

**073CS—Clime-Sogn complex, 5 to 20 percent slopes****Map Unit Composition**

Clime: 60 percent  
 Sogn: 20 percent  
 Minor components: 20 percent

**Component Descriptions****Clime**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Ridge on upland  
*Hillslope position:* Backslope  
*Parent material:* Silty and clayey residuum weathered from calcareous shale  
*Slope:* 5 to 20 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* Low (About 4.4 inches)  
*Shrink-swell potential:* High (About 7.7 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very high  
*Ecological site:* Limy Upland (pe30-36)  
*Land capability (nonirrigated):* 6e

*Typical Profile:*

H1—0 to 11 inches; silty clay  
 H2—11 to 23 inches; silty clay  
 H3—23 to 33 inches; silty clay  
 Cr—33 to 37 inches; unweathered bedrock

**Sogn**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Ridge on upland  
*Hillslope position:* Backslope  
*Parent material:* Loamy residuum weathered from limestone  
*Slope:* 5 to 20 percent  
*Depth to restrictive feature:* 4 to 20 inches to bedrock (lithic)  
*Drainage class:* Somewhat excessively drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* Very low (About 1.4 inches)  
*Shrink-swell potential:* Moderate (About 4.2 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium

*Ecological site:* Shallow Limy (pe30-36)  
*Land capability (nonirrigated):* 7s

*Typical Profile:*

H1—0 to 7 inches; silty clay loam  
 R—7 to 11 inches; unweathered bedrock

**Minor Components****Dwight**

*Composition:* About 5 percent  
*Geomorphic Position:* divide on hillslope on upland  
*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* 40 to 60 inches to bedrock (lithic)  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Pan (pe30-36)

**Labette**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 1 to 4 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe30-36)

**Rock outcrop**

*Composition:* About 5 percent

**Martin**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 4 to 7 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Loamy Upland (pe30-36)

**125BF—Bates-Collinsville complex, 1 to 4 percent slopes****Map Unit Composition**

Bates: 50 percent  
 Collinsville: 40 percent  
 Minor components: 10 percent

**Component Descriptions****Bates**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Ridge on upland  
*Hillslope position:* Summit  
*Parent material:* Sandy and silty residuum weathered from sandstone, unspecified over sandy and silty residuum weathered from sandstone-shale  
*Slope:* 1 to 4 percent

*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* Low (About 5.4 inches)  
*Shrink-swell potential:* Moderate (About 3.0 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Loamy Upland (pe35-42)  
*Land capability (nonirrigated):* 4e

*Typical Profile:*

H1—0 to 9 inches; loam  
 H2—9 to 15 inches; loam  
 H3—15 to 31 inches; clay loam  
 Cr—31 to 35 inches; weathered bedrock

**Collinsville**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Ridge on upland  
*Hillslope position:* Backslope  
*Parent material:* Sandstone residuum  
*Slope:* 1 to 4 percent  
*Depth to restrictive feature:* 4 to 20 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately rapid (About 2.00 in/hr)  
*Available water capacity:* Very low (About 2.1 inches)  
*Shrink-swell potential:* Low (About 1.6 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very low  
*Ecological site:* Shallow Sandstone (pe35-42)  
*Land capability (nonirrigated):* 6e

*Typical Profile:*

H1—0 to 11 inches; fine sandy loam  
 H2—11 to 17 inches; fine sandy loam  
 R—17 to 21 inches; unweathered bedrock

**Minor Components**

**Eram**

*Composition:* About 5 percent  
*Geomorphic Position:* ridge on upland  
*Slope:* 1 to 4 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Upland (pe35-42)

**Talihina**

*Composition:* About 5 percent

*Geomorphic Position:* upland ridge  
*Slope:* 6 to 20 percent  
*Depth to restrictive feature:* 10 to 20 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Ecological site:* Clay Upland (pe35-42)

**125BG—Bates-Collinsville complex, 4 to 20 percent slopes**

**Map Unit Composition**

Bates: 45 percent  
 Collinsville: 40 percent  
 Minor components: 15 percent

**Component Descriptions**

**Bates**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Ridge on upland  
*Hillslope position:* Summit  
*Parent material:* Sandy and silty residuum weathered from sandstone, unspecified over sandy and silty residuum weathered from sandstone-shale  
*Slope:* 4 to 8 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* Low (About 6.0 inches)  
*Shrink-swell potential:* Low (About 2.9 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Loamy Upland (pe35-42)  
*Land capability (nonirrigated):* 6e

*Typical Profile:*

H1—0 to 15 inches; loam  
 H2—15 to 27 inches; loam  
 H3—27 to 31 inches; clay loam  
 Cr—31 to 35 inches; weathered bedrock

**Collinsville**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Ridge on upland  
*Hillslope position:* Backslope  
*Parent material:* Sandstone residuum  
*Slope:* 4 to 20 percent

*Depth to restrictive feature:* 4 to 20 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately rapid (About 2.00 in/hr)  
*Available water capacity:* Very low (About 2.1 inches)  
*Shrink-swell potential:* Low (About 1.6 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Shallow Sandstone (pe35-42)  
*Land capability (nonirrigated):* 7s

*Typical Profile:*

H1—0 to 11 inches; fine sandy loam  
 H2—11 to 17 inches; fine sandy loam  
 R—17 to 21 inches; unweathered bedrock

**Minor Components**

**Dennis**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 4 to 7 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Loamy Upland (pe35-42)

**Eram**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 4 to 7 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Upland (pe35-42)

**Talihina**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 6 to 20 percent  
*Depth to restrictive feature:* 10 to 20 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Ecological site:* Clay Upland (pe35-42)

**125ET—Eram-Talihina silty clay loams, 6 to 20 percent slopes**

**Map Unit Composition**

Eram: 50 percent  
 Talihina: 35 percent  
 Minor components: 15 percent

**Component Descriptions**

**Eram**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Ridge on upland  
*Hillslope position:* Summit  
*Parent material:* Silty and clayey residuum weathered from shale, unspecified  
*Slope:* 6 to 8 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* Low (About 4.9 inches)  
*Shrink-swell potential:* High (About 7.3 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* About 6 to 28 inches  
*Runoff class:* Very high  
*Ecological site:* Clay Upland (pe35-42)  
*Land capability (nonirrigated):* 6e

*Typical Profile:*

H1—0 to 11 inches; silty clay loam  
 H2—11 to 32 inches; silty clay  
 Cr—32 to 36 inches; weathered bedrock

**Talihina**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Ridge on upland  
*Hillslope position:* Shoulder  
*Parent material:* Residuum weathered from shale  
*Slope:* 6 to 20 percent  
*Depth to restrictive feature:* 10 to 20 inches to bedrock (paralithic)  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* Very low (About 2.9 inches)  
*Shrink-swell potential:* High (About 8.3 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* About 6 to 28 inches  
*Runoff class:* Very high  
*Ecological site:* Clay Upland (pe35-42)  
*Land capability (nonirrigated):* 7s

*Typical Profile:*

H1—0 to 7 inches; silty clay loam  
 H2—7 to 14 inches; silty clay  
 H3—14 to 17 inches; silty clay  
 Cr—17 to 21 inches; weathered bedrock

