

## 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:

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- 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--St. Johns County, Florida				
Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric criteria
3—Myakka-Myakka, wet, fine sands, 0 to 2 percent slopes				
	Myakka, wet	15	Flatwoods on marine terraces	2
	Basinger	5	Drainageways on marine terraces	2
	Placid, depressional	1	Depressions on marine terraces	2, 3
4—Myakka fine sand, depressional				
	Myakka, depressional	90	Depressions on marine terraces	2, 3
	Ona, hydric	4	Flats on marine terraces	2
	St. Johns, depressional	3	Depressions on marine terraces	2, 3
	Smyrna, hydric	3	Flats on marine terraces	2
5—St. Johns fine sand, depressional				
	St. Johns, depressional	85	Depressions on marine terraces	2, 3
	Myakka, depressional	8	Depressions on marine terraces	2, 3
	Wesconnett	7	Drainageways on marine terraces	2, 4
7—Immokalee fine sand				
	Immokalee, hydric	20	Flats on marine terraces	2
	Wesconnett	2	Drainageways on marine terraces	2, 4
9—Pomona fine sand				
	Pomona, hydric	20	Flats on marine terraces	2
	St. Johns, hydric	2	Flats on marine terraces	2
	Wesconnett	2	Drainageways on marine terraces	2, 4
	Bakersville	2	Depressions on marine terraces	2, 3
11—Smyrna-Smyrna, wet, fine sand, 0 to 2 percent slopes				
	Smyrna, hydric	20	Flats on marine terraces, flatwoods 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

Hydric Soils--St. Johns County, Florida				
Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric criteria
12—Ona fine sand				
	Ona, hydric	20	Flats on marine terraces	2
	St. Johns, hydric	4	Flats on marine terraces	2
13—St. Johns fine sand				
	St. Johns, hydric	60	Flats on marine terraces	2
	Ona, hydric	3	Flats on marine terraces	2
18—Floridana fine sand, frequently flooded				
	Floridana, frequently flooded	80	Flood plains on marine terraces, drainageways on marine terraces	2, 4
	Holopaw, frequently flooded	10	Drainageways on marine terraces	2, 4
	Riviera, frequently flooded	10	Flood plains on marine terraces, drainageways on marine terraces	2, 4
19—Pompano fine sand				
	Pompano, hydric	20	Flats on marine terraces	2
	Riviera, hydric	3	Flats on marine terraces	2
	Holopaw, hydric	3	Flats on marine terraces	2
21—Wabasso fine sand				
	Floridana, hydric	5	Flats on marine terraces	2
22—Manatee fine sandy loam, frequently flooded				
	Manatee	85	Flood plains on marine terraces, drainageways on marine terraces	2, 4
	Riviera, frequently flooded	5	Flood plains on marine terraces, drainageways on marine terraces	2, 4
	Parkwood	5	Flood plains on marine terraces, drainageways on marine terraces	2, 4
	Bluff	5	Flood plains on marine terraces, drainageways on marine terraces	2, 4
24—Pellicer silty clay loam, frequently flooded				
	Pellicer	90	Tidal marshes on marine terraces	2, 4
	Durbin	4	— error in exists on —	1, 4
	Tisonia	3	Tidal marshes on marine terraces	1, 4

