

**0010B—Osage silty clay loam,  
occasionally flooded****Map Unit Composition**

Osage: 100 percent

**Component Descriptions****Osage**

*MLRA:* 112 - Cherokee Prairies

*Landform:* Flood plain on river valley

*Parent material:* Clayey alluvium

*Slope:* 0 to 2 percent

*Drainage class:* Poorly drained

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

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

*Shrink-swell potential:* Very high (About 13.5 LEP)

*Flooding hazard:* Occasional

*Ponding hazard:* Occasional

*Depth to seasonal water saturation:* About 0 to 12 inches

*Runoff class:* Very high

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

*Land capability (nonirrigated):* 2w

*Typical Profile:*

H1—0 to 13 inches; silty clay loam

H2—13 to 37 inches; silty clay

H3—37 to 60 inches; silty clay loam

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

*Drainage class:* Moderately well drained

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

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

*Shrink-swell potential:* High (About 7.8 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):* 6e

*Typical Profile:*

H1—0 to 10 inches; silty clay

H2—10 to 30 inches; silty clay

Cr—30 to 31 inches; weathered bedrock

**Clareson**

*MLRA:* 112 - Cherokee Prairies

*Landform:* Ridge on upland

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

*Slope:* 1 to 4 percent

*Surface fragments:* About 1 to 3 percent rounded stones

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

*Drainage class:* Well drained

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

*Available water capacity:* Low (About 3.1 inches)

*Shrink-swell potential:* High (About 6.2 LEP)

*Flooding hazard:* None

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

*Runoff class:* High

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

*Land capability (nonirrigated):* 6s

*Typical Profile:*

H1—0 to 10 inches; stony silty clay loam

H2—10 to 15 inches; very flaggy silty clay loam

H3—15 to 32 inches; extremely flaggy silty clay

R—32 to 34 inches; unweathered bedrock

**011RC—Ringo-Clareson complex,  
9 to 15 percent slopes****Map Unit Composition**

Ringo: 70 percent

Clareson: 15 percent

Minor components: 15 percent

**Component Descriptions****Ringo**

*MLRA:* 112 - Cherokee Prairies

*Landform:* Hillslope on upland

*Parent material:* Residuum weathered from limestone

*Slope:* 9 to 15 percent

**Minor Components****Catoosa**

*Composition:* About 8 percent

*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)

**Zaar**

*Composition:* About 7 percent

*Geomorphic Position:* hillslope on upland  
*Slope:* 2 to 6 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Clay Upland (pe35-42)

### **037CE—Cherokee silt loam, 0 to 1 percent slopes**

#### **Map Unit Composition**

Cherokee: 99 percent  
 Minor components: 1 percent

#### **Component Descriptions**

##### **Cherokee**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Paleoterrace on upland  
*Parent material:* Loess over ancient clayey alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Somewhat poorly drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 9.3 inches)  
*Shrink-swell potential:* Very high (About 9.4 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* About 0 to 18 inches  
*Runoff class:* High  
*Ecological site:* Clay Upland (pe35-42)  
*Land capability (nonirrigated):* 3w

##### *Typical Profile:*

H1—0 to 15 inches; silt loam  
 H2—15 to 45 inches; clay  
 H3—45 to 60 inches; silty clay loam

##### **Minor Components**

##### **Parsons**

*Composition:* About 1 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Clay Upland (pe35-42)

### **099VC—Verdigris silt loam, Frequently flooded**

#### **Map Unit Composition**

Verdigris: 85 percent

Minor components: 15 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:* High (About 12.0 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 11 inches; silt loam  
 H2—11 to 34 inches; silt loam  
 H3—34 to 43 inches; silty clay loam  
 H4—43 to 60 inches; silt loam

##### **Minor Components**

##### **Zaar**

*Composition:* About 10 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Upland (pe35-42)

##### **Eram**

*Composition:* About 5 percent  
*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)

### **205BO—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)

## **205KO—Kenoma-Olpe complex, 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

**205RS—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)

**205SC—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)

## AED—Arents, Earthen Dam

## Ba—Bates loam, 1 to 3 percent slopes

## Map Unit Composition

Bates: 85 percent  
Minor components: 15 percent

## Component Descriptions

### Bates

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Ridge on upland  
*Parent material:* Sandy and silty residuum weathered from sandstone, unspecified over sandy and silty residuum weathered from sandstone-shale  
*Slope:* 1 to 3 percent  
*Depth to restrictive feature:* inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)

