

Hydric Soil List - All Components

This table lists the map unit components and their hydric status in the survey area. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 2002).

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for all of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils, under natural conditions, are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units that are dominantly made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units dominantly made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

The criteria for hydric soils are represented by codes in the table (for example, 2). Definitions for the codes are as follows:

1. All Histels except for Folistels, and Histosols except for Folists.
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
 - A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
 - B. Show evidence that the soil meets the definition of a hydric soil;
3. Soils that are frequently ponded for long or very long duration during the growing season.
 - A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
 - B. Show evidence that the soil meets the definition of a hydric soil;
4. Map unit components that are frequently flooded for long duration or very long duration during the growing season that:
 - A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
 - B. Show evidence that the soil meets the definition of a hydric soil;

Hydric Condition: Food Security Act information regarding the ability to grow a commodity crop without removing woody vegetation or manipulating hydrology.

References:

- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
Federal Register. Doc. 2012-4733 Filed 2-28-12. February, 28, 2012. Hydric soils of the United States.
Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.
Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.
Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.
Vasilas, L.M., G.W. Hurt, and C.V. Noble, editors. Version 7.0, 2010. Field indicators of hydric soils in the United States.

Report—Hydric Soil List - All Components

Hydric Soil List - All Components—OH097-Madison County, Ohio					
Map symbol and map unit name	Component/Local Phase	Comp. pct.	Landform	Hydric status	Hydric criteria met (code)
Bs: Brookston silty clay loam, fine texture, 0 to 2 percent slopes	Brookston	85-95	Ground moraines	Yes	2,3
	Crosby	5-10	Till plains	No	—
	Celina	0-5	Till plains	No	—
Ca: Carlisle muck	Carlisle	100	Depressions	Yes	1,3,4
CcB: Casco loam, 2 to 6 percent slopes	Casco	100	Outwash plains, outwash terraces	No	—
	Nearly level areas		—	—	—
CeB: Celina silt loam, 2 to 6 percent slopes	Celina	85-90	Till plains	No	—
	Kokomo	0-5	Depressions on till plains	Yes	2,3
	Brookston	0-5	Depressions	Yes	2,3
	Crosby	0-5	Till plains	No	—
CoA: Corwin silt loam, 0 to 2 percent slopes	Corwin	95	Till plains, moraines	No	—
	Kokomo	5	Drainageways	Yes	2
CoB: Corwin silt loam, 2 to 6 percent slopes	Corwin	90	Till plains, moraines	No	—
	Miamian	5	Till plains	—	—
	Kokomo	5	Drainageways	Yes	2
CrA: Crosby silt loam, Southern Ohio Till Plain, 0 to 2 percent slopes	Crosby	80-100	Water-lain moraines, ground moraines, recessional moraines	No	—
	Kokomo-Drained	0-10	Water-lain moraines, swales, depressions	Yes	2,3
	Celina-Eroded	0-10	Ground moraines, recessional moraines, water-lain moraines	No	—
	Miamian-Eroded	0-10	Water-lain moraines, ground moraines, recessional moraines	No	—
CrB: Crosby silt loam, Southern Ohio Till Plain, 2 to 6 percent slopes	Crosby	80-100	Water-lain moraines, ground moraines, recessional moraines	No	—
	Kokomo-Drained	0-10	Swales, depressions, water-lain moraines	Yes	2,3

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	Celina-Eroded	0-10	Water-lain moraines,ground moraines,recessionial moraines	No	—
	Miamian-Eroded	0-10	Recessionial moraines,water-lain moraines,ground moraines	No	—
	Lewisburg	0-10	Recessionial moraines,water-lain moraines,ground moraines	No	—
CsA: Crosby-Lewisburg silt loams, 0 to 2 percent slopes	Crosby	55	Till plains	No	—
	Lewisburg	35	Till plains	No	—
	Kokomo	5	Depressions	Yes	2,3
	Odell	5	Moraines,till plains	—	—
CsB: Crosby-Lewisburg silt loams, 2 to 6 percent slopes	Crosby	55	Till plains	No	—
	Lewisburg	35	Till plains	No	—
	Kokomo	5	Depressions	Yes	2,3
	Odell	3	Till plains,moraines	—	—
	Eroded areas	2	—	—	—
EIA: Eldean silt loam, 0 to 2 percent slopes	Eldean	90	Outwash terraces,kames,moraines	No	—
	Kendallville	5	Kames,eskers,outwash terraces,moraines	—	—
	Thackery Variant	5	Stream terraces,outwash plains	—	—
EIB: Eldean silt loam, 2 to 6 percent slopes	Eldean	90	Moraines,outwash terraces,kames	No	—
	Kendallville	5	Outwash terraces,moraines,kames,eskers	—	—
	Thackery Variant	5	Outwash plains,stream terraces	—	—
EIC2: Eldean silt loam, 6 to 12 percent slopes, eroded	Eldean	90	Outwash terraces,kames,end moraines	No	—
	Kendallville	10	Outwash terraces,moraines,kames,eskers	—	—

