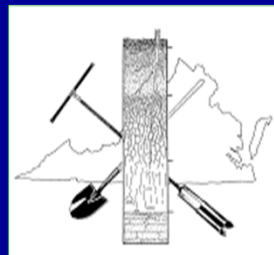


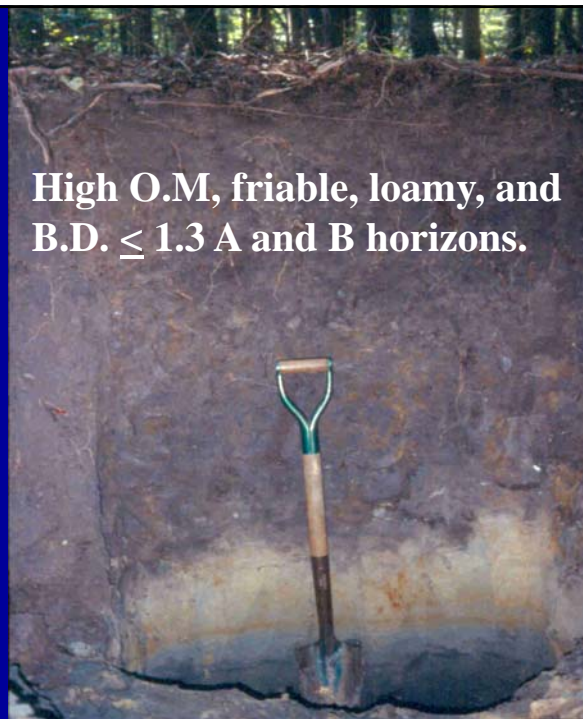
# Hydric Soil Indicators: Their History, Use and Applications

*W. Lee Daniels & John Galbraith*

APSS



**High OM  
wetland soil at  
Sandy Bottom  
Nature Park in  
Hampton. The A  
horizon here is  
over 30 cm thick.  
The annual  
hydroperiod of  
this soil  
fluctuates  
approximately  
1.5 m!**



## Development of Hydric Soils

Inundation or soil saturation



Anaerobic conditions



Chemical reduction (Fe, Mn, etc.)



Distinctive soil characteristics

## 1987 Manual Hydric Soil Indicators

- **Non-sandy soils:**
  - A. Histosols (32 inches plus of OM)
  - B. Histic Epipedons (8 to 16 inches of OM) on soils saturated 30 days plus
  - C. Sulfidic material/odor
  - D. Aquic or peraquic moisture regime
  - E. Reducing soil conditions
  - F. Gleyed or mottled colors

## COE Indicators Continued

G. Soils on Hydric Soils List

H. Fe and Mn concretions within 7.5 cm

### Sandy Soils:

A. High OM in Surface

B. Streaking by OM in Subsurface

C. Organic Pans

ERDC/EL TR-10-20

Environmental Laboratory

US Army Corps of Engineers  
of Engineers  
Engineer Research and Development Center

Wetlands Regulatory Assistance Program

**Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0)**

U.S. Army Corps of Engineers November 2010

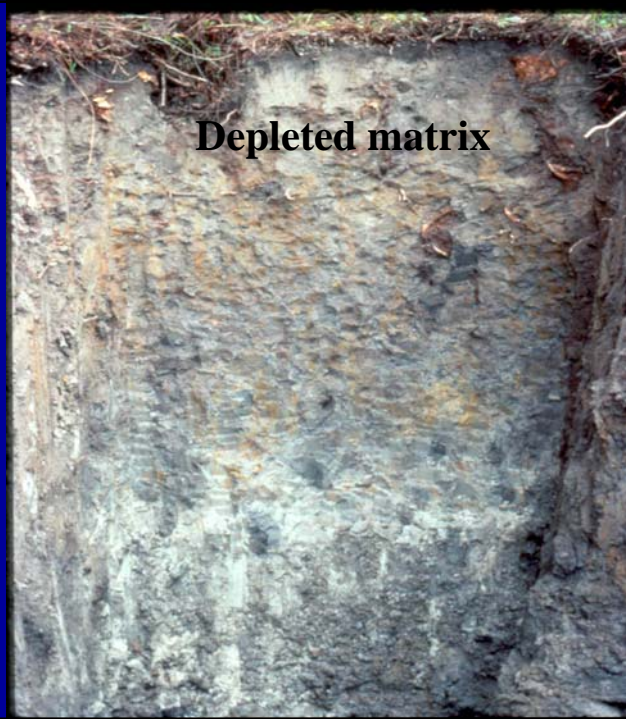


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**New COE regional manual supplements now require use of NRCS HSI's.**

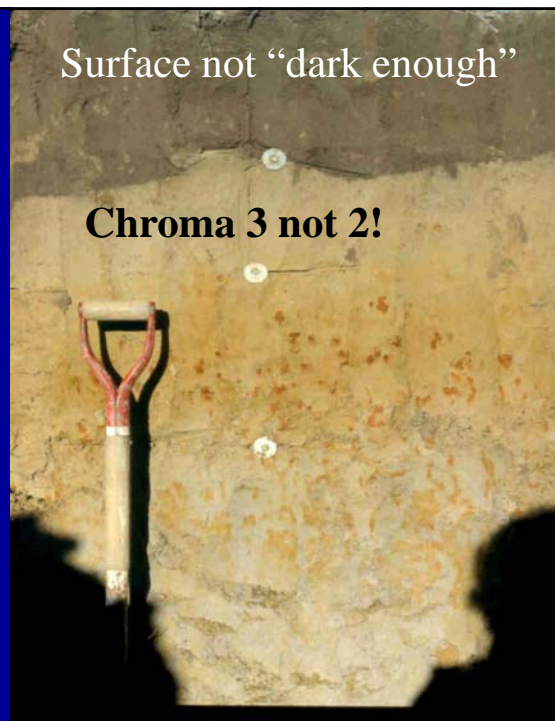
**So, you can't make those soil determinations with a push probe anymore!**

Hydric soil (Roanoke) with **relatively low organic matter content** due to acidic and clayey near-surface soil conditions which limit rooting and faunal mixing.



Yemasee soil showing strong "signature" of endoaquic related redox features where the soil "gets grayer with depth".

However, this soil is not hydric due to lack of HSIs in upper part.



## **Meeting Logistics**

- We are going to “flip the schedule” to get us out to the field this afternoon while the good weather holds.
- We will leave immediately after lunch to view the landscape transect soil pits that are off of the entranced road.
- The materials listed for Monday afternoon presentations will be given on Tuesday morning.

## **Meeting Logistics**

- Lunch is included in registration and will be served here each day. Do not walk into this building with soil on your shoes/boots. Leave them outside on the porch!
- Weather permitting, we will return to the field after lunch tomorrow for HSI determinations led by John Galbraith.