

Hydric Soils

Franklin County, Vermont

[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] Dominant components that are hydric are highlighted.

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
AuA:					
Au Gres loamy fine sand, 0 to 6 percent slopes	Wareham	7	Depressions	Yes	2
	Enosburg	6	Depressions	Yes	2
BeB:					
Belgrade silt loam, 2 to 8 percent slopes	Raynham	10	Depressions	Yes	2
BeC:					
Belgrade silt loam, 8 to 15 percent slopes	Raynham	7	Depressions	Yes	2
Bg:					
Binghamville silt loam	Binghamville	80	Terraces	Yes	2
	Scantic	12	Depressions	Yes	2
	Enosburg	5	Knolls	Yes	2
	Raynham	3	Knolls	Yes	2
Br:					
Birdsall silt loam	Birdsall	85	Depressions	Yes	2, 3
	Binghamville	5	Knolls	Yes	2
	Carlisle, undrained	5	Bogs	Yes	1, 3
	Linwood, undrained	5	Bogs	Yes	1, 3
CaA:					
Cabot silt loam, 0 to 3 percent slopes	Cabot	79	Hills	Yes	2
	Scantic	8	Hills	Yes	2
	Peacham	5	Hills	Yes	2, 3
CaB:					
Cabot silt loam, 3 to 8 percent slopes	Cabot	82	Hills, Mountains	Yes	2
	Peacham	4	Hills, Mountains	Yes	2, 3

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CbA:					
Cabot silt loam, 0 to 3 percent slopes, very stony	Cabot, very stony	85	Hills	Yes	2
	Peacham, very stony	3	Hills	Yes	2, 3
	Scantic	2	Hills	Yes	2
CbB:					
Cabot silt loam, 3 to 15 percent slopes, very stony	Cabot, very stony	85	Hills, Mountains	Yes	2
	Peacham, very stony	3	Hills, Mountains	Yes	2, 3
	Scantic, very stony	2	Hills, Mountains	Yes	2
Ce:					
Carlisle muck	Carlisle, undrained	86	Bogs	Yes	1, 3
	Linwood, undrained	5	Bogs	Yes	1, 3
	Limerick	3	Rises	Yes	2
	Peacham, undrained	3	Knolls	Yes	2, 3
	Wareham	3	Knolls	Yes	2
Cv:					
Covington clay	Covington	80	Depressions, Terraces	Yes	2
	Scantic	8	Depressions	Yes	2
DeB:					
Deerfield loamy fine sand, 0 to 8 percent slopes	Covington	5	Depressions	Yes	2
	Swanton	5	Depressions	Yes	2
	Wareham	5	Depressions	Yes	2
DeC:					
Deerfield loamy fine sand, 8 to 15 percent slopes	Wareham	2	Depressions	Yes	2
EdA:					
Eldridge loamy fine sand, 0 to 3 percent slopes	Enosburg	20	Depressions	Yes	2
EdB:					
Eldridge loamy fine sand, 3 to 8 percent slopes	Enosburg	8	Depressions	Yes	2

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EdC:					
Eldridge loamy fine sand, 8 to 15 percent slopes	Enosburg	2	Depressions	Yes	2
EnA:					
Enosburg loamy fine sand, 0 to 3 percent slopes	Enosburg	85	Deltas, Outwash terraces	Yes	2
	Raynham	5	Depressions	Yes	2
	Wareham	5	Depressions	Yes	2
EnB:					
Enosburg loamy fine sand, 3 to 8 percent slopes	Enosburg	75	Deltas, Outwash terraces	Yes	2
	Raynham	10	Knolls	Yes	2
	Binghamville	5	Depressions	Yes	2
HbA:					
Hinesburg loamy fine sand, 0 to 3 percent slopes	Raynham	3	Depressions	Yes	2
KbA:					
Kingsbury clay, 0 to 3 percent slopes	Covington	10	Depressions	Yes	2
	Scantic	10	Depressions	Yes	2
KbB:					
Kingsbury clay, 3 to 8 percent slopes	Covington	10	Depressions	Yes	2
	Scantic	10	Depressions	Yes	2
Le:					
Limerick silt loam	Limerick	65	Flood plains	Yes	2
	Rumney, variant	20	Flood plains	Yes	2
	Saco	8	Depressions, Flood plains	Yes	2
Ly:					
Lyons stony loam	Lyons	65	Depressions	Yes	2
	Linwood, undrained	8	Bogs	Yes	1, 3
	Covington	7	Depressions	Yes	2

