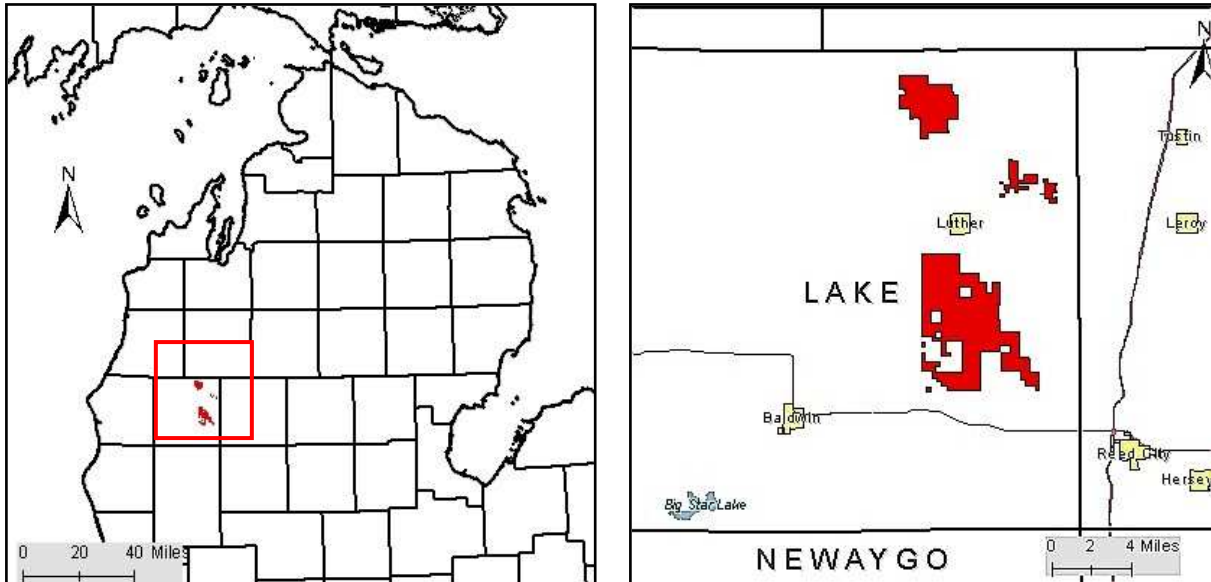


## Lake County Moraines Management Area



### Attributes

The Lake County Moraines Management Area is located on the east side of Lake County with blocks just to the south and north of Luther and has 20,062 acres of State Forest land. The primary attributes which were important in identifying this MA include:

- Ecological Classification - The MA falls almost entirely within the High Plains sub-region of the NLP Ecoregion as classified by Albert (1994).
- Cover Types – Historically this area has been hemlock, red pine/jack pine, red pine/white pine, red pine/oak or red pine. Currently, aspen, oak and red pine cover the majority of the area.
- Landforms – Moraine ridges, moraines or till account for more than 83% of the landforms within the management area.
- Social and Economic – Dispersed recreation in the form of hunting and mushroom hunting, as well as concentrated recreation is significant. Trails include the Lincoln Hills Route which is an ORV/snowmobile trail and the Silver Creek Pathway which is for hiking and biking. The Lincoln Bridge and the Silver Creek Campgrounds are located in the MA.
- Ownership size and connectivity – The majority of the state land in this area is concentrated in two larger blocks of compartments and two isolated compartments.

### Major Cover Types

- Aspen - Aspen totals over 9,600 acres throughout the MA. With the exception of relatively few acres in the 50-59-year age class, the distribution of aspen is well balanced. There is a slight age class spike in the 20-39 year age classes. There are relatively few acres of aspen greater than 60 years old.

- **Oak** – There are almost 8,000 acres of oak in the MA. The age distribution is heavily skewed towards the 70+ year old age classes, and until recently there has been little regeneration over the past 70 years.
- **Red Pine** – Eight-eight percent of the 1,300 acres of red pine is in the 40-59 year age classes. There has been very little regeneration for the past 40 years and there is very little representation in older age classes.
- **White Pine** - The age distribution is highly variable, with 81% of the acres less than 60 years old. Open grown white pine in planted stands has been heavily impacted by white pine weevil.
- **Jack Pine** – There are 700 acres of jack pine in the MA. There is a slight spike in the 50-59-year age class and no acres in the 20-29 year age class. Approximately 200 acres exceed the normal rotation age of 60.
- **Upland Brush/Grass** – Upland brush and grass is a minor component of the MA, with approximately 1% cover.

Lake County Moraines			Age Class (Years)											Uneven Aged
Cover Type	Acres	%	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100+	
Aspen	9,628	44%	1,310	1,651	2,165	2,611	1,182	297	119	70	162	19	0	42
Oak	7,882	36%	1,284	253	183	142	189	6	243	1,400	2,066	941	1,165	10
Red Pine	1,286	6%	0	0	110	10	438	699	17	12	0	0	0	0
White Pine	929	4%	33	205	0	303	147	69	14	11	7	3	0	137
Jack Pine	704	3%	44	66	97	0	96	201	59	59	82	0	0	0
Upland Hardwoods	556	3%	0	139	0	0	0	0	0	44	88	74	16	195
Grass	314	1%												
Upland Brush	59	0%												
Water	29	0%												
Other Types	684	3%												

Total 22,071

Other Types include: Swamp Hardwoods, Mixed Swamp Conifers, Cedar, Bog, Marsh, Hemlock, and Lowland Brush.

**Concepts of Management**

- **Aspen (44% of the MA)** – Maintain aspen at the current levels by harvesting as the stands become mature at a rate which will balance age class distributions. Where aspen is most likely inaccessible due to steep slopes or other constraints, allow it to succeed to upland hardwoods or other types based on habitat type suitability. Where accessible, target aspen in the 60-89 year age classes for harvest.
- **Oak (36% of the MA)** – Based on the site characteristics, utilize a selection of techniques including selective cutting, prescribed burning or other methods to begin regeneration of the oak resource. Successful oak regeneration will require control of red maple and sedge grass competition.
- **Red Pine (6% of the MA)** – Following the Red Pine Management Guidelines, the spike of red pine in the 40-59 age class and the dearth of red pine in younger age classes should be addressed. Areas that are determined through site suitability analysis to remain in red pine will require regeneration by planting or prescribed fire to encourage natural regeneration. Where present as individual trees in upland hardwood stands or on habitat types more

suitable for upland hardwoods retain a component of red pine that may eventually become mature red pine in the supercanopy.

- White Pine (4% of the MA) – Markets are poorly established for white pine products and where practicable, manage white pine through thinning to produce mixed pine/oak stands.
- Jack Pine (3% of the MA) – Manage jack pine to balance age distributions while minimizing health problems due to jack pine budworm by removing older age classes.
- Upland Brush/Grass (1% of the MA) – Continue to maintain acres in grass/upland brush for wildlife values through prescribed burning, brush cutting or other maintenance activities.