

# Rocking Chair Lakes ERA Plan

## Administrative Information

- The Rocking Chair Lakes Ecological Reference Area (ERA) Plan contains four ERA's, they are:
  - Northern Shrub Thicket
  - Dry Mesic Northern Forest
  - Mesic Northern Forest
  - Granite Cliff
  
- Location:
  - The four ERA's are located on State Forest Land within the Gwinn Forest Management Area, compartment 304. The ERA's are all within the Peshekee Highlands Management Area.
  - Marquette County; Champion Township, T49N-R28W, section 10.
  
- Contact Information:
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    - Tom Seablom- FRD, Gwinn FMU Unit Manager
    - Brian Roell- WLD, Wildlife Biologist
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- The Rocking Chair Lakes ERA does not contain any existing infrastructure or facilities. A hiking path does exist along the Granite Cliff ERA but has limited use due to poor access and extreme terrain.

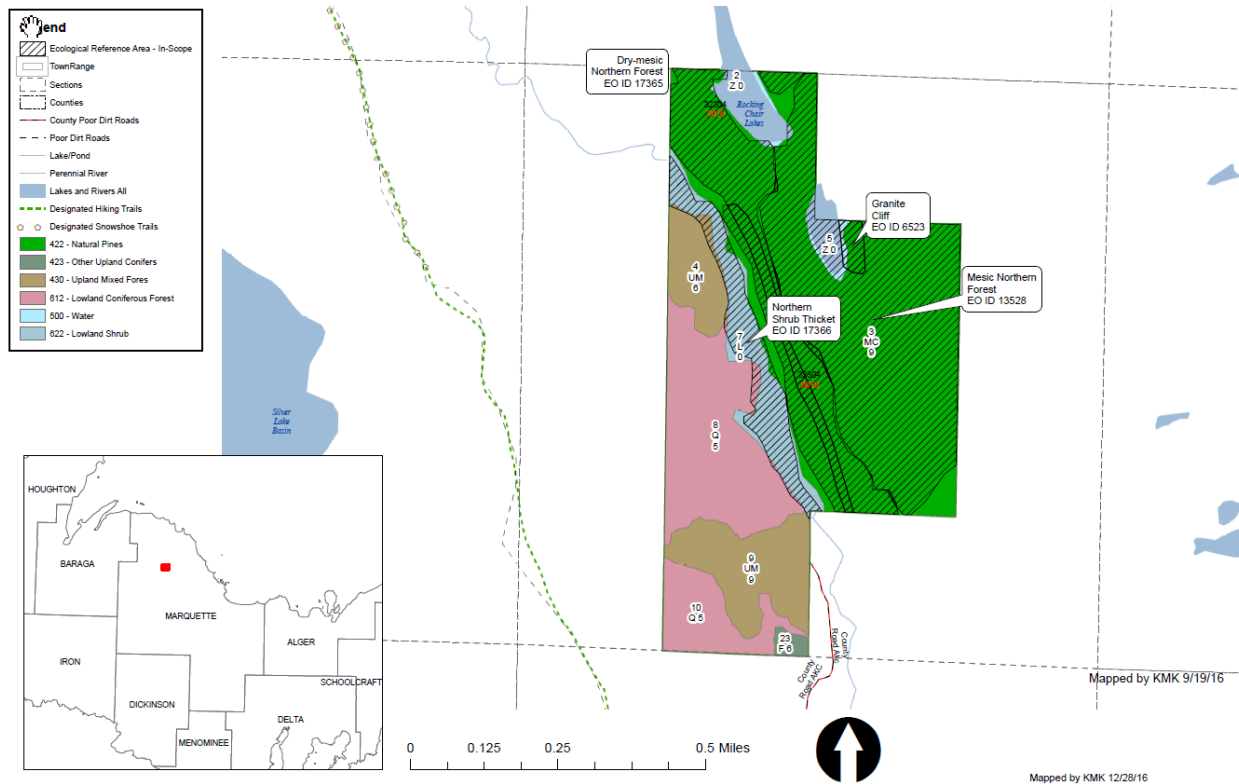


Figure 1: Rocking Chair Lakes ERA area map with EO ID labels

## Conservation Values

There are four natural communities found in this area:

### Northern Shrub Thicket Community

- Element Occurrence (EO) ID: 17366
- Element Occurrence Rank: AB
- Last Observed: 8/22/2009

Tag alder (*Alnus incana*) dominates the Northern Shrub Thicket ERA which occurs on approximately 26 acres of State forest land, along the Mulligan Creek, at the base of an extensive granite cliff escarpment. Seasonal and periodic flooding from beaver activity has influenced Northern Shrub Thicket communities. The saturated, nutrient-rich, organic soils are composed of sapric peat or less frequently, mineral soil, typically with medium acid to neutral pH. Fluctuating water tables, beaver flooding, and wind-throw all slow the succession of this Northern Shrub Thicket to a closed-canopy swamp forest.

