

ERA Management Plan-Walton Marsh Pine Barrens

Administrative Information:

- Walton Marsh Pine Barrens (EO ID 6486) EO Number 6
- Cadillac Management Unit (Compartment 127 Stands 421, 422, 424, 417,420) Compartment 126 (Stand 1)
- Wexford County- T24N R09W Sections 4 and 5
- Forester- Joe Ventimiglia WNLP Planner Derek Cross
- State ownership with some private as well.
- http://mnfi.anr.msu.edu/abstracts/ecology/Pine_barrens.pdf

Conservation Values

Description in Element Occurrence Record: Three small patches of pine barrens occur on broad flat outwash plain with excessively drained acidic sands of medium texture. These small patches of pine barrens of moderate species diversity are decreasing in size due to fire suppression and have been degraded by numerous roads which have facilitated non-native species invasion. The site occurs in a primarily forested landscape that is managed and contains numerous roads and trails. Small-diameter jack pines (*Pinus banksiana*) occur as scattered trees and in patchy clumps. Canopy associates include northern pin oak (*Quercus ellipsoidalis*) and black cherry (*Prunus serotina*) with black cherry increasing in importance in the canopy and sub canopy due to fire suppression. The low shrub layer is dominated by low sweet blueberry (*Vaccinium angustifolium*) and sweet-fern (*Comptonia peregrina*), and the ground layer is dominated by graminoids, especially poverty grass (*Danthonia spicata*), little blue stem (*Andropogon scoparius*), Pennsylvania sedge (*Carex pensylvanica*), and numerous blazing stars (*Liatris* spp.). Lichen (*Cladonia* spp.) is common and areas of open sand are also prevalent. Invasive are prevalent along and adjacent to roads and include spotted knapweed (*Centaurea maculosa*) and common St. John's wort (*Hypericum perforatum*).

- Relatively low grade barren w/excellent potential for restoration. Area has been in an open condition since at least 1938 but is steadily closing in. No Site Survey or Natural Community forms in GMF.
- ERA designation is for rare natural community.
- Pine Barrens are coniferous, fire dependent savanna communities that occur in level sandy outwash plains and sandy glacial lake plains in Northern Peninsula and infrequently in the Upper Peninsula of Michigan. Pine Barrens are found on very strongly to strongly acidic sandy soils with low nutrient availability. Characterized by scattered over story of pine with grass/ sedge dominated ground later.

Threats Assessment

- Primary Threat in this ERA would be lack of fire to maintain pine barren composition. Without fire area, will slowly convert to more of a forested stand as trees encroach on the edges.

- ORV disturbance is already concern with soil disturbance resulting in potential invasive species establishment. With the road that goes right through the main portion of the ERA this will continue to be an issue, particularly since ORVs will soon be allowed on State of Michigan open two tracks. This issue can be mitigated through closing the two track that accesses the main portion of the ERA. This will best be done through the adjacent timber sale activity.
- Small portion of the ERA is planted to traditional red pine plantation, this should and can be managed to more of a pine barrens compositions as plantation matures and is managed. Planation should be managed to economic maturity before converting back to more of a barrens composition.
- Lack of knowledge is also a concern with this ERA. This can be mitigated with more education and research about this type of community. Consider sign to warn public of ecological significance of this community.

Management Goals

- Close roads and illegal ORV trails within main portion of ERA (Stand 422)
- Reduce canopy closure first with timber sale. (This will be included in timber sale to north and south)
- Introduce low intensity prescribed fire in rotation to fight back woody vegetation and maintain barrens composition. Prescribed burns will need to be performed in such a way to not create new roads. New roads, as noted in treats section are one of the primary concerns with this community.
- Pine Barrens – Manage for a canopy closure of 40%
- Red pine plantations within the ERA should be managed to red pine economic maturity and then slowly converted to barrens composition. This can be achieved through a series of traditional pine thinning until the stands is ready for a final harvest in which a few legacy red pines can be left, as the stand is converted to barrens. (red pine components are missing from many of the pine barrens in the state currently)
- Expand barrens where practical into adjacent jack pine forested stands.

