

# Management Plan for Ossineke ERA Complex

## Administrative Information:

- ERA names
  - Ossineke Swale ERA, Ossineke Fen ERA and Ossineke Marsh ERA
- Location
  - Atlanta FMU, Compartment 84, Alpena Lake Plane MA
  - T29N, R08E, Sec. 12 and 13; T29N, R09E, Sec. 7 and 18; Sanborn Township of Alpena County
- Contact information
  - Plan writer: Richard Barber
- Ownership
  - State of Michigan
- Existing infrastructure/facilities
  - Ossineke State Forest Campground includes Ossineke and is adjacent to the swale, fen and marsh.
  - Two forest roads enter the ERA's.
- Other documents related to this ERA (pre-existing plans at a different scale, species specific management/conservation plans, MOU/MOAs with partners, reports with area specific information, etc.)
  - Ossineke Swale ERA
    - Natural Community Management Guidance: Interdunal Wetland
    - MNFI Great Interdunal Wetland Community Abstract
    - MNFI Element Occurrence Record EOID 18834, Ossineke Swale
  - Ossineke Marsh ERA
    - Natural Community Management Guidance: Great Lakes Marsh
    - MNFI Great Lakes Marsh Community Abstract
    - MNFI Element Occurrence Record EOID 18835, Ossineke Marsh
  - Ossineke Fen ERA
    - Natural Community Management Guidance: Northern Fen
    - MNFI Northern Fen Community Abstract
    - MNFI Element Occurrence Record EOID 18836, Ossineke Fen

## Conservation Values

- Natural community occurrence for which each ERA is recognized
  - Ossineke Swale ERA
    - EO ID 18834, EO RANK BC, Last observed 2011.09.21.
    - This community is ranked S2 due to rarity.



roads and residential areas occur throughout the general landscape and a state forest campground occurs to the northwest.”

- Ossineke Marsh ERA
  - EO ID 18835, EO RANK BC, Last observed 2011.09.21.
  - This community is ranked S3 due to rarity.
  - Great Lakes marsh is an herbaceous wetland community occurring statewide along the shoreline of the Great Lakes and their major connecting rivers. Vegetation patterns are strongly influenced by water level fluctuations and type of coastal feature, but generally include the following: a deep marsh with submerged plants; an emergent marsh of mostly narrow-leaved species; and a sedge-dominated wet meadow that is inundated by storms.
  - From 2011 EO Record, “This Great Lakes marsh occurs along the Lake Huron shoreline. The Great Lakes marsh occurs in a mosaic of coastal communities intergrading with high-quality interdunal wetland inland and limestone cobble shore along the shore. The Great Lakes marsh shifts in spatial extent as Great Lakes water levels fluctuate. The hydrologic regime of Great Lakes marsh is directly linked to that of the Great Lakes. As such, the water table is not stable, being subject to seasonal fluctuations in Great Lakes water levels, short-term changes due to seiches and storm surges, and long-term, multi-year lake level fluctuations. Storm waves frequently disturb Great Lakes marsh, reconfiguring the substrate and removing fine mineral sediments and organic soils. Long-term cyclic fluctuations of Great Lakes water levels significantly influence vegetation patterns of Great Lakes marsh, with vegetation and organic soils becoming well established during low-water periods and reduced or eliminated during high-water periods. This stretch of Great Lakes marsh appears to be rather young, likely establishing during low water years in the last decade.”
- HCV attributes:
  - Ossineke Fen is a northern fen.
  - Recreation
    - Ossineke State Forest Campground receives remarkable year-round usage by Ossineke residents. This often includes foot travel along the active and former beach ridges running through these ERA’s.
  - Other designations (natural area, habitat area or corridor, etc.):
    - Ossineke Fen and Ossineke Marsh are intertwined with a federally designated Coastal Environmental Area.

