

Hydric Soils

Washington 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
2A:					
Ondawa fine sandy loam, 0 to 3 percent slopes, frequently flooded	Rumney	2	Flood plains	Yes	2
3A:					
Rumney fine sandy loam, 0 to 3 percent slopes, frequently flooded	Rumney	84	Flood plains	Yes	2
	Medomak	6	Flood plains	Yes	2, 3, 4
	Charles	3	Flood plains	Yes	2
4A:					
Sunny silt loam, 0 to 2 percent slopes	Sunny	85	Flood plains	Yes	2
	Grange	5	Outwash terraces	Yes	2
	Rumney	5	Flood plains	Yes	2
	Scantic	5	Lake terraces	Yes	2
9A:					
Rifle muck, 0 to 2 percent slopes, ponded	Rifle, undrained	90	Bogs, Swamps	Yes	1, 3
	Markey, undrained	5	Bogs, Swamps	Yes	1, 3
	Wonsqueak, undrained	5	Bogs	Yes	1, 3
14B:					
Colonel fine sandy loam, 3 to 8 percent slopes	Brayton	4	Hills, Mountains	Yes	2
14C:					
Colonel fine sandy loam, 8 to 15 percent slopes	Cabot	4	Hills, Mountains	Yes	2
14D:					
Colonel fine sandy loam, 15 to 25 percent slopes	Cabot	4	Hills, Mountains	Yes	2
17A:					
Cabot silt loam, 0 to 3 percent slopes	Cabot	83	Hills, Mountains	Yes	2
	Peacham	5	Hills, Mountains	Yes	2, 3
17B:					
Cabot silt loam, 3 to 8 percent slopes	Cabot	83	Hills, Mountains	Yes	2
	Peacham	5	Hills, Mountains	Yes	2, 3

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17C:					
Cabot silt loam, 8 to 15 percent slopes	Cabot	84	Hills, Mountains	Yes	2
	Peacham	4	Hills, Mountains	Yes	2, 3
18B:					
Cabot silt loam, 0 to 8 percent slopes, very stony	Cabot, very stony	80	Hills, Mountains	Yes	2
	Peacham, very stony	6	Hills, Mountains	Yes	2, 3
	Wonsqueak, very stony	2	Hills, Mountains	Yes	1, 3
18C:					
Cabot silt loam, 8 to 15 percent slopes, very stony	Cabot, very stony	85	Hills, Mountains	Yes	2
	Peacham	4	Hills, Mountains	Yes	2, 3
19B:					
Colonel fine sandy loam, 0 to 8 percent slopes, very stony	Brayton, very stony	3	Hills, Mountains	Yes	2
19C:					
Colonel fine sandy loam, 8 to 15 percent slopes, very stony	Cabot, very stony	5	Hills, Mountains	Yes	2
19D:					
Colonel fine sandy loam, 15 to 35 percent slopes, very stony	Cabot, very stony	5	Hills, Mountains	Yes	2
20A:					
Peacham mucky peat, 0 to 3 percent slopes	Peacham	85	Hills, Mountains	Yes	2, 3
	Cabot	6	Hills, Mountains	Yes	2
	Bucksport	3	Hills, Mountains	Yes	1, 3
	Pondicherry	3	Hills, Mountains	Yes	1, 3
	Wonsqueak	3	Hills, Mountains	Yes	1, 3
21A:					
Sunday fine sand, 0 to 3 percent slopes	Rumney	5	Depressions, Flood plains	Yes	2
33A:					
Machias fine sandy loam, 0 to 3 percent slopes	Grange	4	Depressions	Yes	2
33B:					
Machias fine sandy loam, 3 to 8 percent slopes	Grange	4	Depressions	Yes	2

