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.

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Report—Hydric Soils

Hydric Soils–El Yunque National Forest, Puerto Rico				
Map symbol and map unit name	**Component**	**Percent of map unit**	**Landform**	**Hydric criteria**
DwF—Dwarf-El Duque complex, 5 to 60 percent slopes, windswept				
	Dwarf, windswept	70	Mountains	2
	El duque, windswept	20	Mountains	2
	Palm	5	Mountain slopes	2
	Guayabota	4	Mountains	2
GuF—Guayabota-Yunque complex, 20 to 60 percent slopes				
	Guayabota	70	Mountains	2
	Moteado	2	Mountain slopes	2
	Palm	1	Mountain slopes	2
IcA—Icacos loam, occasionally flooded				
	Icacos, occasionally flooded	90	Mountain valleys	2
	Ciales	2	Mountain slopes	2
PaG—Palm-Yunque complex, 40 to 90 percent slopes, extremelly stony				
	Palm	70	Mountain slopes	2
	Moteado	5	Mountain slopes	2
	Guayabota	3	Mountains	2
PcE—Picacho-Ciales complex, 5 to 40 percent slopes				
	Picacho	60	Mountains	2
	Ciales	30	Mountain slopes	2
PiE—Picacho-Utuado complex, 5 to 40 percent slopes				
	Ciales	10	Mountain slopes	2
PiG—Picacho-Utuado complex, 40 to 90 percent slopes				
	Ciales	3	Mountain slopes	2
PrF—Prieto very cobbly clay loam, 20 to 60 percent slopes				
	Prieto	90	Coves, drainageways on mountain slopes	2
YnG—Yunque cobbly clay,40 to 90 percent slopes, extremely stony				
	Palm	8	Mountain slopes	2
	Moteado	8	Mountain slopes	2

Hydric Soils–El Yunque National Forest, Puerto Rico				
Map symbol and map unit name	**Component**	**Percent of map unit**	**Landform**	**Hydric criteria**
YqE—Yunque-Los Guineos-Moteado complex, 5 to 40 percent slopes				
	Moteado	20	Mountain slopes	2
	Palm	3	Mountain slopes	2
	Guayabota	1	Mountains	2
YuF—Yunque-Moteado complex, 20 to 60 percent slopes				
	Moteado	30	Mountain slopes	2
	Guayabota	5	Mountains	2
	Palm	5	Mountain slopes	2

Data Source Information

Soil Survey Area: El Yunque National Forest, Puerto Rico
Survey Area Data: Version 6, Sep 29, 2015