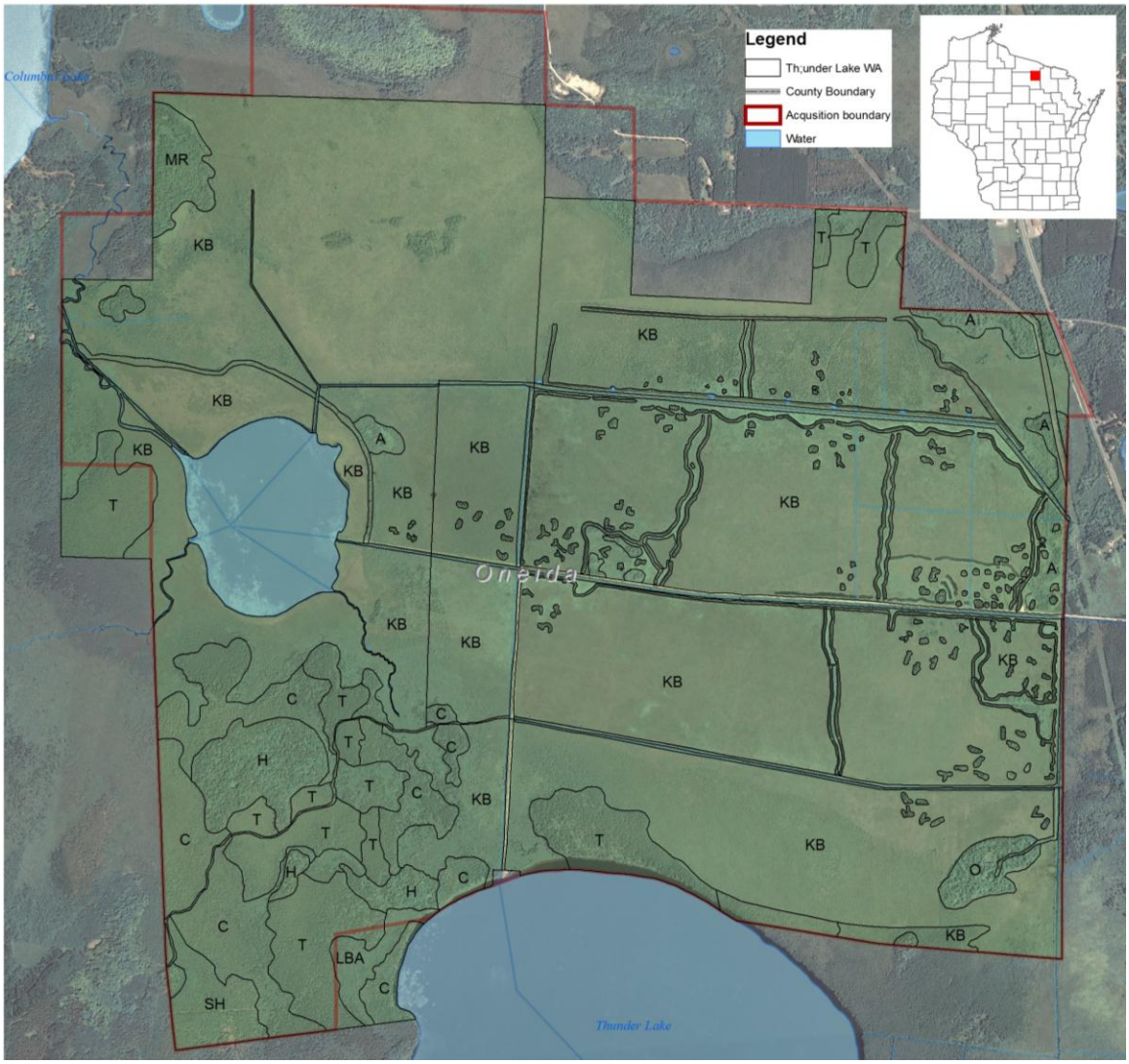
Thunder Lakes State Wildlife Area
Interim Forest Management Plan

Property Identifiers

Property Name and Designation: **Thunder Lakes State Wildlife Area**
County: **Oneida**
Property Acreage: **3,290**
Forestry Property Code(s): **4426**
Master Plan Date:

Part 1: Property Assessment



General Property Description

Thunder Lake Wildlife Area is a 3,290 acre property located in northeast Oneida County, one mile north of the village of Three Lakes. It consists of 50 percent open peat wetland (poor fen) and 50 percent forested tamarack/black spruce wetland with the 120-acre Rice Lake and 1.3 miles of

shoreline on 1,800-acre Thunder Lake. The whole property is open for hunting except for the waterfowl closed area around Rice Lake. A wide variety of wetland wildlife use the property including mallards, blue-winged teal, ring necked ducks, Great blue herons, sandhill cranes, Canada geese and numerous species of wetland songbirds. Three rare species, the Nelson sharp-tailed sparrow, merlin and the yellow rail nest on the property. Common mammals include white-tailed deer, beaver and muskrats.

- **Landscape and regional context**
  The property lies within the Northern Highland Ecological Landscape, and within the Northern Highland Outwash Plains Land type Association (212Xb01). TLSWA is within the Thunder Lake Conservation Opportunity Area (COA) of the Wisconsin Wildlife Action Plan.

