

**015CS—Clime-Sogn complex, 3 to 15 percent slopes****Map Unit Composition**

Clime: 67 percent  
 Sogn: 30 percent  
 Minor components: 3 percent

**Component Descriptions****Clime**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Silty and clayey residuum weathered from shale, calcareous  
*Slope:* 3 to 15 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 4.8 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* High  
*Ecological site:* Limy Upland (pe30-36)  
*Land capability (nonirrigated):* 6e

*Typical Profile:*

H1—0 to 9 inches; silty clay  
 H2—9 to 33 inches; silty clay  
 Cr—33 to 37 inches; unweathered bedrock

**Sogn**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Hillslope position:* Summit  
*Parent material:* Loamy residuum weathered from limestone, unspecified  
*Slope:* 3 to 15 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 4.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium

*Ecological site:* Shallow Limy (pe30-36)

*Typical Profile:*

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

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

*Composition:* About 3 percent

**015FC—Florence Cherty silt loam, 5 to 10 percent slopes****Map Unit Composition**

Florence: 85 percent  
 Minor components: 15 percent

**Component Descriptions****Florence**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Clayey residuum weathered from clayey shale and/or clayey residuum weathered from cherty limestone  
*Slope:* 5 to 10 percent  
*Depth to restrictive feature:* 40 to 60 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* Low (About 4.2 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* High  
*Ecological site:* Loamy Upland (pe30-36)  
*Land capability (nonirrigated):* 6e

*Typical Profile:*

H1—0 to 14 inches; gravelly silt loam  
 H2—14 to 22 inches; very gravelly silty clay  
 H3—22 to 45 inches; very gravelly clay  
 R—45 to 49 inches; unweathered bedrock

**Minor Components****Dwight**

*Composition:* About 5 percent  
*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Pan (pe30-36)

*Ecological site:* Loamy Upland (pe25-34)

### **Labette**

*Composition:* About 5 percent  
*Slope:* 1 to 3 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe30-36)

## **073LD—Labette-Dwight complex, 0 to 3 percent slopes**

### **Tully**

*Composition:* About 5 percent  
*Slope:* 1 to 4 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe30-36)

### **Map Unit Composition**

Labette: 65 percent  
 Dwight: 30 percent  
 Minor components: 5 percent

## **015TU—Tully silty clay loam, 4 to 7 percent slopes**

### **Map Unit Composition**

Tully: 90 percent  
 Minor components: 10 percent

### **Component Descriptions**

#### **Tully**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Clayey colluvium  
*Slope:* 4 to 7 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* Moderate (About 8.5 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very high  
*Ecological site:* Loamy Upland (pe30-36)  
*Land capability (nonirrigated):* 3e

#### *Typical Profile:*

H1—0 to 10 inches; silty clay loam  
 H2—10 to 64 inches; silty clay

### **Minor Components**

#### **Irwin**

*Composition:* About 5 percent  
*Geomorphic Position:* hillside on upland  
*Slope:* 0 to 1 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Upland (pe25-34)

#### **Norge**

*Composition:* About 5 percent  
*Slope:* 1 to 3 percent  
*Drainage class:* Well drained

### **Component Descriptions**

#### **Labette**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Silty and clayey residuum weathered from limestone and shale  
*Slope:* 0 to 3 percent  
*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:* Moderate (About 6.1 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* High  
*Ecological site:* Loamy Upland (pe30-36)  
*Land capability (nonirrigated):* 3e

#### *Typical Profile:*

H1—0 to 9 inches; silty clay loam  
 H2—9 to 36 inches; silty clay  
 R—36 to 40 inches; unweathered bedrock

#### **Dwight**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Silty and clayey residuum weathered from cherty limestone  
*Slope:* 0 to 3 percent  
*Depth to restrictive feature:* 40 to 60 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* Low (About 5.9 inches)  
*Shrink-swell potential:* High (About 7.5 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 23 inches; clay  
 H3—23 to 44 inches; silty clay  
 R—44 to 48 inches; unweathered bedrock

**Minor Components**

**Zaar**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 0 to 2 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Clay Upland (pe30-36)