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33C: Machias fine sandy loam, 8 to 15 percent slopes	Grange	4	Depressions	Yes	2
41D: Buxton silt loam, 15 to 25 percent slopes	Scantic	2	Drainageways	Yes	2
41E: Buxton silt loam, 25 to 45 percent slopes	Scantic	2	Drainageways	Yes	2
44B: Lamoine silt loam, 3 to 8 percent slopes	Scantic	2	Depressions	Yes	2
44C: Lamoine silt loam, 8 to 15 percent slopes	Scantic	2	Depressions	Yes	2
45A: Scantic silt loam, 0 to 3 percent slopes	Scantic	85	Marine terraces	Yes	2
	Biddeford	3	Marine terraces	Yes	2, 3
	Roundabout	2	Marine terraces	Yes	2
55B: Nicholville silt loam, 3 to 8 percent slopes	Roundabout	2	Depressions	Yes	2
58A: Grange silt loam, 0 to 3 percent slopes	Grange	85	Depressions, Outwash terraces	Yes	2
	Cabot	3	Knolls	Yes	2
	Scantic	2	Depressions	Yes	2
59A: Waitsfield silt loam, 0 to 3 percent slopes	Rumney	1	Depressions, Flood plains	Yes	2
	Sunny	1	Depressions, Flood plains	Yes	2
60A: Weider very fine sandy loam, 0 to 3 percent slopes	Rumney	2	Depressions, Flood plains	Yes	2
	Sunny	2	Depressions, Flood plains	Yes	2

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62B: Berkshire fine sandy loam, 3 to 8 percent slopes	Cabot	3	Depressions	Yes	2
62C: Berkshire fine sandy loam, 8 to 15 percent slopes	Cabot	3	Depressions	Yes	2
62D: Berkshire fine sandy loam, 15 to 25 percent slopes	Cabot	3	Drainageways	Yes	2
63B: Berkshire fine sandy loam, 3 to 8 percent slopes, very stony	Cabot	3	Depressions	Yes	2
63C: Berkshire fine sandy loam, 8 to 15 percent slopes, very stony	Cabot	3	Depressions	Yes	2
63D: Berkshire fine sandy loam, 15 to 35 percent slopes, very stony	Cabot	3	Drainageways	Yes	2
66B: Vershire-Dummerston complex, 3 to 8 percent slopes, rocky	Cabot	3	Depressions	Yes	2
66C: Vershire-Dummerston complex, 8 to 15 percent slopes, rocky	Cabot	3	Depressions	Yes	2
66D: Vershire-Dummerston complex, 15 to 25 percent slopes, rocky	Cabot	3	Drainageways	Yes	2
67C: Glover-Vershire complex, 8 to 15 percent slopes, very rocky	Cabot	3	Depressions	Yes	2
67D: Glover-Vershire complex, 15 to 35 percent slopes, very rocky	Cabot	3	Drainageways	Yes	2
71C: Tunbridge-Lyman complex, 3 to 15 percent slopes, rocky	Cabot, rocky	4	Hills, Mountains	Yes	2
72B: Tunbridge-Lyman complex, 0 to 8 percent slopes, very rocky	Cabot, very rocky	3	Hills, Mountains	Yes	2
72C: Tunbridge-Lyman complex, 8 to 15 percent slopes, very rocky	Cabot, very rocky	5	Hills, Mountains	Yes	2
72D: Tunbridge-Lyman complex, 15 to 35 percent slopes, very rocky	Cabot, very rocky	4	Hills, Mountains	Yes	2

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72E: Tunbridge-Lyman complex, 35 to 60 percent slopes, very rocky	Cabot, very rocky	1	Hills, Mountains	Yes	2
76C: Berkshire fine sandy loam, 8 to 15 percent slopes, very bouldery	Cabot	3	Depressions	Yes	2
76D: Berkshire fine sandy loam, 15 to 35 percent slopes, very bouldery	Cabot	3	Drainageways	Yes	2
77B: Peru fine sandy loam, 3 to 8 percent slopes	Cabot	4	Hills, Mountains	Yes	2
77C: Peru fine sandy loam, 8 to 15 percent slopes	Cabot	4	Hills, Mountains	Yes	2
77D: Peru fine sandy loam, 15 to 25 percent slopes	Cabot	3	Hills, Mountains	Yes	2
78C: Peru fine sandy loam, 8 to 15 percent slopes, very stony	Cabot, very stony	4	Hills, Mountains	Yes	2
78D: Peru fine sandy loam, 15 to 35 percent slopes, very stony	Cabot, very stony	4	Hills, Mountains	Yes	2
78E: Peru fine sandy loam, 35 to 60 percent slopes, very stony	Cabot, very stony	5	Hills, Mountains	Yes	2
79A: Markey and Wonsqueak mucks, 0 to 2 percent slopes, ponded	Markey, undrained	43	Bogs, Swamps	Yes	1, 3
	Wonsqueak, undrained	42	Bogs, Swamps	Yes	1, 3
	Cabot	4	Knolls	Yes	2
	Peacham, undrained	4	Knolls	Yes	2, 3
	Rifle, undrained	4	Depressions	Yes	1, 3
	Scantic	3	Knolls	Yes	2

