

**Southern Cooperative Soil Survey Conference  
College Station  
July 12–15, 2010**

**Meeting of Standards and Taxonomy Committee**

**Co-chairs of the Committee**

Charles Love: Alabama State Soil Scientist and MO–15 Team Leader

Dr. Joey Shaw: Associate Professor, Auburn University

**Members of the Committee**

Roy Vick: MO–14 Team Leader

Doug Slabaugh: Tennessee State Soil Scientist

Scott Anderson: MO–15 Soil Data Quality Specialist

**Participants at the Meeting of July 15<sup>th</sup>**

Charles Love

Roy Vick

Doug Slabaugh

Scott Anderson

Norman Bliss

Travis Bushing

Jorge L. Lugo

Richard Reid

Travis Waiser

**Committee Charges**

- 1: Review the existing proposal for new taxonomic classifications and provide recommendations to NSSC for adoption in Soil Taxonomy.
- 2a: Identify changes needed to the NSSH, Field Guide for Describing and Sampling Soils, and Soil Survey Manual to accommodate present soil survey activities.
- 2b: Identify changes needed to the NSSH, Field Guide for Describing and Sampling Soils, and Soil Survey Manual to accommodate subaqueous soil survey activities.

## Charge 1

***Review the existing proposal for new taxonomic classifications and provide recommendations to NSSC for adoption in Soil Taxonomy.***

Two proposals for revisions to Soil Taxonomy were submitted to the committee for review.

### ***Proposal 1: Rhodic subgroups in Alfisols***

Proposed by Roy Vick, MO–14 team leader.

The Mid-Atlantic MLRA Office proposed revisions to the criteria for Rhodic subgroups in the Alfisols. The changes that were made to Ultisols in the 8th edition of the Keys to Soil Taxonomy are also needed for Alfisols. There are soils that have historically been considered Rhodic, at least in part, that fall outside the present criteria.

Research by MO–14 shows that no series in our region will inadvertently meet the criteria proposed for the Rhodic subgroup. Other MLRA regions would need to ensure that the series for which they are responsible are not improperly impacted by the proposed change. We will be circulating the proposal for discussion at the South Regional Cooperative Soil Survey Conference. All of the affected series are covered by MOs in the South Region.

**This proposal is a high priority for the South Region. The decision of the South Region Standards and Taxonomy Committee is to support and accept the proposal as written.**

Attachment 1 lists the soil series in Rhodic subgroups of the Alfisols and the MLRA offices that are responsible for the series. Attachment 2 shows the proposed changes in criteria that will meet our needs in the Mid-Atlantic region. Attachment 3 contains official series descriptions in which either the thickness and color of the type location is outside the requirements for classification as rhodic or the range in characteristics includes soils in Typic subgroups.

### **Attachment 1: Rhodic Alfisols**

Series	MO	State with Type Location	Soil Family
Coronaca	14	SC	Fine, kaolinitic, thermic Rhodic Paleudalfs
Cumberland	18	TN	Fine, mixed, semiactive, thermic Rhodic Paleudalfs
Ellijay	18	NC	Fine, ferruginous, mesic Rhodic Kanhapludalfs
Fayetteville	16	AR	Fine-loamy, mixed, active, thermic Rhodic Paleudalfs
Nacogdoches	16	TX	Fine, kaolinitic, thermic Rhodic Paleudalfs
Pontotoc	9	TX	Coarse-loamy, mixed, active, thermic Rhodic Paleustalfs
Spires	9	TX	Fine, mixed, active, thermic Rhodic Paleustalfs
Tadlock	15	AL	Fine, mixed, active, thermic Rhodic Paleustalfs
Tiff	16	MA	Clayey-skeletal, kaolinitic, mesic Rhodic Paleudalfs

## Attachment 2: Proposed Changes to Soil Taxonomy

JEEI. Other Kandiodalfs that have, in *all* subhorizons in the upper ~~100~~ 75 cm of the kandic horizon or throughout the entire kandic horizon if less than ~~100~~ 75 cm thick, more than 50 percent colors that have *all* of the following:

1. Hue of 2.5YR or redder; *and*
2. Value, moist, of 3 or less; *and*
3. Dry value no more than 1 unit higher than the moist value.

