

Minutes For Hydric Soils Committee

2012 NE Regional Cooperative Soil Survey Conference

Attendance Hydric Soils Committee:

- Rob Tunstead USDA-NRCS
- James Brewer USDA-NRCS
- Bruce Vasilas University of Delaware
- Mark Stolt University of Rhode Island
- Donald Parizek USDA-NRCS
- Marty Rabenhorst University of Maryland
- John Galbraith Virginia Tech
- Marissa Theve NRCS-CT
- Lisa Krall NRCS-CT
- Robert Dobos NSSC-NRCS
- Ken Scheffe NSSC-NRCS- Standards
- Roy Vick USDA-NRCS
- Dave Wilkinson NRCS-ME
- David Rocque ME Department of Agriculture
- Greg Granger NRCS-ME
- Tony Jenkins NRCS-ME
- Patrick Drohan Pennsylvania State University
- Chris Smith USDA-NRCS

Monday June 18, 2012 – 1:30 PM

Notes on Hydric Soils Committee

- 1- Tunstead Secretary / Jim Brewer to also supplement minutes
- 2- New Chair = Rob, Jim Brewer to remain as co-chair
- 3- Prioritizing discussions or talks
- 4- EPA study
- 5- IRIS Tube Study – 20% of depleted zone on IRIS tubes proposal to move from 30% to 20% 15cm zone & starts within 15cm of surface
 - a. Marty does not have a proposal together
 - b. Entirely within the upper 30cm the 15cm zone must be entirely within the upper 30cm
- 6- Red Parent Materials
 - a. TF2 to F22
- 7- Field estimates on Organic C where HSTC were asked to determine OC content in Mid Atlantic & NE mucky, organic or mineral
- 8- TA6 Field tour on TA6 monitoring 3 sites

- 9- New charges for 2014
 - a. Epi/Endo aquic saturation
 - 10- Hydric Interps on WSS
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Donald Parizek

(TF2 & F21)

Red Soils Update (MLRA – 145 CT Valley)

- a. Auer Farm = Lodgment till often doesn't show depleted matrix in a ponded condition
- b. Wadsworth Estate = slide slope of drumlin
- c. Wallingford, CT = Eric Ford studying and collecting data on 3 separate locations in Wallingford 6 pedons

Wilbraham soils = PD lodgment till Endoaquepts & not epi even though it's classic perching

- F21 doesn't allow faint redox
- CCPI color propensity index of 30
- F21 negates use of TF2 often lacking 10% or more redox for MLRA 145 young tills lacking adequate morphology

-Marty will send PowerPoint to Mark on analyzing the data for IRIS

-Alpha/Alpha gives a positive reaction

-Donald presented study locations & indicators met

Aver farm = created not much problem as windblown cap

Wadsworth = no eolian = more problem & Wallingford

-F21 = 65% of time worked & TF2 worked 94-100% of time

F21 didn't work as well

-Stolt grad student to continue to monitor into spring 2013

1) Proposal = F22 Indicator & Re-write (colder, younger glacial till areas with temperature being main reason, could use glacial boundary as break)

2) Continue monitoring

3) Describe additional red soils in MLRA 145

4) Assemble all data and analyze

5) Propose a new indicator with maybe 5% faint instead of 2% concentrations

F21 = test indicator = MLRA indicator as well

Recommend = CCPI for PA soils

Discussion on where F21 could and can be applied: MLRA's = 148 & 127

TF2 should be re-implemented with a re-write

TA6 – Mesic Spodic Update – Jim Turenne

- Spodosols were correlated away in old mesic surveys
- Used for all textures
- Jim provided background on indicator

- National wants 3 additional study sites for TA6 (using IRIS tubes, D-alpha)
Tour showed indicator worked well during very dry spring 2012
 - Marty might have some sites for the mesic spodic in New Jersey and Maryland for the TA6
 - Patrick might work in the valley and ridge province
 - TA6 works on sandy and loamy soils used for both not just S & A
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Updates on NE Hydric Committee – Jim Turenne

