Hydric Soils

Fayette County, Iowa

[This report lists only those map unit components that are rated as hydric. Dashes (---) in any column indicate that the data were not included in the database. Definitions of hydric criteria codes are included at the end of the report]

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
84:					
Clyde clay loam, 0 to 3 percent slopes	Clyde	85	Drainageways	Yes	2
	Clyde, frequently flooded	5	Drainageways	Yes	2
	Klossner	5	Fens	Yes	1
135:					
Coland clay loam, 0 to 2 percent slopes	Coland, occasionally flooded	95	Flood plains	Yes	2
142B:					
Chaseburg silt loam, 2 to 5 percent slopes	Caneek, Frequently flooded	5	Flood plains	Yes	2
158:					
Dorchester silt loam, 0 to 2 percent slopes	Fluvaquents, Frequently flooded	5	Flood plains	Yes	2, 4
198B:					
Floyd loam, 1 to 4 percent slopes	Clyde	5	Drainageways	Yes	2
221:					
Palms muck, 1 to 4 percent slopes	Palms	95	Depressions	Yes	1
	Clyde	5	Drainageways	Yes	2
315:					
Loamy alluvial land	Aquolls	5	Depressions	Yes	2, 3
	Udifluvents, Frequently flooded	5	Flood plains	Yes	4
354:					
Marsh	Marsh	95	Potholes	Yes	1, 3
	Aquolls	5	Depressions	Yes	2, 3
391B:					
Clyde-Floyd complex, 1 to 4 percent slopes	Clyde	50	Drainageways	Yes	2
	Clyde, Frequently flooded	5	Drainageways	Yes	2
	Klossner	5	Fens	Yes	1
398:					
Tripoli clay loam, 0 to 2 percent slopes	Tripoli	95	Flats	Yes	2

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399:					
Readlyn loam, 0 to 2 percent slopes	Tripoli	5	Flats	Yes	2
399B:					
Readlyn loam, 2 to 5 percent slopes	Tripoli	5	Flats	Yes	2
407B:					
Schley loam, 1 to 4 percent slopes	Clyde	5	Drainageways	Yes	2
444B:					
Jacwin loam, 2 to 5 percent slopes	Calamine	5	Flats	Yes	2
444C:					
Jacwin loam, 5 to 9 percent slopes	Calamine	5	Hillslopes	Yes	2
444D:					
Jacwin loam, 9 to 14 percent slopes	Calamine	5	Hillslopes	Yes	2
471:					
Oran loam, 1 to 3 percent slopes	Tripoli	5	Flats	Yes	2
485:					
Spillville loam, 0 to 2 percent slopes	Fluvaquents, Frequently flooded	5	Flood plains	Yes	2, 4
487B:					
Otter-Huntsville silt loams, 2 to 5 percent slopes	Otter, Frequently flooded	55	Drainageways	Yes	2
489:					
Ossian silt loam, 0 to 2 percent slopes	Ossian, Frequently flooded	100	Flood plains	Yes	2
490:					
Caneek silt loam, 0 to 2 percent slopes	Caneek, Frequently flooded	95	Flood plains	Yes	2
	Udifluvents, Frequently flooded	5	Flood plains	Yes	4
496B:					
Dorchester-Volney complex, 2 to 5 percent slopes	Fluvaquents, Frequently flooded	5	Flood plains	Yes	2, 4
497F:					
Fayette-Dubuque-Jacwin complex, 14 to 25 percent slopes	Calamine	10	Hillslopes	Yes	2
497G:					
Fayette-Dubuque-Jacwin complex, 25 to 40 percent slopes	Calamine	10	Hillslopes	Yes	2

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536:					
Hanlon fine sandy loam, 0 to 2 percent slopes	Coland, occasionally flooded	5	Flood plains	Yes	2
551:					
Calamine silty clay loam, 1 to 3 percent slopes	Calamine	90	Flats	Yes	2
626:					
Hayfield loam, 0 to 2 percent slopes, rarely flooded	Marshan, rarely flooded	10	Stream terraces	Yes	2
782:					
Donnan loam, 0 to 2 percent slopes	Clyde	5	Drainageways	Yes	2
782B:					
Donnan loam, 2 to 5 percent slopes	Clyde	5	Drainageways	Yes	2
782C:					
Donnan loam, 5 to 9 percent slopes	Clyde	5	Drainageways	Yes	2
784B:					
Riceville loam, 1 to 4 percent slopes	Tripoli	5	Flats	Yes	2
798B:					
Protivin loam, 1 to 4 percent slopes	Tripoli	5	Flats	Yes	2
926:					
Canoe silt loam, 0 to 2 percent slopes	Ossian, overwash, occasionally flooded	5	Flood plains	Yes	2
1152:					
Marshan clay loam, 0 to 2 percent slopes	Marshan, rarely flooded	75	Stream terraces	Yes	2
	Selmass, rarely flooded	5	Stream terraces	Yes	2
	Shandep, ponded, rarely flooded	5	Depressions, Stream terraces	Yes	2, 3
1226:					
Lawler loam, 24 to 40 inches to sand and gravel, 0 to 2 percent slopes	Marshan, rarely flooded	5	Stream terraces	Yes	2
	Shandep, occasionally flooded	5	Depressions, Stream terraces	Yes	2, 3

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1585:					
Spillville, channeled-Coland, channeled-Aquolls, ponded, complex, 0 to 2 percent slopes	Spillville, frequently flooded, channeled	40	Flood plains	Yes	4
	Coland, frequently flooded, channeled	35	Flood plains	Yes	2, 4
	Aquolls, frequently flooded, ponded	15	Depressions, Flood plains	Yes	2, 3
	Marshan, frequently flooded, ponded	10	Stream terraces	Yes	2
1936:					
Spillville-Udifluvents complex, channeled, 0 to 2 percent slopes	Fluvaquents, frequently flooded, channeled	10	Flood plains	Yes	4
	Aquolls, frequently flooded, ponded	5	Depressions	Yes	2, 3, 4
C135:					
Coland clay loam, channeled, 0 to 2 percent slopes	Coland, frequently flooded, channeled	90	Flood plains	Yes	2
	Aquolls, frequently flooded, ponded	5	Depressions	Yes	3, 4
	Fluvaquents, frequently flooded, ponded	5	Flood plains	Yes	2, 3
C158:					
Dorchester silt loam, channeled, 0 to 2 percent slopes	Aquolls, frequently flooded, ponded	5	Depressions	Yes	4
	Fluvaquents, frequently flooded, ponded	5	Flood plains	Yes	2, 3, 4

Hydric Soils

This table lists the map unit components that are rated as hydric soils 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, 2003) 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 others, 2002).

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, 2B3). 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. are somewhat poorly drained and have a water table at the surface (0.0 feet) during the growing season, or
   B. are poorly drained or very poorly drained and have either:
      1) a water table at the surface (0.0 feet) during the growing season if textures are coarse sand, sand, or fine sand in all layers within a depth of 20 inches, or
      2) a water table at a depth of 0.5 foot or less during the growing season if permeability is equal to or greater than 6.0 in/hr in all layers within a depth of 20 inches, or
      3) a water table at a depth of 1.0 foot or less during the growing season if permeability is less than 6.0 in/hr in any layer within a depth of 20 inches.
3. Soils that are frequently ponded for long or very long duration during the growing season.
4. Soils that are frequently flooded for long or very long duration during the growing season.

References:

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Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
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