Management Objectives

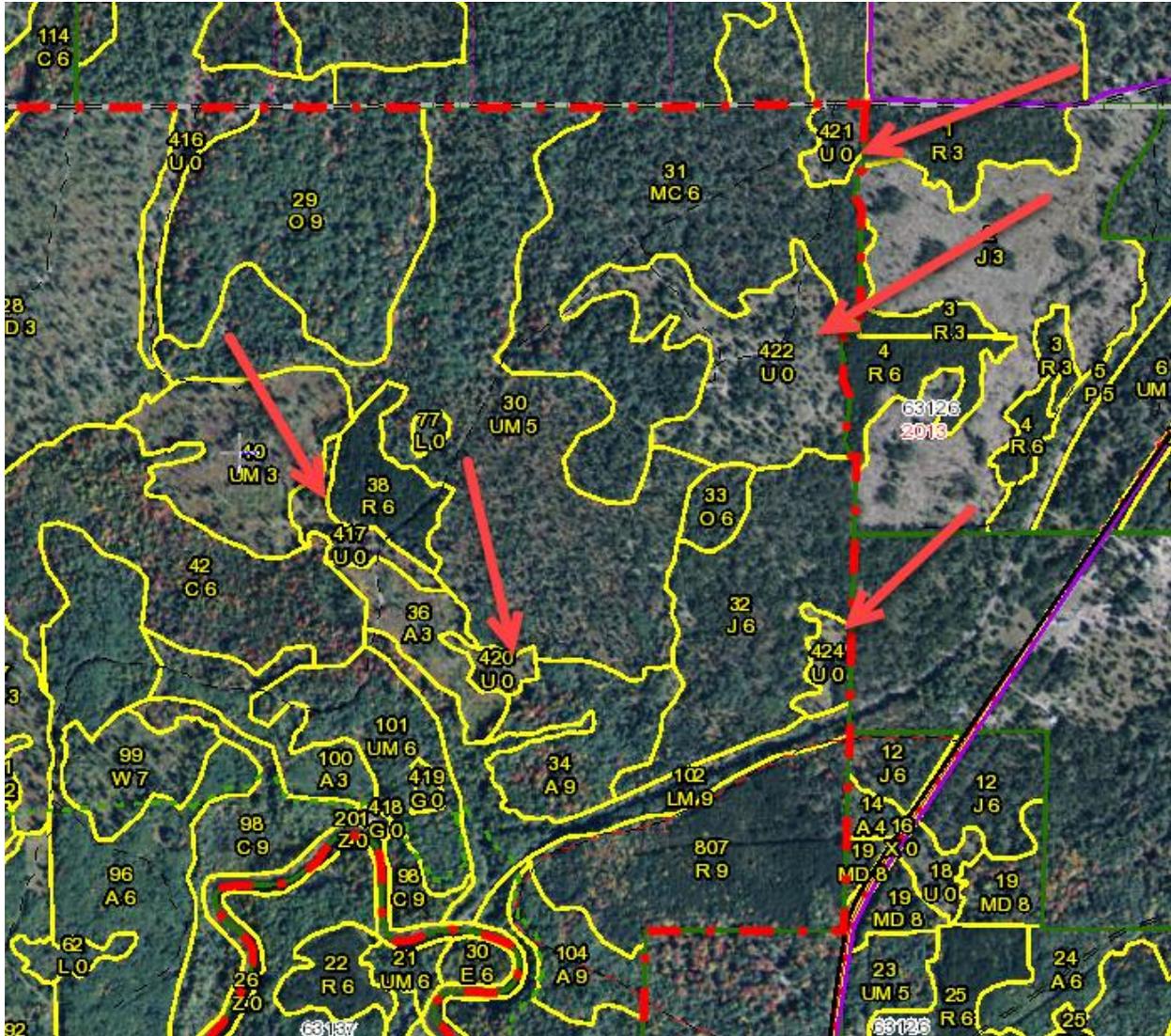
- Reduce canopy closure through timber sales and prescribed fire. Looks to MSU MNFI abstract for better guidance on composition and ideal canopy closure.
- Timber sale will occur first and then fire will be used on a continuous rotation.
- Convert red pine plantations in ERA to pine barrens composition. (This will occur gradually)
- Implement official road closure process. (Road closure noted on map below)
- Promote biological legacies within ERA. Sparse open grown oak, jack and red pine will be the primary species to promote.
- Monitor treatments and success of treatments though inventory process. (MIFI)

Management Actions

- Conduct timber sale in stand 422 to achieve more of desired canopy closure and promote pine barrens in preparation for prescribed burn rotations. (Sales will be set up in 2019)
- Close roads accessing stand 422 as noted on map. This can be done through adjacent timber sale or with FRD staff if needed. Maintain berms as needed.
- Following timber sale begin low intensity prescribed burn rotations. (1 to 3 years after timber sale) Following initial burn place on a continuous 10-year rotation.)
- Prescribed burns should be controlled without creating roads as fire breaks.
- Convert red pine plantation within ERA once stand has reached economic maturity (50 to 70 years old)
- Promote legacy pine and oak within barren including dead snags.
- Don't allow fire wood activity of dead standing in ERA.
- Monitor through inventory process.
- Note actions are focused on stand 422. As stand 1 matures and is harvested it can be included along with stand 421 in burn rotations/barrens management. Stand 417/420/424 will be left to succeed naturally as a result of small size and proximity to private land.