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82A: Peacham mucky peat, 0 to 8 percent slopes, extremely bouldery	Peacham, extremely bouldery	78	Hills, Mountains	Yes	2, 3
	Cabot, extremely bouldery	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
88D: Houghtonville fine sandy loam, 15 to 35 percent slopes, very bouldery	Cabot	3	Drainageways	Yes	2
89E: Houghtonville fine sandy loam, 15 to 60 percent slopes, rubbly	Cabot	3	Drainageways	Yes	2
90B: Dummerston fine sandy loam, 3 to 8 percent slopes	Cabot	3	Depressions	Yes	2
90C: Dummerston fine sandy loam, 8 to 15 percent slopes	Cabot	3	Depressions	Yes	2
90D: Dummerston fine sandy loam, 15 to 25 percent slopes	Cabot	3	Depressions	Yes	2
91C: Dummerston fine sandy loam, 8 to 15 percent slopes, very stony	Cabot	3	Depressions	Yes	2
91D: Dummerston fine sandy loam, 15 to 35 percent slopes, very stony	Cabot	3	Drainageways	Yes	2
92B: Buckland loam, 3 to 8 percent slopes	Cabot	8	Hills	Yes	2
92C: Buckland loam, 8 to 15 percent slopes	Cabot	7	Hills	Yes	2
92D: Buckland loam, 15 to 25 percent slopes	Cabot	7	Hills	Yes	2
93B: Buckland loam, 0 to 8 percent slopes, very stony	Cabot, very stony	12	Hills	Yes	2

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93C: Buckland loam, 8 to 15 percent slopes, very stony	Cabot, very stony	6	Hills	Yes	2
93D: Buckland loam, 15 to 35 percent slopes, very stony	Cabot, very stony	10	Hills	Yes	2
96D: Peru fine sandy loam, 15 to 35 percent slopes, extremely bouldery	Cabot, extremely bouldery	4	Hills, Mountains	Yes	2
98B: Cabot silt loam, 0 to 8 percent slopes, extremely bouldery	Cabot, extremely bouldery	83	Hills, Mountains	Yes	2
	Peacham, extremely bouldery	6	Hills, Mountains	Yes	2, 3
98C: Cabot silt loam, 8 to 15 percent slopes, extremely bouldery	Cabot, extremely bouldery	83	Hills, Mountains	Yes	2
	Peacham, extremely bouldery	6	Hills, Mountains	Yes	2, 3
99C: Colonel fine sandy loam, 3 to 15 percent slopes, extremely bouldery	Cabot, very bouldery	5	Hills, Mountains	Yes	2
99D: Colonel fine sandy loam, 15 to 35 percent slopes, extremely bouldery	Cabot, very bouldery	5	Hills, Mountains	Yes	2
116B: Mundal fine sandy loam, 3 to 8 percent slopes, very stony	Cabot	4	Depressions	Yes	2
116C: Mundal fine sandy loam, 8 to 15 percent slopes, very stony	Cabot	4	Depressions	Yes	2
116D: Mundal fine sandy loam, 15 to 35 percent slopes, very stony	Cabot	4	Drainageways	Yes	2
163C: Houghtonville fine sandy loam, 8 to 15 percent slopes, very stony	Cabot	4	Depressions	Yes	2
163D: Houghtonville fine sandy loam, 15 to 35 percent slopes, very stony	Cabot	4	Drainageways	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:

- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
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