**Minor Components**

**Bates**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 3 to 6 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Well drained

*Ecological site:* Loamy Upland (pe35-42)

### **Collinsville**

*Composition:* About 5 percent  
*Geomorphic Position:* ridge on upland  
*Slope:* 1 to 4 percent  
*Depth to restrictive feature:* 4 to 20 inches to bedrock (lithic)  
*Drainage class:* Somewhat excessively drained  
*Ecological site:* Shallow Sandstone (pe35-42)

### **Dennis**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 1 to 4 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Loamy Upland (pe35-42)

## **125OD—Olpe-Dennis complex, 2 to 6 percent slopes**

### **Map Unit Composition**

Olpe: 55 percent  
 Dennis: 35 percent  
 Minor components: 10 percent

### **Component Descriptions**

#### **Olpe**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Paleoterrace on upland  
*Hillslope position:* Shoulder  
*Parent material:* Clayey alluvium  
*Slope:* 2 to 6 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* Very low (About 1.7 inches)  
*Shrink-swell potential:* Moderate (About 4.3 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Loamy Upland (pe35-42)  
*Land capability (nonirrigated):* 6e

#### *Typical Profile:*

H1—0 to 16 inches; gravelly silt loam  
 H2—16 to 21 inches; very gravelly silty clay loam  
 H3—21 to 60 inches; very gravelly silty clay

### **Dennis**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Hillslope on upland  
*Hillslope position:* Footslope  
*Parent material:* Silty and clayey residuum weathered from shale, unspecified  
*Slope:* 2 to 6 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 10.6 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* About 12 to 28 inches  
*Runoff class:* High  
*Ecological site:* Loamy Upland (pe35-42)  
*Land capability (nonirrigated):* 3e

#### *Typical Profile:*

H1—0 to 13 inches; silt loam  
 H2—13 to 19 inches; silty clay loam  
 H3—19 to 60 inches; silty clay

### **Minor Components**

#### **Bates**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 1 to 3 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe35-42)

#### **Rock outcrop**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Drainage class:* Well drained

## **133EB—Eram silty clay loam, 1 to 3 percent slopes**

### **Map Unit Composition**

Eram: 90 percent  
 Minor components: 10 percent

### **Component Descriptions**

#### **Eram**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Silty and clayey residuum weathered from shale, unspecified

*Slope:* 1 to 3 percent  
*Depth to restrictive feature:* 20 to 41 inches to bedrock (paralithic)  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* Low (About 4.9 inches)  
*Shrink-swell potential:* High (About 8.3 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* About 6 to 31 inches  
*Runoff class:* High  
*Ecological site:* Clay Upland (pe35-42)  
*Land capability (nonirrigated):* 3e

*Typical Profile:*

H1—0 to 11 inches; silty clay  
 H2—11 to 32 inches; clay  
 Cr—32 to 36 inches; weathered bedrock

**Minor Components**

**Bates**

*Composition:* About 5 percent  
*Geomorphic Position:* ridge on upland  
*Slope:* 1 to 3 percent  
*Depth to restrictive feature:* inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe35-42)

**Lebo**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 8 to 15 percent  
*Depth to restrictive feature:* inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe35-42)

*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* Low (About 4.5 inches)  
*Shrink-swell potential:* High (About 8.3 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* About 6 to 31 inches  
*Runoff class:* High  
*Ecological site:* Clay Upland (pe35-42)  
*Land capability (nonirrigated):* 4e

*Typical Profile:*

H1—0 to 10 inches; silty clay  
 H2—10 to 29 inches; silty clay  
 Cr—29 to 31 inches; weathered bedrock

**Minor Components**

**Lebo**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 8 to 15 percent  
*Depth to restrictive feature:* inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe35-42)

**Bates**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 3 to 7 percent  
*Depth to restrictive feature:* inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe35-42)

**133ED—Eram silty clay loam, 3 to 7 percent slopes**

**Map Unit Composition**

Eram: 90 percent  
 Minor components: 10 percent

**Component Descriptions**

**Eram**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Silty and clayey residuum weathered from shale, unspecified  
*Slope:* 3 to 7 percent

**Ae—Apperson silty clay loam, 0 to 2 percent slopes**

**Map Unit Composition**

Apperson: 90 percent  
 Minor components: 10 percent

**Component Descriptions**

**Apperson**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* 40 to 60 inches to bedrock (lithic)  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)

*Available water capacity:* Moderate (About 7.6 inches)  
*Shrink-swell potential:* Very high (About 10.4 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* About 12 to 18 inches  
*Runoff class:* Medium  
*Ecological site:* Loamy Upland (pe35-42)  
*Land capability (nonirrigated):* 2e

*Typical Profile:*

H1—0 to 8 inches; silty clay loam  
 H2—8 to 12 inches; silty clay loam  
 H3—12 to 38 inches; silty clay  
 H4—38 to 43 inches; silty clay  
 R—43 to 47 inches; unweathered bedrock

**Minor Components**

**Catoosa**

*Composition:* About 5 percent  
*Geomorphic Position:* ridge on upland  
*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe35-42)

**Shidler**

*Composition:* About 5 percent  
*Geomorphic Position:* ridge on upland  
*Slope:* 1 to 8 percent  
*Depth to restrictive feature:* inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Ecological site:* Shallow Limy (pe35-42)

**AED—Arents, Earthen Dam**

**Ba—Bates loam, 1 to 4 percent slopes**

**Map Unit Composition**

Bates: 85 percent  
 Minor components: 15 percent

**Component Descriptions**

**Bates**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Ridge on upland  
*Hillslope position:* Summit  
*Parent material:* Sandy and silty residuum weathered from sandstone, unspecified over sandy and silty residuum weathered from sandstone-shale

*Slope:* 1 to 4 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* Low (About 5.4 inches)  
*Shrink-swell potential:* Moderate (About 3.1 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Loamy Upland (pe35-42)  
*Land capability (nonirrigated):* 2e

*Typical Profile:*

H1—0 to 11 inches; loam  
 H2—11 to 15 inches; loam  
 H3—15 to 23 inches; clay loam  
 H4—23 to 28 inches; gravelly clay loam  
 Cr—28 to 32 inches;

**Minor Components**

**Collinsville**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 3 to 7 percent  
*Depth to restrictive feature:* 4 to 20 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Ecological site:* Shallow Sandstone (pe35-42)

**Dennis**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 1 to 4 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Loamy Upland (pe35-42)

**Eram**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 1 to 3 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Upland (pe35-42)

**Bc—Bates loam, 4 to 7 percent slopes**

**Map Unit Composition**

Bates: 85 percent

Minor components: 15 percent

### Component Descriptions

#### Bates

*MLRA:* 112 - Cherokee Prairies

*Landform:* Hillslope on upland

*Hillslope position:* Backslope, summit

*Parent material:* Sandy and silty residuum  
weathered from sandstone, unspecified over  
sandy and

silty residuum weathered from sandstone-shale

*Slope:* 4 to 7 percent

*Depth to restrictive feature:* 20 to 40 inches to  
bedrock (paralithic)

