

# 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)

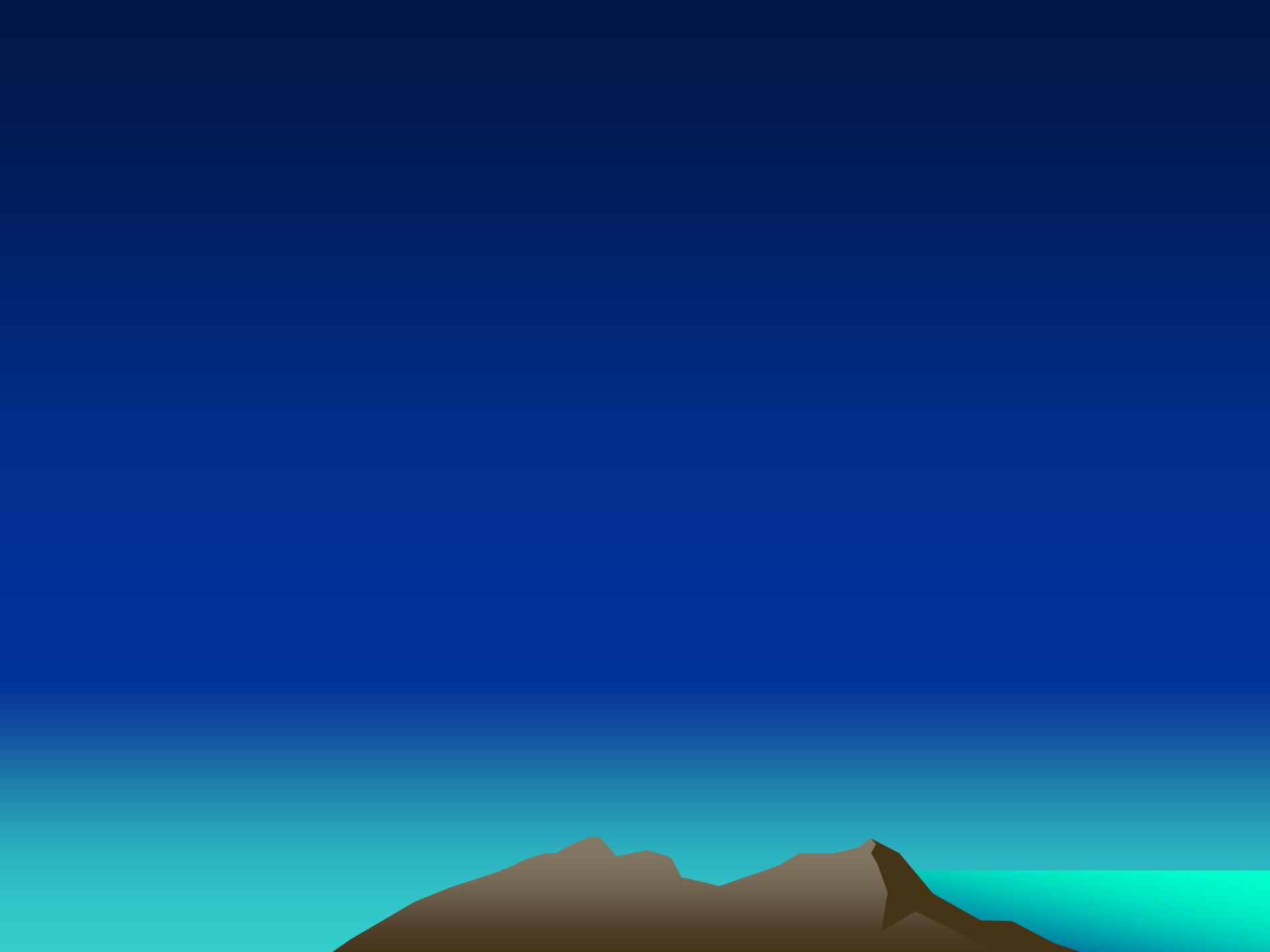
- A two part proposal to add additional humic great groups to the Inceptisols order and to change the definitions of the existing humic subgroups in Udepts, Ustepts, and Xerepts.



# 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





# 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.
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# 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?