

West Region Soil Taxonomy Subcommittee

Subcommittee Members

Joe Chiaretti, NRCS-NV, Chair

Tom Hahn, NRCS-CO

Ed Horn, BLM-OR

Duane Lammers, USFS-OR

Chad McGrath, NRCS-OR

Randy Southard, UC-Davis

Bob Spokas, NRCS-MT



Activities Prior to 2008 Conference

- New members Bob Spokas and Joe Chiaretti (chair for 2007-2008) join the committee in June 2007.
- Former chair Tom Hahn and Joe Chiaretti attend gypsum morphology and classification workshop at NSSC in August 2007 and participate in 4 teleconferences to help develop and refine the Gypseous Soils proposal.
- Committee begins review in September 2007 on first set of five formal proposals for changes to Soil Taxonomy.
- Comments submitted on first set to National Leader for Soil Survey Standards in November 2007.



Activities Prior to 2008 Conference

- Committee works on four sets of proposals issued monthly from January to April 2008.
- Business is conducted mainly through email and document exchange.
- Committee chair compiles draft report to National Leader for Soil Survey Standards on all five sets of proposals plus latest one from NRCS-MO1 and USFS-R6.



Proposals to Revise Soil Taxonomy

August 30, 2007

- **Normal Years Discussion**

by Craig Ditzler, NSSC

- **Natraquerts**

by Craig Ditzler, NSSC

- **Subaqueous Soils**

by Mark Stolt, University of Rhode Island



West Region Subcommittee Decisions on Soil Taxonomy Proposals

- **Normal Years Discussion**

Support and accept as written

- **Natraquerts**

Support and accept as written

- **Subaqueous Soils**

Support in concept, but Reject as written and suggest extensive revisions



Proposals to Revise Soil Taxonomy

January 24, 2008

- **Ashy-skeletal over clayey contrasting particle-size class**
by Joe Chiaretti, NRCS-Reno, NV
- **Correction to temperature regime limits**
by Tom Reedy-NSSC and Ed Tallyn, NRCS-Davis, CA
- **Clarification of Clay Content Requirement for Paleustalfs, Palexeralfs, and Palexerolls**
by Craig Ditzler and Bob Engel-NSSC (retired)
- **Cemented Layer Criteria for Four Great Groups**
by Craig Ditzler-NSSC and Thor Thorson, NRCS-Portland, OR
- **Micaceous Soils**
by Mica Research Group & John Kelly NRCS-Raleigh, NC
- **Aridic Lithic subgroups in Calcixerolls, Argixerolls, and Haploxerolls**
by Joe Chiaretti, NRCS-Reno, NV



West Region Subcommittee Decisions on Soil Taxonomy Proposals

- **Ashy-skeletal over clayey contrasting particle-size class**
Support and accept as written
- **Correction to temperature regime limits**
Support and accept as written
- **Clarification of Clay Content Requirement for Paleustalfs, Palexeralfs, and Palexerolls**
Support and accept with a minor revision
- **Cemented Layer Criteria for Four Great Groups**
Support and accept with some minor revisions
- **Micaceous Soils**
Support and accept as written
- **Aridic Lithic subgroups in Calcixerolls, Argixerolls, and Haploxerolls**
Support and accept as written



Proposals to Revise Soil Taxonomy

February 27, 2008

Permafrost Affected and Other Very Cold Soils

by NRCS, MLRA Regional Office 17-Palmer, AK

- A set of 9 proposals affecting classification of Gelisols as well as soils in gelic suborders and gelic great groups of other orders.
- One major part is the addition of a gelic soil temperature regime since the cryic regime does not allow soils to have permafrost.



West Region Subcommittee Decisions on Soil Taxonomy Proposals

- **Changes to Gelisol order**
Support and accept with one revision
- **Add Gelic temperature regime**
Support and accept with five revisions
- **Criteria for Histels**
Support and accept with one revision
- **Add Oxyaquic subgroup to Haplogelolls**
Support and accept as written
- **Add Aquic subgroup to Gelorthents**
Support and accept as written



West Region Subcommittee Decisions on Soil Taxonomy Proposals

- **Add Turbic subgroups to 8 great groups**
Reject as written and recommend revision
- **Add Folistic subgroups to 12 great groups**
Reject as written and recommend revision
- **Revise great groups of Gelepts**
Support and accept with minor revisions
- **Use reaction classes in Gelisols and gelic taxa**
Some confusion on which gelic taxa are included;
Support more shallow zone for very cold soils;
Accept with suggested revisions



Proposals to Revise Soil Taxonomy

March 4, 2008

Proposal to add Humic Great Groups to the Udepts, Ustepts, and Xerepts and Revise the current Humic subgroups in various great groups

by Bill Craddock-MLRA Regional Office 18 Lexington, KY,
Roy Vick-MLRA Regional Office 14 Raleigh, NC, and Bob
Engel-NSSC (retired)

- A two part proposal to add additional humic great groups to the Inceptisols order and to change the definitions of the existing humic subgroups in Udepts, Ustepts, and Xerepts.



