

# Hydric Soils

Franklin County, Massachusetts

[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
2A: Pootatuck very fine sandy loam, 0 to 3 percent slopes, occasionally flooded	Limerick, frequently flooded	5	Flood plains	Yes	2
5A: Saco mucky silt loam, 0 to 2 percent slopes, frequently flooded	Saco, frequently flooded	93	Flood plains	Yes	2, 3
	Limerick, frequently flooded	5	Flood plains	Yes	2
	Swansea	2	Outwash plains	Yes	1, 3
6A: Scarboro mucky sandy loam, 0 to 2 percent slopes	Scarboro	93	Outwash terraces	Yes	2, 3
	Walpole	5	Outwash plains	Yes	2
	Saco	2	Flood plains	Yes	2, 3
8A: Limerick silt loam, 0 to 2 percent slopes, frequently flooded	Limerick, frequently flooded	85	Flood plains	Yes	2
	Saco, frequently flooded	5	Flood plains	Yes	2, 3
9A: Birdsall mucky silt loam, 0 to 2 percent slopes	Birdsall	88	Depressions	Yes	2, 3
	Raynham	10	Depressions	Yes	2
	Scarboro	1	Outwash terraces	Yes	2, 3
	Swansea	1	Outwash plains	Yes	1, 3
18A: 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
24A: Limerick silt loam, 0 to 2 percent slopes, protected	Limerick, protected	75	Flood plains	Yes	2

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30A:					
Raynham silt loam, 0 to 3 percent slopes	Raynham	85	Depressions	Yes	2
	Birdsall	2	Depressions	Yes	2, 3
	Enosburg	2	Plains	Yes	2
	Walpole	2	Outwash plains	Yes	2
31A:					
Walpole sandy loam, 0 to 3 percent slopes	Walpole	80	Depressions	Yes	2
	Scarboro	10	Outwash terraces	Yes	2, 3
50A:					
Wonsqueak woody peat, 0 to 1 percent slopes	Wonsqueak	85	Ground moraines	Yes	1, 3
	Bucksport	13	Ground moraines	Yes	1, 3
	Peacham	2	Depressions, Ground moraines	Yes	2
51A:					
Swansea muck, 0 to 1 percent slopes	Swansea	80	Swamps	Yes	1, 3
	Freetown	10	Swamps	Yes	1, 3
	Scarboro	5	Depressions, Drainageways	Yes	2, 3
	Whitman	5	Depressions, Drainageways	Yes	2, 3
52A:					
Freetown muck, 0 to 1 percent slopes	Freetown	85	Depressions, Depressions	Yes	1, 3
	Scarboro	5	Depressions, Drainageways	Yes	2, 3
	Swansea	5	Depressions, Depressions	Yes	1, 3
	Whitman	5	Depressions, Drainageways	Yes	2, 3

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Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
<b>53A:</b>					
Freetown muck, ponded, 0 to 1 percent slopes	Freetown, ponded	85	Depressions, Depressions	Yes	1, 3
	Scarboro	5	Depressions, Drainageways	Yes	2, 3
	Swansea, ponded	5	Depressions, Depressions	Yes	1, 3
	Whitman, ponded	5	Depressions, Ground moraines	Yes	2, 3
<b>70B:</b>					
Ridgebury gravelly fine sandy loam, 0 to 5 percent slopes	Ridgebury	80	Depressions, Drumlins	Yes	2
	Whitman	2	Depressions, Ground moraines	Yes	2
<b>71B:</b>					
Ridgebury gravelly fine sandy loam, 0 to 5 percent slopes, extremely stony	Ridgebury, extremely stony	78	Depressions, Drumlins	Yes	2
	Whitman, extremely stony	2	Depressions, Ground moraines	Yes	2
<b>73A:</b>					
Whitman very stony mucky fine sandy loam, 0 to 3 percent slopes, extremely stony	Whitman, extremely stony	85	Depressions, Ground moraines	Yes	2
	Ridgebury, extremely stony	10	Depressions, Drumlins	Yes	2
	Swansea	5	Outwash plains	Yes	1, 3
<b>74A:</b>					
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