**073LS—Labette-Sogn silty clay loams, 0 to 8 percent slopes**

**Map Unit Composition**

Labette: 50 percent  
 Sogn: 35 percent  
 Minor components: 15 percent

**Component Descriptions**

**Labette**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Silty and clayey residuum weathered from limestone and shale  
*Slope:* 1 to 8 percent  
*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 4.5 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* High  
*Ecological site:* Loamy Upland (pe30-36)  
*Land capability (nonirrigated):* 6e

*Typical Profile:*

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

**Sogn**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland

*Parent material:* Loamy residuum weathered from limestone  
*Slope:* 0 to 8 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 3.0 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Shallow Limy (pe30-36)  
*Land capability (nonirrigated):* 7s

*Typical Profile:*

H1—0 to 15 inches; silty clay loam  
 R—15 to 19 inches; unweathered bedrock

**Minor Components**

**Clime**

*Composition:* About 10 percent  
*Geomorphic Position:* hillside on upland  
*Slope:* 5 to 20 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Ecological site:* Limy Upland (pe30-36)

**Rock outcrop**

*Composition:* About 5 percent

**111LD—Labette-Dwight complex, 0 to 2 percent slopes**

**Map Unit Composition**

Labette: 60 percent  
 Dwight: 40 percent

**Component Descriptions**

**Labette**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Silty and clayey residuum weathered from limestone-shale  
*Slope:* 1 to 2 percent  
*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:* Moderate (About 6.4 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* High  
*Ecological site:* Loamy Upland (pe30-36)  
*Land capability (nonirrigated):* 2e

*Typical Profile:*

H1—0 to 8 inches; silty clay loam  
 H2—8 to 38 inches; silty clay  
 R—38 to 38 inches; unweathered bedrock

**Dwight**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland, divide on upland  
*Parent material:* Silty and clayey residuum weathered from limestone, cherty  
*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* 40 to 60 inches to bedrock (lithic)  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* Moderate (About 6.6 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very high  
*Ecological site:* Clay Pan (pe25-34)  
*Land capability (nonirrigated):* 4e

*Typical Profile:*

H1—0 to 4 inches; silt loam  
 H2—4 to 20 inches; silty clay  
 H3—20 to 49 inches; silty clay  
 R—49 to 49 inches; unweathered bedrock

**1110A—Olpe-Kenoma complex, 3 to 15 percent slopes**

**Map Unit Composition**

Olpe: 70 percent  
 Kenoma: 30 percent

**Component Descriptions**

**Olpe**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Paleoterrace on upland  
*Parent material:* Clayey alluvium  
*Slope:* 3 to 15 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 4.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very high  
*Ecological site:* Loamy Upland (pe35-42)  
*Land capability (nonirrigated):* 6e

*Typical Profile:*

H1—0 to 15 inches; gravelly silt loam  
 H2—15 to 25 inches; very gravelly silty clay loam  
 H3—25 to 60 inches; extremely gravelly silty clay

**Kenoma**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Divide on upland  
*Parent material:* Silty and clayey residuum weathered from limestone-shale  
*Slope:* 3 to 7 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* High (About 9.9 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* About 6 to 18 inches  
*Runoff class:* Very high  
*Ecological site:* Clay Upland (pe35-42)  
*Land capability (nonirrigated):* 4e

*Typical Profile:*

H1—0 to 10 inches; silt loam  
 H2—10 to 38 inches; silty clay  
 H3—38 to 60 inches; silty clay

**111TA—Tully silty clay loam, 2 to 7 percent slopes**

**Map Unit Composition**

Tully: 100 percent

## Component Descriptions

### Tully

*MLRA:* 76 - Bluestem Hills

*Landform:* Hillslope

*Parent material:* Clayey colluvium

*Slope:* 2 to 7 percent

*Drainage class:* Well drained

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

*Available water capacity:* Moderate (About 8.8 inches)

*Shrink-swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

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

*Runoff class:* High

*Ecological site:* Loamy Upland (pe30-36)

*Land capability (nonirrigated):* 3e

#### Typical Profile:

H1—0 to 17 inches; silty clay loam

H2—17 to 48 inches; silty clay

H3—48 to 60 inches; silty clay

## 111ZA—Zaar silty clay, 2 to 5 percent slopes

### Map Unit Composition

Zaar: 100 percent

## Component Descriptions

### Zaar

*MLRA:* 76 - Bluestem Hills

*Landform:* Hillslope on upland

*Hillslope position:* Backslope

*Parent material:* Ancient alluvium and/or clayey colluvium and/or residuum weathered from shale

