



2013 NCSS Conference Interpretations Committee Report



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Dr. Amir Hass



- **Issues/actions**

- West Virginia State University is an 1890 School that has recently been re-established as a Land Grant institution

- **Recommendation**

- Collaboration with WVSU will benefit both the university and NCSS

Robert Dobos



- **Issues/actions**

- The National Soil Survey Center recognizes the importance of describing and interpreting the Earth's Critical Zone
- Production of interpretive models is customer-driven, with recent products including an updated NCCPI, wine grape site desirability, soil liquefaction, and drained cracking landscapes
- Training is a priority to foster a de-centralization of interpretation creation, both the science and mechanics, in order to grow the pool of criteria writers
- Future objective is to increase the universality of interpretive models

Jim Turenne



- **Issues/actions**

- Coastal flooding from Sandy was intense in some areas
- Property damage was widespread in areas covered by the storm surge, yet the soil survey often did not give an indication of flooding in the interpretations for dwellings
- The location of the shoreline was moved in some instances

- **Recommendations**

- Make sure urban interpretations account for storm surge flooding
- Revise spatial data as needed to reflect new shorelines

Carl Robinette



- **Issues/actions**
 - Farmers main uses for the soil survey are land capability classification and crop yields
 - Soil survey information is used for nutrient management plans
 - Farmers are diversifying crops for special niches
- **Recommendations**
 - Keep yield data current (or create ways to estimate yields)
 - Make an interpretation for a “sacrifice lot”, a place for cattle to be fed during drought
 - Make an interpretation for hops
 - Maintain forage suitability groups

Charges: Business Meeting



- **1. Review and document progress and key issues raised by the 2012 Regional Committees on Interpretations in the West, North Central, Northeastern, and South NCSS regions.**
- **2. Discuss and begin to develop a plan of action to develop, evaluate, and improve new and existing interpretive products to assist decision makers at all levels in the preparation for, response to, and recovery from extreme weather or other disastrous events.**
- **3. In line with the theme of the conference, discuss possible methods to improve existing interpretive information and to develop new interpretive products by more fully incorporating information from the parts of the “Earth’s Critical Zone” not documented in traditional soil survey.**

Charges: Business Meeting



- **4. Review progress in the development of local, regional, and national interpretations that address “town and country” issues (aka Urban Interpretations). Identify key areas where existing synergies can be exploited as well as areas where additional work is required. Discuss alternative means of expressing interpretive results to better address user needs (e.g., failure probabilities).**
- **5. Discuss the dynamic between National and State/Local interpretations and explore ways to broaden the applicability of National interpretations when appropriate to increase consistency and reduce maintenance workload in the face of steady or decreasing NRCS-SSD staffing and budget.**
- **6. Explore future ways of developing and implementing a more efficient and effective means of interpretation development that integrates published soil data and other spatial data and information (e.g., climate, geology, topography, land use/land cover, etc.) to provide real-time, spatial referenced, interpretive products on both the national and local level.**

Dan Wing



- **Issues/actions**

- Gullied landscapes are quite limited yet rarely accounted for in the interpretation system
- The temporal nature of flooding and ponding is not always well accounted for in interpretive criteria

- **Recommendations**

- Gullied components need to be recognized in the “Local Phase” and can then be accounted for in interpretations
- Flooding and ponding criteria can be adjusted to better account for the timing of the limitation

Dr. Del Fanning



- **Actions/issues**
 - Acid sulfate weathering is often unrecognized, yet very important consequence of exposing unoxidized soil and geologic materials to the atmosphere
 - Soil pH can be pushed as low as 3.0
 - Oxidized zone is 2 to 20 meters, depending
 - Prediction is sometimes difficult but mitigation can be very expensive (I-99 at Skytop in central PA)
 - Pushing development off of wetlands and prime farmlands and on to steeper ground insures that this problem will be encountered more frequently due to deep excavations for roads and structures
- **Recommendations**
 - NCSS must include the presence of sulfidic materials in the soil survey database
 - Interpretive criteria must account for acid sulfate weathering
 - Establish a National Acid Sulfate Soils committee (ad hoc) to assist in identifying problem areas

Joe Kraft



- **Issues/actions**
 - Impacts of oil and gas exploration and extraction
 - Soil disturbance for roads and pipelines is wide spread where the Marcellus (and in the future, Utica) shale is present (at deep depths)
 - Bentonite is a “coproduct” of horizontal drilling for feeder pipeline installation
 - Safe utilization of this product is a topic for debate
 - Currently, this is an issue in Pennsylvania, but will undoubtedly spread to West Virginia, Maryland, and Virginia
- **Recommendations**
 - Best management practices and interpretations are needed to inform land managers in this area
 - Thorough characterization of the “coproduct” is needed to ascertain its potential as a benefit or hazard in soils

Stephanie Connolly



- **Issues/actions**

- Forest Service perspective
- Red Spruce restoration in the Monongahela National Forest
- Threatened and endangered species
- Methyl mercury production

- **Recommendations**

- Develop criteria for predicting soils prone to methyl mercury production
- Interpret habitat for Cheat Mountain Salamander
- Calcium depletion/(pH) limitation in the forest soil

Gary Jellick



- **Issues and actions**

- Private industry perspective
- Soil survey interpretations are of little utility because of the scale, the criteria do not fit regulations, and they do not go deep enough

- **Recommendations**

- Color IR background option for Web Soil Survey to allow much better identification of where hydric soils exist on the landscape
- Deepen the frame of inference to 5 meters

Tanja Williams



- **Issues/actions**

- USGS perspective
- Intense user of SSURGO data
- Hydrologic models
- Water Availability Tool for Environmental Resources
- Accuracy and consistency of Ksat data
- Data voids in urban areas
- Data void peculiarities

- **Recommendations**

- Circumspection when editing Ksat data for SDJR
- Account for preferential flow
- QA/QC for aligning mukeys for spatial and tabular data

Amir Hass



- **Issues/actions**

- Urban soils perspective
- EPA mandates stormwater management: 1 inch in 24 hours cannot produce runoff
- Steep slopes, difficult limitation to overcome
- Constraints:
 - ✦ Mapping scale, grossly contrasting minor components
 - ✦ Depth of observation
 - ✦ Accounting for karst landscapes
 - ✦ Common language between soil scientists and engineers

- **Recommendations**

- Deepen frame of inference
- Develop tools for interpreting a pedon in the field



Thanks