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Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
75B: Pillsbury fine sandy loam, 0 to 8 percent slopes, very stony	Pillsbury, very stony	79	Hills, Mountains	Yes	2
	Peacham, very stony	5	Hills, Mountains	Yes	2, 3
	Wonsqueak	4	Hills, Mountains	Yes	1, 3
79B: Stissing silt loam, 0 to 5 percent slopes	Stissing	95	Ground moraines	Yes	2
80B: Stissing silt loam, 0 to 5 percent slopes, very stony	Stissing, very stony	95	Ground moraines	Yes	2
83B: Lyme gravelly loam, 0 to 5 percent slopes, extremely stony	Lyme, extremely stony	78	Ground moraines	Yes	2
	Pillsbury, extremely stony	10	Ground moraines	Yes	2
	Peacham, extremely stony	5	Depressions, Ground moraines	Yes	2
	Wonsqueak	5	Ground moraines	Yes	1, 3
95A: Podunk fine sandy loam, 0 to 3 percent slopes, occasionally flooded	Rumney	6	Flood plains	Yes	2
	Charles	2	Flood plains	Yes	2
98A: Winooski silt loam, 0 to 3 percent slopes, occasionally flooded	Limerick, frequently flooded	10	Flood plains	Yes	2
109B: Chatfield-Hollis complex, 3 to 8 percent slopes, rocky	Ridgebury, very stony	1	Depressions, Drumlins	Yes	2
	Swansea	1	Outwash plains	Yes	1, 3
109C: Chatfield-Hollis complex, 8 to 15 percent slopes, rocky	Ridgebury, very stony	1	Depressions, Drumlins	Yes	2
109F: Chatfield-Hollis complex, 25 to 60 percent slopes, rocky	Ridgebury, very stony	2	Depressions, Drumlins	Yes	2
112B: Canton-Chatfield-Hollis complex, 3 to 8 percent slopes, rocky	Ridgebury, very stony	1	Depressions, Drumlins	Yes	2

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Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
112C: Canton-Chatfield-Hollis complex, 8 to 15 percent slopes, rocky	Ridgebury, very stony	2	Depressions, Drumlins	Yes	2
112D: Canton-Chatfield-Hollis complex, 15 to 25 percent slopes, rocky	Ridgebury, very stony	1	Depressions, Drumlins	Yes	2
116B: Millsite-Westminster complex, 3 to 8 percent slopes, rocky	Pillsbury, very stony	2	Ground moraines	Yes	2
116C: Millsite-Westminster complex, 8 to 15 percent slopes, rocky	Pillsbury, very stony	1	Ground moraines	Yes	2
129B: Millsite-Woodstock complex, 3 to 8 percent slopes, very rocky	Pillsbury, very stony	1	Ground moraines	Yes	2
129C: Millsite-Woodstock complex, 8 to 15 percent slopes, very rocky	Pillsbury, very stony	2	Ground moraines	Yes	2
131B: Yalesville-Holyoke complex, 3 to 8 percent slopes, rocky	Wilbraham, very stony	5	Ground moraines	Yes	2
138B: Tunbridge-Lyman complex, 0 to 8 percent slopes, very rocky	Cabot, very rocky	3	Hills, Mountains	Yes	2
138C: Tunbridge-Lyman complex, 8 to 15 percent slopes, very rocky	Cabot, very rocky	5	Hills, Mountains	Yes	2
138D: Tunbridge-Lyman complex, 15 to 25 percent slopes, very rocky	Cabot, very rocky	4	Hills, Mountains	Yes	2
138F: Tunbridge-Lyman complex, 25 to 60 percent slopes, very rocky	Cabot, very rocky	1	Hills, Mountains	Yes	2
142B: Cardigan-Kearsarge complex, 3 to 8 percent slopes, very rocky	Stissing, very stony	2	Ground moraines	Yes	2
142C: Cardigan-Kearsarge complex, 8 to 15 percent slopes, very rocky	Stissing, very stony	1	Ground moraines	Yes	2
223A: Scio silt loam, 0 to 3 percent slopes	Raynham	10	Depressions	Yes	2
	Birdsall	2	Depressions	Yes	2, 3
223B: Scio silt loam, 3 to 8 percent slopes	Raynham	10	Depressions	Yes	2

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223C: Scio silt loam, 8 to 15 percent slopes	Raynham	5	Depressions	Yes	2
	Birdsall	2	Depressions	Yes	2, 3
250A: Pollux fine sandy loam, 0 to 3 percent slopes	Enosburg	2	Plains	Yes	2
250B: Pollux fine sandy loam, 3 to 8 percent slopes	Enosburg	5	Plains	Yes	2
256A: Deerfield loamy sand, 0 to 3 percent slopes	Walpole	2	Outwash plains	Yes	2
	Scarboro	1	Outwash terraces	Yes	2, 3
256B: Deerfield loamy sand, 3 to 8 percent slopes	Walpole	10	Outwash plains	Yes	2
260B: Sudbury sandy loam, 3 to 8 percent slopes	Walpole	5	Outwash plains	Yes	2
275A: Agawam fine sandy loam, 0 to 3 percent slopes	Walpole	3	Depressions	Yes	2
300B: Montauk fine sandy loam, 3 to 8 percent slopes	Ridgebury	4	Depressions	Yes	2
300C: Montauk fine sandy loam, 8 to 15 percent slopes	Ridgebury	4	Depressions	Yes	2
301B: Montauk fine sandy loam, 0 to 8 percent slopes, very stony	Ridgebury, very stony	4	Depressions	Yes	2
301C: Montauk fine sandy loam, 8 to 15 percent slopes, very stony	Ridgebury, very stony	4	Depressions	Yes	2
305B: Paxton fine sandy loam, 3 to 8 percent slopes	Ridgebury	6	Depressions	Yes	2
305C: Paxton fine sandy loam, 8 to 15 percent slopes	Ridgebury	2	Depressions	Yes	2
305D: Paxton fine sandy loam, 15 to 25 percent slopes	Ridgebury	1	Depressions	Yes	2

