National Technical Committee for Hydric Soil Annual Meeting

September 19 and 20, 2012 Flint, MI

Meeting Minutes (drafted by Aaron Miller)

Members present: Lenore Vasilas (Acting Chair), Richard Griffin, Steve Monteith, Chris Noble, Wade Hurt, Paul Rodrigue, Aaron Miller.

Other participants present: Jacob Berkowitz, James Sallee

Members present via teleconference: Mike Vepraskas, Ralph Spagnolo, Shawn Finn, Steve Lawrence

On Wednesday, September 19th 2012 the committee took a field trip to observe sites monitored to develop better sandy soil indicators for problematic situations on inter-dunal and lake shore soils around the Great Lakes.

Stop 1

The presence of Field Indicators S7, Dark Surface and S8, Polyvalue Below Dark Surface was observed in a site that had data showing the soils met the Hydric Soils Technical Standard.

Stop 2

An inter-dunal sandy soil adjacent to Lake Huron that met the Hydric Soils Technical Standard was observed. This soil lacked an approved Field Indicator for the region.

Stop 3

An inter-dunal sandy soil adjacent to Lake Huron that met the Hydric Soils Technical Standard was observed. This soil lacked an approved Field Indicator for the region.

Meeting Commenced on Thursday, September 20th 2012 at 8:30 am

- Noble moves to approve meeting minutes from last year. Griffin seconds. All agree.
- Active Membership
    - The committee needs new USFS and BLM members and USFWS has not had someone participate since 2009.
- National Wetland Condition assessment
    - NRCS is working cooperatively with EPA to conduct the NWCA. Samples were collected in summer 2011. NRCS quality assurance review of field data is currently being done. Most common error is with misidentified or missed field

indicators. EPA is seeking input as to how they might use all collected soil data to evaluate wetlands conditions and/or wetland stressors. EPA plans to release this data to public for outside analyses/university projects. They are also looking for ideas on how they can improve the process for the next round of samplings.

- The revised Hydric Soils List selection criteria has been posted in the Federal Register. The new criteria retained 4 categories but no longer requires presence of a water table but instead requires presence of an indicator or proof it meets the definition. No comments were submitted during the 30 day comment period.
- WSS hydric report for wetlands now has 5 categories for hydric conditions. This is an improvement from the previous 3 classes. The classes are 100% hydric, 66 to <100%, 33-<66%, <1-<33%, and 0% hydric. The classes are currently only available as a report that can be exported and used to produce a map in ArcGIS. A change to the interpretive map in WSS will be made to reflect the 5 categories when the next version of WSS is completed.
- NRCS worked with the Association of State Wetland Managers Wetland Mapping Consortium to put together a package of gridded SSURGO data that can be used to help identify potential wetland landscapes for targeting potential sites for restoration/creation.
- Monteith report from Lincoln:
    - The lab is still producing IRIS tubes, call him to place an order.
    - The color change propensity index is still being developed.
- The committee reviewed data submitted from New England on red parent material sites in Connecticut Valley. The data confirmed all sites were in Red Parent Material. They evaluated new indicator F21 and the old TF2 indicator for red parent material. Based on the sites in this study that met the technical standard for hydric soils it appears that in this region F21 may be too restrictive but TF2 may be a little too inclusive. The committee discussed the possibility of bringing TF2 back as a test indicator until a better indicator was proposed but decided to instead encourage the proposal of a new indicator based on this data be presented at the next NTCHS annual meeting in the hopes that an actual indicator not a test indicator could be adopted for this region in the near future.
        - Vepraskas asks how much hydric soil acreage is impacted by the proposed F-21?

      Finn states that the 10% redox concentrations are not always seen in truly hydric soils. 2% or 5% may be a more inclusive of the hydric soils.
        - Vepraskas would like to ask the Mid-Atlantic-Committee to evaluate whether lowering the redox % reflects the data to confirm hydric soils.
- Proposed changes to F19 Flood Plains soils.

