USDA icon **Natural Resources Conservation Service**

Major Land Resource Area 085B
Arbuckle Uplift

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Ecological site keys

Arbuckle Uplift and Arbuckle Mountains

I. Soils forming in residuum, slope alluvium, colluvium, or Pleistocene-age alluvium

A. Soils forming in parent material derived mostly from limestone, dolostone, or limestone conglomerate

1 Slope gradient is greater than 20 percent and soil is shallow to bedrock ... R085BY026OK – Edgerock 38-42 PZ

2 Slope gradient is less than 20 percent

i. Depth to bedrock is less than 50 cm (shallow)

a. Soil has an argillic horizon ... R085BY056OK – Loamy Upland 38-42 PZ

b. Soil does not have an argillic horizon

1) Rock fragment content is less than 20 percent by volume ... R085BY098OK – Very Shallow 38-42 PZ

2) Rock fragment content is greater than 20 percent by volume

a) Bedrock with greater than 20 degrees of dip and site is physiographically located in Arbuckle Mountains ... R085BY026OK – Edgerock 38-42 PZ

b) Limestone conglomerate bedrock with less than 20 degrees of dip ... R085BY083OK – Shallow Upland 38-42 PZ

ii. Depth to bedrock is greater than 50 cm ... R085BY056OK – Loamy Upland 38-42 PZ

B. Soils forming in parent material derived mostly from granite, rhyolite, sandstone, conglomerate (noncalcareous), or shale

1 Depth to bedrock is less than 50 cm (shallow)

i. Ochric epipedon (light colored surface horizon)

a. Rock fragment content is less than 20 percent by volume; lithic contact with tilted sandstone ... R085BY083OK – Shallow Upland 38-42 PZ

b. Rock fragment content is greater than 20 percent by volume; lithic contact with indurated Missippian-age sandstone ... R085BY098OK – Very Shallow 38-42 PZ

ii. Mollic epipedon (dark colored surface horizon)

a. Shallow to tilted rhyolite bedrock ... R085BY028OK – Rhyolite Hills 38-42 PZ

b. Shallow to tilted platy shale and siltstone ... R085BY088OK – Shallow Savannah 38-42 PZ

2 Depth to bedrock is greater than 50 cm

i. Loamy surface texture

a. Less than 100 cm to bedrock

1) **Rock or pararock fragment content is greater than 20 percent by volume ...** R085BY076OK – Savannah 38-42 PZ

2) **Rock or pararock fragment content is less than 20 percent by volume**

a) **Parent material is red shale with limestone cobbles ...** R085BY083OK – Shallow Upland 38-42 PZ

b) **Parent material is shale or sandstone without limestone cobbles**

(1) **Subsoil is clayey with slickensides; Pennsylvanian shale and sandstone bedrock ...** R085BY056OK – Loamy Upland 38-42 PZ

(2) **Subsoil is loamy; tilted indurated sandstone bedrock ...** R085BY076OK – Savannah 38-42 PZ

b. Greater than 100 cm to bedrock

1) **Underlain by granite bedrock**

a) **Mollic epipedon; loamy argillic horizon ...** R085BY056OK – Loamy Upland 38-42 PZ

b) **Ochric epipedon; clayey argillic horizon ...** R085BY010OK – Claypan 38-42 PZ

2) **Not underlain by granite bedrock**

a) **Mollic epipedon (dark colored surface horizon)**

(1) **Rock fragment content greater than 15 percent by volume in the surface horizon ...** R085BY076OK – Savannah 38-42 PZ

(2) **Rock fragment content less than 15 percent by volume in surface horizon**

(a) **Red shale (hue of 5YR or redder) within 200 cm ...** R085BY010OK – Claypan 38-42 PZ

(b) **Lower solum has yellow colors (hue of 7.5YR or yellower) ...** R085BY056OK – Loamy Upland 38-42 PZ

b) **Ochric epipedon (light colored surface horizon)**

(1) **Parent material is colluvium ...** R085BY076OK – Savannah 38-42 PZ

(2) **Parent material is residuum, slope alluvium, or alluvium**

(a) **Subsoil has slickensides and gleyed colors within 20 cm ...** R085BY010OK – Claypan 38-42 PZ

(b) **Subsoil does not slickensides or gleyed colors within 20 cm ...** R085BY076OK – Savannah 38-42 PZ

ii. **Clayey surface texture with slickensides in subsoil ...** R085BY002OK – Clay Upland 38-42 PZ

II. Soils forming in Holocene and late-Pleistocene-age alluvium on a flood plain, flood-plain step, or proximal stream terrace.

A. Landform is a flood plain or flood-plain step with active channel cut and fill.

1 Surface horizon is sandy ... R080AY068OK

2 Surface horizon is loamy or clayey

i. **Subsoil is loamy ...** R085BY050OK – Loamy Bottomland 38-42 PZ

ii. **Subsoil is clayey ... R080AY045OK**

B. Landform is a stream terrace

1 Mollic epipedon ... R085BY056OK – Loamy Upland 38-42 PZ

2 Ochric epipedon

i. Sandy surface greater than 100 cm ... R084AY018OK

ii. Sandy surface less then 100 cm ... R085BY076OK – Savannah 38-42 PZ