### Rhodic Kandiodalfs

JEPD. Other Kanhapludalfs that have, in *all* subhorizons in the upper ~~100~~ 50 cm of the kandic horizon or throughout the entire kandic horizon if less than ~~100~~ 50 cm thick, more than 50 percent colors that have *all* of the following:

1. Hue of 2.5YR or redder; *and*
2. Value, moist, of 3 or less; *and*
3. Dry value no more than 1 unit higher than the moist value.

### Rhodic Kanhapludalfs

JEGT. Other Paleudalfs that have, in *all* subhorizons in the upper ~~100~~ 75 cm of the argillic horizon or throughout the entire argillic horizon if less than ~~100~~ 75 cm thick, more than 50 percent colors that have *all* of the following:

1. Hue of 2.5YR or redder; *and*
2. Value, moist, of 3 or less; *and*
3. Dry value no more than 1 unit higher than the moist value.

### Rhodic Paleudalfs

JCDI. Other Kandiuustalfs that have, in *all* subhorizons in the upper ~~100~~ 75 cm of the kandic horizon or throughout the entire kandic horizon if less than ~~100~~ 75 cm thick, more than 50 percent colors that have *all* of the following:

1. Hue of 2.5YR or redder; *and*
2. Value, moist, of 3 or less; *and*
3. Dry value no more than 1 unit higher than the moist value.

### Rhodic Kandiuustalfs

JCEE. Other Kanhaplualstalfs that have, in *all* subhorizons in the upper ~~100~~ 50 cm of the kandic horizon or throughout the entire kandic horizon if less than ~~100~~ 50 cm thick, more than 50 percent colors that have *all* of the following:

1. Hue of 2.5YR or redder; *and*
2. Value, moist, of 3 or less; *and*
3. Dry value no more than 1 unit higher than the moist value.

#### Rhodic Kanhaplustalfs

JCFR. Other Paleustalfs that have, in *all* subhorizons in the upper ~~100~~ 75 cm of the argillic horizon or throughout the entire argillic horizon if less than ~~100~~ 75 cm thick, more than 50 percent colors that have *all* of the following:

1. Hue of 2.5YR or redder; *and*
2. Value, moist, of 3 or less; *and*
3. Dry value no more than 1 unit higher than the moist value.

#### Rhodic Paleustalfs

### Attachment 3: Official Series Descriptions

#### CORONACA SERIES

The Coronaca series consists of deep, well drained and moderately well drained, clayey soils that formed in material weathered mostly from hornblende, gabbro, or diorite of the Piedmont uplands. Slopes range from 2 to 15 percent.

TAXONOMIC CLASS: Fine, kaolinitic, thermic Rhodic Paleudalfs

TYPICAL PEDON: Coronaca sandy clay loam—cultivated

(Colors are for moist soil.)

Ap—0 to 6 inches; dark reddish brown (2.5YR 2/4) sandy clay loam; weak fine granular structure; friable; sticky; many fine roots; few fine dark colored concretions; 1 percent pebbles of quartz; neutral; abrupt smooth boundary. (4 to 8 inches thick)

Bt1—6 to 25 inches; dusky red (10YR 3/3) clay; moderate medium subangular blocky structure; firm; very sticky; many prominent clay films on faces of peds; common fine roots; 1 percent pebbles of quartz; few fine dark colored concretions; few fine flakes of mica; slightly acid; gradual smooth boundary. (12 to 25 inches thick)

*Bt2—25 to 44 inches; dark red (10R 3/6) clay; strong medium subangular blocky structure; firm; very sticky; many prominent clay films on faces of peds; 1 percent pebbles of quartz; few fine dark colored concretions; few fine flakes of mica; moderately acid; gradual smooth boundary. (10 to 24 inches thick)*

Bt3—44 to 62 inches; red (10R 4/6) clay; common medium prominent yellowish brown (10YR 5/6) mottles; strong fine subangular blocky structure; firm; very sticky; many prominent clay films on faces of peds; 1 percent pebbles of quartz; few fine dark colored concretions; common fine flakes of mica; moderately acid; clear smooth boundary. (10 to 20 inches thick)

