USDA icon **Natural Resources Conservation Service**

Major Land Resource Area 098X
Southern Michigan and Northern Indiana Drift Plains

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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: ? 80% sand in the top 150 cm and ? 70% sand in the top 50 cm; or ? 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 ? 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 ?20%.

14a. No seasonal water table (well drained or drier).

15a. Slope ? 15%. ... F098XA022MI – Loamy Slopes

15b. Slope < 15%.

16a. Mollisol (dark A horizon ? 18 cm thick and ? 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 ? 20 cm thick).

19a. Salty sites, mean electrical conductivity of the upper 50 cm of soil ? 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 ? 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 (? 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 ? 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 ? 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 ? 20 cm thick).

29a. Mean pH of the top 50 cm ? 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