Hydric Soils--St. Johns County, Florida				
Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric criteria
25—Parkwood fine sandy loam, frequently flooded				
	Parkwood	90	Flood plains on marine terraces, drainageways on marine terraces	2, 4
	Bluff	4	Flood plains on marine terraces, drainageways on marine terraces	2, 4
	Floridana, frequently flooded	3	Flood plains on marine terraces, drainageways on marine terraces	2, 4
	Manatee	3	Flood plains on marine terraces, drainageways on marine terraces	2, 4
26—Samsula muck				
	Samsula	90	Depressions on marine terraces	1, 3
	Hontoon	4	Depressions on marine terraces	1, 3
	Wesconnett	3	Drainageways on marine terraces	2, 4
	Tomoka	3	Depressions on marine terraces	1, 3
27—St. Augustine fine sand				
	Moultrie	3	Tidal marshes on marine terraces	2, 4
	Pellicer	2	Tidal marshes on marine terraces	2, 4
29—Satellite fine sand				
	Moultrie	3	Tidal marshes on marine terraces	2, 4
30—Wesconnett fine sand, frequently flooded				
	Wesconnett	90	Drainageways on marine terraces	2, 4
	Myakka, depressional	3	Depressions on marine terraces	2, 3
	Bakersville	3	Depressions on marine terraces	2, 3
	St. Johns, depressional	2	Depressions on marine terraces	2, 3
	Tomoka	2	Depressions on marine terraces	1, 3

Hydric Soils--St. Johns County, Florida				
Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric criteria
34--Tocoi fine sand				
	Tocoi, hydric	20	Flats on marine terraces	2
	Pompano, hydric	3	Flats on marine terraces	2
	Placid	3	Flats on marine terraces	2
	St. Johns, hydric	3	Flats on marine terraces	2
35--Hontoon muck				
	Hontoon	90	Depressions on marine terraces	1, 3
	Wesconnett	5	Drainageways on marine terraces	2, 4
	Samsula	5	Depressions on marine terraces	1, 3
36--Riviera fine sand, frequently flooded				
	Riviera, frequently flooded	85	Flood plains on marine terraces, drainageways on marine terraces	2, 4
	Floridana, frequently flooded	3	Flood plains on marine terraces, drainageways on marine terraces	2, 4
	Holopaw, frequently flooded	3	Drainageways on marine terraces	2, 4
	Manatee	3	Flood plains on marine terraces, drainageways on marine terraces	2, 4
	Winder, frequently flooded	3	Flood plains on marine terraces, drainageways on marine terraces	2, 4
	Bluff	3	Flood plains on marine terraces, drainageways on marine terraces	2, 4
40--Pottsburg fine sand				
	Pottsburg, hydric	20	Flats on marine terraces	2
41--Tomoka muck				
	Tomoka	80	Depressions on marine terraces	1, 3
	Samsula	10	Depressions on marine terraces	1, 3
	Hontoon	10	Depressions on marine terraces	1, 3

Hydric Soils--St. Johns County, Florida				
Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric criteria
42—Bluff sandy clay loam, frequently flooded				
	Bluff	85	Flood plains on marine terraces, drainageways on marine terraces	2, 4
	Parkwood	5	Flood plains on marine terraces, drainageways on marine terraces	2, 4
	Manatee	5	Flood plains on marine terraces, drainageways on marine terraces	2, 4
	Floridana, frequently flooded	5	Flood plains on marine terraces, drainageways on marine terraces	2, 4
46—Holopaw fine sand				
	Holopaw, hydric	15	Flats on marine terraces	2
	Winder	5	Flats on marine terraces	2
	Pompano, hydric	5	Flats on marine terraces	2
	Riviera, hydric	5	Flats on marine terraces	2
47—Holopaw fine sand, frequently flooded				
	Holopaw, frequently flooded	90	Drainageways on marine terraces	2, 4
	Floridana, frequently flooded	4	Flood plains on marine terraces, drainageways on marine terraces	2, 4
	Riviera, frequently flooded	3	Flood plains on marine terraces, drainageways on marine terraces	2, 4
	Myakka, depressional	3	Depressions on marine terraces	2, 3
48—Winder fine sand, frequently flooded				
	Winder, frequently flooded	85	Flood plains on marine terraces, drainageways on marine terraces	2, 4
	Manatee	4	Flood plains on marine terraces, drainageways on marine terraces	2, 4
	Bluff	4	Flood plains on marine terraces, drainageways on marine terraces	2, 4
	Holopaw, frequently flooded	4	Drainageways on marine terraces	2, 4
	Riviera, frequently flooded	3	Flood plains on marine terraces, drainageways on marine terraces	2, 4