- The mid-Atlantic hydric soils committee (MAHSC) submitted a proposal to remove the wording "active" from flood plains in this indicator. The word was initial put in there in the hopes of ensuring that users would not use this indicator on terraces but only on flood plains but the word has caused a great deal of confusion that has caused the exclusion of the use of this indicator in areas where it was intended for use.
    - Noble motions to accept this change to F19 wording. Griffin seconds. All agree.
- The MAHSC also proposed that the NSSH definitions of flood plain and stream terrace be added to the Field Indicators glossary.
    - Monteith motions to add definitions from NSSH to glossary for flood plains and stream terraces. Griffin seconds. All agree.
- The MAHSC also proposed a wording change to the user notes. The NTCHS edited the proposed user notes.
    - Hurt motions to accept further text revisions made during discussions to tech note F19. Griffin seconds. All agree.
- The final draft of the edited F19 indicator is:

F19. Piedmont Flood Plain Soils*. For use in MLRAs 149A and 148 of LRR S; for testing on flood plains subject to Piedmont deposition throughout LRRs P, S, and T. On flood plains, a mineral layer at least 15 cm (6 inches) thick, starting within 25cm (10 inches) of the soil surface, with a matrix (60 percent or more of the volume) chroma of less than 4 and 20 percent or more distinct or prominent redox concentrations occurring as soft masses or pore linings.*

User Notes: *This indicator is for use or testing on flood plains in the Mid-Atlantic and Southern Piedmont Provinces and areas where sediments derived from the Piedmont have been deposited on flood plains on the Coastal Plain (fig. 39). This indicator does not apply to stream terraces, which are associated with a previous stream level and are representative of an abandoned flood plain. While these soils are found on flood plains, flooding may be rare and groundwater is often the source of hydrology.*

- Miller presents Water Table Model in Rio Grande Floodplains.
    - Working with funding from USACE and NM-Tech to develop model that identifies shallow water tables in floodplains soils that could produce map of potential hydric soils.
- Miller presents the attempt by New Mexico Environment Department Surface Water Quality Bureau to incorporate hydric soils criteria in a metric for their wetland RAM.

    - Suggests keeping metric simple for non-soil scientist field technicians to be able to use.
    - Need universal language to address the presence or absence of hydric soil character.
    - Berkowitz suggests including: oxidized rhizoshpheres; presence /absence of chroma 2 colors; oxidized concentrations present; organic matter accumulations.
- Hurt reports on conflicts encountered using climate data tables
    - Hurt recommends using local weather stations for determination of "normal" conditions. He has found the change from the 2004 datum to the 2012 datum in the WETS tables has caused changes in what is considered "normal". Vasilas informs us that NRCS is looking at whether we are bound to using the WETS 2004 datum for "normal" for Food Security Act determinations. Vasilas will look into resolving the issues in the discrepancy between 2004 and 2012 WET tables and the local weather station data.
    - University of Florida has hired a new pedologist.
- Griffin reports on the University updates
    - Closures are looming for soils programs.
    - Studies of Red Dust from West Africa depositing in US soil sin the south. After 5 years of collecting dust, they reported detectable quantities of red dust with the presence of associated microbial communities immigrating along with dust. Potential health-related problems are a possibility.
- Vepraskas reports on his research that predicts the impact of climate change on water tables of benchmark soils.
    - Created a predictive map showing where wetland boundaries might change. This will impact suitability for septic systems. If water tables rise regionally, systems could fail. Models do not predict a large scale rise in water tables of North Carolina.
- USACE update
    - All regional supplements have been completed, reviewed and are in use.
    - Revisions to the wetland determination and delineation manual have been made. The National Advisory Team is awaiting final revisions to the vegetation methodology before final approval can be made to a final draft of the manual and the manual can be submitted to the Federal Register as an update to the old 1987 Delineation Manual.
- EPA update
    - F3 issues in AK need to be addressed. EPA wants to be included in these discussions.

