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–Orange County, Florida				
Map symbol and map unit name	**Component**	**Percent of map unit**	**Landform**	**Hydric criteria**
3—Basinger fine sand, depressional, 0 to 1 percent slopes				
	Basinger, depressional	90	Depressions on marine terraces, drainageways on marine terraces	2, 3
	Smyrna, hydric	5	Flats on marine terraces	2
	Samsula, muck	3	Depressions on marine terraces	1, 3
	Floridana, hydric	2	Depressions on marine terraces	2, 3
9—Canova muck				
	Canova, drained	56	Depressions on marine terraces	2
	Canova, undrained	30	Depressions on marine terraces	2, 3
	Okeelanta, undrained	7	Depressions on marine terraces	1, 3
	Gator	7	Depressions on marine terraces	1, 3
10—Chobee fine sandy loam, frequently flooded				
	Chobee	96	Flood plains on marine terraces	2, 4
	Gator	4	Depressions on marine terraces	1, 3
11—Floridana and Chobee soils, frequently flooded				
	Floridana	74	Flood plains on marine terraces	2, 4
	Chobee	24	Flood plains on marine terraces	2, 4
	Gator	2	Depressions on marine terraces	1, 3
12—Emeralda and Holopaw fine sands, frequently flooded				
	Emeralda	54	Flood plains on marine terraces	2, 4
	Holopaw	35	Flood plains on marine terraces	2, 4
	Gator	6	Depressions on marine terraces	1, 3
	Pompano	5	Drainageways on marine terraces	2

Hydric Soils–Orange County, Florida				
Map symbol and map unit name	**Component**	**Percent of map unit**	**Landform**	**Hydric criteria**
13—Felda fine sand				
	Felda	95	Drainageways on marine terraces	2
	Holopaw	5	Flood plains on marine terraces	2, 4
14—Felda fine sand, occasionally flooded				
	Felda	92	Flood plains on marine terraces	2
15—Felda fine sand, frequently flooded				
	Felda	99	Flood plains on marine terraces	2, 4
	Pompano	1	Drainageways on marine terraces	2
16—Floridana fine sand, frequently flooded				
	Floridana	98	Flood plains on marine terraces	2, 4
	Gator	2	Depressions on marine terraces	1, 3
17—Floridana mucky fine sand, depressional				
	Floridana	93	Depressions on marine terraces	2, 3
	Felda	7	Drainageways on marine terraces	2
18—Gator muck				
	Gator	92	Depressions on marine terraces	1, 3
	Terra ceia	4	Swamps on marine terraces	1
	Canova, undrained	4	Depressions on marine terraces	2, 3
19—Hontoon muck				
	Hontoon, undrained	80	Depressions on marine terraces	1, 3
	Hontoon, drained	18	Depressions on marine terraces	1
	Basinger	1	Depressions on marine terraces	2, 3
	Sanibel, undrained	1	Marshes on marine terraces	2, 3
20—Immokalee fine sand				
	Immokalee, hydric	10	Flats on marine terraces	2
	Pineda	4	Flats on marine terraces	2

Hydric Soils–Orange County, Florida				
Map symbol and map unit name	**Component**	**Percent of map unit**	**Landform**	**Hydric criteria**
23—Malabar fine sand				
	Malabar, hydric	60	Drainageways on marine terraces	2
25—Okeelanta muck				
	Okeelanta, drained	70	Depressions on marine terraces	1
	Okeelanta, undrained	26	Depressions on marine terraces	1, 3
	Terra ceia	2	Swamps on marine terraces	1
	Sanibel, undrained	2	Marshes on marine terraces	2, 3
26—Ona fine sand				
	Immokalee, hydric	9	Flats on marine terraces	2
27—Ona-Urban land complex				
	Immokalee, hydric	7	Flats on marine terraces	2
30—Pineda fine sand				
	Pineda	93	Flats on marine terraces	2
	Malabar, hydric	4	Drainageways on marine terraces	2
31—Pineda fine sand, frequently flooded				
	Pineda	94	Flood plains on marine terraces	2, 4
	Floridana	3	Flood plains on marine terraces	2, 4
33—Pits				
	Aquents	30	Depressions	2, 3
35—Pomello-Urban land complex, 0 to 5 percent slopes				
	Pompano	2	Drainageways on marine terraces	2
36—Pompano fine sand				
	Pompano	86	Drainageways on marine terraces	2
37—St. Johns fine sand				
	St. johns, hydric	30	Flats on marine terraces	2
40—Samsula muck				
	Samsula, undrained	50	Depressions on marine terraces	1, 3
	Samsula, drained	38	Depressions on marine terraces	1
	Basinger	6	Depressions on marine terraces	2, 3
	Sanibel, undrained	6	Marshes on marine terraces	2, 3

Hydric Soils–Orange County, Florida				
Map symbol and map unit name	**Component**	**Percent of map unit**	**Landform**	**Hydric criteria**
41—Samsula-Hontoon-Basinger association, depressional				
	Samsula	47	Depressions on marine terraces	1, 3
	Hontoon	31	Depressions on marine terraces	1, 3
	Basinger	14	Depressions on marine terraces	2, 3
	Holopaw	4	Flood plains on marine terraces	2, 4
42—Sanibel muck				
	Sanibel, undrained	65	Marshes on marine terraces	2, 3
	Sanibel, drained	25	Depressions on marine terraces	2
	Hontoon, undrained	5	Depressions on marine terraces	1, 3
	Samsula	5	Depressions on marine terraces	1, 3
43—Seffner fine sand				
	Basinger	4	Depressions on marine terraces	2, 3
44—Smyrna-Smyrna, wet, fine sand, 0 to 2 percent slopes				
	Smyrna, hydric	20	Flatwoods on marine terraces, flats on marine terraces	2
	Basinger, depressional	2	Depressions on marine terraces	2, 3
	Eaugallie, hydric	1	Flatwoods on marine terraces, flats on marine terraces	2
45—Smyrna-Urban land complex				
	Smyrna, hydric	10	Flats on marine terraces	2
49—Terra Ceia muck				
	Terra ceia	93	Swamps on marine terraces	1
	Gator	4	Depressions on marine terraces	1, 3
	Okeelanta, undrained	3	Depressions on marine terraces	1, 3
52—Wabasso-Urban land complex				
	Pineda	1	Flats on marine terraces	2
53—Wauberg fine sand				
	Wauberg	94	Flats on marine terraces	2

Data Source Information

Soil Survey Area: Orange County, Florida
Survey Area Data: Version 10, Sep 21, 2014