*Available water capacity:* Moderate (About 6.7 inches)  
*Shrink-swell potential:* Moderate (About 3.1 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 21 inches; loam  
 H2—21 to 27 inches; clay loam  
 H3—27 to 34 inches; clay loam  
 Cr—34 to 38 inches;

**Minor Components**

**Collinsville**

*Composition:* About 5 percent  
*Slope:* 2 to 6 percent  
*Depth to restrictive feature:* inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Ecological site:* Shallow Sandstone (pe35-42)

**Dennis**

*Composition:* About 5 percent  
*Slope:* 1 to 3 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Loamy Upland (pe35-42)

**Eram**

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

**Bc—Bates loam, 3 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  
*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:* inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* Low (About 4.3 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):* 3e

*Typical Profile:*

H1—0 to 7 inches; loam  
 H2—7 to 15 inches; loam, clay loam  
 H3—15 to 24 inches; clay loam  
 Cr—24 to 28 inches; unweathered bedrock

**Minor Components**

**Collinsville**

*Composition:* About 5 percent  
*Slope:* 2 to 6 percent  
*Depth to restrictive feature:* inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Ecological site:* Shallow Sandstone (pe35-42)

**Dennis**

*Composition:* About 5 percent  
*Slope:* 3 to 6 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Loamy Upland (pe35-42)

**Eram**

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

**Bd—Bates-Collinsville loams, 1 to 4 percent slopes**

**Map Unit Composition**

Bates: 55 percent  
 Collinsville: 35 percent  
 Minor components: 10 percent

**Component Descriptions**

**Bates***MLRA:* 112 - Cherokee Prairies*Landform:* Hillslope on upland*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:* inches to bedrock (paralithic)*Drainage class:* Well drained*Slowest permeability:* Moderately slow (About 0.20 in/hr)*Available water capacity:* Low (About 4.8 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):* 4e*Typical Profile:*

H1—0 to 8 inches; loam

H2—8 to 16 inches; loam

H3—16 to 27 inches; clay loam

Cr—27 to 31 inches; unweathered bedrock

**Collinsville***MLRA:* 112 - Cherokee Prairies*Landform:* Hillslope on upland*Parent material:* Sandstone residuum*Slope:* 2 to 6 percent*Depth to restrictive feature:* inches to bedrock (lithic)*Drainage class:* Well drained*Slowest permeability:* Moderately rapid (About 2.00 in/hr)*Available water capacity:* Very low (About 1.7 inches)*Shrink-swell potential:* Low (About 1.5 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):* 7e*Typical Profile:*

H1—0 to 8 inches; loam

H2—8 to 14 inches; fine sandy loam, loam

R—14 to 18 inches; unweathered bedrock

**Minor Components****Eram***Composition:* About 5 percent*Slope:* 3 to 7 percent*Depth to restrictive feature:* inches to bedrock (paralithic)*Drainage class:* Moderately well drained*Ecological site:* Clay Upland (pe35-42)**Lebo***Composition:* About 5 percent*Slope:* 8 to 15 percent*Depth to restrictive feature:* inches to bedrock (paralithic)*Drainage class:* Well drained*Ecological site:* Loamy Upland (pe35-42)**Bh—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:* Hillslope on upland*Parent material:* Sandy and silty residuum weathered from sandstone over sandy and silty residuum

weathered from sandstone and 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 4.8 inches)*Shrink-swell potential:* Low (About 2.9 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 8 inches; loam

H2—8 to 16 inches; loam

H3—16 to 27 inches; clay loam

Cr—27 to 31 inches; unweathered bedrock

**Collinsville***MLRA:* 112 - Cherokee Prairies*Landform:* Hillslope on upland*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 1.7 inches)  
*Shrink-swell potential:* Low (About 1.5 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):* 7e

*Typical Profile:*

H1—0 to 8 inches; loam  
 H2—8 to 14 inches; loam, fine sandy loam  
 R—14 to 18 inches; unweathered bedrock

**Minor Components**

**Lebo**

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

**Eram**

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

**Dennis**

*Composition:* About 5 percent  
*Slope:* 3 to 6 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Loamy 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  
*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 5.4 inches)  
*Shrink-swell potential:* High (About 7.4 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; silty clay loam  
 H2—8 to 13 inches; silty clay loam  
 H3—13 to 28 inches; silty clay  
 R—28 to 32 inches;

**Minor Components**

**Kenoma**

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

**Shidler**

*Composition:* About 5 percent  
*Slope:* 3 to 8 percent  
*Depth to restrictive feature:* inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Ecological site:* Shallow Limy (pe35-42)

