

TECHNICAL NOTES

February 10, 2003

MO-1 Technical Note Number 19 (Revised)

Re: Official Series Descriptions - Textural Modifiers, Nomenclature

Ashy and Medial Textural Modifiers

On page 618-49 of the NSSH, the definition of the ashy, medial, and hydrous textural modifiers are listed. The use of these modifiers should be implemented for all new and revised series descriptions. The modifiers are also to be used in NASIS. The hydrous modifier criteria has not been observed or measured within MO-1 and should not be used unless there is data to support its use. All soil horizons that qualify as having andic soil properties or that meet Vitric (Vitrandic, Vitritorrandic) or Andic subgroup criteria or horizons that meet subgroup criteria but are too thin (<7 inches) should have an ashy or medial textural modifier. Examples are: ashy sandy loam, medial silt loam, very gravelly ashy loam, extremely paragravelly ashy loamy coarse sand.

Rock and Pararock Fragment Textural Modifiers

On page 618-48 and 49 of the NSSH, the use of rock and pararock fragments is discussed when determining the textural modifier; see item 2(v).

Nomenclature for Volcanic Ash Deposits

1. Recent volcanic ash deposits on the soil surface have a strong resemblance to E horizons. In the past, the "recent" ash deposits have been horizonated as either A, E or C horizons.
2. Absolute rules for horizonation cannot be provided but guidance on what to look for follows:
 - a. 1980 St. Helen's ash, horizonate as a C horizon.
 - b. If the boundary of the ash deposit is irregular and appears tongued or the material below the ash layer meets the requirements of an argillic or spodic horizon, then horizonate the ash deposit as an E horizon. Note that the reddish color of the spodic horizon should be the results of pedogenic processes and not the color of the buried soil. The reddish spodic horizons are typically thin and have an irregular boundary. Spodic horizons also typically develop in a moist environment.
 - c. If the boundary of the ash deposit is relatively smooth and a spodic or argillic horizon is absent directly below the deposit, then horizonate the ash deposit as A or C. If the deposit meets andic soil properties or has developed soil structure, horizonate the ash deposit as an A horizon. If structure is absent, horizonate the ash deposit as a C horizon.
 - d. Thin, discontinuous or mixed ash deposits can be described as a horizon note.
 - e. If the ash deposit is from a source unrelated to the soil beneath it,

and the ash has undergone sufficient change so as to "effect" the soil beneath it, then horizonate the soil beneath the ash deposit with a discontinuity. Most soils classified as Vitrandic, Vitritorrandic, or Andic intergrades based on not meeting the thickness requirement for Andisols or are an Andisol and have a contrasting particle-size class such as ashy over loamy will have a discontinuity. Soils that have developed in multiple age layers of ejects would not show a discontinuity since this is their mode of formation, similar to stratified alluvial soils.