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HeF: Hennepin-Miamian silt loams, 25 to 50 percent slopes	Hennepin	55	Till plains	No	—
	Miamian	30	Till plains	No	—
	Eldean	8	Outwash terraces,kames,end moraines	—	—
	Escarpmnts	7	—	—	—
KeB: Kendallville silt loam, 2 to 6 percent slopes	Kendallville	90	Outwash terraces,moraines,kames,eskrs	No	—
	Eldean	5	Outwash terraces,kames,end moraines	—	—
	Miamian	5	Till plains	—	—
KeC2: Kendallville silt loam, 6 to 12 percent slopes, eroded	Kendallville	85	Moraines,kames,eskers,outwash terraces	No	—
	Eldean	10	Kames,end moraines,outwash terraces	—	—
	Severely eroded areas	5	—	—	—
Ko: Kokomo silty clay loam, 0 to 2 percent slopes	Kokomo	85-95	Depressions on till plains	Yes	2,3
	Crosby	5-10	Till plains	No	—
	Celina	5-10	Till plains	No	—
LeB: Lewisburg-Celina silt loams, 2 to 6 percent slopes	Lewisburg	50	Till plains	No	—
	Celina	30	Till plains,moraines	No	—
	Crosby	10	Till plains	—	—
	Miamian	10	Till plains	—	—
Lp: Lippincott silty clay loam	Lippincott	100	Depressions	Yes	2,3
	Gravelly loam till at about 34 inches		Depressions	Yes	2,3
	Thicker surface layer; and grayer subsoil		Depressions	Yes	2,3
Mk: Medway silt loam, occasionally flooded	Medway	90	Flood plains	No	—
	Sloan	10	Depressions	Yes	2,4
MIB: Miamian silt loam, 2 to 6 percent slopes	Miamian	85-95	Till plains	No	—
	Celina	0-5	Till plains	No	—
	Crosby	0-5	Till plains	No	—
	Brookston	0-5	Depressions	Yes	2,3

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MIB2: Miamian silt loam, 2 to 6 percent slopes, eroded	Miamian-Eroded	85-95	Ground moraines, recessional moraines	No	—
	Celina-Eroded	0-10	Water-lain moraines, ground moraines, recessional moraines	No	—
	Crosby	0-10	Till plains	No	—
	Kokomo	0-5	Depressions on till plains	Yes	2,3
MIC2: Miamian silt loam, 6 to 12 percent slopes, eroded	Miamian	85-95	Till plains	No	—
	Losantville	0-5	Till plains	No	—
	Celina	0-10	Till plains	No	—
	Crosby	0-10	Till plains	No	—
MID2: Miamian silt loam, 12 to 18 percent slopes, eroded	Miamian	90	Till plains	No	—
	Lewisburg	4	Till plains	—	—
	Severely eroded areas	3	—	—	—
	Eldean	3	Outwash terraces, kames, end moraines	—	—
MIE2: Miamian silt loam, 18 to 25 percent slopes, eroded	Miamian	90	Till plains	No	—
	Severely eroded areas	10	—	—	—
MIF: Miamian silt loam, 25 to 50 percent slopes	Miamian	95	Till plains	No	—
	Eroded areas	5	—	—	—
MnB: Miamian-Eldean silt loams, 2 to 6 percent slopes	Miamian	50	Till plains	No	—
	Eldean	35	Outwash terraces, kames, moraines	No	—
	Lewisburg	8	Till plains	—	—
	Crosby	7	Till plains	—	—
MnC2: Miamian-Eldean silt loams, 6 to 12 percent slopes, eroded	Miamian	60	Till plains	No	—
	Eldean	25	Outwash terraces, kames, end moraines	No	—
	Crosby	5	Till plains	—	—
	Sand within 20 inches	5	—	—	—
	Lewisburg	5	Till plains	—	—