Bt4—62 to 81 inches; red (2.5YR 4/6) clay; many fine distinct brownish yellow (10YR 5/6) and few fine distinct very pale brown (10YR 7/3) mottles; weak fine subangular blocky structure; firm; sticky; common faint clay films on faces of some peds; 1 percent pebbles of quartz; few fine flakes of mica; 1 percent feldspar crystals; moderately acid; clear wavy boundary. (10 to 25 inches thick)

BC—81 to 97 inches; mottled red (2.5YR 4/6), white (10YR 8/2), light red (2.5YR 6/6), and reddish yellow (5YR 6/6) clay loam; weak fine subangular blocky structure; firm; slightly sticky; few faint clay films on faces of peds; few fine flakes of mica; 4 percent feldspar crystal; moderately acid.

TYPE LOCATION: Greenwood County, South Carolina; 5 miles north of Greenwood, 3 miles southeast of Cokesbury on Gary road, 30 feet east of Gary Road.

RANGE IN CHARACTERISTICS: Thickness of the solum is 60 to more than 99 inches. The soil is moderately acid to neutral throughout the profile. Dark colored concretions and flakes of mica are in the A horizon of some pedons and are in the B horizon of most pedons. Content of coarse fragments ranges to as much as 5 percent, by volume, in the upper part of the solum and to as much as 10 percent in the lower part of the solum.

The A horizon has hue of 10R to 5YR, value of 2 or 3, and chroma of 4 or 6. It is clay loam, sandy clay loam, or loam.

The upper part of the Bt horizon has hue of 10R or 2.5YR, value of 3, and chroma of 3 to 6. The lower part of the Bt horizon, below the series control section, has hue of 10R or 2.5YR, value of 3 or 4, and chroma of 6 or 8. Mottles in shades of red, brown, or yellow are in the lower part of the B2t horizon of most pedons. The Bt horizon is clay. Some pedons have thin horizons of clay loam. The BC horizon has hue of 10R or 2.5YR, value of 3 to 5, and chroma of 6 or 8, commonly with mottles in shades of red, brown, or yellow. It is clay loam, silty clay loam, or clay.

## **CUMBERLAND SERIES**

The Cumberland series is a member of the fine, mixed, thermic family of Rhodic Paleudalfs. These soils have dark reddish brown silt loam A horizons and dark red clay B horizons.

TAXONOMIC CLASS: Fine, mixed, semiactive thermic Rhodic Paleudalfs

TYPICAL PEDON: Cumberland silt loam—pasture

(Colors are for moist soil unless otherwise stated.)

Ap—0 to 8 inches; dark reddish brown (5YR 3/4) silt loam; moderate medium granular structure; friable; many fine roots and pores; few fine black and dark brown concretions; medium acid; abrupt smooth boundary. (5 to 10 inches thick)

B1—8 to 14 inches; dark reddish brown (2.5YR 3/4) silty clay loam; moderate medium subangular blocky structure; friable; common fine roots and pores; thin patchy clay films; common fine dark concretions; medium acid; clear smooth boundary. (4 to 9 inches thick)

B21t—14 to 27 inches; dark red (2.5YR 3/6) clay; moderate medium subangular blocky structure; firm; common fine roots; thick patchy clay films; common fine dark concretions; strongly acid; diffuse smooth boundary. (12 to 20 inches thick)

B22t—27 to 40 inches; dark red (2.5YR 3/6) clay; moderate medium and fine subangular blocky structure; firm; few fine roots and pores; thin continuous clay films; many fine dark concretions; strongly acid; gradual smooth boundary. (12 to 20 inches thick)

B23t—40 to 48 inches; dark red (2.5YR 3/6) clay; moderate medium angular and subangular blocky structure; firm; few fine roots and pores; thin continuous clay films; many fine dark concretions; strongly acid; gradual smooth boundary. (6 to 12 inches thick)

NOTE: If B1 (BA) is upper part of argillic horizon, this pedon is still borderline.

B24t—48 to 64 inches; mottled red (2.5YR 4/6) and strong brown (7.5YR 5/6) clay; weak coarse angular blocky structure; very firm and very plastic; few fine roots and pores; thin continuous clay films; few fine fragments of chert; strongly acid.

TYPE LOCATION: Rutherford County, Tennessee; 3 miles north of Murfreesboro, 1 mile north of Murfreesboro Airport on U.S. Highway 231, then east on gravel road (forming north boundary of Alsup farm) for 1/4 mile, then 100 feet south of gravel road.

