

## SECTION II

### II - D. SOIL INTERPRETATIONS

#### 13. Hydric Soils

##### INTRODUCTION

###### *Definition*

The definition of a hydric soil is a soil 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).

###### *Field Indicators*

Field Indicators are soil characteristics which are documented to be strictly associated only with hydric soils. Field Indicators are an efficient on-site means to confirm the presence of hydric soil. The Field Indicators are designed to identify soils which meet the hydric soil definition without further data collection. Some hydric soils exist for which no Field Indicators have yet been recorded and documented, and to identify these soils as hydric, evidence must be gathered to demonstrate that the definition is met. Additional Field Indicators are being developed and tested (Hurt and Vasilas, 2006).

The Hydric Soil Field Indicators Guide is available at the following NRCS website:

<http://soils.usda.gov/use/hydric/>

###### *Concept*

The concept of hydric soils includes soils developed under sufficiently wet conditions to support the growth and regeneration of hydrophytic vegetation. Soils that are sufficiently wet because of artificial measures are included in the concept of hydric soils. Also, soils in which the hydrology has been artificially modified are hydric if the soil, in an unaltered state, was hydric. Some series, designated as hydric, have phases that are not hydric depending on water table, flooding, and ponding characteristics.

## HYDRIC SOILS LISTS

The lists of hydric soils were created by using criteria that were developed by the [National Technical Committee for Hydric Soils](#). The criteria are selected soil properties that are documented in Soil Taxonomy (Soil Survey Staff, 1999) and were designed primarily to generate a list of hydric soils from the National Soil Information System (NASIS) database.

### *Hydric Soil Criteria*

The following NASIS criteria reflect those soils that may meet the definition of hydric soils. Criteria 1, 3, and 4 serve as both database criteria and as field indicators for identification of hydric soils. Criterion 2 serves only to retrieve soils from the database. In addition, the wording of criteria 1 and 2 were changed in 2000 to incorporate recent changes in Soil Taxonomy (Soil Survey Staff, 1999). Please note that these changes did not cause any soils to be added or deleted from the list.

1. All Histels except Folistels and Histosols except Folists, or
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that are:
  - a. Somewhat poorly drained with a water table\* equal to 0.0 foot (ft) from the surface during the growing season, or
  - b. poorly drained or very poorly drained and has either:
    - i. water table\* equal to 0.0 ft during the growing season if textures are coarse sand, sand, or fine sand in all layers within 20 inches (in),  
or for other soils
    - ii. water table\* at less than or equal to 0.5 ft from the surface during the growing season if permeability is equal to or greater than 6.0 in/hour (h) in all layers within 20 in,  
or
    - iii. water table\* at less than or equal to 1.0 ft from the surface during the growing season if permeability is less than 6.0 in/h in any layer within 20 in, or
3. Soils that are frequently ponded for long duration or very long duration during the growing season, or
4. Soils that are frequently flooded for long duration or very long duration during the growing season.

### *Hydric Soils Lists*

Hydric soil lists have a number of agricultural and nonagricultural applications. These include assistance in land-use planning, conservation planning, and assessment of potential wildlife habitat. A combination of the hydric soil, hydrophytic vegetation, and hydrology criteria defines wetlands as described in the National Food Security Act Manual (Soil Conservation Service, 1994) and the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory, 1987) which is currently being regionalized. Therefore, an area that meets the hydric soil criteria must also meet the hydrophytic vegetation and wetland hydrology criteria in order for it to be classified as a jurisdictional wetland.

The national list of hydric soils is maintained in a computer file and is updated yearly. The most current national electronic list of hydric soils may be obtained directly from this website. State lists of hydric soils are also available electronically from this site or as hardcopy from the NRCS State Conservationist in each state. Field Indicators must be used for on-site determinations of hydric soils. The website address for the National and State Hydric Soils lists is:

<http://soils.usda.gov/use/hydric/>

Hydric soils lists for each California soil survey area are also available through the USDA-NRCS Soil Data Mart and Web Soil Survey.

<http://soildatamart.nrcs.usda.gov/Default.aspx>

<http://websoilsurvey.nrcs.usda.gov/app/>

#### Literature Cited:

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