Monitoring

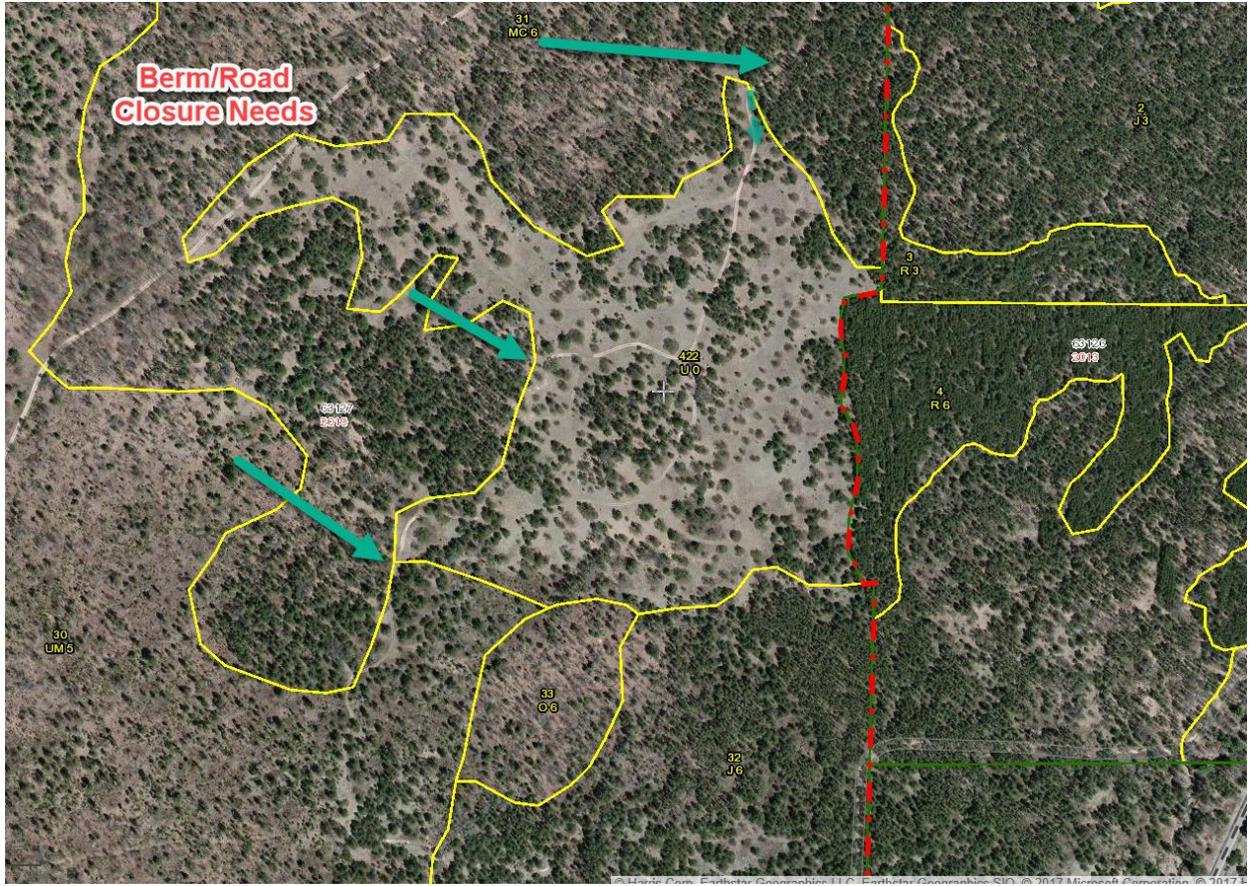
- Roads are currently open in ERA (stand 422) Once closed with timber sale, berms and road closure should be monitored every inventory cycle and as time allows in-between cycles. Update roads layer to show closure once approved.
- Canopy Closure will be monitored every ten years in the inventory cycle.
- Treatments that occur (cutting or burning) will be noted and tracked in the MIFI inventory system.
- Acres of ERA can also be tracked in MIFI as the shape and size of barrens changes through management and natural succession.

