

Selma Swamp ERA Plan

Administrative Information:

- Location:
 - Traverse City FMU; Manistee Plains MA, Compartment 39
 - Manistee County; T23NR14W, Sections 10 & 15
- Contact information:
 - Plan Writer: Patrick Cotant, Forester, Traverse City Field Office
 - Local Unit Manager & Wildlife Biologist: David Lemmien and Steve Griffith
- State of Michigan owned 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:

- Northern Hardwood Swamp, EO_ID 7693, EORANK-C, last observed 8/25/2006
- ERA designation is for a rare natural community
- Northern hardwood swamp is a seasonally inundated, deciduous swamp forest community dominated by black ash (*Fraxinus nigra*) that occurs on neutral to slightly acidic, hydric mineral soils and shallow muck over mineral soils. Located north of the climatic tension zone, northern hardwood swamp is found primarily in depressions on level to hummocky glacial lakeplains, fine- and medium-textured glacial tills, and broad flat outwash plains. Fundamental disturbance factors affecting northern hardwood swamp development include seasonal flooding and windthrow. Refer to the MNFI Community Abstract for more detailed information.
http://mnfi.anr.msu.edu/abstracts/ecology/Northern_hardwood_swamp.pdf
- Description from the Element Occurrence Record: The overwhelming canopy dominant is silver maple (*Acer saccharinum*) (30-80 cm DBH) and canopy associates include green ash (*Fraxinus pennsylvanica*) and black ash (*F. nigra*) with yellow birch (*Betula alleghaniensis*) and northern white-cedar (*Thuja occidentalis*) restricted to the margins and primarily confined to the subcanopy. The subcanopy also contains silver maple, ash species, and American elm (*Ulmus americana*). The tall shrub layer is sparse with ashes, elm, and muscledwood (*Carpinus caroliniana*). The low shrub layer is scattered with winterberry (*Ilex verticillata*), spicebush (*Lindera benzoin*), and raspberries (*Rubus* spp.). Ground cover ranges from closed to patchy (due to seasonal inundation) and is dominated by false nettle (*Boehmeria cylindrica*), northern bugleweed (*Lycopus uniflorus*), spinulose woodfern (*Dryopteris carthusiana*), and silver maple seedlings. Common ground cover species include fragrant bedstraw (*Galium triflorum*), mad-dog

skullcap (*Scutellaria lateriflora*), and fowl manna grass (*Glyceria striata*). This site is characterized by high native species diversity (over 80 species were recorded during the 2006 survey). Following 2006 surveys, this site, which was formerly classified as a southern hardwood swamp, was re-classified as northern hardwood swamp.

- Other High Conservation Values present: None
- Other Values for Consideration:
 - Aesthetics/visual management – Some very large silver maple (along with silver/red maple hybrid) trees are present throughout ERA.
 - Timber products – There are early successional aspen stands adjacent to the ERA that may provide opportunities for timber management if access is granted by adjacent private landowners. Potential for timber management within ERA boundary is limited due to the lowland characteristics present.

Threats Assessment

- Primary threats involve hydrological impacts such as drainage for agriculture, sedimentation due to road and/or trail construction. Protection of groundwater and surface water hydrology is critical to maintaining the integrity of the northern hardwood swamp community. Invasive plant species including reed canary grass (*Phalaris arundinacea*), phragmites (*Phragmites australis*) and European marsh thistle (*Cirsium palustre*) or shrubs such as glossy buckthorn (*Rhamnus frangula*) can also reduce diversity and alter community structure of northern hardwood swamps. Phragmites is present nearby on both public and private land. Therefore, monitoring to detect and promptly implementing methods to control invasive species are important for protecting affected and surrounding natural communities.
- The introduction of the emerald ash borer (*Agrilus plannipennis*) has initiated new concern for ecosystems in which ash plays a significant role. Within the Selma Swamp, black ash has suffered severe mortality and while it continues to regenerate in these areas of mortality, it's percentage in the canopy has been greatly reduced.
- Non-native earthworms were observed throughout site. Earthworms are potentially negatively impacting soil nutrient and accumulation properties.
- Regeneration failure of conifers may occur due to limited seed source and high deer densities

Management Goals

- In northern hardwood swamps, the best management practice is to leave large tracts unharvested and allow natural processes (e.g., flooding, windthrow, and senescence) to operate unhindered.
- Maintain canopy closure of the surrounding uplands to minimize surface water flow into the swamp and to maintain groundwater seepage.
- Obtain long term walk-in access.

Management Objectives

- Reduce deer densities in the surrounding landscape to dampen deer browse pressure.
- Gain access from adjacent private landowners.
- Continually monitor area to ensure that ORV use from adjacent landowners is not occurring within ERA boundary.
- Monitor edges and open areas of ERA for the presence of invasive species.

Management Actions

- Assess area on a regular time interval for presence of invasive species.
- Continue to pursue a long-term agreement from private landowners for public, walk-in access.
- Work with Unit Wildlife biologist, MNFI and public on ways to lessen the impact of deer browse throughout ERA.
- Continue to restrict timber management within ERA to allow natural processes to operate unhindered.

Monitoring

- Monitor ERA and adjacent state owned land for invasive species on a regular basis, preferably more frequent than the 10 year inventory cycle. Coordinate monitoring, reporting and treatment with Grand Traverse Conservation District.
- Monitor private and state land interface for illegal ORV use within ERA boundary