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306B: Paxton fine sandy loam, 0 to 8 percent slopes, very stony	Ridgebury, very stony	4	Depressions	Yes	2
306C: Paxton fine sandy loam, 8 to 15 percent slopes, very stony	Ridgebury, very stony	2	Depressions	Yes	2
306D: Paxton fine sandy loam, 15 to 25 percent slopes, very stony	Ridgebury, very stony	1	Depressions	Yes	2
310B: Woodbridge fine sandy loam, 3 to 8 percent slopes	Ridgebury	8	Depressions	Yes	2
310C: Woodbridge fine sandy loam, 8 to 15 percent slopes	Ridgebury	4	Depressions	Yes	2
311B: Woodbridge fine sandy loam, 0 to 8 percent slopes, very stony	Ridgebury, very stony	8	Depressions	Yes	2
311C: Woodbridge fine sandy loam, 8 to 15 percent slopes, very stony	Ridgebury, very stony	4	Depressions	Yes	2
	Whitman, very stony	1	Depressions	Yes	2
315A: Scituate fine sandy loam, 0 to 3 percent slopes	Ridgebury	10	Depressions, Drumlins	Yes	2
315B: Scituate fine sandy loam, 3 to 8 percent slopes	Ridgebury	10	Depressions, Drumlins	Yes	2
315C: Scituate fine sandy loam, 8 to 15 percent slopes	Ridgebury	5	Depressions, Drumlins	Yes	2
316B: Scituate fine sandy loam, 3 to 8 percent slopes, very stony	Ridgebury, very stony	10	Depressions, Drumlins	Yes	2
316C: Scituate fine sandy loam, 8 to 15 percent slopes, very stony	Ridgebury, very stony	5	Depressions, Drumlins	Yes	2
330B: Bernardston silt loam, 3 to 8 percent slopes	Stissing	2	Ground moraines	Yes	2
330C: Bernardston silt loam, 8 to 15 percent slopes	Stissing	5	Ground moraines	Yes	2
331B: Bernardston silt loam, 3 to 8 percent slopes, very stony	Stissing, very stony	2	Ground moraines	Yes	2

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331C: Bernardston silt loam, 8 to 15 percent slopes, very stony	Stissing, very stony	5	Ground moraines	Yes	2
345B: Pittstown silt loam, 3 to 8 percent slopes	Stissing	5	Ground moraines	Yes	2
345C: Pittstown silt loam, 8 to 15 percent slopes	Stissing	5	Ground moraines	Yes	2
346B: Pittstown silt loam, 3 to 8 percent slopes, very stony	Stissing, very stony	5	Ground moraines	Yes	2
346C: Pittstown silt loam, 8 to 15 percent slopes, very stony	Stissing, very stony	5	Ground moraines	Yes	2
348B: Henniker sandy loam, 3 to 8 percent slopes	Pillsbury	2	Ground moraines	Yes	2
348C: Henniker sandy loam, 8 to 15 percent slopes	Pillsbury	2	Ground moraines	Yes	2
349B: Henniker sandy loam, 3 to 8 percent slopes, very stony	Pillsbury, extremely stony	2	Ground moraines	Yes	2
349C: Henniker sandy loam, 8 to 15 percent slopes, very stony	Pillsbury, extremely stony	2	Ground moraines	Yes	2
355B: Marlow fine sandy loam, 3 to 8 percent slopes	Pillsbury	3	Hills, Mountains	Yes	2
355C: Marlow fine sandy loam, 8 to 15 percent slopes	Pillsbury	2	Hills, Mountains	Yes	2
356B: Marlow fine sandy loam, 0 to 8 percent slopes, very stony	Pillsbury, very stony	4	Hills, Mountains	Yes	2
356C: Marlow fine sandy loam, 8 to 15 percent slopes, very stony	Pillsbury, very stony	2	Hills, Mountains	Yes	2
360B: Peru fine sandy loam, 3 to 8 percent slopes	Cabot	4	Hills, Mountains	Yes	2
360C: Peru fine sandy loam, 8 to 15 percent slopes	Cabot	4	Hills, Mountains	Yes	2

