

2008 Hydric Soil Committee Final Report

Co-Chairs:
Lenore Vasilas & Jim Turenne



Birdsall Soil

2010 Co-Chairs

- Committee Voted Jim Turenne (northeast) and Jared Beard (Mid-Atlantic) to chair the 2010 committee.

2008 Members

2008 Committee Members:

Lenore Vasilas, Robert Tunstead, Wayne Maresch, Peter Venemen, Mark Stolt, Maggie Payne, Kevin Connelly, Fred Schemegel, Edwin Muniz, Don Parizek, Chris Smith, Ron Taylor, Henry Ferguson, David Kroetsch, Scott Stevens, Marty Rabenhurst, Patric Drohan, Jim Thompson, Phil Schoenberger, James Brewer, Jared Beard, Joe Homer, Kim McCracken, Steve Gourley, Karen Dudley, Steven Indrick, Richard Shaw, Jim Turenne.

Committee Agenda

1. Provide an overview on the regionalization of the 1987 COE Wetland Delineation manual (Vasilias).
2. Provide an overview of the New England Hydric Soils Technical Committee and proposed hydric soil indicators sent to NTCHS (Turenne)
3. Other proposed indicators (none).
4. Review charges from 2006 meeting (all).

Agend Items

1. A copy of the presentation Lenora made is on the Hydric Soil SharePoint site.
2. A copy of Turenne's presentation on the NEHSTC is on the Hydric Soil SharePoint site.
3. No other indicators were proposed from other regions, Lenore and Marty provided some info on Mid-Atlantic work.
4. Charges slides below.

1. Review progress on dark parent materials indicator. In 2006, the Committee identified this as an issue for New England.

- Discussed the Dark Mineral indicator (VIII), developed by NEHSTC, indicator developed using thesis study, result of 2 tours, study sites with data, and long email threads with revisions.
- Re-write using the National Guidelines (copy of proposed dark indicator on next slide).
- Discussed during tour NEHSTC dark soil subcommittee will review pedons to see if chroma is needed for surface, and if redox features should be changed to distinct or prominent.

Proposed Dark Indicator

- **A__.** **Dark Mineral Soils.** For use in LRR R. A mineral surface layer with matrix value 3 or less that is directly underlain by a different layer also underlain with a matrix value 3 or less. Within 30 cm (12 inches) of the top of the mineral soil material or directly underlying the mineral surface layer, whichever is shallower, there are 2 percent or more redox depletions and/or concentrations that extend to either a depth of 50 cm (20 inches) below the top of the mineral soil material or to a depleted or gleyed matrix. The matrix chroma is 2 or less to a depth of 50 cm (20 inches) below the top of the mineral soil material.
- **User Note:** With or without an O horizon.

Version 3 NE Guide

- VIII. DARK MINERAL SOILS.** Soils with a matrix chroma of 2 or less that extends to a depth of 20 inches below the *top of the mineral soil material*, and that have a *dark A or Ap horizon* (with or without an *O horizon*) that is directly underlain by a horizon with a matrix value of less than 4, and within 12 inches of the *top of the mineral soil material* or directly underlying an *A or Ap horizon*, whichever is shallower, 2 percent or more *redoximorphic features* that extend to:
- A. a depth of 20 inches below the *top of the mineral soil material*; or
 - B. a *depleted or gleyed matrix*, whichever is shallower; or

2. Review progress on red parent materials indicator. In 2006, the Committee identified this as a shared issue for New England and the mid-Atlantic.

- Donald provided a report on the red soil subcommittee – data for Auer Farm and other sites they are collecting.
- Proposed the test indicator for region.
- Support data being written and will be sent to NTCHS.

3. Review progress on folists and other histosols indicators. In 2006, the Committee identified this as an issue for New England.

- Folists were examined during NEHSTC tour in Maine.
- Pete Fletcher recommended looking at drying out the organics – folists not firm, histic becomes firm and lighter color.
- No other recommendations from subcommittee.

4. Review progress on anthropogenic soils indicators. In 2006, the Committee identified the need for a better understanding of what to look for to identify anthropogenic hydric soils.

- Studied during NEHSTC tour, monitoring sites are ongoing, still considered difficult soils to analyze.
- Recommend using the new HTM designations, detailed descriptions of redox feature (Tech Bulletin 301, boundary distinctness, etc.).
- Soil series for hydric HTM being developed and mapped in some areas to show on soil surveys.

5. Review and comment on spodosols indicators. In 2006, the Committee identified an issue with the current indicators identifying non-hydric spodosols as well as hydric spodosols.

- Mesic spodic indicator was written for 144A, 145, and 149B (copy next slide).
- Indicator developed by extensive review of 35 pedons most with data to back up wetland classification, upland pedons also checked. Support data will be sent to NTCHS.
- NEHSTC will review comments from NY NRCS and reply or change – support data will be requested.

Mesic Spodic Indicator Proposed by NEHSTC

- **A__ Mesic Spodic.** For use in MLRA 144A and 145 of LRR R, and MLRA 149B or LRR S. A layer 5 cm (2 inches) or more thick starting within 15 cm (6 inches) of the mineral soil surface that has value 3 or less and chroma 2 that is underlain by either: **a)** an illuvial layer(s) 8 cm (3 inches) or more thick occurring within 30 cm (12 inches) of the surface that has value and chroma 3 or less; or **b)** an eluvial layer(s) 8 cm (3 inches) or more thick occurring within 30 cm (12 inches) of the mineral soil surface that has value 4 or more and chroma 2 or less that is directly underlain by an illuvial layer(s) 8 cm (3 inches) or more thick with value and chroma 3 or less.
- **User Notes:** This indicator is used to identify wet soils with spodic morphology in MLRA 144A, 145, and 149B of Region R and S only. The eluvial layer with evidence of translocated organic matter is typically described as an E or Eg horizon (these typically have a color pattern referred to as stripped matrices). The illuvial layer is typically described as Bh, Bhs, or Bhsm horizons that typically have several color patterns or cementation indicative of translocated iron, manganese, aluminum, and/or organic matter.

Review for resolution hydric soil indicator S6. In 2006, the Committee recommended revisions to the indicator including supplying a minimum thickness, adding size of stripped zones and minimum volume into the indicator's criteria, describing color of stripped zones and/or contrast between striped zones and matrix color in the indicator's criteria, and use of the term "uncovered and uncoated" to be consistent with other sandy indicators, or define a maximum volume percent that can be covered or masked like other indicators such as indicator S7.

S-6 dropped from region R

7 Review for resolution regional indicators for use in the national indicators.

- NEHSTC will review comments from NY NRCS and reply/make changes to our proposed indicators.
- Will review comments from NTCHS and send comments back.
- Study sites will continued to be monitored a tour for fall 2008 is planned, invite will be sent to Mid-Atlantic and NTCHS.
- Support data for each will be sent.