

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, 2006) 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 Vasilas, 2006).

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, 2). 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. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
 - B. Show evidence that the soil meets the definition of a hydric soil;
3. Soils that are frequently ponded for long or very long duration during the growing season.
 - A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
 - B. Show evidence that the soil meets the definition of a hydric soil;
4. Map unit components that are frequently flooded for long duration or very long duration during the growing season that:
 - A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
 - B. Show evidence that the soil meets the definition of a hydric soil;

Hydric Condition: Food Security Act information regarding the ability to grow a commodity crop without removing woody vegetation or manipulating hydrology.

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.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.
- Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.
- 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.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

Report—Hydric Soils

Hydric Soils--Collier County Area, Florida				
Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric criteria
2--Holopaw fine sand, limestone substratum				
	Holopaw	90	Drainageways on marine terraces	2
	Basinger	4	-- error in exists on --	2
	Boca	3	Drainageways on marine terraces	2
	Chobee	3	Depressions on marine terraces	2, 3
3--Malabar fine sand, 0 to 2 percent slopes				
	Malabar	85	-- error in exists on --	2
	Basinger	6	-- error in exists on --	2
	Valkaria	5	-- error in exists on --	2
	Pompano	3	-- error in exists on --	2
	Delray	1	-- error in exists on --	2
4--Chobee, limestone substratum, and Dania mucks, depressional				
	Chobee, limestone substratum	45	Depressions on marine terraces	2, 3
	Dania	45	Depressions on marine terraces	1, 3
	Hallandale	5	Drainageways on marine terraces	2
	Gator	5	Depressions on marine terraces	1, 3
6--Riviera, limestone substratum-Copeland fine sands				
	Riviera, limestone substratum	65	Drainageways on marine terraces	2
	Copeland	30	Drainageways on marine terraces	2
	Boca	5	Drainageways on marine terraces	2
7--Immokalee fine sand, 0 to 2 percent slopes				
	Basinger	5	Flats on marine terraces, drainageways on marine terraces	2
	Margate	3	Drainageways on marine terraces	2
	Placid, depressional	2	Depressions on marine terraces	2, 3

Hydric Soils--Collier County Area, Florida				
Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric criteria
8—Myakka fine sand, 0 to 2 percent slopes				
	Basinger	5	Drainageways on marine terraces	2
	Placid, depressional	1	Depressions on marine terraces	2, 3
10—Oldsmar fine sand, limestone substratum				
	Malabar	4	Drainageways on marine terraces	2
	Pineda, limestone substratum	3	Drainageways on marine terraces	2
	Riviera, limestone substratum	3	Drainageways on marine terraces	2
11—Hallandale fine sand				
	Pineda, limestone substratum	8	Drainageways on marine terraces	2
	Riviera, limestone substratum	7	Drainageways on marine terraces	2
14—Pineda fine sand, limestone substratum				
	Pineda, limestone substratum	88	Drainageways on marine terraces	2
	Boca	4	Drainageways on marine terraces	2
	Hallandale	4	Drainageways on marine terraces	2
	Malabar	4	Drainageways on marine terraces	2
16—Oldsmar fine sand, 0 to 2 percent slopes				
	Pineda	5	Drainageways on marine terraces	2
	Holopaw	2	Drainageways on marine terraces	2
17—Basinger fine sand, 0 to 2 percent slopes				
	Basinger	90	Drainageways	2
	Margate	3	Drainageways on marine terraces	2
	Placid, depressional	3	Depressions on marine terraces	2, 3

Hydric Soils--Collier County Area, Florida				
Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric criteria
18—Riviera fine sand, limestone substratum				
	Riviera, limestone substratum	88	Drainageways on marine terraces	2
	Boca	4	Drainageways on marine terraces	2
	Copeland	4	Drainageways on marine terraces	2
	Holopaw	4	Drainageways on marine terraces	2
20—Ft. Drum and Malabar, high, fine sands				
	Basinger	4	— error in exists on —	2
	Holopaw	3	Drainageways on marine terraces	2
	Pineda	3	Drainageways on marine terraces	2
21—Boca fine sand, 0 to 2 percent slopes				
	Boca	85	— error in exists on —	2
	Hallandale	7	Drainageways on marine terraces	2
22—Chobee, Winder, and Gator soils, depressional				
	Chobee	30	Depressions on marine terraces	2, 3
	Winder	30	Marshes on marine terraces	2, 3
	Gator	30	Depressions on marine terraces	1, 3
	Riviera	5	Drainageways on marine terraces	2
	Pineda	5	Drainageways on marine terraces	2
23—Holopaw and Okeelanta soils, depressional				
	Holopaw	60	Marshes on marine terraces	2, 3
	Okeelanta	30	Depressions on marine terraces	1, 3
	Gator	5	Depressions on marine terraces	1, 3
	Basinger	5	— error in exists on —	2