*Slope:* 2 to 5 percent

*Drainage class:* Moderately well drained

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

*Available water capacity:* Moderate (About 8.4 inches)

*Shrink-swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

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

*Runoff class:* Very high

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

*Land capability (nonirrigated):* 4e

#### Typical Profile:

H1—0 to 14 inches; silty clay

H2—14 to 40 inches; silty clay

H3—40 to 60 inches; silty clay

## 115CR—Clime stony silty clay loam, 15 to 30 percent slopes

### Map Unit Composition

Clime: 80 percent

Minor components: 20 percent

## Component Descriptions

### Clime

*MLRA:* 76 - Bluestem Hills

*Landform:* Hillslope on upland

*Parent material:* Silty and clayey residuum weathered from calcareous shale

*Slope:* 15 to 30 percent

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

*Drainage class:* Well drained

*Slowest permeability:* Very slow (About 0.01 in/hr)

*Available water capacity:* Low (About 4.2 inches)

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

*Flooding hazard:* None

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

*Runoff class:* Very high

*Ecological site:* Limy Upland (pe25-34)

*Land capability (nonirrigated):* 7e

#### Typical Profile:

H1—0 to 7 inches; stony silty clay loam

H2—7 to 15 inches; silty clay

H3—15 to 23 inches; silty clay

Cr—23 to 27 inches; silty clay

### Minor Components

#### Sogn

*Composition:* About 10 percent

*Slope:* 0 to 15 percent

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

*Drainage class:* Somewhat excessively drained

*Ecological site:* Shallow Limy (pe25-34)

### Tully

*Composition:* About 10 percent

*Slope:* 3 to 6 percent

*Drainage class:* Well drained

*Ecological site:* Loamy Upland (pe25-34)

**115FC—Florence silt loam, 2 to 15 percent slopes**

*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe25-34)

**Map Unit Composition**

Florence: 85 percent  
 Minor components: 15 percent

**Component Descriptions****Florence**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Clayey residuum weathered from clayey shale and/or clayey residuum weathered from cherty limestone  
*Slope:* 2 to 15 percent  
*Depth to restrictive feature:* 40 to 60 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* Low (About 5.2 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* High  
*Ecological site:* Loamy Upland (pe30-36)  
*Land capability (nonirrigated):* 6e

*Typical Profile:*

H1—0 to 13 inches; silt loam  
 H2—13 to 16 inches; gravelly silty clay loam  
 H3—16 to 45 inches; extremely gravelly clay  
 R—45 to 49 inches; unweathered bedrock

**Minor Components****Dwight**

*Composition:* About 5 percent  
*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  
*Slope:* 1 to 4 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe25-34)

**Tully**

*Composition:* About 5 percent  
*Slope:* 3 to 6 percent

**115IC—Irwin silty clay loam, 3 to 6 percent slopes****Map Unit Composition**

Irwin: 90 percent  
 Minor components: 10 percent

**Component Descriptions****Irwin**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Old clayey alluvium  
*Slope:* 3 to 6 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* Moderate (About 8.8 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very high  
*Ecological site:* Clay Upland (pe25-34)  
*Land capability (nonirrigated):* 4e

*Typical Profile:*

H1—0 to 13 inches; silty clay loam  
 H2—13 to 40 inches; silty clay  
 H3—40 to 60 inches; silty clay

**Minor Components****Clime**

*Composition:* About 5 percent  
*Slope:* 3 to 7 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Ecological site:* Limy Upland (pe25-34)

**Labette**

*Composition:* About 5 percent  
*Slope:* 1 to 4 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe25-34)

## 115LG—Labette-Sogn silty clay loams, 2 to 15 percent slopes

### Map Unit Composition

Labette: 65 percent  
Sogn: 25 percent  
Minor components: 10 percent

### Component Descriptions

#### Labette

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Silty and clayey residuum weathered from limestone and shale  
*Slope:* 2 to 8 percent  
*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:* Moderate (About 6.0 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* High  
*Ecological site:* Loamy Upland (pe25-34)  
*Land capability (nonirrigated):* 6e