*Drainage class:* Well drained

*Slowest permeability:* Moderately slow (About  
0.20 in/hr)

*Available water capacity:* Low (About 5.0 inches)

*Shrink-swell potential:* Moderate (About 3.1  
LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6  
feet

*Runoff class:* High

*Ecological site:* Loamy Upland (pe35-42)

*Land capability (nonirrigated):* 3e

#### Typical Profile:

H1—0 to 8 inches; loam

H2—8 to 11 inches; loam

H3—11 to 19 inches; clay loam

H4—19 to 27 inches; clay loam

Cr—27 to 31 inches; weathered bedrock

### Minor Components

#### Collinsville

*Composition:* About 5 percent

*Geomorphic Position:* hillslope on upland

*Slope:* 3 to 7 percent

*Depth to restrictive feature:* 4 to 20 inches to  
bedrock (lithic)

*Drainage class:* Well drained

*Ecological site:* Shallow Sandstone (pe35-  
42)

#### Dennis

*Composition:* About 5 percent

*Geomorphic Position:* hillslope on upland

*Slope:* 4 to 7 percent

*Drainage class:* Moderately well drained

*Ecological site:* Loamy Upland (pe35-42)

#### Eram

*Composition:* About 5 percent

*Geomorphic Position:* hillslope on upland

*Slope:* 3 to 7 percent

*Depth to restrictive feature:* 20 to 40 inches  
to bedrock (paralithic)

*Drainage class:* Moderately well drained

*Ecological site:* Clay Upland (pe35-42)

### Bh—Bates-Collinsville loams, 3 to 7 percent slopes

### Map Unit Composition

Bates: 50 percent

Collinsville: 35 percent

Minor components: 15 percent

### Component Descriptions

#### Bates

*MLRA:* 112 - Cherokee Prairies

*Landform:* Ridge on upland

*Hillslope position:* Summit

*Parent material:* Sandy and silty residuum  
weathered from sandstone, unspecified over  
sandy and

silty residuum weathered from sandstone-shale

*Slope:* 3 to 7 percent

*Depth to restrictive feature:* 20 to 40 inches to  
bedrock (paralithic)

*Drainage class:* Well drained

*Slowest permeability:* Moderately slow (About  
0.20 in/hr)

*Available water capacity:* Low (About 5.0 inches)

*Shrink-swell potential:* Moderate (About 3.1  
LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6  
feet

*Runoff class:* High

*Ecological site:* Loamy Upland (pe35-42)

*Land capability (nonirrigated):* 4e

#### Typical Profile:

H1—0 to 10 inches; loam

H2—10 to 12 inches; loam

H3—12 to 19 inches; clay loam

H4—19 to 27 inches; gravelly clay loam

Cr—27 to 31 inches; weathered bedrock

#### Collinsville

*MLRA:* 112 - Cherokee Prairies

*Landform:* Hillslope on upland

*Hillslope position:* Backslope

*Parent material:* Sandstone residuum

*Slope:* 3 to 7 percent

*Depth to restrictive feature:* 4 to 20 inches to  
bedrock (lithic)

*Drainage class:* Well drained

*Slowest permeability:* Moderately rapid (About  
2.00 in/hr)

*Available water capacity:* Very low (About 2.2 inches)  
*Shrink-swell potential:* Low (About 1.8 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very low  
*Ecological site:* Shallow Sandstone (pe35-42)  
*Land capability (nonirrigated):* 6s

*Typical Profile:*

H1—0 to 6 inches; loam  
 H2—6 to 14 inches; fine sandy loam  
 R—14 to 18 inches; unweathered bedrock

**Minor Components**

**Dennis**

*Composition:* About 8 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 4 to 7 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Loamy Upland (pe35-42)

**Eram**

*Composition:* About 7 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 3 to 7 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Upland (pe35-42)

**Bo—Bates-Collinsville loams, 7 to 20 percent slopes**

**Map Unit Composition**

Bates: 45 percent  
 Collinsville: 40 percent  
 Minor components: 15 percent

**Component Descriptions**

**Bates**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Ridge on upland  
*Hillslope position:* Summit  
*Parent material:* Sandy and silty residuum weathered from sandstone, unspecified over sandy and silty residuum weathered from sandstone-shale  
*Slope:* 3 to 8 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Well drained

*Slowest permeability:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* Low (About 4.4 inches)  
*Shrink-swell potential:* Moderate (About 3.3 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* High  
*Ecological site:* Loamy Upland (pe35-42)  
*Land capability (nonirrigated):* 6e

*Typical Profile:*

H1—0 to 7 inches; loam  
 H2—7 to 13 inches; loam  
 H3—13 to 20 inches; clay loam  
 H4—20 to 25 inches; gravelly clay loam  
 Cr—25 to 29 inches; weathered bedrock

**Collinsville**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Sandstone residuum  
*Slope:* 7 to 20 percent  
*Depth to restrictive feature:* 4 to 20 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately rapid (About 2.00 in/hr)  
*Available water capacity:* Very low (About 2.2 inches)  
*Shrink-swell potential:* Low (About 1.8 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Shallow Sandstone (pe35-42)  
*Land capability (nonirrigated):* 7s

*Typical Profile:*

H1—0 to 6 inches; loam  
 H2—6 to 14 inches; fine sandy loam  
 R—14 to 18 inches; unweathered bedrock

**Minor Components**

**Dennis**

*Composition:* About 8 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 4 to 7 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Loamy Upland (pe35-42)

**Eram**

*Composition:* About 7 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 3 to 7 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)



*Drainage class:* Moderately well drained  
*Ecological site:* Clay Upland (pe35-42)

## **Ca—Catoosa silt loam, 0 to 2 percent slopes**

### **Map Unit Composition**

Catoosa: 85 percent  
 Minor components: 15 percent

### **Component Descriptions**

#### **Catoosa**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Ridge on upland  
*Hillslope position:* Summit  
*Parent material:* Residuum weathered from limestone  
*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* Low (About 5.8 inches)  
*Shrink-swell potential:* Very high (About 9.3 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Loamy Upland (pe35-42)  
*Land capability (nonirrigated):* 2e

#### *Typical Profile:*

H1—0 to 10 inches; silty clay loam  
 H2—10 to 16 inches; silty clay loam  
 H3—16 to 20 inches; silty clay  
 H4—20 to 30 inches; silty clay  
 R—30 to 34 inches;

### **Minor Components**

#### **Apperson**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* 40 to 60 inches to bedrock (lithic)  
*Drainage class:* Moderately well drained  
*Ecological site:* Loamy Upland (pe35-42)

#### **Shidler**

*Composition:* About 5 percent  
*Geomorphic Position:* ridge on upland  
*Slope:* 1 to 8 percent

*Depth to restrictive feature:* inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Ecological site:* Shallow Limy (pe35-42)

#### **Kenoma**

*Composition:* About 5 percent  
*Geomorphic Position:* ridge on upland  
*Slope:* 1 to 3 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Upland (pe35-42)