The MNFI link below contains more details regarding Northern Shrub Thicket Communities:

<https://mnfi.anr.msu.edu/communities/community.cfm?id=10677>



Figure 2: Northern Shrub Thicket along the Mulligan Creek.

#### Dry Mesic Northern Forest Community

- Element Occurrence ID: 17365
- Element Occurrence Rank: A
- Last Observed: 8/22/2009

The forest canopy in the Dry Mesic Forest Community is dominated by red pine (*Pinus resinosa*), white pine (*Pinus strobus*), and red oak (*Quercus rubra*) which occurs on approximately 70 acres of extremely rugged State forest land. The soils are characterized as shallow (5-30cm), acidic (pH 4.5 – 5.0), fine to medium textured sands and loamy sands overlying granite bedrock.

This ERA was noted to be of very high quality dry-mesic northern forest occurring with high quality old growth mesic northern forest adjacent to extensive outcropping of granite cliff and numerous inland lakes surrounding the complex. Little human disturbance was noted in the 2009 MNFI survey. Management comments noted in the Element Occurrence record are to monitor whether pine is recruiting and if surface fires are occurring.

The MNFI link below contains more details regarding Dry Mesic Forest Communities:

<https://mnfi.anr.msu.edu/communities/community.cfm?id=10688>



Figure 3: Dry Mesic Northern Forest along (South) Rocking Chair Lake.

#### Mesic Northern Forest Community

- Element Occurrence ID: 13528
- Element Occurrence Rank: AB
- Last Observed: 9/24/2009

There are two types of old growth in the Mesic Northern Forest Community within this area (Cohen 2009). The canopy is dominated by sugar maple (*Acer saccharum*) and hemlock (*Tsuga Canadensis*). Sugar maple was noted during the last survey in all strata levels (canopy, sub-canopy, understory, and ground cover). The community also includes numerous wetland inclusions which are made up of hardwood-conifer swamps and rich conifer swamps. The landscape is characterized as very rugged with granite outcrops throughout the area. The loamy sands and sandy loams covering the granite bedrock within this community are fine in texture, shallow (25-30 cm) and acidic (pH 4.5 – 5.5). The organic soils have likely been reduced by earthworms which were observed on this site in 2009 (Cohen 2009)

The MNFI link below contains more details regarding the Mesic Northern Forest Communities:

<https://mnfi.anr.msu.edu/communities/community.cfm?id=10687>





Figure 4: Mesic Northern Forest Community.

#### Granite Cliff Community

- Element Occurrence ID: 6523
- Element Occurrence Rank: A
- Last Observed: 7/18/2007

The Granite Cliff Community is composed of resistant igneous and metamorphic bedrock types which formed the Michigamme Highlands during the Precambrian Era, approximately 3,500 to 600 million years ago. The Mulligan Cliffs found in this area are among the largest expanses of inland cliffs found in the State of Michigan: they are several miles long and range in height from 60 to 130 feet.

Shallow organic soils found within the Granite Cliff Community, normally accumulate in rock crevices along the summit and base of the cliff. Natural disturbance is high within this community due to the shallow soils, strong winds, vertical exposure, ice, and bedrock exfoliation.

The Granite Cliff Community found towards the top of the cliff face supports a scattered canopy of both deciduous and conifer trees. The forest is characterized by a dry-mesic forest with red pine, white pine, and red oak. Most of the trees in this community are stunted due to the lack of adequate soil and moisture. Understory species include regenerating pine, fir, cherry, serviceberry, and bracken fern.

Management recommendations from the element occurrence record include maintaining a forested buffer adjacent to the cliffs to minimize the threat of invasive species, and the removal of an illegal deer blind along the river. No major threats to this ERA were found during the 2009 surveys.

The MNFI link below contains more details regarding the Granite Cliff Community:

<https://mnfi.anr.msu.edu/communities/community.cfm?id=10706>



Figure 5: Granite Cliff Community along (North) Rocking Chair Lake.

### High Conservation Value (HCV) Attributes

In general the Rocking Chair Lakes ERA, is a mostly intact and functional landscape. Private land surrounds this 240 acre parcel of State ownership. The ERA contains numerous threatened and endangered plants and contains one of the largest inland cliffs in the State, the Mulligan Cliffs.

There is an old mine shaft within one of the ERA's which is marked as a known archaeological site.

Pockets of old growth exist within Mesic Northern Forest Community.

### Threats Assessment

A primary threat to all of the natural community types in this area would be invasive species. A system of control efforts to detect and remove invasive species is critical to the long-term viability of this ERA.

Potential long-term threats include mining exploration and development, logging on nearby private lands, ORV, foot traffic, and primitive camping disturbance.