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Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
361B: Peru fine sandy loam, 0 to 8 percent slopes, very stony	Pillsbury, very stony	4	Hills, Mountains	Yes	2
361C: Peru fine sandy loam, 8 to 15 percent slopes, very stony	Cabot, very stony	4	Hills, Mountains	Yes	2
368A: Metacomet fine sandy loam, 0 to 3 percent slopes	Pillsbury	5	Ground moraines	Yes	2
368B: Metacomet fine sandy loam, 3 to 8 percent slopes	Pillsbury	10	Ground moraines	Yes	2
368C: Metacomet fine sandy loam, 8 to 15 percent slopes	Pillsbury	10	Ground moraines	Yes	2
369B: Metacomet fine sandy loam, 3 to 8 percent slopes, very stony	Pillsbury, extremely stony	10	Ground moraines	Yes	2
369C: Metacomet fine sandy loam, 8 to 15 percent slopes, very stony	Pillsbury, extremely stony	10	Ground moraines	Yes	2
370B: Shelburne fine sandy loam, 3 to 8 percent slopes	Pillsbury	5	Ground moraines	Yes	2
370C: Shelburne fine sandy loam, 8 to 15 percent slopes	Pillsbury	5	Ground moraines	Yes	2
371B: Shelburne fine sandy loam, 3 to 8 percent slopes, very stony	Pillsbury, very stony	5	Ground moraines	Yes	2
371C: Shelburne fine sandy loam, 8 to 15 percent slopes, very stony	Pillsbury, very stony	5	Ground moraines	Yes	2
375B: Ashfield fine sandy loam, 1 to 8 percent slopes	Pillsbury	5	Ground moraines	Yes	2
375C: Ashfield fine sandy loam, 8 to 15 percent slopes	Pillsbury	8	Ground moraines	Yes	2
376B: Ashfield fine sandy loam, 3 to 8 percent slopes, very stony	Pillsbury, very stony	5	Ground moraines	Yes	2
376C: Ashfield fine sandy loam, 8 to 15 percent slopes, very stony	Pillsbury, very stony	8	Ground moraines	Yes	2

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389A: Wilbraham mucky silt loam, 0 to 3 percent slopes	Wilbraham	84	Moraines	Yes	2
	Whitman, extremely stony	8	Depressions, Ground moraines	Yes	2
390B: Ludlow silt loam, 3 to 8 percent slopes	Wilbraham	10	Moraines	Yes	2
397B: Wethersfield very fine sandy loam, 3 to 8 percent slopes	Wilbraham	2	Moraines	Yes	2
397C: Wethersfield very fine sandy loam, 8 to 15 percent slopes	Wilbraham	2	Moraines	Yes	2
397D: Wethersfield very fine sandy loam, 15 to 25 percent slopes	Wilbraham	1	Moraines	Yes	2
441B: Gloucester sandy loam, 3 to 8 percent slopes, very stony	Ridgebury, very stony	1	Depressions, Drumlins	Yes	2
441C: Gloucester sandy loam, 8 to 15 percent slopes, very stony	Ridgebury, very stony	1	Depressions, Drumlins	Yes	2
459B: Berkshire and Monadnock soils, 3 to 8 percent slopes, very stony	Pillsbury, very stony	2	Ground moraines	Yes	2
525B: Fullam loam, 3 to 8 percent slopes, very stony	Pillsbury, extremely stony	5	Ground moraines	Yes	2
731A: Enosburg fine sandy loam, 0 to 3 percent slopes	Enosburg	80	Plains	Yes	2
	Raynham	7	Depressions	Yes	2
	Birdsall	6	Depressions	Yes	2, 3
771A: Walpole fine sandy loam, 0 to 3 percent slopes, very stony	Walpole, very stony	70	Outwash plains	Yes	2
	Ridgebury, very stony	10	Depressions, Drumlins	Yes	2
	Whitman, very stony	5	Depressions, Ground moraines	Yes	2
	Scarboro, verystony	2	Outwash terraces	Yes	2, 3

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Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
850A: Bucksport mucky peat, 0 to 1 percent slopes	Bucksport	90	Ground moraines	Yes	1, 3
	Wonsqueak	10	Ground moraines	Yes	1, 3
851A: Bucksport mucky peat, 0 to 1 percent slopes, ponded	Bucksport, ponded	90	Ground moraines	Yes	1, 3
	Wonsqueak, ponded	10	Ground moraines	Yes	1, 3

## 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 Folist.
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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