## **Dn—Dennis silt loam, 1 to 4 percent slopes**

### **Map Unit Composition**

Dennis: 95 percent  
 Minor components: 5 percent

### **Component Descriptions**

#### **Dennis**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Silty and clayey residuum weathered from shale, unspecified  
*Slope:* 1 to 4 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 9.3 inches)  
*Shrink-swell potential:* High (About 8.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* About 12 to 28 inches  
*Runoff class:* Medium  
*Ecological site:* Loamy Upland (pe35-42)  
*Land capability (nonirrigated):* 2e

#### *Typical Profile:*

H1—0 to 10 inches; silt loam  
 H2—10 to 16 inches; silty clay loam  
 H3—16 to 60 inches; silty clay

### **Minor Components**

#### **Bates**

*Composition:* About 5 percent  
*Geomorphic Position:* ridge on upland  
*Slope:* 1 to 4 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe35-42)

*Drainage class:* Somewhat poorly drained  
*Ecological site:* Clay Upland (pe35-42)

## **Do—Dennis silt loam, 4 to 7 percent slopes**

### **Map Unit Composition**

Dennis: 91 percent  
 Minor components: 9 percent

### **Component Descriptions**

#### **Dennis**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Silty and clayey residuum weathered from shale, unspecified  
*Slope:* 4 to 7 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 9.3 inches)  
*Shrink-swell potential:* High (About 8.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* About 12 to 28 inches  
*Runoff class:* High  
*Ecological site:* Loamy Upland (pe35-42)  
*Land capability (nonirrigated):* 3e

#### *Typical Profile:*

H1—0 to 8 inches; silt loam  
 H2—8 to 14 inches; silty clay loam  
 H3—14 to 60 inches; silty clay

#### **Minor Components**

##### **Bates**

*Composition:* About 3 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 4 to 7 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe35-42)

##### **Eram**

*Composition:* About 3 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 3 to 7 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Upland (pe35-42)

##### **Zaar**

*Composition:* About 3 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 1 to 4 percent

## **Dp—Dennis silty clay loam, 2 to 5 percent slopes, eroded**

### **Map Unit Composition**

Dennis: 95 percent  
 Minor components: 5 percent

### **Component Descriptions**

#### **Dennis**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Silty and clayey residuum weathered from shale, unspecified  
*Slope:* 2 to 5 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 9.0 inches)  
*Shrink-swell potential:* High (About 8.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* About 12 to 28 inches  
*Runoff class:* High  
*Ecological site:* Loamy Upland (pe35-42)  
*Land capability (nonirrigated):* 3e

#### *Typical Profile:*

H1—0 to 5 inches; silty clay loam  
 H2—5 to 60 inches; silty clay

#### **Minor Components**

##### **Eram**

*Phase:* Eroded  
*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 3 to 7 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Upland (pe35-42)

## **Dw—Dennis-Dwight silt loams, 1 to 5 percent slopes**

### **Map Unit Composition**

Dennis: 65 percent  
 Dwight: 25 percent

Minor components: 10 percent

### Component Descriptions

#### Dennis

*MLRA:* 112 - Cherokee Prairies

*Landform:* Hillslope on upland

*Hillslope position:* Footslope

*Parent material:* Silty and clayey residuum weathered from shale, unspecified

*Slope:* 1 to 5 percent

*Drainage class:* Moderately well drained

*Slowest permeability:* Slow (About 0.06 in/hr)

*Available water capacity:* High (About 9.3 inches)

*Shrink-swell potential:* High (About 8.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* About 12 to 28 inches

*Runoff class:* High

*Ecological site:* Loamy Upland (pe35-42)

*Land capability (nonirrigated):* 3e

#### Typical Profile:

H1—0 to 10 inches; silt loam

H2—10 to 16 inches; silty clay loam

H3—16 to 60 inches; silty clay

#### Dwight

*MLRA:* 112 - Cherokee Prairies

*Landform:* Hillslope on paleoterrace on upland

*Hillslope position:* Footslope

*Parent material:* Silty and clayey residuum weathered from limestone, cherty

*Slope:* 1 to 3 percent

*Drainage class:* Moderately well drained

*Slowest permeability:* Very slow (About 0.00 in/hr)

*Available water capacity:* Moderate (About 7.5 inches)

*Shrink-swell potential:* Very high (About 9.0 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Very high

*Ecological site:* Clay Pan (pe30-36)

*Land capability (nonirrigated):* 4s

#### Typical Profile:

H1—0 to 4 inches; silt loam

H2—4 to 42 inches; silty clay

H3—42 to 60 inches; silty clay

### Minor Components

#### Bates

*Composition:* About 10 percent

*Geomorphic Position:* ridge on upland

*Slope:* 1 to 4 percent

*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)

*Drainage class:* Well drained

*Ecological site:* Loamy Upland (pe35-42)

### Eb—Eram silt loam, 1 to 3 percent slopes

### Map Unit Composition

Eram: 90 percent

Minor components: 10 percent

### Component Descriptions

#### Eram

*MLRA:* 112 - Cherokee Prairies

*Landform:* Hillslope on upland

*Hillslope position:* Summit, backslope

*Parent material:* Silty and clayey residuum weathered from shale, unspecified

*Slope:* 1 to 3 percent

*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)

*Drainage class:* Moderately well drained

*Slowest permeability:* Slow (About 0.06 in/hr)

*Available water capacity:* Low (About 4.8 inches)

*Shrink-swell potential:* High (About 8.3 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* About 6 to 18 inches

*Runoff class:* High

*Ecological site:* Clay Upland (pe35-42)

*Land capability (nonirrigated):* 3e

#### Typical Profile:

H1—0 to 9 inches; silt loam

H2—9 to 24 inches; silty clay

H3—24 to 32 inches; silty clay

Cr—32 to 36 inches; weathered bedrock

### Minor Components

#### Bates

*Composition:* About 5 percent

*Geomorphic Position:* ridge on upland

*Slope:* 1 to 4 percent

*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)

*Drainage class:* Well drained

*Ecological site:* Loamy Upland (pe35-42)

#### Ringo

*Composition:* About 5 percent

*Geomorphic Position:* hillslope on upland

*Slope:* 15 to 35 percent

*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)

*Drainage class:* Moderately well drained  
*Ecological site:* Clay Upland (pe35-42)

## **Ec—Eram silt loam, 3 to 7 percent slopes**

### **Map Unit Composition**

Eram: 90 percent  
 Minor components: 10 percent

### **Component Descriptions**

#### **Eram**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Silty and clayey residuum weathered from shale, unspecified  
*Slope:* 3 to 7 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* Low (About 3.7 inches)  
*Shrink-swell potential:* High (About 8.3 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* About 6 to 18 inches  
*Runoff class:* High  
*Ecological site:* Clay Upland (pe35-42)  
*Land capability (nonirrigated):* 4e

#### *Typical Profile:*

H1—0 to 9 inches; silt loam  
 H2—9 to 20 inches; silty clay loam  
 H3—20 to 24 inches; silty clay  
 Cr—24 to 28 inches; weathered bedrock

#### **Minor Components**

##### **Ringo**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 15 to 35 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Upland (pe35-42)

##### **Bates**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 4 to 7 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe35-42)