### General Management of ERAs

ERAs will generally not be managed for timber harvest. Management activities or prescriptions in Ecological Reference Areas are limited to low impact activities compatible with the defined attributes and values of the community type, except under the following circumstances:

- i. Harvesting activities where necessary to restore or recreate conditions to meet the objectives of the ERA, or to mitigate conditions that interfere with achieving the ERA objectives. In this regard, forest management activities (including timber harvest) may be used to create and maintain conditions that emulate an intact, mature forest or other successional phases that may be under-represented in the landscape.
- ii. Road building only where it is documented that it will contribute to minimizing the overall environmental impacts within the FMU and will not jeopardize the purpose for which the ERA was designated.
- iii. Existing and new land use activities should be evaluated in the context of whether they detract from achieving the desired future conditions of the natural community for which the ERA was designated. The acceptability of land use activities within DNR administered ERAs will be evaluated using severity, scope, and irreversibility criteria, as established in DNR IC4199, Guidance for Land Use Activities within DNR Administered Ecological Reference Areas.
- iv. Threats such as fire, natural or exotic pests or pathogens may warrant other management measures.
- v. Harvesting and other management activities in presently accessible areas located within the peripheral boundary of an ERA that are NOT the natural community of focus and which may or may not be typed as a separate stand or forest type (e.g. an upland island of previously managed aspen within a bog complex) may be prescribed for treatments, contingent upon a determination of no anticipated direct or indirect adverse impact to the defined attributes and values of natural community for which the ERA was designated. The FRD Biodiversity Conservation Program leader shall be consulted regarding the determination of any direct or indirect adverse impact.
- vi. Land management activities immediately adjacent to an ERA should consider any anticipated direct or indirect adverse impact to the defined attributes and values of natural community for which the ERA was designated. Management will be adaptive. ERAs will be monitored to determine if implemented management activities are moving the natural communities forward, or maintaining them at their desired future condition. The network of ERAs will be evaluated every five years for their contribution to the overall goal of biodiversity conservation. This review cycle will allow for the potential addition or subtraction of lands from an ERA, designation of new ERAs, or removal of the ERA planning designation.

## Management Goals

- Allow natural processes to operate unhindered.
- Manage for an unfragmented forest.
- Reduce/control current invasive species and prevent new invasive species from becoming established.
- Reduce other threats (alteration of hydrology, ORV use, erosion due to heavy foot traffic, etc).
- Ensure the ERA has a representation of native plants, indicator species, and rare species.

## Management Objectives

- Identify and eliminate illegal ORV access points, if they occur.
- If invasive species are found, identify and prioritize treatment to eliminate them.
- Assess EO quality every 10-20 years.
- Allow naturally occurring fires to spread. If suppression action is needed, use Minimal Impact Suppression Techniques (MIST).
- Determine additional threats to the ERA's.
- Work with an adaptation specialist to determine threats associated with climate change.
- Identify areas of excessive foot traffic.
- Identify opportunities for acquisition where applicable.

## Management Actions

Suggested actions or series of actions that would help to achieve the above objectives.

(M= Maintenance action, R= Restoration action)

- If current data/knowledge are not available regarding the management goals, actions may address needed assessments (i.e., surveys may be needed) (M,R)
- Identify vectors of invasive species and reduce their introduction to the site. (M,R)
- Remove invasive plants using appropriate control methods for that particular species (hand-pull, herbicide, Rx, etc.) using partnerships where appropriate, develop FTP's and PAP's. (M,R)
- Maintain an intact forested buffer of 100 feet adjacent to the Granite Cliff ERA. (M)
- Remove illegal blind along the river within section 10. (R)
- Close illegal roads and trails. (R)
- Work with MNFI and other experts to update EO inventory. (M,R)
- Update the Plan with additional knowledge as it becomes available. (M)
- Assess pine regeneration and if lacking, consider prescribed fire as a management option in the Dry-Mesic Northern Forest ERA. (M,R)
- Write a wildfire plan to incorporate a "let it burn" policy in the natural communities where safety concerns allow. (M,R)
- In the event of a wildfire or prescribed fire, avoid establishing new fire lines and use existing/natural fire breaks. (M,R)



- Negotiate conservation easements or acquire lands, if possible. (M,R)

## Monitoring

Unless otherwise specified, monitoring is expected to occur once every 10-year cycle.

Metric	Current Status	Desired Future Status	Assessment
Populations of invasive species- number and scope of species	Severity unknown; treatments should be monitored appropriately; detection monitoring opportunistically or every five years maximum	Eliminated/fewer occurrences	TBD
Representative and rare species - species occurrences	Baseline EO Records; updated when EO's are updated every 10-20 years	No Decreases	TBD
Presence/Absence of trees > 120 years old	Baseline inventory data taken every decade	Increasing in age	TBD
Illegal ORV activity- number of new instances	No known ORV issues to date	Eliminated	TBD

Treatments were added to all ERA's to monitor for invasive species, next steps were added for hand/pull or herbicide application.

## Additional Resources

MNFI Natural Community Abstracts: <https://mnfi.anr.msu.edu/pub/abstracts.cfm#Communities>

Michigan Department of Natural Resources Forest Certification Work Instruction 1.4:  
[https://www.michigan.gov/documents/dnr/WI\\_1.4BiodMgt\\_320943\\_7.pdf](https://www.michigan.gov/documents/dnr/WI_1.4BiodMgt_320943_7.pdf)