

Major Land Resource Area 111X

Indiana and Ohio Till Plain

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Ecological site keys

MLRA 111A

I. Organic PM

- A. Underlying material is mineral ... R111XA001IN – Mineral Muck
- B. Underlying material is organic
 - i. Underlying material is limnic ... R111XA002IN – Limnic Muck
 - ii. Underlying material is not limnic ... R111XA003IN – Deep Muck

II. Non-Organic PM

- A. Alluvium PM
 - i. Soils are very poorly to somewhat poorly drained ... F111XA004IN – Wet Alluvium
 - ii. Soils are moderately well or well drained ... F111XA005IN – Dry Alluvium
- B. Glacial till PM
 - i. Site is located in a depression landscape position
 - a. Soil surface color (SC) is lighter than 3/2 and/or an alfisol; no ponding ... F111XA006IN – Till Depression
 - b. Soil SC is 3/2 or darker and/or a mollisol; occasional to frequent ponding ... F111XA007IN – Till Depression Flatwood
 - ii. Site is located in a swell (concave) landscape position
 - a. Soil surface is lighter than 3/2
 - Soils are poorly or somewhat poorly drained ... F111XA008IN – Wet Till Ridge
 - Soils are moderately well or well drained ... F111XA009IN – Till Ridge
 - b. Soil surface color is 3/2 or darker and/or a mollisol ... R111XA010IN – Till Ridge Prairie

C. Lacustrine PM

- i. Soils are poorly or somewhat poorly drained ... F111XA011IN – Wet Lacustrine Forest
- ii. Soils are somewhat poorly to well drained ... F111XA012IN – Lacustrine Forest

D. Loess PM ... F111XA013IN – Loess Upland

E. Outwash PM

- i. Soils surface color is lighter than 3/2
 - a. Soils are somewhat poorly or moderately well drained .F111AY014IN
 - b. Soils are well to excessively drained ... F111XA015IN – Dry Outwash Upland
- ii. Soils surface color is darker than 3/2
 - a. Soils are very poorly to somewhat poorly drained ... R111XA016IN – Outwash Mollisol
 - b. Soils are moderately well to excessively drained ... R111XA017IN – Dry Outwash Mollisol

F. Residuum PM

- i. Depth to restrictive layer is less than 20 inches ... F111XA018IN – Shallow Restricted
- ii. Depth to restrictive layer is between 20 and 40 inches ... F111XA019IN – Moderately Deep Restricted
- iii. Depth to restrictive layer is greater than 40 inches ... F111XA020IN – Deep Restricted

G. Sand PM

- i. Site is located on an interdunal landscape position ... F111XA021IN – Sandy Interdune
- ii. Site is located on a dune landscape position ... R111XA022IN – Sand Dune

111B

I. Organic PM

- A. Underlying material is mineral ... R111XB001IN – Mineral Muck
- B. Underlying material is organic
 - i. Underlying material is limnic ... R111XB002IN – Limnic Muck
 - ii. Underlying material is not limnic and/or greater than 30 inches from the surface ... R111XB003IN – Deep Muck

II. Mineral PM

A. Lacustrine Parent Material

- i. Soils are very poorly or poorly drained ... F111XB101IN – Lacustrine Flatwood
- ii. Soils are somewhat poorly or moderately well drained ... F111XB102IN – Lacustrine Forest

B. Alluvium Parent Material

- i. Soil Surface dark in color (3/2 Munsell or darker)
 - a. Soils are in the aquic taxonomic suborder ... F111XB201IN – Wet Alluvium Floodplain
 - b. Soils are not in the aquic taxonomic suborder ... F111XB202IN – Dry Alluvium Floodplain
- ii. Soil surface light in color (lighter than 3/2 Munsell)
 - Soils are very poorly to somewhat poorly drained ... F111XB203IN – Wet Alluvium Forest
 - Soils are moderately well or well drained ... F111XB204IN – Dry Alluvium Forest

C. Bedrock Parent Material

- i. Soil surface dark in color 3/2 Munsell or darker ... R111XB301IN – Dark Bedrock Prairie
- ii. Soil surface light in color (lighter than 3/2 Munsell)
 - a. Soils are poorly or somewhat poorly drained ... F111XB302IN – Mesic Bedrock Forest
 - b. Soils are moderately well drained or drier ... F111XB303IN – Dry Bedrock Forest

D. Outwash Parent Material

- i. Soil surface dark in color 3/2 Munsell or darker
 - a. Soils are in the aquic suborder and/or very poorly or poorly drained ... R111XB401IN – Wet Outwash Mollisol
 - b. Soils are not in the aquic suborder and/or they are SWPD or drier ... R111XB402IN – Dry Outwash Integrate
- ii. Soil surface light in color lighter than 3/2 Munsell
 - a. Soils are very poorly to somewhat poorly drained ... F111XB403IN – Outwash Upland
 - b. Soils are moderately well drained or drier ... F111XB404IN – Dry Outwash Upland

E. Glacial Till Parent Material

- i. Site is on a concave landscape position and/or very poorly or poorly drained ... F111XB501IN – Till Depression
- ii. Site is on a convex landscape position
 - a. Soils are somewhat poorly drained ... F111XB502IN – Wet Till Ridge
 - b. Soils are moderately well or well drained ... F111XE503IN – Till Ridge

I. Organic PM

- A. organic material depth less than 51 inches ... R111XD001IN – Shallow Muck
- B. organic material depth 51 inches or greater ... R111XD002IN – Deep Muck