RANGE IN CHARACTERISTICS: The thickness of the solum and depth to bedrock exceed 60 inches. Amount of angular fragments of chert or of rounded gravel ranges from none to about 10 percent or rarely 15 percent, by volume, in each horizon. Dark colored concretions range from few to common in each horizon. The soil is strongly acid or medium, except the surface layer where limed and the layer in the lower part of the solum, which ranges through slightly acid.

The A horizon is dark reddish brown (5YR 3/2, 3/3, 3/4; 2.5YR 3/4, 2/4) silt loam or loam. It ranges to dark red (2.5YR 3/6; 10YR 3/6) silty clay loam or clay loam where severely eroded.

The B1 horizon is dark reddish brown (2.5YR 3/4), dusky red (10YR 3/3, 3/4), or dark red (2.5YR 3/6; 10YR 3/6) clay loam or silty clay loam. The B21t through B23t horizons are dark red (2.5YR 3/6; 10R 3/6), dark reddish brown (2.5YR 3/4), or dusky red (10R 3/3, 3/4) clay, clay loam, or silty clay loam marginal to clay. The dark red, dusky red, or dark reddish brown colors extend to depths greater than 40 inches. The B24t horizon is firm or very firm clay or clay loam that is variable in color. In addition to the colors given for the B21t to B23t horizons, it includes red (2.5YR 4/6, 4/8; 10R 4/6, 4/8) and yellowish red (5YR 4/6, 4/8, 5/6, 5/8) or mottled brown, yellow, and red. Average clay content of the upper 20 inches of the B horizon ranges from about 35 and 60 percent. Clay content increases as depth increases.

## ELLIJAY SERIES

The Ellijay series consists of very deep, well drained, moderately permeable soils on intermountain ridges and side slopes in the Southern Appalachian Mountains. These soils formed mainly in materials weathered from ultra mafic crystalline rocks that contain such minerals as olivine, serpentine, and talc. Near the type location, the mean annual temperature is about 56 degrees F and the mean annual precipitation is about 55 inches. Slope ranges from 2 to 70 percent.

TAXONOMIC CLASS: Fine, ferruginous, mesic Rhodic Kanhapludalfs

TYPICAL PEDON: Ellijay silty clay loam on a 12 percent east-facing side slope at an elevation of 2,128 feet—forested

(Colors are for moist soil unless otherwise stated.)

A—0 to 4 inches; dusky red (10R 3/4) silty clay loam, red (10R4/6) dry; moderate fine granular structure; very friable; many fine and coarse roots; 5 percent gravel, cobbles, and stones; strongly acid; gradual wavy boundary. (3 to 8 inches thick)

Bt1—4 to 15 inches; dark red (10R 3/6) clay; moderate medium subangular blocky structure; friable; sticky, slightly plastic; many fine and coarse roots; 5 percent gravel, cobbles, and stones in a line at the base of this horizon; strongly acid; gradual wavy boundary.

Bt2—15 to 34 inches; dark red (10R 3/6) clay; moderate medium subangular blocky structure; friable; sticky, slightly plastic; common fine and coarse roots; 5

percent gravel, cobbles, and stones; medium acid; gradual wavy boundary.  
(Combined thickness of the Bt horizon is 15 to 45 inches.)

NOTE: If BC is still part of the argillic horizon, soils with thin Bt horizons can have value of 4 to 6 within the upper meter of the argillic horizon.

BC—34 to 52 inches; dark red (2.5YR 3/6) loam; weak medium subangular blocky structure; very friable; few fine and medium roots; 5 percent gravel, cobbles, and stones; medium acid; clear wavy boundary. (0 to 25 inches thick)

C1—52 to 59 inches; mottled yellowish red (5YR 5/6), reddish yellow (7.5YR 6/8), and brownish yellow (10YR 6/6) saprolite that has a clay loam texture; massive; very friable; few fine roots; 5 percent gravel, cobbles, and stones; few black concretions; slightly acid; gradual wavy boundary.