#### Typical Profile:

H1—0 to 7 inches; silty clay loam  
H2—7 to 36 inches; silty clay  
R—36 to 40 inches; unweathered bedrock

#### Sogn

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Loamy residuum weathered from limestone  
*Slope:* 8 to 15 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 1.6 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 (pe25-34)

*Land capability (nonirrigated):* 6s

#### Typical Profile:

H1—0 to 10 inches; silty clay loam  
R—10 to 14 inches; unweathered bedrock

### Minor Components

#### Dwight

*Composition:* About 8 percent  
*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)

#### Rock outcrop

*Composition:* About 2 percent

## 115TU—Tully silty clay loam, 2 to 6 percent slopes

### Map Unit Composition

Tully: 90 percent  
Minor components: 10 percent

### Component Descriptions

#### Tully

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Clayey colluvium  
*Slope:* 3 to 6 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 9.0 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* High  
*Ecological site:* Loamy Upland (pe25-34)  
*Land capability (nonirrigated):* 3e

#### Typical Profile:

H1—0 to 17 inches; silty clay loam  
H2—17 to 60 inches; silty clay

### Minor Components

#### Clime

*Composition:* About 5 percent  
*Slope:* 3 to 7 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Well drained

*Ecological site:* Limy Upland (pe25-34)

#### **Labette**

*Composition:* About 5 percent

*Slope:* 1 to 4 percent

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

*Drainage class:* Well drained

*Ecological site:* Loamy Upland (pe25-34)

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

*Drainage class:* Moderately well drained

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

#### **Tully**

*Composition:* About 5 percent

*Geomorphic Position:* hillslope on upland

*Slope:* 3 to 7 percent

*Drainage class:* Well drained

*Ecological site:* Loamy Upland (pe30-36)

### **127FC—Florence Cherty silt loam, 5 to 15 percent slopes**

#### **Map Unit Composition**

Florence: 90 percent

Minor components: 10 percent

#### **Component Descriptions**

##### **Florence**

*MLRA:* 76 - Bluestem Hills

*Landform:* Hillslope on upland

*Parent material:* Clayey residuum weathered from cherty limestone and/or clayey residuum weathered

from clayey shale

*Slope:* 5 to 15 percent

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

*Drainage class:* Well drained

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

*Available water capacity:* Low (About 4.0 inches)

*Shrink-swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

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

*Runoff class:* High

*Ecological site:* Loamy Upland (pe30-36)

*Land capability (nonirrigated):* 6e

##### *Typical Profile:*

H1—0 to 4 inches; gravelly silt loam

H2—4 to 11 inches; extremely gravelly silty clay loam

H3—11 to 15 inches; extremely gravelly silty clay loam

H4—15 to 44 inches; extremely cobbly clay

R—44 to 48 inches; unweathered bedrock

#### **Minor Components**

##### **Dwight**

*Composition:* About 5 percent

*Slope:* 1 to 3 percent

### **127LB—Labette silty clay loam, 2 to 5 percent slopes**

#### **Map Unit Composition**

Labette: 90 percent

Minor components: 10 percent

#### **Component Descriptions**

##### **Labette**

*MLRA:* 76 - Bluestem Hills

*Landform:* Hillslope on upland

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

*Slope:* 2 to 5 percent

*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 4.5 inches)

*Shrink-swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

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

*Runoff class:* High

*Ecological site:* Loamy Upland (pe30-36)

*Land capability (nonirrigated):* 3e

##### *Typical Profile:*

H1—0 to 8 inches; silty clay loam

H2—8 to 26 inches; silty clay

R—26 to 30 inches; unweathered bedrock

#### **Minor Components**

##### **Dwight**

*Composition:* About 5 percent

*Slope:* 1 to 3 percent

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

*Drainage class:* Moderately well drained

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

##### **Irwin**



*Composition:* About 5 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Upland (pe25-34)

## **Ch—Chase silty clay loam, occasionally flooded**

### **AED—Arents, Earthen Dam**

### **Map Unit Composition**

Chase: 90 percent  
 Minor components: 10 percent

### **Ar—Ivan silt loam, channeled**

### **Map Unit Composition**

Ivan: 80 percent  
 Minor components: 20 percent

### **Component Descriptions**

#### **Ivan**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Flood plain on river valley  
*Parent material:* Calcareous fine-silty alluvium  
*Slope:* 0 to 3 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderate (About 0.60 in/hr)  
*Available water capacity:* Very high (About 12.7 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* Frequent  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Loamy Lowland (pe30-36)  
*Land capability (nonirrigated):* 5w