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MpB: Miamian-Lewisburg silt loams, 2 to 6 percent slopes	Miamian	55	Till plains	No	—
	Lewisburg	35	Till plains	No	—
	Kokomo	5	Drainageways	Yes	2
	Crosby	5	Till plains	—	—
MrB: Miamian-Kendallville silt loams, 2 to 6 percent slopes	Miamian	55	Till plains	No	—
	Kendallville	35	Kames, eskers, outwash terraces, moraines	No	—
	Crosby	5	Till plains	—	—
	Kokomo	5	Drainageways	Yes	2
MrC2: Miamian-Kendallville silt loams, 6 to 12 percent slopes, eroded	Miamian	63	Till plains	No	—
	Kendallville	30	Kames, eskers, outwash terraces, moraines	No	—
	Kokomo	7	Drainageways	Yes	2
Mu: Muskego muck	Muskego	100	Depressions	Yes	1,3
	marl beneath the sapric material		Depressions	Yes	1,3
	silt loam overwash		Depressions	Yes	1,3
	over 40 inches of sapric material		Depressions	Yes	1,3
OdA: Odell-Lewisburg complex, 0 to 2 percent slopes	Odell	60	Moraines, till plains	No	—
	Lewisburg	30	Till plains	No	—
	Crosby	5	Till plains	—	—
	Kokomo	5	Drainageways	Yes	2,3
OdB: Odell-Lewisburg complex, 2 to 6 percent slopes	Odell	60	Moraines, till plains	No	—
	Lewisburg	30	Till plains	No	—
	Kokomo	5	Depressions	Yes	2,3
	Crosby	3	Till plains	—	—
	Better drained soils	2	—	—	—
Pa: Patton silty clay loam	Patton	90	Depressions	Yes	2,3
	Kokomo	5	Depressions on till plains	Yes	2,3
	Crosby	5	Till plains	No	—
Pc: Patton silty clay loam, overwash	Patton	100	Depressions	Yes	2,3,4
Pg: Pits, gravel	Pits	100	—	Unranked	—

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Rs: Ross silt loam, occasionally flooded	Ross	90	Flood plains,terraces	No	—
	Sloan	5	Drainageways	Yes	2,3
	Medway	3	Flood plains	—	—
	Carbonates throughout the soil	2	—	—	—
Sm: Sloan silt loam, sandy substratum, occasionally flooded	Sloan	85	Flood-plain steps	Yes	2,3
	Ross	10	Terraces,flood plains	No	—
	Adrian	5	Depressions	Yes	1,3
Sn: Sloan silt loam, frequently flooded	Sloan	85	Backswamps on flood plains,depressions on flood plains	Yes	2
	Algiers	8	Flood plains	No	—
	Shoals	7	Flood plains	No	—
So: Sloan silty clay loam, frequently flooded	Sloan	90	Flood plains	Yes	2
	Ross	5	Terraces,flood plains	No	—
	Medway	5	Flood plains	No	—
Sp: Sloan silt loam, occasionally flooded	Sloan	85	Flood plains	Yes	2
	Shoals	5	Flood plains	No	—
	Algiers	5	Flood plains	No	—
	Westland	5	Outwash plains	Yes	2,3
TgA: Thackery silt loam, 1 to 4 percent slopes	Thackery	95	Stream terraces	No	—
	Westland	5	Depressions	Yes	2,3
	Sleeth		Outwash terraces,stream terraces,outwash plains	—	—
	slopes of more than 4 percent		—	—	—
ThA: Thackery variant silt loam, 0 to 2 percent slopes	Thackery Variant	90	Outwash plains,stream terraces	No	—
	Crosby	5	Till plains	—	—
	Eldean	5	Outwash terraces,kames,end moraines	—	—
ThB: Thackery variant silt loam, 2 to 6 percent slopes	Thackery Variant	90	Outwash plains,stream terraces	No	—
	Crosby	4	Till plains	—	—

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	Eldean	3	Kames,end moraines,outwash terraces	—	—
	Wetter soils	3	—	—	—
Ud: Udorthents	Udorthents	100	—	No	—
W: Water	Water	100	—	Unranked	—
Wa: Walkkill silt loam	Walkkill	100	Depressions	Yes	2,3
	Muck soils		Depressions	Yes	2,3
WbA: Warsaw silt loam, 0 to 2 percent slopes	Warsaw	85	Outwash plains,terraces,kames	No	—
	Ockley	8	Terraces	—	—
	sand and gravel at 15 to 30 inches	7	—	—	—
WeA: Wea silt loam, 0 to 3 percent slopes	Wea	90	Stream terraces,kames,outwash plains,outwash terraces	No	—
	Eldean	10	Outwash terraces,kames,end moraines	—	—
WfA: Wea silt loam, 0 to 2 percent slopes	Wea	100	Stream terraces,kames,outwash plains,outwash terraces	No	—
	soils on alluvial fans		—	—	—
Wt: Westland silty clay loam	Westland	85	Stream terraces,outwash plains	Yes	2,3
	Thackery Variant	4	Stream terraces,outwash plains	No	—
	Patton	4	Lake plains,stream terraces	Yes	2,3
	Kokomo	4	Depressions on till plains	Yes	2,3
	Flooded areas	3	Outwash plains,stream terraces	Yes	2,3
Wv: Westland silty clay loam, silty substratum	Westland	85	Stream terraces,outwash plains	Yes	2,3
	Thackery Variant	4	Stream terraces,outwash plains	No	—

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	Patton	4	Lake plains, stream terraces	Yes	2,3
	Kokomo	4	Depressions on till plains	Yes	2,3
	Flooded areas	3	Flood plains	Yes	2,3

Data Source Information

Soil Survey Area: Madison County, Ohio
Survey Area Data: Version 13, Sep 19, 2014