C2—59 to 70 inches; mottled strong brown (7.5YR 5/8), yellowish red (5YR 5/8), and very pale brown (10YR 7/4) saprolite that has a loam texture; massive; very friable; 5 percent gravel, cobbles, and stones; few black concretions; slightly acid.

TYPE LOCATION: Jackson County, North Carolina; 3.5 miles southeast of Sylva on NC 107; 1.9 miles southwest on NC 116; 0.2 mile southeast of Webster on State Road 1346; 50 feet west of road in woods.

RANGE IN CHARACTERISTICS: Solum thickness ranges from 30 to 60 inches. Depth to bedrock is greater than 60 inches. Reaction in the A horizon ranges from very strongly acid to medium acid, unless limed.

The Bt, BC, and C horizons range from strongly acid to neutral. There is a substantial imbalance between exchangeable calcium and magnesium in the Bt, BC, and C horizons, unless it has been corrected by liming. Content of mica flakes ranges from none to common. Content of rock fragments ranges from 0 to 35 percent in the A horizon and from 0 to 15 percent in the lower horizons. Rock fragments are dominantly gravel, but cobbles and stones are in some pedons.

The A horizon has hue of 10R to 7.5YR, value of 3, and chroma of 2 to 6. It is loam, fine sandy loam, silty clay loam, or clay loam in the fine- earth fraction.

Thin AB or BA horizons, where present, have hue of 10R to 5YR, value of 3, and chroma of 4 or 6. They are silty clay loam or clay loam.

The Bt horizon has hue of 10R or 2.5YR, value of 3, and chroma of 4 or 6. The dry color value is 4. It is typically clay, but may include silty clay loam or clay loam.

The BC or CB horizons, where present, have hue of 10R to 5YR, value of 3 to 6, and chroma of 4 to 8. They are loam, clay loam, or silty clay loam.

The C horizon is multicolored or mottled in shades of red, yellow, or brown. It is saprolite that has textures of loam, clay loam, fine sandy loam, or sandy loam.

## **NACOGDOCHES SERIES**

The Nacogdoches series consists of deep, well drained, moderately slowly permeable soils that formed in thick marine sediments high in glauconite. These soils are on gently to strongly sloping uplands. Slope is dominantly less than 8 percent but ranges up to 15 percent.

TAXONOMIC CLASS: Fine, kaolinitic, thermic Rhodic Paleudalfs

TYPICAL PEDON: Nacogdoches fine sandy loam, on a smooth 3 percent slope, in pasture

(Colors are for moist soil unless otherwise stated.)

Ap—0 to 6 inches; dark reddish brown (5YR 3/4) fine sandy loam, reddish brown (5YR 4/4) dry; very weak subangular blocky structure; slightly hard, very friable; many fine roots; common fine angular fragments of ironstone; medium acid; gradual smooth boundary. (4 to 10 inches thick)

B21t—6 to 30 inches; dark red (10R 3/6) clay, same color dry; moderate medium and fine angular and subangular blocky structure; very hard, friable; common fine roots; common fine pores; thin continuous clay films; common fine angular fragments of ironstone; strongly acid; diffuse wavy boundary. (15 to 40 inches thick)

B22t—30 to 70 inches; dark red (2.5YR 3/6) clay, red (2.5YR 4/6) dry; weak and moderate medium subangular blocky structure; very hard, friable; few fine roots; common fine and very fine pores; common thin discontinuous clay films; few fine angular fragments of ironstone; 20 to 30 percent, by volume, of yellowish brown partially weathered brittle fragments of glauconitic material less than 1 inch across the long axis; very strongly acid; diffuse smooth boundary. (20 to 60 inches thick)

B3—70 to 100 inches; stratified red (2.5YR 4/6) clay and partially weathered olive yellow (5Y 6/6) glauconitic material; weak medium subangular blocky structure and massive; very hard, friable; patchy clay films and few thick clay or iron flows in clayey part; glauconitic material is brittle and contains shell fossils; strongly acid.

TYPE LOCATION: Nacogdoches County, Texas; about 20 miles east of Nacogdoches; from the intersection of Farm Road 95 and State Highway 21 in Chireno; 1.4 miles east on State Highway 21, and 400 feet north; 350 feet west of fence.

RANGE IN CHARACTERISTICS: Solum thickness is 60 to more than 100 inches. The base saturation ranges from 35 to 60 percent at 72 inches below the soil surface.

