.
 - Black locust is found on the far south end of the property (Freyer tract) and south of Fiddle Lake.
- Soils – Sandy and loamy sand soils of variable particle sizes predominate throughout the property.

Cultural and Recreational Considerations

- Cultural and archeological sites (including tribal sites)
 - Six archaeological sites are recognized in the project boundary. A three mound group containing conical and linear mounds greatly limits activities in those areas. A prehistoric village site is found on the shores of Plainfield Lake and two historic features - a homestead foundation and burial site – are found just west of Weymouth Lake.

Part 2: IFMP Components (1-2 pages maximum)

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, open grassy areas and presently forested areas south of Aniwa Road are proposed for management to help the Karner Blue butterfly. The remaining uplands are proposed to be



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restored to forest types similar to those found prior to settlement by Europeans (oak savanna, and pine forests).

- 1) Interior Beach and Grassland Restoration do not require any forest management other than replacing stand 13 with prairie species after the normal red pine rotation found the DNR Silviculture Handbook with prairie species and thinning stand 12 to savanna.
- 2) Oak Savanna – create and maintain oak savanna
- 3) Jack Pine and oak management areas maintain cover types.
- 4) Pine forest - Develop older forests

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):

Oak –

- a. Maintain to oak savanna densities in the non-reconned stand south of Plainfield Lake and stands 5 and 19. These stands also harbor the mound groups and any operation would require consultation with the Department archaeologist and the Ho-chunk nation.
- b. Promote replacement trees to maintain canopy densities.

Jack Pine and oak forest –

In stands 2, 3, and 9 manage the jack pine and oaks by conducting clearcut, coppice with standards or shelterwood harvest. Supplemental seeding of jack pine may be necessary to maintain a substantive jack pine component.

Pine plantation and white pine stands –

- a. Thin plantations through normal silvicultural order of removal to attain a more natural appearing forest of old pines.
- b. Thin white pines stands to promote development of old-growth white pine characteristics.
- c. Thin white pine forest to lower residual densities near Fiddle Lake to assist with any Fassett's locoweed recovery on the south shore of the lake.

Approvals:

District Ecologist Date

Forester Date

Property Manager Date

Area/Team Supervisor Date