

## Hydric Soils

Ballard and McCracken Counties, Kentucky

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
<b>Ab:</b>					
Arkabutla silt loam, 0 to 2 percent slopes, occasionally flooded	Rosebloom, occasionally flooded	3	Flood plains	Yes	2
<b>Af:</b>					
Arkabutla silt loam, 0 to 2 percent slopes, frequently flooded	Rosebloom, frequently flooded	3	Flood plains	Yes	2
<b>Bf:</b>					
Bardwell silt loam, 0 to 2 percent slopes, frequently flooded	Bardwell, frequently flooded	95	Flood plains	Yes	4
	Commerce, (hydric)	4	Flood plains	Yes	4
	Robinsonville, (hydric)	1	Flood plains	Yes	4
<b>CaA:</b>					
Calloway silt loam, 0 to 2 percent slopes	Routon	3	Flats	Yes	2
<b>Cb:</b>					
Cape silty clay, 0 to 2 percent slopes, frequently flooded	Cape, frequently flooded	90	Flood plains	Yes	2
	Rosebloom, frequently flooded	7	Flood plains	Yes	2
	Routon, rarely flooded	2	Stream terraces	Yes	2
	Natalbany, rarely flooded	1	Stream terraces	Yes	2
<b>Cf:</b>					
Cascilla silt loam, 0 to 2 percent slopes, frequently flooded	Cascilla, (hydric)	2	Flood plains	Yes	4
<b>CgD:</b>					
Cascilla-Colp-Wheeling complex, 2 to 25 percent slopes, occasionally flooded	Cascilla, (hydric, flooding)	2	Flood plains	Yes	4
<b>CnA:</b>					
Chavies fine sandy loam, 0 to 3 percent slopes, frequently flooded	Chavies, (hydric, flooding)	1	Stream terraces	Yes	4
<b>CpB:</b>					
Colp silt loam, 2 to 6 percent slopes, rarely flooded	Routon, rarely flooded	2	Stream terraces	Yes	2
<b>CpC2:</b>					
Colp silt loam, 6 to 12 percent slopes, eroded, rarely flooded	Natalbany	1	Stream terraces	Yes	2

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<b>Cs:</b>					
Commerce silt loam, 0 to 2 percent slopes, frequently flooded	Commerce, frequently flooded	95	Flood plains	Yes	4
	Bardwell, (hydric, flooding)	3	Flood plains	Yes	4
	Openlake, (hydric, Flooding)	2	Flood plains	Yes	4
<b>Fa:</b>					
Falaya-Collins complex, 0 to 2 percent slopes, occasionally flooded	Waverly, occasionally flooded	3	Flood plains	Yes	2
<b>Fc:</b>					
Falaya-Collins complex, 0 to 2 percent slopes, frequently flooded	Rosebloom, frequently flooded	2	Flood plains	Yes	2
	Waverly, frequently flooded	2	Flood plains	Yes	2
<b>GaA:</b>					
Ginat silt loam, 0 to 2 percent slopes, protected	Ginat, protected	90	Stream terraces	Yes	2
	Okaw, protected	3	Stream terraces	Yes	2
<b>GeA:</b>					
Ginat silt loam, 0 to 2 percent slopes, rarely flooded	Ginat, rarely flooded	90	Stream terraces	Yes	2
	Rosebloom, occasionally flooded	2	Flood plains	Yes	2
	Okaw, rarely flooded	1	Stream terraces	Yes	2
<b>GmA:</b>					
Ginat silt loam, 0 to 2 percent slopes, occasionally flooded	Ginat, occasionally flooded	90	Stream terraces	Yes	2
	Rosebloom, occasionally flooded	2	Flood plains	Yes	2
<b>GnA:</b>					
Ginat silt loam, 0 to 2 percent slopes, frequently flooded	Ginat, frequently flooded	90	Stream terraces	Yes	2, 4
	Newark, (hydric, flooding)	4	Flood plains	Yes	4
<b>HaA:</b>					
Henshaw silt loam, 0 to 2 percent slopes, protected	Ginat, protected	5	Stream terraces	Yes	2
	Okaw, protected	3	Stream terraces	Yes	2

