

# 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

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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  $\geq$  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  $\geq$  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  $\geq$  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**