Hydric Soils--Collier County Area, Florida				
Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric criteria
25—Boca, Riviera, limestone substratum, and Copeland fine sands, depressional				
	Riviera, limestone substratum	30	Depressions on marine terraces	2, 3
	Copeland	30	Depressions on marine terraces	2, 3
	Boca	30	Depressions on marine terraces	2, 3
	Basinger	3	— error in exists on —	2
	Dania	3	Depressions on marine terraces	1, 3
	Hallandale	2	Drainageways on marine terraces	2
	Gator	2	Depressions on marine terraces	1, 3
27—Holopaw fine sand, 0 to 2 percent slopes				
	Holopaw	85	— error in exists on —	2
	Basinger	6	Drainageways on marine terraces	2
	Boca	3	— error in exists on —	2
	Riviera	1	Depressions on marine terraces	2, 3
28—Pineda and Riviera fine sands				
	Pineda	46	Drainageways on marine terraces	2
	Riviera	46	Drainageways on marine terraces	2
	Boca	4	Drainageways on marine terraces	2
	Basinger	4	— error in exists on —	2
29—Wabasso fine sand, 0 to 2 percent slopes				
	Felda	4	Flats on marine terraces, drainageways on marine terraces	2
	Riviera	4	Flats on marine terraces, drainageways on marine terraces	2
	Basinger	4	— error in exists on —	2
	Boca	3	Drainageways on marine terraces	2

Hydric Soils--Collier County Area, Florida				
Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric criteria
31—Hilolo, Jupiter, and Margate fine sands				
	Hilolo	30	Flats on marine terraces	2
	Pineda	5	Drainageways on marine terraces	2
	Holopaw	5	Drainageways on marine terraces	2
33—Urban land-Holopaw-Basinger complex				
	Holopaw	35	Drainageways on marine terraces	2
	Basinger	20	Drainageways on marine terraces	2
37—Tusawilla fine sand				
	Tusawilla	90	Flats on marine terraces	2
39—Satellite fine sand, 0 to 2 percent slopes				
	Basinger	3	Drainageways on marine terraces	2
	Pompano	1	Flats on marine terraces, drainageways on marine terraces	2
40—Durbin and Wulfert mucks, frequently flooded				
	Durbin	45	Tidal marshes on marine terraces	1
	Wulfert	45	Tidal marshes on marine terraces	1
	Kesson	5	Tidal marshes on marine terraces	2
	Pennsuco	5	Marshes on marine terraces	2
43—Winder, Riviera, limestone substratum, and Chobee soils, depressional				
	Chobee	30	Depressions on marine terraces	2, 3
	Winder	30	Marshes on marine terraces	2, 3
	Riviera, limestone substratum	30	Marshes on marine terraces	2, 3
	Gator	5	Depressions on marine terraces	1, 3
	Boca	5	Depressions on marine terraces	2, 3
48—Pennsuco silt loam				
	Pennsuco	98	Marshes on marine terraces	2
	Ochopee, low	2	Marshes on marine terraces	2

Hydric Soils--Collier County Area, Florida				
Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric criteria
49--Hallandale and Boca fine sands				
	Boca	45	Drainageways on marine terraces	2
	Hallandale	45	Drainageways on marine terraces	2
	Pineda, limestone substratum	5	Drainageways on marine terraces	2
	Copeland	5	Drainageways on marine terraces	2
50--Ochopee fine sandy loam, low				
	Ochopee, low	95	Marshes on marine terraces	2
51--Ochopee fine sandy loam				
	Ochopee	95	Marshes on marine terraces	2
52--Kesson muck, frequently flooded				
	Kesson	85	Tidal marshes on marine terraces	2
	Basinger	5	Tidal marshes on marine terraces	2
	Dania	5	Depressions on marine terraces	1, 3
	Peckish	5	Tidal marshes on marine terraces	2
53--Estero and Peckish soils, frequently flooded				
	Estero	50	Tidal marshes on marine terraces	2
	Peckish	45	Tidal marshes on marine terraces	2
	Wulfert	5	Tidal marshes on marine terraces	1
54--Jupiter-Boca complex				
	Jupiter	60	Drainageways on marine terraces	2
	Boca	38	Drainageways on marine terraces	2
	Copeland	2	Drainageways on marine terraces	2
56--Basinger fine sand, occasionally flooded				
	Basinger	98	Ridges on tidal marshes on marine terraces	2

Data Source Information

Soil Survey Area: Collier County Area, Florida
Survey Area Data: Version 6, Sep 21, 2014