**Zaar**

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

**Da—Deepwater silt loam, 1 to 4 percent slopes**

**Map Unit Composition**

Deepwater: 90 percent  
 Minor components: 10 percent

**Component Descriptions**

**Deepwater**



*MLRA:* 112 - Cherokee Prairies  
*Landform:* Hillslope on upland  
*Parent material:* Residuum weathered from shale  
*Slope:* 1 to 4 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* High (About 12.0 inches)  
*Shrink-swell potential:* Moderate (About 4.7 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* About 36 to 54 inches  
*Runoff class:* Medium  
*Ecological site:* Loamy Upland (pe35-42)  
*Land capability (nonirrigated):* 2e

*Typical Profile:*

H1—0 to 14 inches; silt loam  
 H2—14 to 19 inches; silt loam  
 H3—19 to 30 inches; silty clay loam  
 H4—30 to 60 inches; clay loam

**Minor Components**

**Darnell**

*Composition:* About 10 percent  
*Slope:* 12 to 20 percent  
*Depth to restrictive feature:* inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Ecological site:* Shallow Savannah (pe35-42)

**Db—Dennis silt loam, 1 to 3 percent slopes**

**Map Unit Composition**

Dennis: 90 percent  
 Minor components: 10 percent

**Component Descriptions**

**Dennis**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Hillslope on upland  
*Parent material:* Silty and clayey residuum weathered from shale, unspecified  
*Slope:* 1 to 3 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 9.4 inches)

*Shrink-swell potential:* Very high (About 9.4 LEP)

*Flooding hazard:* None

*Depth to seasonal water saturation:* About 24 to 36 inches

*Runoff class:* High

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

*Land capability (nonirrigated):* 2e

*Typical Profile:*

H1—0 to 7 inches; silt loam  
 H2—7 to 11 inches; silt loam  
 H3—11 to 19 inches; silty clay loam  
 H4—19 to 37 inches; silty clay  
 H5—37 to 60 inches; silty clay

**Minor Components**

**Bates**

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

**Eram**

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

**Dc—Dennis silt loam, 3 to 6 percent slopes**

**Map Unit Composition**

Dennis: 90 percent  
 Minor components: 10 percent

**Component Descriptions**

**Dennis**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Hillslope on upland  
*Parent material:* Silty and clayey residuum weathered from shale, unspecified  
*Slope:* 3 to 6 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 9.4 inches)  
*Shrink-swell potential:* Very high (About 9.4 LEP)  
*Flooding hazard:* None

*Depth to seasonal water saturation:* About 24 to 36 inches  
*Runoff class:* High  
*Ecological site:* Loamy Upland (pe35-42)  
*Land capability (nonirrigated):* 3e

**Typical Profile:**

H1—0 to 7 inches; silt loam  
 H2—7 to 11 inches; silt loam  
 H3—11 to 19 inches; silty clay loam  
 H4—19 to 37 inches; silty clay  
 H5—37 to 60 inches; silty clay

**Minor Components**

**Bates**

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

**Eram**

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

**Dn—Dennis-Lanton silt loams, 2 to 8 percent slopes**

**Map Unit Composition**

Dennis: 55 percent  
 Lanton: 30 percent  
 Minor components: 15 percent

**Component Descriptions**

**Dennis**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Hillslope on upland  
*Parent material:* Silty and clayey residuum weathered from shale, unspecified  
*Slope:* 2 to 8 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 9.4 inches)  
*Shrink-swell potential:* Very high (About 9.4 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* About 24 to 36 inches

*Runoff class:* High  
*Ecological site:* Loamy Upland (pe35-42)  
*Land capability (nonirrigated):* 4e

**Typical Profile:**

H1—0 to 10 inches; silt loam  
 H2—10 to 15 inches; silt loam  
 H3—15 to 19 inches; silty clay loam  
 H4—19 to 37 inches; silty clay  
 H5—37 to 60 inches; silty clay

**Lanton**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Drainageway on upland  
*Parent material:* Silty and clayey alluvium  
*Slope:* 2 to 3 percent  
*Drainage class:* Somewhat poorly drained  
*Slowest permeability:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* High (About 10.5 inches)  
*Shrink-swell potential:* Moderate (About 4.6 LEP)  
*Flooding hazard:* Frequent  
*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 12 inches; silt loam  
 H2—12 to 32 inches; silty clay loam  
 H3—32 to 60 inches; silty clay loam