- Membership discussion
 - Hydric Tours and field trips – Fall 2012 will look at Coastal Marine Sediments in New England with brown colored surfaces.
 - Looking at red soils again
 - Looking at version 4 for NE
 - S6 = NE and mid-Atlantic group throwing it out
 - How do we get recommendations to National Tech Committee? Send it with instruction and a cover letter. National Meeting September 17th on National Tech Committee
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Update on Mid-Atlantic Committee – Jim Brewer

- How to get people involved
 - Sponsor Field Trips
 - F21 update provided
 - F19 flooded verses Floodplains
 - Floodplains similar to F19 and get IRIS tube data problematic into Limestone influenced solid
 - Pedogenesis on Hydromorphology of Barrier Landscapes
 - Field estimates for Soil OM
 - o Glauconitic Soils = some meet F3 tabled for now and need to select sites
 - Update on Floodplains of MLRA 147
 - EPA sponsors website for Mid-Atlantic group
 - Meet January & June, next meeting January 9th – 10th, 2013 in Ocean City / Assateague – Examining the PD and VPD soils Barrier Island Landscapes
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Marty and Hydromorphology in Holocene Dunal Landscapes

- Barrier Landscapes = islands = only a few thousand years old
 - o Freshwater lense on top of saltwater
- No redox with 6/2 matrix 7/2 matrixes
- Dating sites – Holocene material
- Subtle color differences are huge 6/2 vs. 6/1.5?
 - These might be notes Digital Colorimeter
- Marty says it's legitimate to do 1/2 color value and chroma chips

- Chips 3/1 are critical!
 - Striped matrix and Marty made mention the indicator is poorly written and will not use it.
 - It can be interpreted many different ways (stripped matrix)
 - Chris Smith brought up stripped and Wade Hurt
 - Different aged landscapes = degree of organic accumulators
 - Younger = very wet but no O horizon accumulations
 - Patrick mentioned that Brian Carter doing optical analysis -Oklahoma State University
 - Anne Rossi PhD study on Assateague Island
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Epi vs. Endo Discussion

Proposed new definition of episaturation & propose removing densic from page 31 in the keys. Below is what the committee will send to Lincoln for next round of taxonomy proposals:

b. Episaturation.—The soil is saturated with water in one or more layers within 200 cm of the mineral soil surface and also has one or more unsaturated layers, with an upper boundary above a depth of 200 cm, below the saturated layer. The zone of saturation, i.e., the water table, is perched on top of a relatively impermeable layer **such as a densic layer or fragipan.**

Pg 24 Keys 11th

In the “Key to Soil Orders” and the other keys that follow, the diagnostic horizons and the properties mentioned do not include those below any ~~densic~~, lithic, paralithic, or petroferric contact.

Tuesday June 19, 2012 - Hydric Soils

- Discussion on becoming a standing committee for hydric and subaqueous soils – voted approved, Jim Turenne will write up and send to By-Laws committee.
- Discussion on Organic vs. Mineral and Pete Fletcher’s document (copy available at: http://nesoil.com/NEHSTC/Peter_Fletcher_Field_SOM_Chart_Final.pdf)
- Discussion on descriptors of Muck vs. highly decomposed plant material (CHARGE)
 - o Page 2-34 September 2002 Field Book for describing and sampling soils
 - o Language Muck, Mucky Peat and Peat has been in National Hydric Indicators predating version 2 of the purple book which has descriptors for texture depending on organic thicknesses?
 - o Charge = There is a need for resolution to correct the discrepancy we need resolution
 - E-mail a proposal with change to Lenora, Phil Schoenberger, Chris Smith, cc Larry West - Joe Cheretti
 - Clarification on the terms for organic textured materials.
- Epi Saturation and strike densic materials from page 31.