## Threats Assessment

- Ossineke Swale:
  - Off-road vehicles can damage or destroy the vegetation and habitat of interdunal wetlands, as documented at several sites along the northern Lake Michigan and Lake Huron shorelines. Heavy human usage of the adjacent beach can also threaten associated fauna, such as piping plover and other shorebirds.
  - Invasive species that threaten diversity and community structure include reed (*Phragmites australis*), reed canary grass (*Phalaris arundinacea*), narrow-leaved cat-tail (*Typha angustifolia*), hybrid cat-tail (*Typha xglauca*), purple loosestrife (*Lythrum salicaria*), spotted knapweed (*Centaurea maculosa*), baby's breath (*Gypsophila paniculata*), common St. John's-wort (*Hypericum perforatum*), ox-eye daisy (*Chrysanthemum leucanthemum*), bull thistle (*Cirsium vulgare*), white sweet clover (*Melilotus alba*), Japanese knotweed (*Polygonum cuspidatum*), hoary alyssum (*Berteroa incana*), Kentucky bluegrass (*Poa pratensis*), Canada bluegrass (*P. compressa*), quack grass (*Agropyron repens*), hawkweeds (*Hieracium spp.*), sheep sorrel (*Rumex acetosella*), black locust (*Robinia pseudoacacia*), white poplar (*Populus alba*), Lombardy poplar (*P. nigra var. italica*), common buckthorn (*Rhamnus cathartica*), glossy buckthorn (*Rhamnus frangula*), autumn olive (*Elaeagnus umbellata*), Eurasian honeysuckles (*Lonicera morrowii*, *L. japonica*, *L. maackii*, *L. sempervirens*, *L. tatarica*, *L. xbella*, and *L. xylosteum*), and multiflora rose (*Rosa multiflora*).
- Ossineke Marsh:
  - Off-road vehicles can damage or destroy the vegetation and habitat of Great Lakes Marsh when water levels permit their entry. The recreational use of airboats is an emerging threat the natural community and nesting birds within the marsh.
  - Uncontrolled non-motorized recreation can also can also cause damage.
  - Introductions of invasive plants and animals can alter community structure and species composition. It is important to monitor for invasive species following such control efforts.
- Ossineke Fen:
  - Fens are threatened by peat mining, logging, quarrying, agricultural runoff and nutrient enrichment, draining, flooding, and invasive species.
  - Perhaps the greatest threat to northern fens comes from off-road vehicle (ORV) traffic, which can destroy populations of sensitive species and drastically alter fen hydrology through rutting.
  - Uncontrolled non-motorized recreation can also can also cause damage.

- Failure to minimize the impacts of management to hydrologic regimes, especially increased surface flow and reduction in groundwater recharge.
- Particularly aggressive invasive species threatening the diversity and community structure of northern fens include: glossy buckthorn (*Rhamnus frangula*), multiflora rose (*Rosa multiflora*), autumn olive (*Elaeagnus umbellata*), purple loosestrife (*Lythrum salicaria*), narrow-leaved cat-tail (*Typha angustifolia*), hybrid cat-tail (*Typha xglauca*), reed canary grass (*Phalaris arundinacea*), reed (*Phragmites australis*) and Canada thistle (*Cirsium palustre*).

### Management Goals

- Ossineke Swale:
  - As the interdunal wetlands extend beyond the compartment boundary on to Great Lakes bottomland, work with MDEQ, Army Corps of Engineers, NOAA as necessary.
  - Invasive Species: Ideally, the best goal would be to eliminate invasive species (or maintain an absence of invasive species), but in some areas that may not be possible and a goal that recognizes this may be necessary
  - Restore Interdunal wetlands where applicable
  - Reduce other threats (encroachment of woody vegetation, ORVs, etc.)
  - The ERA has representation of native plants, indicator species, and rare species
- Ossineke Marsh:
  - As the Great Lakes marsh extends beyond the compartment boundary and across Great Lakes bottomland, work with MDEQ, Army Corps of Engineers, NOAA as necessary.
  - Invasive Species: Ideally, the best goal would be to eliminate invasive species (or maintain an absence of invasive species), but that may not be possible and a goal that recognizes this may be necessary
  - Restore Great lakes marsh where applicable
  - Reduce other Threats (ORVs, airboats, altered hydrology etc.)
  - The ERA has representation of native plants, indicator species, and rare species
- Ossineke Fen:
  - Restoration of northern fen ERA where applicable
  - Invasive Species: Ideally, the best goal would be to eliminate invasive species (or maintain an absence of invasive species), but in some areas that may not be possible and a goal that recognizes this may be necessary
  - Reduce other Threats (Encroachment of Woody Vegetation, ORVs, etc.)
  - The ERA has representation of native plants, indicator species, and rare species
  - Allow natural processes to occur

## Management Objectives

- Ossineke Swale:
  - Identify and eliminate any remaining illegal ORV access points by October 31, 2019
  - Evaluate potentials for damage (soil, flora, hydrology, spread of invasive species) posed by non-motorized recreation (hikers, bikers, horses) and develop plan to protect ERA complex by October 31, 2019
  - Identify and prioritize critical areas within the ERA to treat for invasive species by October 31, 2019
  - Assess EO quality every ten-year entry period
  - Work with adaptation specialist to determine threats associated with climate change by October 31, 2019
- Ossineke Marsh:
  - Identify and eliminate any remaining illegal ORV access points by October 31, 2019
  - Evaluate potentials for damage (soil, flora, hydrology, spread of invasive species) posed by non-motorized recreation (hikers, bikers, horses) and develop plan to protect ERA complex by October 31, 2019
  - Identify and prioritize critical areas within the ERA to treat for invasive species by October 31, 2019
  - Assess EO quality every ten-year entry period
  - Work with adaptation specialist to determine threats associated with climate change by October 31, 2019
- Ossineke Fen:
  - Identify and eliminate illegal ORV access points by October 31, 2019
  - Evaluate potentials for damage (soil, flora, hydrology, spread of invasive species) posed by non-motorized recreation (hikers, bikers, horses) and develop plan to protect ERA complex by October 31, 2019
  - Identify and prioritize critical areas within the ERA to treat for invasive species by October 31, 2019
  - Assess EO quality every ten-year entry period
  - Determine if there are impacts to hydrological system, especially from roads, by October 31, 2019
  - Work with adaptation specialist to determine threats associated with climate change by October 31, 2019

## Management Actions

- Ossineke Swale:
  - Survey any remaining illegal ORV access points, develop and execute plan to close.
  - Identify vectors of invasive species and reduce their introduction to the site. Install power wash station for mountain bikes and baby buggies. Or install signs encouraging visitors to not bring in seed sources such as footwear or equipment caked with mud.