**Minor Components**

**Osage**

*Composition:* About 10 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Poorly drained  
*Ecological site:* Clay Lowland (pe35-42)

**Parsons**

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

**Eb—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)

**Ec—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

*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)

**Et—Eram-Lebo silty clay loams, 4 to 15 percent slopes**

## Map Unit Composition

Eram: 50 percent

Lebo: 35 percent

Minor components: 15 percent

## Component Descriptions

### Eram

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Hillslope on upland  
*Parent material:* Silty and clayey residuum weathered from shale, unspecified  
*Slope:* 8 to 10 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 8.3 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* About 6 to 31 inches  
*Runoff class:* Very high  
*Ecological site:* Clay Upland (pe35-42)  
*Land capability (nonirrigated):* 6e

*Typical Profile:*  
 H1—0 to 8 inches; silty clay  
 H2—8 to 27 inches; clay  
 Cr—27 to 31 inches; weathered bedrock

#### **Lebo**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Hillslope on upland  
*Parent material:* Residuum weathered from shale, clayey  
*Slope:* 8 to 15 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 5.9 inches)  
*Shrink-swell potential:* Very high (About 9.4 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 16 inches; silty clay loam  
 H2—16 to 27 inches; channery silty clay loam  
 H3—27 to 32 inches; extremely channery silty clay loam  
 Cr—32 to 36 inches; weathered bedrock

#### **Minor Components**

##### **Bates**

*Composition:* About 5 percent  
*Slope:* 4 to 7 percent  
*Depth to restrictive feature:* inches to bedrock (paralithic)  
*Drainage class:* Well drained

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

##### **Collinsville**

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

##### **Dennis**

*Composition:* About 5 percent  
*Slope:* 3 to 6 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Loamy Upland (pe35-42)

### **Ka—Kenoma silt loam, 1 to 3 percent slopes**

#### **Map Unit Composition**

Kenoma: 90 percent  
 Minor components: 10 percent

#### **Component Descriptions**

##### **Kenoma**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Ridge on paleoterrace on upland  
*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 9.3 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 7 inches; silt loam  
 H2—7 to 35 inches; silty clay  
 H3—35 to 44 inches; silty clay  
 H4—44 to 60 inches; silty clay

##### **Minor Components** **Catoosa**

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

**Zaar**

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

**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:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* High (About 10.5 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 12 inches; silt loam  
 H2—12 to 32 inches; silty clay loam  
 H3—32 to 60 inches; silty clay loam

**Minor Components****Osage**

*Composition:* About 10 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Poorly drained  
*Ecological site:* Clay Lowland (pe35-42)

**M-W—Miscellaneous Water****Map Unit Composition**

Miscellaneous Water: 100 percent

**Component Descriptions****Miscellaneous Water**

*MLRA:* 112 - Cherokee Prairies  
*Depth to seasonal water saturation:* More than 6 feet

**No—Nowata silt loam, 3 to 7 percent slopes****Map Unit Composition**

Nowata: 90 percent  
 Minor components: 10 percent

**Component Descriptions****Nowata**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Hillslope on upland  
*Parent material:* Residuum weathered from limestone  
*Slope:* 3 to 7 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* Low (About 3.5 inches)  
*Shrink-swell potential:* Moderate (About 5.3 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):* 4e

*Typical Profile:*

H1—0 to 10 inches; silt loam  
 H2—10 to 13 inches; silt loam  
 H3—13 to 30 inches; extremely channery silty clay loam  
 R—30 to 34 inches;

**Minor Components**  
**Shidler**

*Composition:* About 5 percent  
*Slope:* 3 to 8 percent  
*Depth to restrictive feature:* inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Ecological site:* Shallow Limy (pe35-42)

**Rock outcrop**

*Composition:* About 5 percent  
*Drainage class:* Well drained

**Od—Olpe-Dennis complex, 3 to 7 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  
*Parent material:* Ancient clayey alluvium  
*Slope:* 3 to 7 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* Very low (About 1.8 inches)  
*Shrink-swell potential:* Moderate (About 4.1 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):* 6e

*Typical Profile:*

H1—0 to 15 inches; gravelly silt loam  
 H2—15 to 30 inches; very gravelly silty clay loam, extremely gravelly silty clay loam  
 H3—30 to 60 inches; extremely gravelly silty clay

**Dennis**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Hillslope on upland  
*Parent material:* Silty and clayey residuum weathered from shale, unspecified  
*Slope:* 3 to 7 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)