## **Ef—Eram silty clay loam, 3 to 7 percent slopes, eroded**

### **Map Unit Composition**

Eram: 90 percent  
 Minor components: 10 percent

### **Component Descriptions**

#### **Eram**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Silty and clayey residuum weathered from shale, unspecified  
*Slope:* 3 to 7 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* Low (About 3.1 inches)  
*Shrink-swell potential:* High (About 8.3 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* About 6 to 18 inches  
*Runoff class:* High  
*Ecological site:* Clay Upland (pe35-42)  
*Land capability (nonirrigated):* 4e

#### *Typical Profile:*

H1—0 to 4 inches; silty clay loam  
 H2—4 to 21 inches; silty clay  
 Cr—21 to 25 inches; weathered bedrock

#### **Minor Components**

##### **Bates**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 4 to 7 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe35-42)

##### **Ringo**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 15 to 35 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Upland (pe35-42)

## Gr—Girard silty clay loam, Frequently flooded

### Map Unit Composition

Girard: 95 percent  
Minor components: 5 percent

### Component Descriptions

#### Girard

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Flood plain on valley on upland  
*Parent material:* Clayey alluvium  
*Slope:* 0 to 1 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)  
*Drainage class:* Poorly drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* Low (About 4.1 inches)  
*Shrink-swell potential:* High (About 7.6 LEP)  
*Flooding hazard:* Frequent  
*Depth to seasonal water saturation:* About 0 to 24 inches  
*Runoff class:* High  
*Ecological site:* Clay Lowland (pe35-42)  
*Land capability (nonirrigated):* 5w

#### Typical Profile:

H1—0 to 9 inches; silty clay loam  
H2—9 to 14 inches; silty clay loam  
H3—14 to 23 inches; silty clay  
H4—23 to 26 inches; silty clay  
R—26 to 30 inches; unweathered bedrock

#### Minor Components

##### Shidler

*Composition:* About 5 percent  
*Geomorphic Position:* ridge on upland  
*Slope:* 1 to 8 percent  
*Depth to restrictive feature:* inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Ecological site:* Shallow Limy (pe35-42)

## Iv—Ivan silt loam, occasionally flooded

### Map Unit Composition

Ivan: 100 percent

### Component Descriptions

#### Ivan

*MLRA:* 76 - Bluestem Hills  
*Landform:* Flood plain on river valley  
*Parent material:* Silty alluvium  
*Slope:* 0 to 2 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* Very high (About 13.2 inches)  
*Shrink-swell potential:* Moderate (About 4.9 LEP)  
*Flooding hazard:* Occasional  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Loamy Lowland (pe35-42)  
*Land capability (nonirrigated):* 2w

#### Typical Profile:

H1—0 to 9 inches; silt loam  
H2—9 to 24 inches; silty clay loam  
H3—24 to 30 inches; silty clay loam  
H4—30 to 60 inches; silt loam

## Ke—Kenoma silt loam, 1 to 3 percent slopes

### Map Unit Composition

Kenoma: 91 percent  
Minor components: 9 percent

### Component Descriptions

#### Kenoma

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Ridge on upland  
*Hillslope position:* Summit  
*Parent material:* Loess over ancient clayey alluvium and/or residuum weathered from limestone and shale  
*Slope:* 1 to 3 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* High (About 9.7 inches)  
*Shrink-swell potential:* High (About 8.7 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* High

*Ecological site:* Clay Upland (pe35-42)  
*Land capability (nonirrigated):* 3e

*Typical Profile:*

H1—0 to 9 inches; silt loam  
 H2—9 to 25 inches; silty clay  
 H3—25 to 41 inches; silty clay  
 H4—41 to 60 inches; silty clay

**Minor Components**

**Catoosa**

*Composition:* About 3 percent  
*Geomorphic Position:* ridge on upland  
*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* 20 to 40 inches  
     to bedrock (lithic)  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe35-42)

**Dwight**

*Composition:* About 3 percent  
*Geomorphic Position:* hillslope on  
     paleoterrace on upland  
*Slope:* 1 to 3 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Pan (pe30-36)

**Olpe**

*Composition:* About 3 percent  
*Geomorphic Position:* ridge on paleoterrace  
     on upland  
*Slope:* 2 to 7 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe35-42)

**Ko—Kenoma-Olpe silt loams, 2 to 7 percent slopes**

**Map Unit Composition**

Kenoma: 50 percent  
 Olpe: 35 percent  
 Minor components: 15 percent

**Component Descriptions**

**Kenoma**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Hillslope on upland  
*Hillslope position:* Footslope  
*Parent material:* Loess over ancient clayey  
     alluvium and/or residuum weathered from  
     limestone and  
     shale  
*Slope:* 2 to 3 percent  
*Drainage class:* Moderately well drained

*Slowest permeability:* Very slow (About 0.00  
     in/hr)

*Available water capacity:* Moderate (About 8.6  
     inches)

*Shrink-swell potential:* High (About 8.7 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6  
     feet

*Runoff class:* Very high

*Ecological site:* Clay Upland (pe35-42)

*Land capability (nonirrigated):* 4e

*Typical Profile:*

H1—0 to 8 inches; silt loam  
 H2—8 to 15 inches; silty clay  
 H3—15 to 22 inches; silty clay  
 H4—22 to 46 inches; silty clay  
 Cr—46 to 50 inches;

**Olpe**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Ridge on paleoterrace on upland  
*Hillslope position:* Backslope, summit  
*Parent material:* Clayey alluvium  
*Slope:* 2 to 7 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* Low (About 4.2 inches)  
*Shrink-swell potential:* Moderate (About 3.5  
     LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6  
     feet  
*Runoff class:* Medium  
*Ecological site:* Loamy Upland (pe35-42)  
*Land capability (nonirrigated):* 4e

*Typical Profile:*

H1—0 to 8 inches; silt loam  
 H2—8 to 16 inches; silty clay loam  
 H3—16 to 22 inches; very gravelly silty clay  
 H4—22 to 56 inches; extremely gravelly silty  
     clay  
 H5—56 to 60 inches; gravelly silty clay

**Minor Components**

**Eram**

*Composition:* About 10 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 3 to 7 percent  
*Depth to restrictive feature:* 20 to 40 inches  
     to bedrock (paralithic)  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Upland (pe35-42)

**Rock outcrop**

*Composition:* About 5 percent

## La—Lanton silt loam, occasionally flooded

### Map Unit Composition

Lanton: 90 percent  
Minor components: 10 percent

### Component Descriptions

#### Lanton

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Flood plain on river valley  
*Parent material:* Silty and clayey alluvium  
*Slope:* 0 to 2 percent  
*Drainage class:* Somewhat poorly drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 10.7 inches)  
*Shrink-swell potential:* Moderate (About 4.6 LEP)  
*Flooding hazard:* Occasional  
*Depth to seasonal water saturation:* About 12 to 24 inches  
*Runoff class:* Medium  
*Ecological site:* Loamy Lowland (pe35-42)  
*Land capability (nonirrigated):* 2w

#### Typical Profile:

H1—0 to 7 inches; silt loam  
H2—7 to 37 inches; silty clay loam  
H3—37 to 60 inches; silty clay

