

Major Land Resource Area 098X

Southern Michigan and Northern Indiana Drift Plains

Accessed: 05/10/2025

Ecological site keys

Key to Ecological Sites of MLRA 98

- 1a. Part of the Central Hardwoods region, fire locally important (mostly Great Lakes watershed).
- 2a. Floodplain.
 - 3a. Hydric Soil (poorly or very poorly drained). ... F098XA004MI – Wet Floodplains
 - 3b. Non-Hydric Soil (somewhat poorly to well drained). ... F098XA003MI – Moist Floodplains
- 2b. Non-Floodplain.
 - 4a. Mineral Soil with no histic epipedon (if any peat or muck surface, it is < 20 cm thick).
 - 5a. Bedrock within 150 cm of surface, and no seasonal water table < 100 cm (well drained).
 - 6a. Bedrock Sandstone, substrate generally acidic. ... F098XA023MI – Sandstone Drift Plains
 - 6b. Bedrock Limestone or Dolostone, substrate generally calcareous. ... F098XA024MI – Limestone Drift Plains
 - 5b. Deep Soil (≥ 150 cm), or seasonal water table < 100 cm.
 - 7a. Sandy Site: $\geq 80\%$ sand in the top 150 cm and $\geq 70\%$ sand in the top 50 cm; or $\geq 80\%$ sand in top 50 cm; or < 20% clay in top 150 cm, pH < 6, and ultic subgroup.
 - 8a. No seasonal water table < 100 cm (well drained or drier).
 - 9a. Slope $\geq 15\%$ F098XA021MI – Sandy Slopes
 - 9b. Slope < 15%.
 - 10a. North of the Grand River, cooler/shorter growing season, white pine common. ... F098XA013MI – Piney Dry Sandy Drift Plains
 - 10b. South of the Grand River, warmer/longer growing season, white pine uncommon. ... F098XA014MI – Dry Sandy Drift Plains
 - 8b. Seasonal water table present < 100 cm (moderately well drained or wetter).
 - 11a. Non-hydric Soil (somewhat poorly to moderately well drained).
 - 12a. pH ≥ 5.5 in the top 50 cm, Mollisols, or Mollic subgroups. ... F098XA019MI – Moist Sandy Drift Plains
 - 12b. pH < 5.5 in the top 50 cm, Spodosols, or Spodic and Ultic subgroups. ... F098XA017MI – Moist Acidic Drift Flats
 - 11b. Hydric Soil (poorly to very poorly drained).
 - 13a. pH ≥ 5.5 in the top 50 cm, Mollisols, or Mollic subgroups. ... F098XA020MI – Wet Sandy Drift Depressions
 - 13b. pH < 5.5 in the top 50 cm, Spodosols, or Spodic and Ultic subgroups. ... F098XA018MI – Wet Acidic Drift Depressions
 - 7b. Loamy Site: < 80% sand in the top 150 cm or < 70% sand in the top 50 cm; and not in ultic subgroup unless pH ≥ 6 or clay $\geq 20\%$.
 - 14a. No seasonal water table (well drained or drier).
 - 15a. Slope $\geq 15\%$ F098XA022MI – Loamy Slopes
 - 15b. Slope < 15%.
 - 16a. Mollisol (dark A horizon ≥ 18 cm thick and $\geq 50\%$ base saturation), historically prairie.

... R098XA016MI – Prairie Loamy Drift Plains

16a. Not Mollisols (A horizon < 18 cm thick or < 50% base saturation, Alfisols, Entisols, Inceptisols, etc.), historically forest or savanna.

17a. North of the Grand River, cooler/shorter growing season, white pine common. ...

F098XA008MI – Piney Dry Loamy Till Knolls

17b. South of the Grand River, warmer/longer growing season, white pine uncommon.

... F098XA015MI – Dry Loamy Drift Plains

14b. Seasonal water table present (moderately well drained or wetter).

18a. Non-hydric Soil (somewhat poorly to moderately well drained). ... F098XA011MI – Moist Loamy Drift Plains

18b. Hydric Soil (poorly to very poorly drained). ... F098XA012MI – Wet Loamy Depressions

4b. Histosol or Histic Subgroup (peat or muck surface $\geq$ 20 cm thick).

19a. Salty sites, mean electrical conductivity of the upper 50 cm of soil $\geq$ 4 mmhos/cm (wet muck); halophytes frequent. ... R098XA002MI – Inland Salt Marshes

19b. Non-salty sites, electrical conductivity of the upper 50 cm of soil < 4 mmhos/cm.

20a. Mean pH of the top 50 cm $\geq$ 5.0, or euic reaction class. ... F098XA006MI – Mucky Depressions

20b. Mean pH of the top 50 cm < 5.0, or dysic reaction class. ... F098XA007MI – Acidic Peaty Depressions

1b. Part of the Prairie Peninsula, fire frequent and widespread (Kankakee Watershed, mostly below 220 m elevation).

21a. Floodplain.

22a. Hydric Soil (poorly or very poorly drained). ... F098XB026IN – Kankakee Wet Floodplains

22b. Non-Hydric Soil (somewhat poorly drained or drier). ... F098XB025IN – Kankakee Moist Floodplains

21b. Non-Floodplain.

23a. Mineral Soil with no histic epipedon (if any peat or muck surface, it is < 20 cm thick).

24a. Bedrock within 150 cm of surface, and no seasonal water table < 100 cm (well drained). --- see MLRA 110.

24b. Deep Soil ($\geq$ 150 cm), or seasonal water table < 100 cm.

25a. No seasonal water table (well drained or drier). ... F098XB030IN – Kankakee Sand Dunes

25b. Seasonal water table present (moderately well drained or wetter).

26a. Non-hydric Soil (somewhat poorly to moderately well drained).

27a. pH $\geq$ 5.5 in the top 50 cm, Mollisols, or Mollic subgroups. ... R098XB033IN – Kankakee Moist Drift Flats

27b. pH < 5.5 in the top 50 cm, Spodosols, or Spodic and Ultic subgroups. ... F098XB031IN – Kankakee Acidic Interdunes

26b. Hydric Soil (poorly to very poorly drained).

28a. pH $\geq$ 5.5 in the top 50 cm, Mollisols, or Mollic subgroups. ... R098XB034IN – Kankakee Wet Drift Flats

28b. pH < 5.5 in the top 50 cm, Spodosols, or Spodic and Ultic subgroups. ... F098XB032IN – Kankakee Wet Acidic Interdunes

23b. Histosol or Histic Subgroup (peat or muck surface $\geq$ 20 cm thick).

29a. Mean pH of the top 50 cm $\geq$ 5.0, or euic reaction class. ... R098XB028IN – Kankakee Mucky Depressions

29b. Mean pH of the top 50 cm < 5.0, or dysic reaction class. --- F098XA007MI – Acidic Peaty Depressions