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<b>HeA:</b>					
Henshaw silt loam, 0 to 2 percent slopes, rarely flooded	Ginat, rarely flooded	5	Stream terraces	Yes	2
<b>HfA:</b>					
Henshaw silt loam, 0 to 2 percent slopes, occasionally flooded	Ginat, occasionally flooded	5	Stream terraces	Yes	2
<b>HhA:</b>					
Henshaw silt loam, 0 to 2 percent slopes, frequently flooded	Henshaw, (hydric, flooding)	10	Stream terraces	Yes	4
	Newark, (hydric, flooding)	1	Flood plains	Yes	4
<b>Hm:</b>					
Huntington-Combs complex, 0 to 2 percent slopes, frequently flooded	Combs, (hydric, flooding)	2	Flood plains	Yes	4
	Huntington, (hydric, flooding)	2	Flood plains	Yes	4
<b>Hn:</b>					
Huntington and Nolin silty clay loams, 0 to 2 percent slopes, frequently flooded	Huntington, (hydric, flooding)	5	Flood plains	Yes	4
	Nolin, (hydric, flooding)	5	Flood plains	Yes	4
	Lindside, (hydric, flooding)	2	Flood plains	Yes	4
<b>HrA:</b>					
Hurst silt loam, 0 to 2 percent slopes, protected	Okaw, protected	8	Stream terraces	Yes	2
<b>HuA:</b>					
Hurst silt loam, 0 to 2 percent slopes, rarely flooded	Okaw, rarely flooded	2	Stream terraces	Yes	2
<b>Ka:</b>					
Karnak silty clay, 0 to 2 percent slopes, frequently flooded	Karnak, frequently flooded	90	Flood plains	Yes	2, 4
	Melvin, frequently flooded	8	Flood plains	Yes	2, 4
	Newark, (hydric, flooding)	2	Flood plains	Yes	4
<b>Kn:</b>					
Karnak silty clay, ponded	Karnak, ponded	90	Flood plains	Yes	2, 3, 4
	Melvin, ponded	8	Flood plains	Yes	2, 3, 4
	Newark, (hydric, flooding)	2	Flood plains	Yes	4

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<b>KrA:</b>					
Kurk silt loam, 0 to 2 percent slopes	Routon	10	Stream terraces	Yes	2
<b>KuA:</b>					
Kurk silt loam, 0 to 2 percent slopes, rarely flooded	Routon, rarely flooded	8	Stream terraces	Yes	2
<b>Me:</b>					
Melvin silty clay loam, 0 to 2 percent slopes, frequently flooded	Melvin, frequently flooded	90	Flood plains	Yes	2, 4
	Newark, (hydric, flooded)	7	Flood plains	Yes	4
	Karnak, frequently flooded	3	Flood plains	Yes	2, 4
<b>Mn:</b>					
Melvin silty clay loam, ponded	Melvin, ponded	90	Flood plains	Yes	2, 3, 4
	Karnak, ponded	7	Flood plains	Yes	2, 3, 4
	Newark, (hydric, flooded)	3	Flood plains	Yes	4
<b>Mo:</b>					
Mhoon silty clay loam, 0 to 2 percent slopes, frequently flooded	Mhoon, frequently flooded	95	Flood plains	Yes	2, 4
	Commerce, (hydric, flooded)	4	Flood plains	Yes	4
	Openlake, (hydric, flooded)	1	Flood plains	Yes	4
<b>NaA:</b>					
Natalbany silt loam, 0 to 2 percent slopes	Natalbany	95	Stream terraces	Yes	2
	Routon	5	Stream terraces	Yes	2
<b>NbA:</b>					
Natalbany silt loam, 0 to 2 percent slopes, rarely flooded	Natalbany, rarely flooded	95	Stream terraces	Yes	2
	Routon	4	Stream terraces	Yes	2
	Cape, frequently flooded	1	Flood plains	Yes	2

