Major Land Resource Area 085B
Arbuckle Uplift

Accessed: 12/22/2025

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