Hydric Soils--St. Johns County, Florida				
Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric criteria
49—Moultrie fine sand, frequently flooded				
	Moultrie	90	Tidal marshes on marine terraces	2, 4
	Pellicer	5	Tidal marshes on marine terraces	2, 4
	Tisonia	5	Tidal marshes on marine terraces	1, 4
52—Durbin muck, frequently flooded				
	Durbin	90	Tidal marshes on marine terraces	1, 4
	Moultrie	4	Tidal marshes on marine terraces	2, 4
	Pellicer	3	Tidal marshes on marine terraces	2, 4
	Tisonia	3	Tidal marshes on marine terraces	1, 4
53—Immokalee-Urban land complex				
	Immokalee, hydric	5	Flats on marine terraces	2
54—Astatula-Urban land complex				
	Wesconnett	1	Drainageways on marine terraces	2, 4
57—Adamsville variant fine sand				
	St. Johns, hydric	3	Flats on marine terraces	2
58—EauGallie fine sand				
	Eaugallie, hydric	15	Flats on marine terraces	2
	Riviera, hydric	5	Flats on marine terraces	2
61—Riviera fine sand, depressional				
	Riviera, depressional	90	Depressions on marine terraces	2, 3
	Winder	2	Flats on marine terraces	2
	Bluff	2	Flood plains on marine terraces, drainageways on marine terraces	2, 4
	Manatee	2	Flood plains on marine terraces, drainageways on marine terraces	2, 4
	Riviera, frequently flooded	2	Flood plains on marine terraces, drainageways on marine terraces	2, 4
	Floridana, hydric	2	Flats on marine terraces	2

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Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric criteria
62--Floridana fine sand				
	Floridana	90	Flats on marine terraces	2
	Floridana, depressional	10	Depressions on marine terraces	2, 3
63--Placid fine sand				
	Placid	85	Flats on marine terraces	2
	Floridana, hydric	4	Flats on marine terraces	2
	Ellzey, hydric	4	Flats on marine terraces	2
	Holopaw, hydric	4	Flats on marine terraces	2
	Tocoi, hydric	3	Flats on marine terraces	2
64--Ellzey fine sand				
	Ellzey, hydric	30	Flats on marine terraces	2
	Pompano, hydric	5	Flats on marine terraces	2
	Floridana, hydric	5	Flats on marine terraces	2
65--Riviera fine sand				
	Riviera, hydric	25	Flats on marine terraces	2
	Floridana, hydric	5	Flats on marine terraces	2
	Holopaw, hydric	5	Flats on marine terraces	2
66--Terra Ceia muck, frequently flooded				
	Terra ceia	90	Flood plains on marine terraces	1, 4
	Riviera, frequently flooded	4	Flood plains on marine terraces, drainageways on marine terraces	2, 4
	Winder, frequently flooded	3	Flood plains on marine terraces, drainageways on marine terraces	2, 4
	St. Johns, hydric	3	Flats on marine terraces	2
67--Tisonia mucky peat, frequently flooded				
	Tisonia	85	Tidal marshes on marine terraces	1, 4
	Durbin	8	— error in exists on —	1, 4
	Pellicer	7	Tidal marshes on marine terraces	2, 4
68--Winder fine sand				
	Winder	85	Flats on marine terraces	2
	Holopaw, hydric	5	Flats on marine terraces	2
	Floridana, hydric	5	Flats on marine terraces	2
	Riviera, depressional	5	Depressions on marine terraces	2, 3

Hydric Soils--St. Johns County, Florida				
Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric criteria
69--Bakersville muck				
	Bakersville	100	Depressions on marine terraces	2, 3

## Data Source Information

Soil Survey Area: St. Johns County, Florida  
Survey Area Data: Version 11, Sep 15, 2014