#### Minor Components

##### Mason

*Composition:* About 5 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Lowland (pe35-42)

##### Osage

*Composition:* About 5 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Poorly drained  
*Ecological site:* Clay Lowland (pe35-42)

## M-W—Miscellaneous Water

## Ma—Mason silt loam, rarely flooded

### Map Unit Composition

Mason: 90 percent  
Minor components: 10 percent

## Component Descriptions

#### Mason

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Stream terrace on river valley  
*Parent material:* Silty alluvium  
*Slope:* 0 to 2 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* High (About 10.6 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* Rare  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Loamy Lowland (pe35-42)  
*Land capability (nonirrigated):* 1

#### Typical Profile:

H1—0 to 9 inches; silt loam  
H2—9 to 14 inches; silt loam  
H3—14 to 60 inches; silty clay loam

#### Minor Components

##### Lanton

*Composition:* About 5 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Loamy Lowland (pe35-42)

##### Osage

*Composition:* About 5 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Poorly drained  
*Ecological site:* Clay Lowland (pe35-42)

## Nd—Niotaze-Darnell complex, 4 to 30 percent slopes

### Map Unit Composition

Niotaze: 50 percent  
Darnell: 35 percent  
Minor components: 15 percent

## Component Descriptions

#### Niotaze

*MLRA:* 84A - Cross Timbers  
*Landform:* Hillslope on upland  
*Hillslope position:* Footslope

*Parent material:* Clayey residuum weathered from sandstone and shale

*Slope:* 4 to 30 percent

*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)

*Drainage class:* Somewhat poorly drained

*Slowest permeability:* Slow (About 0.06 in/hr)

*Available water capacity:* Low (About 4.8 inches)

*Shrink-swell potential:* High (About 7.0 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* About 12 to 24 inches

*Runoff class:* High

*Ecological site:* Savannah (pe35-38)

*Land capability (nonirrigated):* 6e

*Typical Profile:*

H1—0 to 5 inches; cobbly fine sandy loam

H2—5 to 9 inches; cobbly fine sandy loam

H3—9 to 24 inches; silty clay

H4—24 to 36 inches; silty clay

Cr—36 to 40 inches; weathered bedrock

**Darnell**

*MLRA:* 84A - Cross Timbers

*Landform:* Hillslope on upland

*Hillslope position:* Backslope

*Parent material:* Loamy residuum

*Slope:* 4 to 15 percent

*Depth to restrictive feature:* 10 to 20 inches to bedrock (paralithic)

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* Very low (About 2.4 inches)

*Shrink-swell potential:* Low (About 1.3 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Low

*Ecological site:* Shallow Savannah (pe35-38)

*Land capability (nonirrigated):* 6e

*Typical Profile:*

H1—0 to 6 inches; fine sandy loam

H2—6 to 17 inches; fine sandy loam

Cr—17 to 21 inches; weathered bedrock

**Minor Components**

**Stephenville**

*Composition:* About 10 percent

*Geomorphic Position:* hillslope on upland

*Slope:* 6 to 15 percent

*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)

*Drainage class:* Well drained

*Ecological site:* Savannah (pe35-38)

**Rock outcrop**

*Composition:* About 5 percent

**Or—Osage silty clay loam, occasionally flooded**

**Map Unit Composition**

Osage: 90 percent

Minor components: 10 percent

**Component Descriptions**

**Osage**

*MLRA:* 112 - Cherokee Prairies

*Landform:* Flood plain on river valley

*Parent material:* Clayey alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Poorly drained

*Slowest permeability:* Very slow (About 0.00 in/hr)

*Available water capacity:* Moderate (About 7.2 inches)

*Shrink-swell potential:* Very high (About 10.4 LEP)

*Flooding hazard:* Occasional

*Ponding hazard:* Occasional

*Depth to seasonal water saturation:* About 6 to 45 inches

*Runoff class:* Very high

*Ecological site:* Clay Lowland (pe35-42)

*Land capability (nonirrigated):* 2w

*Typical Profile:*

H1—0 to 11 inches; silty clay loam

H2—11 to 60 inches; silty clay

**Minor Components**

**Lanton**

*Composition:* About 5 percent

*Slope:* 0 to 2 percent

*Drainage class:* Somewhat poorly drained

*Ecological site:* Loamy Lowland (pe35-42)

**Verdigris**

*Composition:* About 5 percent

*Slope:* 0 to 2 percent

*Drainage class:* Moderately well drained

*Ecological site:* Loamy Lowland (pe35-42)



**Os—Osage silty clay, occasionally flooded****Map Unit Composition**

Osage: 90 percent  
 Minor components: 10 percent

**Component Descriptions****Osage**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Flood plain on river valley  
*Parent material:* Clayey alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Poorly drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* Moderate (About 6.4 inches)  
*Shrink-swell potential:* Very high (About 14.5 LEP)  
*Flooding hazard:* Occasional  
*Ponding hazard:* Occasional  
*Depth to seasonal water saturation:* About 6 to 45 inches  
*Runoff class:* Very high  
*Ecological site:* Clay Lowland (pe35-42)  
*Land capability (nonirrigated):* 3w

**Typical Profile:**

H1—0 to 7 inches; silty clay  
 H2—7 to 16 inches; silty clay  
 H3—16 to 45 inches; silty clay  
 H4—45 to 60 inches; silty clay

**Minor Components****Lanton**

*Composition:* About 5 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Loamy Lowland (pe35-42)

**Verdigris**

*Composition:* About 5 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Loamy Lowland (pe35-42)

**Pe—Prue loam, 2 to 5 percent slopes****Map Unit Composition**

Prue: 90 percent  
 Minor components: 10 percent

**Component Descriptions****Prue**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Hillslope on upland  
*Hillslope position:* Footslope  
*Parent material:* Fine-loamy residuum weathered from sandstone and shale  
*Slope:* 2 to 5 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 9.9 inches)  
*Shrink-swell potential:* High (About 7.9 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Loamy Upland (pe35-42)  
*Land capability (nonirrigated):* 3e

**Typical Profile:**

H1—0 to 11 inches; loam  
 H2—11 to 17 inches; clay loam  
 H3—17 to 38 inches; clay loam  
 H4—38 to 60 inches; silty clay

**Minor Components****Stephenville**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 6 to 15 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Ecological site:* Savannah (pe35-38)

**Dwight**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on paleoterrace on upland  
*Slope:* 1 to 3 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Pan (pe30-36)

**Pt—Pits, Quarries**

*General Considerations:* Pits are open excavations from which soil and commonly underlying material have been removed, exposing either rock or other material. Kinds include Pits, mine; Pits, gravel; and Pits, quarry. Commonly, pits are closely associated with Dumps.

