

New Soil Interpretations Policy
Southern Regional Cooperative Soil Survey
Conference

Soil Interpretation Criteria Review Committee

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Topics

- New Policy to review Soil Interpretation Criteria
- National Priorities for soil interpretations
- Research Needs for soil interpretations
- Needs for new soil interpretations
- Needs to improve existing interpretations

New NSSH Policy

- Added with Amendment 11 issued Sept. 2005
- Information located in NSSH Part 617.04 (a and b)
 - Establishes “Interpretation Criteria Review Teams” as Standing Committees at Regional and National Cooperative Soil Survey Conferences
 - Group of interpretations selected by NSSC or NCSS cooperator prior to Regional Conferences

New NSSH Policy

- NSSC provides list and criteria to Regional Interpretations Teams for their input - 6 months prior to Regional Conferences or as soon as Chairperson for Criteria Review Teams are in place
- Criteria Review Teams should compare local/regional interpretation criteria for same or similar interpretations
 - Add new references or science that applies
- Forward to National Conference – National Conference to NSSC for action/implementation

National Priorities for Soil Interpretations

- Provide relevant, accurate, defensible, timely soil interpretations to all customers
- Provide guidance to field soil scientists regarding data population
 - “New Soil Survey” provides mechanism to verify and update existing data and to collect new data needed for soil interpretations
 - Soil interpretations require accessible data
 - Measured, modeled, tacit knowledge – mechanism to label kind of data
- Expand soil survey interpretations to meet more diverse nontraditional customer’s needs

National Priorities for Soil Interpretations

- Integration of other kinds of data into soil interpretations
 - Spatial data of all kinds – distances, elevation, aspect, etc.
- Use-dependent data – quantify data according to land use history (Pilots in MO, UT, ID)
- Raster-based interpretations (pixel models)
- Soil interpretation validation/certification
- Subaqueous soils interpretations

National Priorities for Soil Interpretations

- Develop methods to provide variable levels of criteria documentation to customers/users
- Develop new methods of presenting interpretative results (visual simulations)
- Attach metadata to soil interpretations
 - What is the science behind interpretation?
 - Has it been tested?
 - Are there soils/areas where interpretation does not work? Andisols/Andic Intergrades are examples
 - Who to contact with questions?
 - What literature was used in developing criteria?
 - Under what conditions were data collected during design and during testing?

National Priorities for Soil Interpretations

- Complete NASIS version of Soil Rating for Plant Growth – SRPG
 - goal to have testing done by 12/06
 - implement in 2007

Research Needs for Soil Interpretations

- Benchmark soils/landscapes
 - Water movement through landscapes/watersheds
 - Ksat measurements to support our estimates
- Validating/certifying existing and/or new soil interpretations
 - Department of Homeland Security Suite
 - Composting, carcass burial, debris disposal, suitability for clay liner, suitability for composting medium and final cover, Hazard of Radioactive Bioaccumulation, Potential for Radioactive Sequestration
 - Peer review of all new interpretations developed at any level (National, Standard, local/regional)

Needs for New Interpretations

- Gypsum interpretations (associated salts)
 - Subsidence, corrosivity, what combinations of salts are the worst for various uses (plant growth, concrete, pipes of various kinds, etc.)
- Hydric Soils – Hydrology indicators for wet areas (middle of wetland) to assist in determining wetlands
- Plinthite –related interpretations



Needs to Improve Existing Soil Interpretations

- **Adding O horizon property criteria to all relevant soil interpretations**
- **Modifying existing soil interpretations for properties associated with high mica contents**
- **Modifying existing or developing new soil interpretations for soils high in gypsum/other soluble salts**



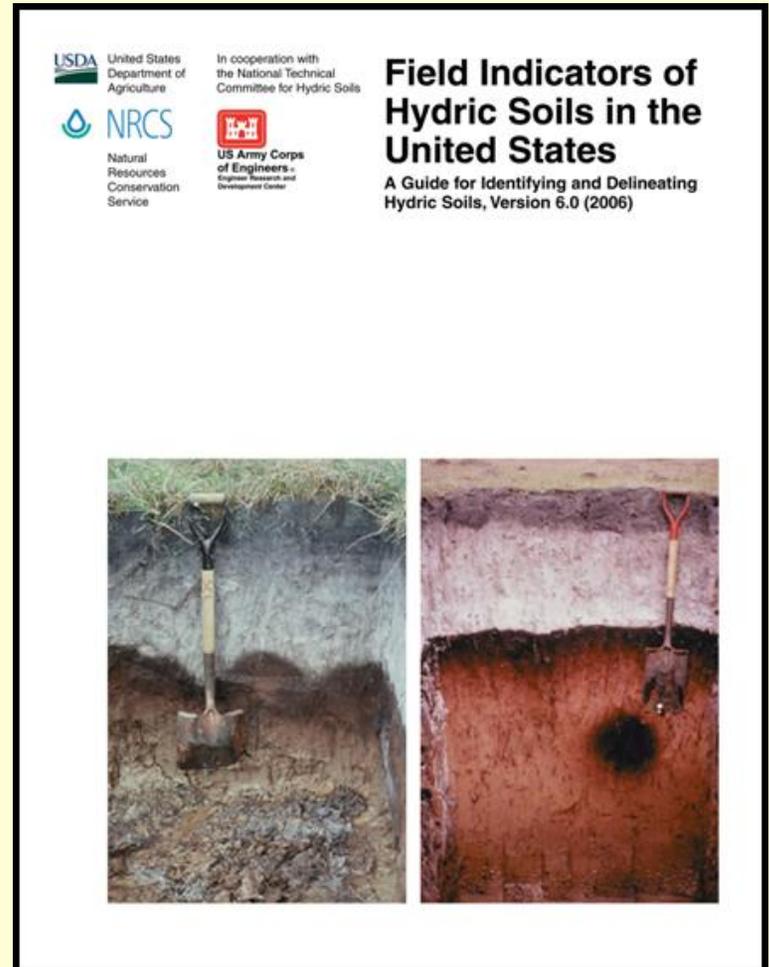
Needs to Improve Existing Soil Interpretations

- **Modifying existing or developing new soil interpretations for soils with Plinthite**
- **Critical need for literature reviews before/after** (for existing interpretations to see if new science) new interpretations are developed
- **Fix interpretations where they don't work**
- **Data Population/ Data Verification**



Needs to Improve Existing Soil Interpretations

- **Field Indicators of Hydric Soils**
 - Test Indicators
 - New Indicators
- Review of soil interpretation response curves
- Split Soil Interpretation components (e.g. installation, maintenance, longevity)



Conclusions

- Soil Interpretations will play a more dominant role in the “new soil survey”
- Each state needs a State Soil Interpretations Specialist (like the old State Soil Correlator”)
- There is more work to do than we have people to do it
- Soil scientists need to feel more comfortable developing new soil interpretations – training issue
- Soil scientists will be asked to develop or assist in development of more nontraditional interpretations – are you ready???