II. Mineral PM**A. Alluvium PM**

- A. Soils are very poorly to somewhat poorly drained ... F111XD003IN – Wet Alluvium
- B. Soils are moderately well to excessively drained ... F111XD004IN – Dry Alluvium

B. Glacial Till

- A. Site is located in a concave landscape position
 - i. Soil surface color is lighter than 3/2 and/or an alfisol ... F111XD005IN – Till Depression
 - ii. Soil surface color is 3/2 Munsell or darker
 - a. Soil Surface color is less than 10 inches deep ... R111XD006IN – Mollic Till Depression
 - b. Soil surface color is 10 inches or deeper
 - 1) Soils are well drained ... R111XD007IN – Till Depression Prairie
 - 2) Soils are very poorly or poorly drained ... F111XD008IN – Till Depression Flatwood

- B. Site is located in a convex landscape position

- i. Soil surface color is lighter than 3/2
 - a. Soil is poorly or somewhat poorly drained ... F111XD009IN – Wet Till Ridge
 - b. Soil is moderately well or well drained ... F111XD010IN – Till Ridge
 - ii. Soil surface color is 3/2 or darker
 - a. Soil surface color is less than 10 inches deep ... R111XD011IN – Mollic Till Ridge
 - b. Soil surface color is 10 inches or deeper ... R111XD012IN – Till Ridge Prairie

C. Lacustrine PM

- A. Soils are very poorly or poorly drained ... F111XD013IN – Wet Lacustrine Forest
- B. Soils are somewhat poorly or moderately well drained Lacustrine Forest ... F111XD014IN – Lacustrine Forest

D. Loess PM

- A. Soils are very poorly or poorly drained and/or are a mollisol ... F111XD015IN – Wet Loess Upland
- B. Soils are somewhat poorly to well drained and/or are an alfisol ... F111XD016IN – Dry Loess Upland

E. Outwash PM

- A. Soil surface color is lighter than 3/2
 - i. Soils are somewhat poorly or moderately well drained ... F111XD017IN – Outwash Upland
 - ii. Soils are well to excessively drained ... F111XD018IN – Dry Outwash Upland
- B. Soil surface color is darker than 3/2
 - i. Surface color is less than 10 inches deep ... R111XD019IN – Outwash Integrate
 - ii. Surface color is 10 inches or deeper
 - 1) Soils are very poorly to somewhat poorly drained ... R111XD020IN – Wet Outwash Mollisol
 - 2) Soils are moderately well to excessively well drained ... R111XD021IN – Dry Outwash Mollisol

F. Residuum PM

- A. Depth to restrictive layer is less than 20 inches ... F111XD022IN – Shallow Restricted
- B. Depth to restrictive layer is between 20 and 40 inches ... F111XD023IN – Moderately Deep Restricted
- C. Depth to restrictive layer is greater than 40 inches ... F111XD024IN – Deep Restricted

G. Sand PM

- A. Site is located on an interdunal landscape position ... F111XD025IN – Sandy Interdune
- B. Site is located on a dune landscape position
 - i. Soil surface color is 3/2 or darker to a depth of 10 inches or greater ... R111XD026IN – Sand Dune Prairie
 - ii. Soil surface is lighter than that 3/2 munsell ... R111XD027IN – Sand Dune

MLRA 111E Site Key

I. Organic Parent Material

- A. Underlying material is mineral ... R111XE001OH – Mineral Muck
- B. Underlying material is organic
 - 1 Underlying material is limnic (coprogenous earth) ... R111XE002OH – Limnic Muck
 - 2 Underlying material is not limnic ... R111XE003OH – Deep Muck

II. Non-Organic/Mineral Parent Material

A. Lacustrine Parent Material

- 1 Soils are very poorly or poorly drained ... F111XE101OH – Lacustrine Flatwood
- 2 Soils are somewhat poorly drained or drier ... F111XE102OH – Lacustrine Forest

B. Alluvium Parent Material

- 1 Soil surface dark in color (3/2 Munsell or darker)
 - i. Soils are very poorly drained ... F111XE201OH – Wet Alluvium Floodplain
 - ii. Soils are moderately well to well drained ... F111XE202OH – Dry Alluvium Floodplain
- 2 Soil surface light in color (lighter than 3/2 Munsell)
 - i. Soils are poorly to somewhat poorly drained ... F111XE203OH – Wet Alluvium Forest
 - ii. Soils are moderately well to well drained ... F111XE204OH – Dry Alluvium Forest

C. Residuum Parent Material

- 1 Soils are somewhat poorly drained ... F111XE301OH – Wet Restricted
- 2 Soils are moderately well to well drained ... F111XE302OH – Dry Restricted

D. Outwash-Colluvium Parent Material

- 1 Soil surface dark in color (3/2 Munsell or darker)
 - i. Soils are very poorly or poorly drained ... R111XE401OH – Wet Outwash Mollisol
 - ii. Soils are somewhat poorly drained or drier ... R111XE402OH – Dry Outwash Mollisol
- 2 Soil surface light in color (lighter than 3/2 Munsell)
 - i. Soils are very poorly, poorly or somewhat poorly drained ... F111XE403OH – Outwash Upland
 - ii. Soils are moderately well drained or drier ... F111XE404OH – Dry Outwash Upland

E. Glacial Till Parent Material

- 1 Site is on a concave landscape position (toeslope and/or footslope) AND frequently ponded ... F111XE501OH – Till Depression
- 2 site is on a convex landscape position (summit, shoulder, backslope)
 - i. Soils are somewhat poorly drained ... F111XE502OH – Wet Till Ridge
 - ii. Soils are moderately well to well drained ... F111XE503OH – Till Ridge