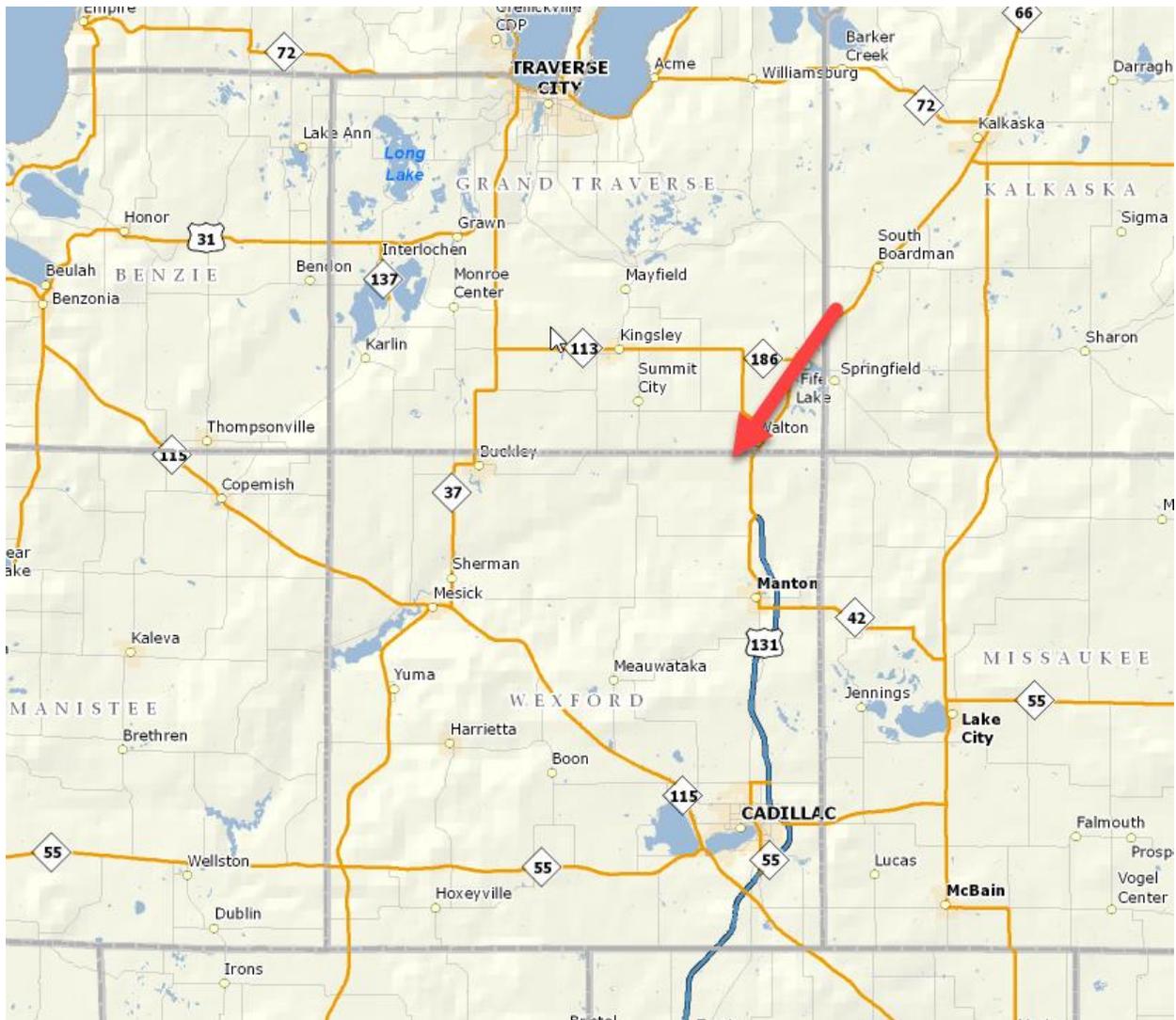


Stand 422 is main portion of ERA and where primary ERA restoration will occur. Stand 1,424,417 and 420 were included in original ERA. Stand 1 is red pine plantation currently. 422 will be the focus of restoration efforts with potential to expand ERA outward following timber sales. Stand 1 in C126 when final harvested in future YOY's will also present opportunity to expand ERA restoration efforts into stand 421.



Photo by Joshua G. Cohen





Resources for Plan Writers

Forester – Joe Ventimiglia

West Lower Peninsula Planner- Derek Cross

Cadillac Unit Manager- David Fisher