#### *Typical Profile:*

H1—0 to 32 inches; silty clay loam  
 H2—32 to 60 inches; silty clay loam

#### **Minor Components**

#### **Reading**

*Composition:* About 20 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Lowland (pe30-36)

### **BOP—Borrow Pits**

*General Considerations:* An open excavation from which soil and underlying material have been removed usually for construction purposes.

### **Component Descriptions**

#### **Chase**

*MLRA:* 76 - Bluestem Hills  
*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 9.9 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* Occasional  
*Depth to seasonal water saturation:* About 24 to 48 inches  
*Runoff class:* High  
*Ecological site:* Loamy Lowland (pe30-36)  
*Land capability (nonirrigated):* 2w

#### *Typical Profile:*

H1—0 to 14 inches; silty clay loam  
 H2—14 to 46 inches; silty clay  
 H3—46 to 60 inches; silty clay

#### **Minor Components**

#### **Osage**

*Composition:* About 5 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Poorly drained  
*Ecological site:* Clay Lowland (pe30-36)

#### **Reading**

*Composition:* About 5 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Lowland (pe30-36)

## **Cs—Clime-Sogn complex, 3 to 25 percent slopes**

### **Map Unit Composition**

Clime: 47 percent  
 Sogn: 20 percent

Minor components: 33 percent

### Component Descriptions

#### Clime

*MLRA:* 76 - Bluestem Hills

*Landform:* Hillslope on upland

*Parent material:* Silty and clayey residuum weathered from calcareous shale

*Slope:* 3 to 25 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 4.1 inches)

*Shrink-swell potential:* Moderate (About 4.5 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 9 inches; silty clay

H2—9 to 33 inches; silty clay

Cr—33 to 37 inches; unweathered bedrock

#### Sogn

*MLRA:* 76 - Bluestem Hills

*Landform:* Hillslope on upland

*Parent material:* Loamy residuum weathered from limestone

*Slope:* 3 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 1.2 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 (pe30-36)

*Land capability (nonirrigated):* 6s

#### Typical Profile:

H1—0 to 6 inches; silty clay loam

R—6 to 10 inches; unweathered bedrock

#### Minor Components

##### Labette

*Composition:* About 13 percent

*Slope:* 1 to 3 percent

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

*Drainage class:* Well drained

*Ecological site:* Loamy Upland (pe30-36)

#### Dwight

*Composition:* About 10 percent

*Slope:* 1 to 3 percent

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

*Drainage class:* Moderately well drained

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

#### Zaar

*Composition:* About 10 percent

*Geomorphic Position:* hillslope on upland

*Slope:* 3 to 7 percent

*Drainage class:* Somewhat poorly drained

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

### CSS—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:* Hillslope 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 7.5 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:* Hillslope 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 4.5 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* More than 6 feet*Runoff class:* Very high*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****Martin-X***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)**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**DT—Dwight silt loam, 0 to 2 percent slopes****Map Unit Composition**

Dwight: 90 percent

Minor components: 10 percent

**Component Descriptions****Dwight***MLRA:* 76 - Bluestem Hills*Landform:* Hillslope on upland*Parent material:* Silty and clayey residuum weathered from cherty limestone*Slope:* 0 to 2 percent*Depth to restrictive feature:* 40 to 60 inches to bedrock (lithic)*Drainage class:* Moderately well drained*Slowest permeability:* Very slow (About 0.00 in/hr)*Available water capacity:* Moderate (About 7.4 inches)*Shrink-swell potential:* High (About 7.5 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 6 inches; silt loam

H2—6 to 56 inches; silty clay

R—56 to 60 inches; unweathered bedrock

**Minor Components****Labette***Composition:* About 10 percent*Slope:* 1 to 4 percent*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)*Drainage class:* Well drained*Ecological site:* Loamy Upland (pe25-34)**Dw—Dwight silt loam, 1 to 3 percent slopes****Map Unit Composition**

