Michigan- Marginal Land Experiment Site Histories

Southern MI MLE- Lux Arbor Reserve:

*Early 1800’s (presettlement)*: oak hickory forest

1938 – present: Aerial photos from 1938, 1950, 1955, or 1961 and 1967 and 1997 were found. Based on these airphotos, the GLBRC MLE Site has been farmed with hay or row crops since at least 1938. At some point between the 1967 and 1997 photos, (probably the decade of the 1970's) surrounding fields were planted to pine trees which likely diminished the intensity of cropping activity on the MLE field. According to the previous Lux Arbor Reserve manager, Steve Norris, the MLE field has not been cropped, other than non-harvested deer food plots, since ownership of the property was assumed by MSU in the early 1990’s (deed signed 1991).

Soils:

- Kalamazoo loam (2-6% slope): Parent material- loess-influenced loamy outwash over sandy and gravelly outwash.

Central MI MLE- Lake City, Michigan

*Early 1800’s (presettlement)*: hemock-white pine forest.

Recent History: This site is considered unimproved pasture. According to farm manager Doug Carmichael, the site had remained in a brome grass mix and had been grazed intermittently over the 30 years previous to our arriving there.

Airphoto interpretation – The earliest available airphotos are from 1938 and show cleared land with scattered bushes or short trees. In 1952, the scattered trees were taller and in 1963 the scattered trees are even taller. In 1963 there were approximately 20 trees in the area that is now the Margainal Land Experiment. In 1973, 1981, 1998 and 2004 (or 2005?) the area was clear of trees and appeared to be grazed (as mentioned above by Doug Carmichael).

Soils:

- Croswell sand (0-3% slope): Sandy glaciofluvial deposits
- Graycalm-Rubicon sands (0-6% slope): Sandy glaciofluvial deposits
- Montclam-Graycalm complex (0-6% slope): Sandy and loamy glaciofluvial deposits and/or drift
- Nester sandy loam (1-6% slope): 20 to 36 inches of loamy and clayey material over calcareous loamy and clayey till
Northern MI MLE-Escanaba, Michigan:

*Early 1800’s (presettlement):* beech-sugar maple- hemlock forest

*1939 and 1954* aerial photos show that the land has been cleared, possibly for pasture.

**Recent History:** This site is also considered unimproved pasture. According to the farm manager, Brad Bender, a local farmer took an annual single cutting of hay (alfalfa & grass mix) from the site the previous ten years or so before the marginal site was established. As per Kurt Thelen, the amount of alfalfa present in the mix in 2012 prior to Marginal site establishment, suggests that alfalfa was likely planted there within ten years though Brad Bender had no recollection of it.

**Soils:**

- Onaway-Ossineke fine sandy loams, moraine, 1 to 6 % slope: Loamy drift over calcareous loamy basal till.
- Charlevoix sandy loam, 0 to 4 % slopes

**Data sources:**

- The early 1800’s presettlement vegetation is from the “Landuse circa 1800” data which is a statewide database for Michigan based on original surveyors tree data and descriptions of the vegetation and land between 1816 and 1856. [http://www.mcgi.state.mi.us/mgdl/?rel-thext&action=thmname&cid=5&cat=Land+Cover+Circa+1800](http://www.mcgi.state.mi.us/mgdl/?rel-thext&action=thmname&cid=5&cat=Land+Cover+Circa+1800) The land cover given here includes the Marginal Land Experiment plot areas only.

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