The A horizon is very dusky red (10YR 2/2; 2.5YR 2/2), dusky red (10R 3/2, 3/3, 3/4; 2.5 YR 3/2), dark red (10R 3/6; 2.5YR 3/6), or dark reddish brown (2.5YR 3/4; 5YR 2/2, 3/2, 3/3, 3/4). Where chromas are 3 or less, the horizon is less than 6 inches thick. It is fine sandy loam, sandy clay loam, or clay loam or gravelly phases of these textures. The A horizon ranges from strongly through slightly acid.

The B2t horizon is dark red (10R 3/6; 2.5YR 3/6) in the upper 40 inches. Color below this depth and including the B3 horizon is dark red (10R 3/6; 2.5YR 3/6) or red (10R 4/6, 4/8; 2.5YR 4/6, 4/8). The B horizon has a clay content of 40 to 60 percent and contains more than 25 percent sand. The clay fraction is dominated by tabular halloysite. Coarse fragments, dominantly ironstone, range from few to about 15 percent, by volume, throughout the Bt horizon. The Bt horizon is very strongly acid or strongly acid.

The C horizon, where encountered within 100 inches, is weathered glauconitic sandstone and greensand materials. Some pedons contain marine shells. The C horizon ranges from strongly acid through mildly alkaline.

## PONTOTOC SERIES

The Pontotoc series consists of very deep, well drained, moderately permeable soils that formed in thick beds of red sandstone. These soils are on nearly level to moderately sloping uplands. Slopes range from 0 to 8 percent.

TAXONOMIC CLASS: Coarse-loamy, mixed, active, thermic Rhodic Paleustalfs

TYPICAL PEDON: Pontotoc fine sandy loam—cultivated

(Colors are for dry soil unless otherwise stated.)

Ap—0 to 5 inches; dark reddish brown (2.5YR 3/4) fine sandy loam, dark reddish brown (2.5YR 3/4) moist; weak fine granular structure; slightly hard, very friable; slightly acid; abrupt smooth boundary. (4 to 6 inches thick)

A—5 to 10 inches; dark reddish brown (2.5YR 3/4) fine sandy loam, dark reddish brown (2.5YR 3/4) moist; weak fine granular and subangular blocky structure; slightly hard, very friable; few roots; common fine and medium pores; slightly acid; diffuse smooth boundary. (3 to 8 inches thick)

Bt1—10 to 21 inches; dark reddish brown (2.5YR 3/4) fine sandy loam, dark reddish brown (2.5YR 3/4) moist; weak fine subangular blocky structure; slightly

hard, very friable; few roots; few fine and medium pores; few patchy clay films; slightly acid; diffuse smooth boundary. (5 to 14 inches thick)

Bt2—21 to 33 inches; dark red (2.5YR 3/6) fine sandy loam, dark red (2.5YR 3/6) moist; weak fine subangular blocky structure; hard, friable; few roots; common fine and medium pores; clay films in pores; slightly acid; diffuse smooth boundary. (5 to 14 inches thick)

Bt3—33 to 67 inches; dark red (2.5YR 3/6) sandy clay loam, dark red (2.5YR 3/6) moist; weak fine subangular blocky structure; hard, friable; few fine pores; patchy clay films in pores; few roots; slightly acid; clear irregular boundary. (18 to 45 inches thick)

Cr—67 to 70 inches; red weakly cemented sandstone bedrock.

TYPE LOCATION: Mason County, Texas. About 1 mile west of Mason, Texas. From the courthouse in Mason, 0.8 mile north on U.S. Highway 87, 0.6 mile west and northwest on county road, 0.4 mile west on private road to field boundary, 350 yards west in cultivated field.

RANGE IN CHARACTERISTICS: Solum thickness is 60 to 80 inches over sandstone. Sandstone cobbles and pebbles range from 0 to about 10 percent throughout. The reaction is slightly acid or neutral. The A horizon has hue of 2.5YR or 5YR, value of 3 or 4, and chroma of 3 to 6. Clay content is 8 to 15 percent.

The Bt1 horizon has a hue of 10R or 2.5YR, value of 3 or 4, and chroma of 4 through 6. Texture is fine sandy loam with a clay content of 12 to 18 percent.