*Available water capacity:* High (About 9.4 inches)  
*Shrink-swell potential:* Very high (About 9.4 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* About 24 to 36 inches  
*Runoff class:* High  
*Ecological site:* Loamy Upland (pe35-42)  
*Land capability (nonirrigated):* 4e

*Typical Profile:*

H1—0 to 7 inches; silt loam  
 H2—7 to 11 inches; silt loam  
 H3—11 to 19 inches; silty clay loam  
 H4—19 to 37 inches; silty clay  
 H5—37 to 60 inches; silty clay

**Minor Components****Rock outcrop**

*Composition:* About 5 percent  
*Drainage class:* Well drained

**Bates**

*Composition:* About 5 percent  
*Slope:* 3 to 7 percent  
*Depth to restrictive feature:* inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (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 2 percent  
*Drainage class:* Poorly drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* Moderate (About 6.1 inches)  
*Shrink-swell potential:* Very high (About 14.5 LEP)  
*Flooding hazard:* Occasional  
*Depth to seasonal water saturation:* About 0 to 12 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 19 inches; silty clay  
 H3—19 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)

**Pa—Parsons silt loam, 0 to 1 percent slopes**

**Map Unit Composition**

Parsons: 90 percent  
 Minor components: 10 percent

**Component Descriptions**

**Parsons**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Paleoterrace on upland  
*Parent material:* Loess over ancient clayey alluvium 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 9.0 inches)  
*Shrink-swell potential:* High (About 7.7 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):* 2s

*Typical Profile:*

H1—0 to 8 inches; silt loam  
 H2—8 to 12 inches; silt loam  
 H3—12 to 37 inches; silty clay

H4—37 to 60 inches; silty clay

**Minor Components**

**Zaar**

*Composition:* About 10 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Clay Upland (pe35-42)

**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.

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

**Map Unit Composition**

Shidler: 50 percent  
 Catoosa: 40 percent  
 Minor components: 10 percent

**Component Descriptions**

**Shidler**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Drainageway on upland  
*Parent material:* Residuum weathered from limestone  
*Slope:* 3 to 8 percent  
*Depth to restrictive feature:* 4 to 20 inches to bedrock (lithic)  
*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 1.7 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 12 inches; silt loam  
 R—12 to 14 inches; unweathered bedrock

**Catoosa***MLRA:* 112 - Cherokee Prairies*Landform:* Ridge on upland*Parent material:* Residuum weathered from limestone*Slope:* 1 to 3 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 5.3 inches)*Shrink-swell potential:* Very high (About 9.3 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 10 inches; silt loam

H2—10 to 31 inches; silty clay loam

R—31 to 33 inches; unweathered bedrock

**Minor Components****Lebo***Composition:* About 5 percent*Slope:* 8 to 15 percent*Depth to restrictive feature:* inches to bedrock (paralithic)*Drainage class:* Well drained*Ecological site:* Loamy Upland (pe35-42)**Rock outcrop***Composition:* About 5 percent*Drainage class:* Well drained**Sd—Stephenville-Darnell fine sandy loams, 3 to 20 percent slopes****Map Unit Composition**

Stephenville: 45 percent

Darnell: 40 percent

Minor components: 15 percent

**Component Descriptions****Stephenville***MLRA:* 84A - Cross Timbers*Landform:* Ridge on upland*Parent material:* Residuum weathered from sandstone*Slope:* 3 to 9 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 3.5 inches)*Shrink-swell potential:* Low (About 2.2 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* More than 6 feet*Runoff class:* High*Ecological site:* Savannah (pe35-42)*Land capability (nonirrigated):* 6e*Typical Profile:*

H1—0 to 4 inches; fine sandy loam

H2—4 to 11 inches; fine sandy loam

H3—11 to 26 inches; sandy clay loam

Cr—26 to 30 inches; weathered bedrock

**Darnell***MLRA:* 84A - Cross Timbers*Landform:* Hillslope on upland*Parent material:* Residuum weathered from sandstone*Slope:* 12 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 2.0 inches)*Shrink-swell potential:* Low (About 0.0 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* More than 6 feet*Runoff class:* Low*Ecological site:* Shallow Savannah (pe35-42)*Land capability (nonirrigated):* 7s*Typical Profile:*

H1—0 to 8 inches; fine sandy loam

H2—8 to 14 inches; fine sandy loam

Cr—14 to 18 inches; weathered bedrock

**Minor Components****Deepwater***Composition:* About 10 percent*Slope:* 1 to 4 percent*Drainage class:* Moderately well drained*Ecological site:* Loamy Upland (pe35-42)**Rock outcrop***Composition:* About 5 percent*Drainage class:* Well drained