West Region Subcommittee Decisions on Soil Taxonomy Proposals

- **Add humic great groups to Udepts, Usteps, and Xerepts**
 - Support 3 new great groups (e.g. Humixerepts);
 - Disagree with keying sequence for great groups;
 - More input needed for subgroups in Humixerepts;
 - Reject as now written and suggest revisions
- **Revise criteria for existing humic subgroups**
 - Support concept of revised subgroup criteria;
 - Thorough review needed of impact on series;
 - Reject as now written and suggest revisions



Proposals to Revise Soil Taxonomy

April 2008

- **Revision for definition of Jarosite and Suffix j**
by Dr. Del Fanning, University of Maryland
- **Kanhapludults (1 new subgroup)**
by NRCS-MLRA Regional Office 14 Raleigh, NC
- **Paleaquults (1 new subgroup)**
by NRCS-MLRA Regional Office 14 Raleigh, NC
- **Paleudults (3 new subgroups and subgroup key)**
by NRCS-MLRA Regional Office 14 Raleigh, NC
- **Gypseous Soils**
by Gypsum Soils Taskforce – Workgroup on Soil Morphology and Classification
- **Anhydritic mineralogy, Anhydritic diagnostic horizon, & revision to the Aquisalids**
by Dr. Shabir A. Shahid, Dubai, United Arab Emirates



West Region Subcommittee Decisions on Soil Taxonomy Proposals

- **Revision for definition of Jarosite and Suffix j**
Support and accept as written
- **Kanhapludults (add 1 new subgroup)**
Support Arenic Fragic subgroup and accept as written
- **Paleaquults (add 1 new subgroup)**
Reject Grossarenic Umbric subgroup as not needed
- **Paleudults (add 3 new subgroups and new subgroup key)**
Can support Aquic Grossarenic subgroup;
Reject Grossarenic Oxyaquic subgroup as not needed;
Reject Arenic Plinthic Oxyaquic subgroup as not needed;
Support new subgroup key with some revisions



West Region Subcommittee Decisions on Soil Taxonomy Proposals

Gypseous Soils

- Morphology proposal for soils with ≥ 40 % gypsum
Support need for two new terms used in lieu of texture
- Proposed substitutes for particle-size class (3 new classes)
Support need for the three new classes for soils ≥ 40 % gypsum;
Reject broad term “crystalline” and replace with “gypseous”
- Strongly contrasting particle-size classes (6 new classes)
Support need for these classes;
Add statement in 4 of 6 classes for minimum gypsum difference of 15%
between both parts to ensure they are contrasting
- Proposed hypergypsic mineralogy class
Support and accept as written
- Revision to criteria for gypsic mineralogy class
Support and accept as written



West Region Subcommittee

Decisions on Soil Taxonomy Proposals

Anhydritic mineralogy, Anhydritic diagnostic horizon, & revision to the Aquisalids

- Proposal to add an anhydritic mineralogy class
- Proposal to add an anhydritic diagnostic horizon
- Proposal to add an anhydritic subgroup of Aquisalids
 - Anhydrite occurs rarely in high chlorinity, coastal soils of very restricted local and global extent (~2000 acres);
 - Unanswered questions exist on lab method to quantify anhydrite vs. gypsum which makes mineralogy class criteria impossible to apply;
 - More study on interpretive significance of anhydrite is needed;
 - More study on differences vs. gypsic mineralogy/gypsic horizon is needed;
 - Needs to be coordinated with result of Gypseous Soils proposal;
 - Committee rejects all three proposals as premature



Proposals to Revise Soil Taxonomy

May 2008

Cryic Albolls

by NRCS MLRA Regional Office 1 Portland, OR
and USFS, R6

- This proposal is to improve the classification of soils in the suborder of Albolls that have a cryic temperature regime. Cryic Albolls classify in a frigid family even though they do not have a frigid temperature regime.



Proposals to Revise Soil Taxonomy

May 2008

Cryic Albolls

Alternatives:

- 1.) Exclude soils with a cryic soil temperature regime from classifying in Albolls and add Albic subgroups to Cryaquolls (Albargic) and Argicryolls (Albaquic);
- 2.) Add Cryalbolls great group and add subgroups, as needed;
- 3.) Add a subgroup of Cryic Argialbolls; or
- 4.) Add cryic adjective to existing subgroups of Argialbolls to form a dual name subgroup, as needed.



West Region Subcommittee Decisions on Soil Taxonomy Proposals

Cryic Albolls

- Preferred option (2) is to establish a great group of Cryalbolls and to add just a single subgroup of Typic Cryalbolls at this time due to limited extent of series
- Could also support option (1) to exclude cryic soils from Albolls and add albic subgroups to Cryaquolls and Argicryolls





Questions?