- Develop FTP's, burn plans and PAP's for invasive species control. Remove invasive plants using appropriate control methods for each species (hand-pull, herbicide, Rx burn) using partnerships with other divisions, AmeriCorps and local user groups where appropriate.
- To the extent practical, retain an intact 100-foot buffer of natural vegetation surrounding the ERA to reduce the threat of negative hydrologic impacts.
- Work with MNFI and other experts to update EO inventory
- Update plan with additional knowledge as it becomes available
- Ossineke Marsh:
  - Survey any remaining forest roads or illegal ORV access points, develop and execute plan to close.
  - Identify vectors of invasive species and reduce their introduction to the site. May require education component, such as installing signs
  - Develop FTP's, burn plans and PAP's for invasive species control. Remove invasive plants using appropriate control methods for each species (hand-pull, herbicide, Rx burn) using partnerships with other divisions, AmeriCorps and local user groups where appropriate.
  - Retain an intact 100-foot buffer of natural vegetation surrounding the ERA to reduce the threat of negative hydrologic impacts. Minimize clearcuts adjacent ERA due to existing significant deer browse pressure.
  - Apply for a Director's Order closing the marsh to airboat usage
  - Work with MNFI and other experts to update EO inventory
  - Update plan with additional knowledge as it becomes available
- Ossineke Fen:
  - Survey any remaining forest roads or illegal ORV access points, develop and execute plan to close.
  - Identify vectors of invasive species and reduce their introduction to the site. May require education component, such as installing signs
  - Develop FTP's, burn plans and PAP's for invasive species control. Remove invasive plants using appropriate control methods for each species (hand-pull, herbicide, Rx burn) using partnerships with other divisions, AmeriCorps and local user groups where appropriate.
  - Retain an intact 100-foot buffer of natural vegetation surrounding the ERA to reduce the threat of negative hydrologic impacts. Minimize clearcuts adjacent ERA due to existing significant deer browse pressure.
  - Apply for a Director's Order closing the fen to airboat usage
  - Use periodic burning to maintain presence of native plant species, reduce invasives, and to reduce woody encroachment
  - Write a wildfire plan to incorporate a "let it burn" policy if safety concerns allow.
  - Avoid establishment of new fire lines to reduce invasive species encroachment

- Avoid creating new roads adjacent to ERA and install culverts under existing roads, as needed, and ensure that current culverts are functioning
- Work with MNFI and other experts to update EO inventory
- Update plan with additional knowledge as it becomes available

Monitoring

- Ossineke Swale:

Indicator	Current	Desired	Assessment
ORV Access Points	Unknown	None	TBD
Invasive Species Signages	None	TBD	TBD
Invasive Species Present	Unknown	None	TBD
100 Foot Buffer	Unknown	100 Feet	TBD
Update EO Inventory	Not Updated	Updated	TBD
Update Plan W/ New Knowledge	Plan with Old Knowledge	Updated Plan W/ New Knowledge	TBD

- Ossineke Marsh:

Indicator	Current	Desired	Assessment
Roads and ORV Access Points	Unknown	None	TBD
Invasive Species Signage	None	TBD	TBD
Invasive Species Present	Unknown	None	TBD
100 Foot Buffer	100 Feet	100 Feet	TBD
Director's Order Banning Airboats	None	One	TBD
Update EO Inventory	Not Updated	Updated	TBD
Update Plan W/ New Knowledge	Plan with Old Knowledge	Updated Plan W/ New Knowledge	TBD

- Ossineke Fen:

Indicator	Current	Desired	Assessment
Roads And ORV Access Points	Unknown	None	TBD



Invasive Species Signage	None	TBD	TBD
Invasive Species Present	Unknown	None	TBD
100 Foot Buffer	100 Feet	100 Feet	TBD
Director's Order Banning Airboats	None	One	TBD
Periodic Prescribed Burns	Unburned	Revitalized	TBD
Let-It-Burn Wildfire Plan	None	One	TBD
Avoid New Fire Lines	None	None	TBD
Avoid New Roads	Only Old Roads	Only Old Roads	TBD
Update EO Inventory	Not Updated	Updated	TBD
Update Plan W/ New Knowledge	Plan with Old Knowledge	Updated Plan W/ New Knowledge	TBD

Imagery:

- Maps (locator map and area map)
- Photos

Signatures & Approval Date:

- Each plan will require formal approval from all relevant resource divisions
- Date of final approval

Attachment: Resources for Plan Writers

- Not part of the template itself
- List of internal and external content experts
- List of other individuals who can help to interpret more technical written resources