    - Jim Herrington sent along comments concerning use of the 87' manual. It appears his comments are identical to the ones he submitted last year. He is concerned about the site visits along the Rio Grande that were not identified as wetlands. Many of these issues were addressed when the committee met in New Mexico in 2009.
- Discussion on the exclusion of LRR Q from the Field Indicators
    - A proposal was submitted from the Pacific Islands with a recommendation to approve all indicators applicable in LRR V to also be included in LRR Q. Currently there are no approved field indicators for LRR Q.
    - Hurt motions to approve this item. Griffin seconds. All agree.
- Vepraskas has agreed to work on tech note for stripped matrix.
- Wednesday's Field Trip Review.
    - The committee did a site visit to South Saginaw Bay that confirmed that indicators S7 and S8 are present in Michigan.
    - The site visit to East Saginaw Bay, Sleeper State Park, showed that an indicator similar to Coastal Prairie Redox is present there but maybe needs to include chromas up to 4.
    - The site visit to West Saginaw Bay, Tawas Point State Park, showed that sandy indicators were not met but the Technical Standards were met in this location. S-5 was almost met but chroma 2 was seen just below 15cm depth.
    - Based on the site visit and other data submitted there may be a need to add S7 Dark Surface and S8 Polyvalue Below Dark Surface indicators for use in LRR's K, L and M. Not enough data has been collected to establish the need for S8.
    - S11 High chroma sands indicator proposed for interdunal sands:
        - Berkowitz presents new indicator for LRR's L and K in coastal zone dune-swale complexes. "A layer 2" or more thick starting within 4" of surface with a chroma of 4 or less and 2% distinct or prominent redox concentrations".
    - Noble motions to accept new indicator as proposed. Griffin seconds. All agree.
    - New S11 indicator:

S11. High Chroma Sands. *For use along shorelines and near shore regions of the Great Lakes in LRRs K and L. In coastal zones and dune-and-swale complexes, a layer 2 inches (5 cm) or more thick starting within 4 inches (10 cm) of the surface with chroma 4 or less and 2% or more distinct or prominent redox concentrations.*

User Notes: *Along the shorelines of the Great Lakes within LRRs L and K, some wetlands exhibit the presence of high chroma sands (often a chroma of 3 or more). These high-chroma, sandy soils occur at the landward edge of coastal marshes, in interdunal landscape*

positions, and dune-and-swale complexes. These soils exhibit redox concentrations as pore linings and/or soft masses starting within 4 in. (10 cm) of the surface. In adjacent upland areas, redox concentrations are absent or are only observed below 6 in. (15cm). It may be helpful to involve a soil scientist or wetland scientist familiar with these soils.

  - Noble motions to add S7 indicator to LRR's K, L, and M. Griffin seconds. All agree.

- NTCHS Annual Meeting 2013
  - Last year we discussed AK as our destination to visit F-3 indicators and address abrupt boundary indicator issues. We will wait until next year to propose an AK meeting in the hopes that we can also obtain data to address EPA's issue with the lack of the ability to use F3 in AK.
  - Mobile Alabama may be next year's destination in April. Vasilas will work on this and get back to the committee before end of year.
- Agenda items complete. Meeting adjourned 11:50am. Off to lunch and final field visit.

- Marl soils site visit
  - F3 works at this site because colors meet 4/2 or 5/2 and redox concentrations are present. Other Marl soil data from Michigan shows that F3 does not always work in these soils. Based on the data and the evaluation of those on the committee with experience in Marl that the material we were looking at was in fact Marl it was proposed that the F10 be edited to include chromas of less than 2 instead of the current requirement of a chroma of 1 as well as adding the inclusion for use in LRRs K and L.
  - Vasilas motions to make above mentioned changes. Griffin seconds. All agree.
  - Approved version of F10 indicator:

F10. Marl. *For use in LRRs K, L and U. A layer of marl with value of 5 or more and chroma less than 2 starting within 10 cm (4 inches) of the soil surface.*

User Notes: *Marl is a limnic material deposited in water by precipitation of CaCO3 by algae as defined in Soil Taxonomy (Soil Survey Staff, 1999). It has a Munsell value of 5 or more and reacts with dilute HCl to evolve CO2. Marl is not the carbonatic substrate material associated with limestone bedrock. Some soils have materials with all of the properties of marl, except for the required Munsell value. These soils are hydric if the required value is present within 10 cm (4 inches) of the soil surface. Normally, this indicator occurs at the soil surface.*

- Meeting adjourns at 3:30 pm

Examples of Marl brought from Florida to compare with MI Marl soils.

Iron oxide present on the shore line of a small lake in the inter-dunal sandy soils adjacent to Lake Huron. A layer of Mn oxide was observed immediately below the iron oxide layer.

Committee members and guests present at the meeting.