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<b>Ne:</b>					
Newark-Lindside complex, 0 to 2 percent slopes, frequently flooded	Newark, (hydric, flooding)	50	Flood plains	Yes	4
	Lindside, (hydric, flooding)	35	Flood plains	Yes	4
	Melvin, (hydric, flooding)	5	Flood plains	Yes	2, 4
	Karnak, (hydric, flooding)	2	Flood plains	Yes	2, 4
<b>OcA:</b>					
Okaw silt loam, 0 to 2 percent slopes	Okaw	90	Stream terraces	Yes	2
	Ginat	4	Stream terraces	Yes	2
<b>OhA:</b>					
Okaw silt loam, 0 to 2 percent slopes, protected	Okaw, protected	90	Stream terraces	Yes	2
	Ginat, protected	5	Stream terraces	Yes	2
<b>OkA:</b>					
Okaw silt loam, 0 to 2 percent slopes, rarely flooded	Okaw, rarely flooded	90	Stream terraces	Yes	2
	Ginat, rarely flooded	5	Stream terraces	Yes	2
<b>Op:</b>					
Openlake silty clay loam, 0 to 2 percent slopes, frequently flooded	Openlake, frequently flooded	95	Flood plains	Yes	4
	Mhoon, frequently flooded	3	Flood plains	Yes	2, 4
	Commerce, (hydric, flooding)	2	Flood plains	Yes	4
<b>Rm:</b>					
Rosebloom silt loam, 0 to 2 percent slopes, occasionally flooded	Rosebloom, occasionally flooded	85	Flood plains	Yes	2
	Waverly, occasionally flooded	5	Flood plains	Yes	2
<b>Ro:</b>					
Rosebloom silt loam, 0 to 2 percent slopes, frequently flooded	Rosebloom, frequently flooded	85	Flood plains	Yes	2
	Cape, frequently flooded	2	Flood plains	Yes	2
	Waverly, frequently flooded	2	Flood plains	Yes	2

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<b>Rs:</b>					
Rosebloom silt loam, ponded	Rosebloom, ponded	90	Flood plains	Yes	2, 3
	Waverly, frequently flooded	5	Flood plains	Yes	2
<b>RtA:</b>					
Routon silt loam, 0 to 2 percent slopes	Routon	80	Stream terraces	Yes	2
	Natalbany	7	Stream terraces	Yes	2
<b>RuA:</b>					
Routon silt loam, 0 to 2 percent slopes, rarely flooded	Routon, rarely flooded	80	Stream terraces	Yes	2
	Natalbany, rarely flooded	7	Stream terraces	Yes	2
<b>SaC:</b>					
Saffell gravelly sandy loam, 2 to 10 percent slopes	Routon	2	Stream terraces	Yes	2
<b>UkA:</b>					
Uniontown silt loam, 0 to 2 percent slopes, protected	Ginat	1	Stream terraces	Yes	2
<b>UoA:</b>					
Uniontown silt loam, 0 to 2 percent slopes, frequently flooded	Uniontown, (hydric, flooded)	5	Stream terraces	Yes	4
	Henshaw, (hydric, flooded)	2	Stream terraces	Yes	4
<b>UrA:</b>					
Urban land-Udorthents complex, 0 to 4 percent slopes	Routon	4	Drainageways	Yes	2
<b>UtA:</b>					
Urban land-Udorthents complex, 0 to 4 percent slopes, protected	Ginat, protected	7	Stream terraces	Yes	2
	Okaw, protected	2	Stream terraces	Yes	2
<b>Wa:</b>					
Waverly silt loam, 0 to 2 percent slopes, occasionally flooded	Waverly, occasionally flooded	85	Flood plains	Yes	2
	Rosebloom, occasionally flooded	4	Flood plains	Yes	2
<b>We:</b>					
Waverly silt loam, 0 to 2 percent slopes, frequently flooded	Waverly, frequently flooded	85	Flood plains	Yes	2
	Rosebloom, frequently flooded	3	Flood plains	Yes	2

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WnA: Wheeling silt loam, 0 to 2 percent slopes, frequently flooded	Wheeling, (hydric, flooding)	5	Stream terraces	Yes	4
WnB: Wheeling silt loam, 2 to 6 percent slopes, frequently flooded	Wheeling, (hydric, flooding)	5	Stream terraces	Yes	4
WnC2: Wheeling silt loam, 6 to 12 percent slopes, eroded, frequently flooded	Wheeling, (hydric, flooding)	3	Stream terraces	Yes	4
	Newark, (hydric, flooded)	2	Flood plains	Yes	4
Ye: Yeager fine sandy loam, 0 to 4 percent slopes, frequently flooded	Yeager, frequently flooded	85	Natural levees	Yes	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:

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