The lower Bt horizons have hue of 10R or 2.5YR, value of 3 or 4, and chroma of 6. Texture is fine sandy loam or sandy clay loam with a clay content of 18 to 22 percent.

The Cr horizon is weakly to strongly cemented reddish sandstone bedrock with a hardness of 2 to 3 on Mohs scale. The sandstone usually contains some glauconite.

## **TADLOCK SERIES**

The Tadlock series consists of deep, well drained, moderately permeable soils that formed in clayey marine sediments. They are on broad upland ridges. Slope ranges from 0 to 10 percent.

TAXONOMIC CLASS: Fine, mixed, subactive, thermic Rhodic Paleudalfs

TYPICAL PEDON: Tadlock fine sandy loam on a smooth, convex 1 percent slope, in pines

(Colors are for moist soil unless otherwise stated.)

Ap—0 to 5 inches; dark reddish brown (5YR 3/4) fine sandy loam; weak medium granular structure; very friable; many fine roots; medium acid; abrupt wavy boundary. (4 to 8 inches thick)

B21t—5 to 23 inches; dark red (2.5YR 3/6) clay; moderate fine subangular blocky structure; friable; few fine roots; thin clay films on faces of most peds; few black coatings on ped faces; few clean sand grains; medium acid; gradual wavy boundary. (16 to 60 inches thick)

B22t—23 to 63 inches; dark red (2.5YR 3/6) clay; moderate fine subangular blocky structure; friable; few fine roots; thin clay films on faces of most peds; few clean sand grains; medium acid; gradual wavy boundary. (19 to 50 inches thick)

B23t—63 to 72 inches; dark red (2.5YR 3/6) and red (2.5YR 4/6) clay; moderate fine subangular blocky structure; friable; thin clay films on faces of most peds; few clean sand grains; slightly acid.

TYPE LOCATION: Dallas County, Alabama; 100 feet east of Alabama Highway 22 and 3.9 miles north of Selma City limits and Northside Baptist Church.  
NE1/4NE1/4NW1/4 sec. 32, T. 18 N., R. 11 E.

RANGE IN CHARACTERISTICS: Solum thickness exceeds 72 inches. Reaction is slightly acid to very strongly acid. Many pedons become more acid with depth. Few small quartz pebbles occur throughout some pedons.

The Ap horizon has hue of 2.5YR to 7.5YR, value of 3, and chroma 2 through 4. It is fine sandy loam or loam.

The B2t horizon has hue of 10R to 5YR, value of 3, and chroma 4 or 6. Below 40 inches, some pedons have hue of 2.5YR or 5YR, value of 4, and chroma of 6 or 8. It is clay or clay loam. The upper 20 inches of the argillic has more than 30 percent sand and less than 30 percent silt. The clay content gradually decreases with depth. Some pedons have mottles in shades of brown or yellow in the lower B2t horizon. Many pedons have some dark coatings of manganese and a few iron or manganese concretions in the B2t horizon.

***Proposal #2: A master V horizon for the designation of near-surface horizons with vesicular porosity***

Prepared by Judith K. Turk, University of California, Riverside; Carrie-Ann Houdeshell, USDA–NRCS, Victorville; and Robert C. Graham, University of California, Riverside.

The West Region proposed the addition of a new genetic horizon to NCSS terminology (Chapter 3 of Soil Survey Manual; Chapter 18 of Keys to Soil Taxonomy, 2006). The new terminology would specifically indicate the presence of a vesicular horizon. The choice of nomenclature for the proposed horizon requires careful consideration of how the vesicular horizon fits into the existing range of master horizons and suffix designations. The commonly used “Av horizon” is not a possibility because it conflicts with the usage of the subscript “v” to indicate plinthite. Although some modification of the suffix symbol (e.g., ve or vv) would provide a quick fix, we believe that given the distinct genetic origin of the vesicular horizon, the most appropriate designation is a master V horizon. This proposal would impact west Texas soil correlation activities.