**Rn—Ringo silty clay loam, 15 to 35 percent slopes****Map Unit Composition**

Ringo: 90 percent  
 Minor components: 10 percent

**Component Descriptions****Ringo**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Residuum weathered from limestone  
*Slope:* 15 to 35 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* Low (About 4.5 inches)  
*Shrink-swell potential:* High (About 8.3 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very high  
*Ecological site:* Clay Upland (pe35-42)  
*Land capability (nonirrigated):* 7e

*Typical Profile:*

H1—0 to 11 inches; silty clay loam  
 H2—11 to 21 inches; silty clay loam  
 H3—21 to 26 inches; silty clay  
 Cr—26 to 30 inches; weathered bedrock

**Minor Components****Shidler**

*Composition:* About 5 percent  
*Geomorphic Position:* ridge on upland  
*Slope:* 1 to 8 percent  
*Depth to restrictive feature:* inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Ecological site:* Shallow Limy (pe35-42)

**Eram**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 3 to 7 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Upland (pe35-42)

**Rs—Ringo-Shidler silty clay loams, 3 to 15 percent slopes****Map Unit Composition**

Ringo: 65 percent  
 Shidler: 30 percent  
 Minor components: 5 percent

**Component Descriptions****Ringo**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Residuum weathered from limestone  
*Slope:* 3 to 15 percent  
*Depth to restrictive feature:* inches to bedrock (paralithic)  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* Low (About 4.6 inches)  
*Shrink-swell potential:* High (About 8.3 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* High  
*Ecological site:* Clay Upland (pe35-42)  
*Land capability (nonirrigated):* 6e

*Typical Profile:*

H1—0 to 11 inches; silty clay loam  
 H2—11 to 21 inches; silty clay loam  
 H3—21 to 26 inches; silty clay  
 Cr—26 to 30 inches; weathered bedrock

**Shidler**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Ridge on upland  
*Hillslope position:* Summit  
*Parent material:* Residuum weathered from limestone  
*Slope:* 3 to 8 percent  
*Depth to restrictive feature:* inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* Very low (About 2.0 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium

*Ecological site:* Shallow Limy (pe35-42)

*Land capability (nonirrigated):* 7e

*Typical Profile:*

H1—0 to 10 inches; silty clay loam

R—10 to 14 inches; unweathered bedrock

**Minor Components**

**Catoosa**

*Composition:* About 5 percent

*Geomorphic Position:* ridge on upland

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Well drained

*Ecological site:* Loamy Upland (pe35-42)

**Sc—Shidler-Catoosa complex, 1 to 8 percent slopes**

**Map Unit Composition**

Shidler: 70 percent

Catoosa: 20 percent

Minor components: 10 percent

**Component Descriptions**

**Shidler**

*MLRA:* 112 - Cherokee Prairies

*Landform:* Ridge on upland

*Hillslope position:* Shoulder

*Parent material:* Residuum weathered from limestone

*Slope:* 1 to 8 percent

*Depth to restrictive feature:* inches to bedrock (lithic)

*Drainage class:* Well drained

*Slowest permeability:* Moderate (About 0.60 in/hr)

*Available water capacity:* Very low (About 2.0 inches)

*Shrink-swell potential:* Moderate (About 4.5 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Medium

*Ecological site:* Shallow Limy (pe35-42)

*Land capability (nonirrigated):* 6e

*Typical Profile:*

H1—0 to 10 inches; silty clay loam

R—10 to 14 inches; unweathered bedrock

**Catoosa**

*MLRA:* 112 - Cherokee Prairies

*Landform:* Ridge on upland

*Hillslope position:* Summit

*Parent material:* Residuum weathered from limestone

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* inches to bedrock (lithic)

*Drainage class:* Well drained

*Slowest permeability:* Moderately slow (About 0.20 in/hr)

*Available water capacity:* Low (About 5.0 inches)

*Shrink-swell potential:* High (About 6.0 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* More than 6 feet

*Runoff class:* Medium

*Ecological site:* Loamy Upland (pe35-42)

*Land capability (nonirrigated):* 2e

*Typical Profile:*

H1—0 to 8 inches; silt loam

H2—8 to 26 inches; silty clay loam

R—26 to 30 inches; unweathered bedrock

**Minor Components**

**Ringo**

*Composition:* About 4 percent

*Geomorphic Position:* hillslope on upland

*Slope:* 15 to 35 percent

*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)

*Drainage class:* Moderately well drained

*Ecological site:* Clay Upland (pe35-42)

**Apperson**

*Composition:* About 3 percent

*Geomorphic Position:* hillslope on upland

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* 40 to 60 inches to bedrock (lithic)

*Drainage class:* Moderately well drained

*Ecological site:* Loamy Upland (pe35-42)

**Girard**

*Composition:* About 3 percent

*Slope:* 0 to 1 percent

*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)

*Drainage class:* Poorly drained

*Ecological site:* Clay Lowland (pe35-42)

**Sf—Steedman gravelly silt loam, 4 to 25 percent slopes, stony****Map Unit Composition**

Steedman: 90 percent  
 Minor components: 10 percent

**Component Descriptions****Steedman**

*MLRA:* 84A - Cross Timbers  
*Landform:* Hillslope on upland  
*Hillslope position:* Summit, backslope  
*Parent material:* Clayey residuum weathered from clayey shale  
*Slope:* 4 to 25 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* Low (About 4.1 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* About 6 to 12 inches  
*Runoff class:* Very high  
*Ecological site:* Loamy Upland (pe35-38)  
*Land capability (nonirrigated):* 6e

*Typical Profile:*

H1—0 to 8 inches; gravelly silt loam  
 H2—8 to 32 inches; silty clay  
 Cr—32 to 36 inches; weathered bedrock

**Minor Components****Bates**

*Composition:* About 5 percent  
*Geomorphic Position:* ridge on upland  
*Slope:* 3 to 8 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe35-42)

**Collinsville**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 7 to 20 percent  
*Depth to restrictive feature:* 4 to 20 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Ecological site:* Shallow Sandstone (pe35-42)

**Sm—Stephenville-Darnell fine sandy loams, 2 to 6 percent slopes****Map Unit Composition**

Stephenville: 60 percent  
 Darnell: 30 percent  
 Minor components: 10 percent

**Component Descriptions****Stephenville**

*MLRA:* 84A - Cross Timbers  
*Landform:* Ridge on upland  
*Hillslope position:* Summit  
*Parent material:* Fine-loamy residuum weathered from sandstone  
*Slope:* 2 to 6 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* Low (About 3.6 inches)  
*Shrink-swell potential:* Low (About 2.0 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Savannah (pe35-38)  
*Land capability (nonirrigated):* 4e

*Typical Profile:*

H1—0 to 7 inches; fine sandy loam  
 H2—7 to 17 inches; fine sandy loam  
 H3—17 to 27 inches; sandy clay loam  
 Cr—27 to 31 inches; weathered bedrock

**Darnell**

*MLRA:* 84A - Cross Timbers  
*Landform:* Ridge on upland  
*Hillslope position:* Summit, shoulder  
*Slope:* 2 to 6 percent  
*Depth to restrictive feature:* 10 to 20 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately rapid (About 2.00 in/hr)  
*Available water capacity:* Very low (About 2.4 inches)  
*Shrink-swell potential:* Low (About 1.7 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very low  
*Ecological site:* Shallow Savannah (pe35-38)  
*Land capability (nonirrigated):* 6e