**Va—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:* Moderately slow (About 0.20 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:* Medium  
*Ecological site:* Loamy Lowland (pe35-42)  
*Land capability (nonirrigated):* 2w

*Typical Profile:*

H1—0 to 7 inches; silt loam  
 H2—7 to 27 inches; silt loam  
 H3—27 to 44 inches; silt loam  
 H4—44 to 60 inches; silt loam

**Minor Components****Osage**

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

**Vb—Verdigris silt loam, channeled****Map Unit Composition**

Verdigris: 95 percent  
 Minor components: 5 percent

**Component Descriptions****Verdigris**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Drainageway on upland  
*Parent material:* Silty alluvium

*Slope:* 0 to 2 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* Very high (About 12.4 inches)  
*Shrink-swell potential:* Low (About 2.2 LEP)  
*Flooding hazard:* Frequent  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Loamy Lowland (pe35-42)  
*Land capability (nonirrigated):* 5w

*Typical Profile:*

H1—0 to 7 inches; silt loam  
 H2—7 to 27 inches; silt loam  
 H3—27 to 60 inches; silt loam

**Minor Components****Osage**

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

**W—Water****Wa—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:* Paleoterrace on upland  
*Parent material:* Silty and clayey alluvium over silty and clayey residuum weathered from clayey shale  
*Slope:* 0 to 1 percent  
*Drainage class:* Somewhat poorly drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* Moderate (About 8.7 inches)  
*Shrink-swell potential:* Very high (About 10.6 LEP)  
*Flooding hazard:* None

*Depth to seasonal water saturation:* About 6 to 24 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 19 inches; silty clay  
 H3—19 to 30 inches; silty clay  
 H4—30 to 43 inches; silty clay  
 H5—43 to 60 inches; silty clay

**Minor Components**

**Zaar**

*Composition:* About 10 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Clay Upland (pe35-42)

**Zb—Zaar silty clay, 0 to 2 percent slopes**

**Map Unit Composition**

Zaar: 85 percent  
 Minor components: 15 percent

**Component Descriptions**

**Zaar**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Hillslope on upland  
*Parent material:* Ancient alluvium and/or clayey colluvium and/or residuum weathered from shale  
*Slope:* 0 to 2 percent  
*Drainage class:* Somewhat poorly drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* Moderate (About 8.3 inches)  
*Shrink-swell potential:* Very high (About 11.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* About 12 to 24 inches  
*Runoff class:* High  
*Ecological site:* Clay Upland (pe35-42)  
*Land capability (nonirrigated):* 3w

*Typical Profile:*

H1—0 to 7 inches; silty clay  
 H2—7 to 22 inches; silty clay  
 H3—22 to 41 inches; silty clay  
 H4—41 to 52 inches; silty clay  
 H5—52 to 60 inches; silty clay

**Minor Components**

**Woodson**

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

**Parsons**

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

**Verdigris**

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

**ZC—Zaar silty clay, 1 to 3 percent slopes**

**Map Unit Composition**

Zaar: 96 percent  
 Minor components: 4 percent

**Component Descriptions**

**Zaar**

*MLRA:* 112 - Cherokee Prairies  
*Landform:* Hillslope on upland  
*Parent material:* Ancient alluvium and/or clayey colluvium and/or residuum weathered from shale  
*Slope:* 1 to 3 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* Moderate (About 8.5 inches)  
*Shrink-swell potential:* Very high (About 11.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* About 14 to 22 inches  
*Runoff class:* High  
*Ecological site:* Clay Upland (pe35-42)  
*Land capability (nonirrigated):* 3e

*Typical Profile:*

H1—0 to 16 inches; silty clay  
 H2—16 to 38 inches; silty clay  
 H3—38 to 53 inches; silty clay  
 H4—53 to 60 inches; silty clay

**Minor Components****Dennis**

*Composition:* About 1 percent  
*Slope:* 1 to 4 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Loamy Upland (pe35-42)

**Parsons**

*Composition:* About 1 percent  
*Slope:* 1 to 3 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Clay Upland (pe35-42)

**Lula**

*Composition:* About 1 percent

*Slope:* 1 to 3 percent

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

*Drainage class:* Well drained

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

**Ringo**

*Composition:* About 1 percent

*Slope:* 3 to 9 percent

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

*Drainage class:* Moderately well drained

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