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Ma: Marsh	Carlisle, undrained	20	Marshes	Yes	1, 3
	Linwood, undrained	10	Marshes	Yes	1, 3
MeA: Massena stony loam, 0 to 3 percent slopes	Lyons	10	Depressions	Yes	2
MeB: Massena stony loam, 3 to 8 percent slopes	Lyons	5	Depressions	Yes	2
MnA: Massena extremely stony loam, 0 to 6 percent slopes	Lyons	10	Depressions	Yes	2
MsA: Missisquoi loamy sand, 0 to 3 percent slopes	Wareham	4	Depressions	Yes	2
MsB: Missisquoi loamy sand, 3 to 8 percent slopes	Wareham	4	Depressions	Yes	2
MsC: Missisquoi loamy sand, 8 to 15 percent slopes	Wareham	2	Depressions	Yes	2
MsD: Missisquoi loamy sand, 15 to 25 percent slopes	Wareham	2	Drainageways	Yes	2
MsE: Missisquoi loamy sand, 25 to 60 percent slopes	Wareham	4	Drainageways	Yes	2
MuB: Munson silt loam, 3 to 8 percent slopes	Raynham	10	Depressions	Yes	2
	Scantic	10	Depressions	Yes	2
	Swanton	4	Knolls	Yes	2
MuC: Munson silt loam, 8 to 15 percent slopes	Raynham	8	Depressions	Yes	2
	Scantic	8	Depressions	Yes	2
	Swanton	5	Knolls	Yes	2
Od: Ondawa variant silt loam	Rumney, variant	5	Depressions, Flood plains	Yes	2

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Pa:					
Peacham mucky peat, 0 to 8 percent slopes, very stony	Peacham, very stony	78	Hills, Mountains	Yes	2, 3
	Cabot, very stony	11	Hills, Mountains	Yes	2
	Wonsqueak	8	Hills, Mountains	Yes	1, 3
	Bucksport	2	Hills, Mountains	Yes	1, 3
	Searsport	1	Hills, Mountains	Yes	2, 3
PeB:					
Peru fine sandy loam, 3 to 8 percent slopes	Cabot	4	Hills, Mountains	Yes	2
PeC:					
Peru fine sandy loam, 8 to 15 percent slopes	Cabot	4	Hills, Mountains	Yes	2
PeD:					
Peru fine sandy loam, 15 to 25 percent slopes	Cabot	3	Hills, Mountains	Yes	2
PrC:					
Peru fine sandy loam, 3 to 15 percent slopes, very stony	Cabot, very stony	4	Hills, Mountains	Yes	2
PrD:					
Peru fine sandy loam, 15 to 25 percent slopes, very stony	Cabot, very stony	4	Hills, Mountains	Yes	2
Pu:					
Podunk variant silt loam	Rumney, variant	10	Depressions, Flood plains	Yes	2
RaB:					
Raynham silt loam, 3 to 8 percent slopes	Raynham	80	Terraces	Yes	2
	Binghamville	5	Depressions	Yes	2
	Scantic	2	Depressions	Yes	2
	Birdsall	1	Depressions	Yes	2, 3

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Ru:					
Rumney variant silt loam	Rumney, variant	65	Flood plains	Yes	2
	Limerick	20	Depressions, Flood plains	Yes	2
	Walkkill, undrained	5	Depressions, Flood plains	Yes	2, 3, 4
ScA:					
Scantic silt loam, 0 to 3 percent slopes	Scantic	75	Terraces	Yes	2
	Raynham	20	Knolls	Yes	2
	Covington	3	Depressions	Yes	2
ScB:					
Scantic silt loam, 3 to 8 percent slopes	Scantic	70	Terraces	Yes	2
	Binghamville	20	Depressions	Yes	2
	Covington	3	Depressions	Yes	2
	Raynham	3	Knolls	Yes	2
	Enosburg	2	Depressions	Yes	2
Tm:					
Terric Medisaprists	Terric Medisaprists, undrained	65	Bogs	Yes	1, 3
	Carlisle, undrained	20	Bogs	Yes	1, 3
	Birdsall	5	Depressions	Yes	2, 3
	Lyons	5	Depressions	Yes	2, 3
	Peacham, undrained	5	Depressions	Yes	2, 3
TwB:					
Tunbridge-Woodstock fine sandy loams, very rocky, 3 to 8 percent slopes	Cabot	3	Depressions	Yes	2
	Peacham, undrained	3	Depressions	Yes	2, 3

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TwC:					
Tunbridge-Woodstock fine sandy loams, very rocky, 8 to 15 percent slopes	Cabot	3	Depressions	Yes	2
	Peacham, undrained	3	Depressions	Yes	2, 3
TwD:					
Tunbridge-Woodstock fine sandy loams, very rocky, 15 to 25 percent slopes	Cabot	3	Drainageways	Yes	2
	Peacham, undrained	3	Drainageways	Yes	2, 3
Wa:					
Wallkill silt loam	Wallkill, undrained	70	Flood plains	Yes	2, 3, 4
	Birdsall	10	Depressions	Yes	2, 3
	Rumney, variant	10	Flood plains	Yes	2
	Carlisle, undrained	5	Bogs	Yes	1, 3, 4
	Linwood, undrained	5	Bogs	Yes	1, 3
Wh:					
Wareham loamy fine sand	Wareham	70	Terraces	Yes	2
	Enosburg	10	Knolls	Yes	2
	Binghamville	5	Depressions	Yes	2
	Walpole	5	Depressions	Yes	2
WrA:					
Westbury stony fine sandy loam, 0 to 3 percent slopes	Cabot	10	Depressions	Yes	2
WrB:					
Westbury stony fine sandy loam, 3 to 8 percent slopes	Cabot	10	Depressions	Yes	2
WrC:					
Westbury stony fine sandy loam, 8 to 15 percent slopes	Cabot	5	Depressions	Yes	2
Wt:					
Winooski silt loam	Limerick	5	Depressions, Flood plains	Yes	2

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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- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.