- **History of land use and past management**
  The area was cleared and drained for agriculture by 1920. Agriculture failed and the land became tax delinquent. In 1952, Oneida County transferred the land to the State of Wisconsin for development of a wildlife management area. During the 1950's and 1960's prescribed fire was used to keep the property free of invading tamarack and black spruce and to support a remnant population of sharp-tailed grouse. By 1985 the sharp-tailed grouse had disappeared because suitable habitat declined to less than 2,000 acres.

  Today the property is managed for wetland wildlife. The western half of the property is a large, wild State Natural Area while the eastern half is managed as an open peatland. In the managed area, cutting and prescribed fire are used to maintain about 1,000 acres of open sedge, leatherleaf, cottongrass and bog birch peatland.

Site Specifics

- ***Current forest types, size classes and successional stages*** : 3,290 Recon acres, 626 acres of forested, 2,664 non-forested:

Forest Type Description	Stands	Acres	Percent of Forested Acres	Percent of Recon Acres
Aspen	2	45	7%	1%
White Cedar	5	192	31%	6%
Hemlock	2	69	11%	2%
Red Maple	1	33	5%	1%
Oak	1	22	4%	1%
Swamp Hardwoods	1	35	6%	1%
Tamarack	10	230	37%	7%
Total:	**22**	**626**	**101%**	**19%**

Non-Forested Type Description	Stands	Acres	Percent of Non-Forested Acres	Percent of Recon Acres
Snowmobile and/or Horse Trail	1	17	1%	1%
Muskeg Bog	3	2,467	93%	75%
Lowland Brush-Alder	2	29	1%	1%
Minor Lake	3	87	3%	3%
Right of Way	3	47	2%	1%
Upland Brush	2	17	1%	1%
Total:	**14**	**2,664**	**101%**	**82%**

*Percentages may not sum to 100% due to rounding

- ***State Natural Area designations***: Rice Lake SNA (#40)
- ***High Value Conservation Forests (HCVF) or other resources/natural community types limited in the landscape***: No drafts or final designations. This property contains areas of

Northern Sedge Meadow which are important nesting habitat for Yellow rail, which only nest at a few locations in Wisconsin.

- ***Biotic Inventory status:*** None
- ***Deferral/consultation area designations (refer to the following website):*** None
- ***Rare species:*** Threatened species and high-quality examples of native communities have been documented on this property. NHI screening will be conducted prior to all future management activities.
- ***Invasive species***: spotted knapweed
- ***Soils***: The characteristic landform pattern is undulating pitted and unpitted outwash plain with swamps, bogs, and lakes common. Soils are predominantly well drained sandy loam over outwash. Common habitat types include forested lowland, ATM, TMC, PMV, and AVV

Cultural and Recreational Considerations

Cultural and archeological sites (including tribal sites): The Oneida County Archaeological and Historical Sites map (WDNR, 2012) indicates one Historical sites adjacent to this property. All known sites are to be protected during forest management operations.

Part 2: IFMP Components

Management Objectives (Outline primary forest management objectives):

Property Management goals at Thunder Lakes SWA emphasizes habitat for waterfowl and other species that require open wetland and grassland habitats. A combination of prescribed fire, hand cutting, mowing and shearing is used to limit the growth of shrubs and tamarack, while increasing the abundance of grasses and sedges. Without intervention, these peatlands naturally convert to tamarack forest and black spruce muskeg.

Due to the nature of the overall objectives for this property; classic forest management objectives will be minimal on this property and confined to specific locations.

The primary forest management objectives include the following:

1. Manage forested stands after consultation with the property manager to determine specific objectives for the particular area.
2. Identification of viable forest acreage that is to be managed in a manner that will maintain that acreage in a productive forested cover type.
3. 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.
4. Sustainably maintain forest health and species diversity across the property.
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. Manage a small unique oak island using a shelterwood silvicultural system to regenerate the stand.
7. Incorporate landscape scale opportunities into management decisions to include:
    - Improving forest composition and structure
    - Naturally regenerate stands whenever possible
    - Protecting rare and endangered species and habitats

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):

- Stand specific objectives and prescriptions will be discussed and determined at the Annual Integrated Property Management meetings. Several resource professionals

associated with the property attend the meeting, including the forester, district ecologist, fish manager, wildlife biologist / property manager, and law enforcement staff.

- 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 other cover types those guidelines will not apply.
- Manage aspen on an even-aged basis, using a coppice with standards silvicultural system. Emphasis on smaller sized harvest patches with "standards" and Green Tree Retention will improve age and structural diversity for wildlife such as grouse, deer, and turkey.
- Manage black spruce and tamarack on an even-aged basis using a strip clear cut silvicultural system in larger stands and a seed tree system in small stands. Wetland Forest habitats such as Tamarack may need to be maintained on a shorter rotation to prevent succession of open areas.
- Manage oak, red and white pine stands on an extended rotation, regenerating either by group selection, shelterwood or by clear cut and replanting. Retention of large oaks and pines during any thinning or regeneration stages will improve structural and age diversity for wildlife within the stand.
- Manage northern hardwood on an all-aged basis, creating all age classes through the installation of canopy gaps and thinning.

Approvals:

_____
Regional Ecologist Date

_____
Forester Date

_____
Property Manager Date

_____
Area/Team Supervisor Date