*Typical Profile:*

H1—0 to 6 inches; fine sandy loam  
 H2—6 to 17 inches; fine sandy loam  
 Cr—17 to 21 inches; weathered bedrock

**Minor Components****Niotaze**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 4 to 30 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Savannah (pe35-38)

**Prue**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 2 to 5 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Loamy Upland (pe35-42)

## **Sp—Stephenville-Darnell fine sandy loams, 6 to 20 percent slopes**

### **Map Unit Composition**

Stephenville: 55 percent  
 Darnell: 35 percent  
 Minor components: 10 percent

### **Component Descriptions**

**Stephenville**

*MLRA:* 84A - Cross Timbers  
*Landform:* Hillslope on upland  
*Hillslope position:* Summit  
*Parent material:* Fine-loamy residuum weathered from sandstone  
*Slope:* 6 to 15 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* Low (About 3.6 inches)  
*Shrink-swell potential:* Low (About 2.0 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Savannah (pe35-38)  
*Land capability (nonirrigated):* 6e

*Typical Profile:*

H1—0 to 7 inches; fine sandy loam  
 H2—7 to 17 inches; fine sandy loam  
 H3—17 to 27 inches; sandy clay loam  
 Cr—27 to 31 inches; weathered bedrock

**Darnell**

*MLRA:* 84A - Cross Timbers  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope, summit  
*Slope:* 6 to 20 percent  
*Depth to restrictive feature:* 10 to 20 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately rapid (About 2.00 in/hr)  
*Available water capacity:* Very low (About 2.1 inches)  
*Shrink-swell potential:* Low (About 1.7 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Shallow Savannah (pe35-38)  
*Land capability (nonirrigated):* 6e

*Typical Profile:*

H1—0 to 6 inches; fine sandy loam  
 H2—6 to 15 inches; fine sandy loam  
 Cr—15 to 19 inches; weathered bedrock

**Minor Components****Niotaze**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 4 to 30 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Savannah (pe35-38)

**Prue**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 2 to 5 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Loamy Upland (pe35-42)

## **Vc—Verdigris silt loam, channeled**

### **Map Unit Composition**

Verdigris: 95 percent  
 Minor components: 5 percent

### **Component Descriptions**

**Verdigris**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Flood plain on river valley  
*Parent material:* Silty alluvium  
*Slope:* 0 to 2 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* Very high (About 12.8 inches)  
*Shrink-swell potential:* Low (About 2.2 LEP)  
*Flooding hazard:* Frequent  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Loamy Lowland (pe35-42)  
*Land capability (nonirrigated):* 5w

*Typical Profile:*  
 H1—0 to 10 inches; silt loam  
 H2—10 to 30 inches; silt loam  
 H3—30 to 48 inches; silt loam  
 H4—48 to 60 inches; silt loam

#### Minor Components

##### Osage

*Composition:* About 5 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Poorly drained  
*Ecological site:* Clay Lowland (pe35-42)

### Vf—Verdigris silt loam, occasionally flooded

#### Map Unit Composition

Verdigris: 95 percent  
 Minor components: 5 percent

#### Component Descriptions

##### Verdigris

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Flood plain on river valley  
*Parent material:* Silty alluvium  
*Slope:* 0 to 2 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* Very high (About 12.4 inches)  
*Shrink-swell potential:* Low (About 2.2 LEP)  
*Flooding hazard:* Occasional  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low

*Ecological site:* Loamy Lowland (pe35-42)  
*Land capability (nonirrigated):* 2w

##### Typical Profile:

H1—0 to 8 inches; silt loam  
 H2—8 to 22 inches; silty clay loam  
 H3—22 to 27 inches; silty clay loam  
 H4—27 to 60 inches; silty clay loam

#### Minor Components

##### Osage

*Composition:* About 5 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Poorly drained  
*Ecological site:* Clay Lowland (pe35-42)

### W—Water

### Wo—Woodson silt loam, 0 to 1 percent slopes

#### Map Unit Composition

Woodson: 90 percent  
 Minor components: 10 percent

#### Component Descriptions

##### Woodson

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Ridge on upland  
*Hillslope position:* Summit  
*Parent material:* Silty and clayey alluvium over silty and clayey residuum weathered from shale, clayey  
*Slope:* 0 to 1 percent  
*Drainage class:* Somewhat poorly drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* Moderate (About 8.7 inches)  
*Shrink-swell potential:* Very high (About 13.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* About 6 to 12 inches  
*Runoff class:* High  
*Ecological site:* Clay Upland (pe35-42)  
*Land capability (nonirrigated):* 2s

##### Typical Profile:

H1—0 to 8 inches; silt loam  
 H2—8 to 28 inches; silty clay

H3—28 to 50 inches; silty clay  
H4—50 to 60 inches; silty clay

### Minor Components

#### Zaar

*Composition:* About 10 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 0 to 1 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Clay Upland (pe35-42)

### Za—Zaar silty clay, 0 to 1 percent slopes

#### Map Unit Composition

Zaar: 90 percent  
Minor components: 10 percent

#### Component Descriptions

##### Zaar

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Hillslope on upland  
*Hillslope position:* Toeslope  
*Parent material:* Ancient alluvium and/or clayey colluvium and/or residuum weathered from shale  
*Slope:* 0 to 1 percent  
*Drainage class:* Somewhat poorly drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* Moderate (About 8.7 inches)  
*Shrink-swell potential:* Very high (About 18.9 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* About 12 to 24 inches  
*Runoff class:* Medium  
*Ecological site:* Clay Upland (pe35-42)  
*Land capability (nonirrigated):* 3w

##### Typical Profile:

H1—0 to 10 inches; silty clay  
H2—10 to 20 inches; silty clay  
H3—20 to 48 inches; silty clay  
H4—48 to 60 inches; silty clay

### Minor Components

#### Woodson

*Composition:* About 10 percent  
*Geomorphic Position:* ridge on upland  
*Slope:* 0 to 1 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Clay Upland (pe35-42)

### Zb—Zaar silty clay, 1 to 4 percent slopes

#### Map Unit Composition

Zaar: 85 percent  
Minor components: 15 percent

#### Component Descriptions

##### Zaar

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Hillslope on upland  
*Hillslope position:* Footslope  
*Parent material:* Clayey colluvium and/or residuum weathered from shale  
*Slope:* 1 to 4 percent  
*Drainage class:* Somewhat poorly drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* Moderate (About 8.7 inches)  
*Shrink-swell potential:* Very high (About 18.9 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* About 12 to 24 inches  
*Runoff class:* Medium  
*Ecological site:* Clay Upland (pe35-42)  
*Land capability (nonirrigated):* 3e

##### Typical Profile:

H1—0 to 10 inches; silty clay  
H2—10 to 24 inches; silty clay  
H3—24 to 56 inches; silty clay  
H4—56 to 60 inches; silty clay

### Minor Components

#### Eram

*Composition:* About 10 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 1 to 3 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Upland (pe35-42)

#### Woodson

*Composition:* About 5 percent  
*Geomorphic Position:* ridge on paleoterrace on upland  
*Slope:* 0 to 1 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Clay Upland (pe35-42)