

# Cyr Swamp Patterned Fen ERA Management Plan



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## Administrative Information:

- Location:
  - Gwinn Forest Management Unit, Cyr Management Area, Compartments 21, 22.
  - Gwinn County: T44N R25W, Sections, 3, 4, 9, 10, 11, 14, 15, 22, 23.
- Contact Information:
  - Plan Writer: John M. Hamel, Inventory and Planning Specialist, Marquette Customer Service Center
  - Local Forester(s) & Biologist(s): Eric Brolin, Pete Holodnick, Brian Roell.
- State of Michigan lands
- Existing Infrastructure/Facilities: None
- Other Documents Related to This ERA: None

## Conservation Values:

Describe the natural community occurrence for which the ERA is recognized:

- Patterned fen (EO ID 17617) Last observed 2019.
- Patterned fen is a minerotrophic shrub- and herb-dominated peatland mosaic characterized by a series of peat ridges (strings) and hollows (flarks) oriented parallel to the slope of the landform and perpendicular to the flow of groundwater. The strings vary in height, width, and spacing, but are generally less than one meter tall, resulting in a faint wave-like pattern that may be discernable only from aerial photographs. The flarks are saturated to inundated open lawns of sphagnum mosses, sedges, and rushes, while the strings are dominated by sedges, shrubs, and scattered, stunted trees. Patterned fens occur in the eastern Upper Peninsula, with the highest concentration found in Schoolcraft County. Patterned fens are also referred to as patterned bogs, patterned peatlands, strangmoor, aapamires, and string bogs. ERA high-quality patterned fens are undisturbed and associated with high quality wetlands and upland communities. Native plant diversity is characteristic of species documented in baseline surveys (Cohen et al 2008) and MNFI community descriptions, invasive species populations should be minimal. Hydrology should be unimpeded by ditching, diking, or damming, and there should be no evidence of past plowing. Protecting the upland area that feeds groundwater into the fen is critical to maintain the quality of groundwater (chemicals, nutrient levels, etc.) Maintenance of periodic fire disturbance is important. More detailed information can be found in the MNFI community abstract. [http://mnfi.anr.msu.edu/abstracts/ecology/Patterned\\_Fen.pdf](http://mnfi.anr.msu.edu/abstracts/ecology/Patterned_Fen.pdf)
- Other High Conservation Values Present:
  - The large size of this patterned fen makes it an extensive, mostly undisturbed, occurrence in a matrix of natural communities which consists of several wetland communities and upland forests.
- Other Values for Consideration:
  - Unique birding opportunities – These fens are home to one of the most pursued sparrow species because of elusiveness, simple song and inaccessible habitat; the LeConte’s Sparrow *Ammodramus leconteii* is a prized find.
    - Other unique bird species:
    - Bobolink, *Dolichonyx oryzivorus*
    - Short-eared owl, *Asio flammeus* (state endangered)
    - American bittern, *Botaurus lentiginosus* (state special concern)
    - Northern harrier, *Circus cyaneus* (state special concern)
    - Yellow rail, *Coturnicops noveboracensis* (state threatened)
    - Spruce grouse, *Falcipennis canadensis* (state special concern)
    - Merlin, *Falco columbarius* (state threatened)
    - Black-backed woodpecker, *Picoides arcticus* (state special concern)
  - Timber products- islands within the fen have limited value for timber production due to their small size and the work required to access. Long-term management for timber products will be minimal.

**Threats Assessment:**

- Primary threats include logging, nutrient enrichment, draining, flooding, off-road vehicle (ORV) activity, shrub and tree encroachment.

**Management Goal(s):**

- Eliminate invasive species if found
- ERA's have representation of native plants, indicator species, and rare species
- Reduce fragmentation
- Reduce threats from ORVs,
- Prevent shrub encroachment

**Management Objectives:**

- Identify and prioritize critical areas within the ERA to treat for invasive species.
- Maintain a high diversity of native plants.
- Allow blowdown/windthrow, fire, and insect mortality to occur without salvage harvest.
- Determine if there are impacts to hydrological system.
- Work with local landowners to manage fen on private property directly adjacent to ERA
- Assess EO quality every 10-20 years.
- Identify and eliminate illegal ORV access points.