**This proposal is a high priority for the South Region. The decision of the South Region Standards and Taxonomy Committee is to not accept the proposal as written. Instead, the committee recommends consideration of “ve” as the suffix symbol for vesicular horizons.**

## **Charge 2a**

***Identify changes needed to the NSSH, Field Guide for Describing and Sampling Soils, and Soil Survey Manual to accommodate present soil survey activities.***

### ***Proposal 1: Miscellaneous Areas (Exhibit 627-1)***

Kit Paris, Mark Clark, and Chad McGrath requested discussion of this issue.

The revised exhibit has one new miscellaneous area, “Mined land.” Seven miscellaneous areas were deleted from the list.

#### **Addition**

Mined land.—Added at the request of Kit Paris as a new type of miscellaneous area to encompass many mined areas that do not fit the concepts of pits and dumps. Use of this miscellaneous area makes “Uranium mined land” (deleted below) a phase of Mined land.

#### **Deletions**

Blownout land.—There are about 53,000 acres of this miscellaneous area. It is used mainly in older soil surveys in Montana, the Dakotas, Hawaii, and New Mexico. Areas currently correlated as Blownout land could be recorrelated to soil components during map unit update projects.

Cirque land.—There are about 44,000 acres of this miscellaneous area. It is used mainly in Wyoming and Colorado. Areas currently correlated as Cirque land components could be recorrelated to either Rock outcrop or Rubble land.

Gullied land.—There are about 1,256,171 acres of this miscellaneous area. It is used mainly in southern and western states, such as Mississippi and California, respectively, but it is also used in eastern and midwestern states. A general recommendation for recorrelating this miscellaneous area is difficult to make because the area has been mapped broadly, even within individual states.

Gypsum land.—There are about 417,031 acres of this miscellaneous area. It is used mainly in New Mexico. About one-third of the total acreage occurs in the old White Sands Missile Range soil survey area, which is currently being updated for the DOD. Most areas currently correlated as Gypsum land components could be recorrelated to soils. Some Gypsum land components on steep slopes may be recorrelated to Rock outcrop.

Scoria land.—There are about 1,655 acres of this miscellaneous area. It is used only in North Dakota. Areas currently correlated as Scoria land could be recorrelated to soils and/or Rock outcrop components.

Slickspots.—There are about 536,352 acres of this miscellaneous area (16,646 acres spelled as two words; 519,706 acres spelled as one word). It is used mainly in North Dakota, Wyoming, Colorado, and Montana. Areas currently correlated as Slickspots could be recorrelated to sodic or saline-sodic soils.

Uranium mined land.—There are about 3,934 acres of this miscellaneous area. It is used only in the soil survey of McKinley County Area, New Mexico (NM692). There is only a single map unit, which is “265—Uranium mined lands.” Areas currently correlated as Uranium mined land could be recorrelated as a component of Mined land with uranium as the local phase term.

This proposal is a high priority for the South Region because of the Mined land and Gullied land areas. The decision of the South Region Standards and Taxonomy Committee is to accept the proposal with some revisions. The recommendations of the committee are:

- Gullied land should remain as a miscellaneous area to meet the correlation activities in the South Region.
- The definitions for Gullied land and Mined land need further clarification for correlation activities. Also, a suggested minimum data set that is tailored to the type of miscellaneous area should be developed.
- Establish a subcommittee consisting of Senior Regional Soil Scientists from each MO to review and clarify the definitions of miscellaneous areas in the National Soil Survey Handbook (Exhibit 627–7).

## **Charge 2b**

*Identify needed changes to the NSSH, Field Guide for Describing and Sampling Soils, and Soil Survey Manual to accommodate subaqueous soil survey activities.*

### ***Proposal 2: Subaqueous Soil Survey Activities***

The Southern Cooperative Soil Survey Steering Committee established a Southern Region Subaqueous Soils Subcommittee. This subcommittee will work with NSSC and other regions to establish procedures and standards for the South Region. This decision was presented and supported at the 2008 South Cooperative Soil Survey Conference.

**This proposal is a high priority for the South Region. The South Region Standards and Taxonomy Committee recommends that the National Standard Committee continues to work on revising the NSSH, Field Guide for Describing, and Sampling Soil and Soil Survey Manual to accommodate subaqueous soil survey activities. Restoration and research efforts are needed along the Gulf Coast. These efforts will apply to other coastal areas. We also need to establish a definition for freshwater subaqueous soils. Please refer to the report of the 2010 Southern Subaqueous Committee for more details.**