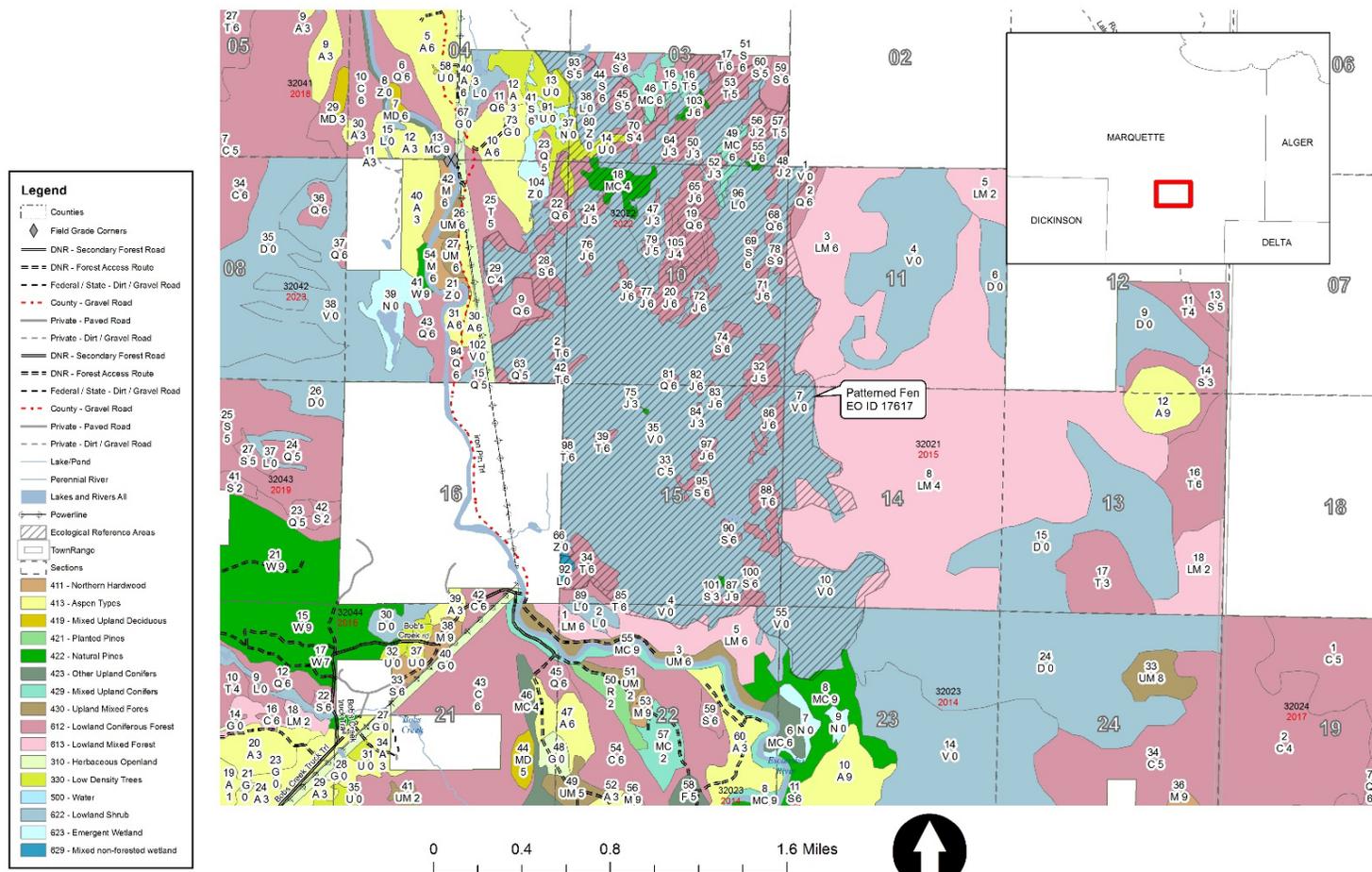
**Management Actions:**

- Identify vectors of invasive species and reduce their introduction to the site.
- Remove invasive plants using appropriate control methods for that species.
  - Glossy buckthorn is just beginning to establish itself into the patterned fen and should be a treatment priority.
- Write a wildfire plan to incorporate Minimum Impact Suppression Tactics (MIST) where safety concerns allow.
- Avoid establishment of new fire lines to reduce invasive species encroachment.
- Use periodic burning to maintain presence of native plant species, reduce invasives, and to reduce woody encroachment.
- Avoid creating new roads adjacent to ERA.
- Install culverts under roads as needed and ensure that current culverts are functioning.
- Close illegal roads and trails.
- Work with LED to increase patrols for illegal ORV activity and enforce state land use rules.

**Table: Monitoring patterned fen**

<b>Indicator</b>	<b>Current Status</b>	<b>Desired Future Status</b>	<b>Summary Assessment</b>
<b>Presence of Invasive Species</b>	Present, (glossy buckthorn)	None	MNFI Assessment
<b>Effects of invasive species treatment</b>	Unknown	Eradicated	Treatment report and surveys
<b>EO Rank</b>	B	AB	MNFI Assessment
<b>Illegal ORV activity</b>	Unknown	None	LED data and observations

# Site Map:



**Pictures:**

Cyr Swamp patterned fen (EO ID 17617). Photo by Joshua G. Cohen.