Dwight: 85 percent

Minor components: 15 percent

## Component Descriptions

### Dwight

*MLRA:* 76 - Bluestem Hills

*Landform:* Hillslope on upland

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

*Slope:* 1 to 3 percent

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

*Drainage class:* Moderately well drained

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

*Available water capacity:* Low (About 5.8 inches)

*Shrink-swell potential:* High (About 7.5 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):* 4e

#### Typical Profile:

H1—0 to 5 inches; silt loam

H2—5 to 21 inches; silty clay

H3—21 to 42 inches; silty clay

R—42 to 46 inches; unweathered bedrock

### Minor Components

#### Labette

*Composition:* About 8 percent

*Slope:* 1 to 3 percent

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

*Drainage class:* Well drained

*Ecological site:* Loamy Upland (pe30-36)

#### Irwin

*Composition:* About 7 percent

*Slope:* 1 to 3 percent

*Drainage class:* Moderately well drained

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

## Fa—Florence-Labette complex, 2 to 12 percent slopes

### Map Unit Composition

Florence: 47 percent

Labette: 34 percent

## Component Descriptions

### Florence

*MLRA:* 76 - Bluestem Hills

*Landform:* Hillslope on upland

*Parent material:* Clayey residuum weathered from clayey shale and/or clayey residuum weathered from cherty limestone

*Slope:* 2 to 12 percent

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

*Drainage class:* Well drained

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

*Available water capacity:* Low (About 3.9 inches)

*Shrink-swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

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

*Runoff class:* High

*Ecological site:* Loamy Upland (pe30-36)

*Land capability (nonirrigated):* 6e

#### Typical Profile:

H1—0 to 13 inches; gravelly silt loam

H2—13 to 20 inches; extremely gravelly silty clay loam

H3—20 to 42 inches; extremely cobbly clay

R—42 to 46 inches; unweathered bedrock

### Labette

*MLRA:* 76 - Bluestem Hills

*Landform:* Hillslope on upland

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

*Slope:* 2 to 8 percent

*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:* Moderate (About 6.5 inches)

*Shrink-swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

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

*Runoff class:* High

*Ecological site:* Loamy Upland (pe30-36)

*Land capability (nonirrigated):* 4

#### Typical Profile:

H1—0 to 10 inches; silty clay loam

H2—10 to 38 inches; silty clay

R—38 to 42 inches; unweathered bedrock

## **Fm—Florence-Matfield Cherty silt loams, 1 to 15 percent slopes**

### **Map Unit Composition**

Florence: 70 percent  
Matfield: 25 percent  
Minor components: 5 percent

### **Component Descriptions**

#### **Florence**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Clayey residuum weathered from clayey shale and/or clayey residuum weathered from cherty limestone  
*Slope:* 2 to 15 percent  
*Depth to restrictive feature:* 40 to 60 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* Low (About 3.9 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* High  
*Ecological site:* Loamy Upland (pe30-36)  
*Land capability (nonirrigated):* 6e

#### *Typical Profile:*

H1—0 to 13 inches;  
H2—13 to 20 inches; extremely gravelly silty clay loam  
H3—20 to 42 inches; extremely cobbly clay  
R—42 to 46 inches; unweathered bedrock

#### **Matfield**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Clayey residuum weathered from cherty limestone  
*Slope:* 1 to 5 percent  
*Depth to restrictive feature:* inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* Low (About 4.0 inches)  
*Shrink-swell potential:* Low (About 1.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very high

*Ecological site:* Flint Ridge (pe30-36)  
*Land capability (nonirrigated):* 6

#### *Typical Profile:*

H1—0 to 22 inches;  
H2—22 to 46 inches;  
H3—46 to 60 inches;  
R—60 to 64 inches; unweathered bedrock

### **Minor Components**

#### **Labette**

*Composition:* About 3 percent  
*Slope:* 1 to 3 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe30-36)

#### **Dwight**

*Composition:* About 2 percent  
*Slope:* 1 to 3 percent  
*Depth to restrictive feature:* 40 to 60 inches to bedrock (lithic)  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Pan (pe30-36)

## **GRP—Gravel Pits**

## **Ic—Irwin silty clay loam, 1 to 3 percent slopes**

### **Map Unit Composition**

Irwin: 85 percent  
Minor components: 15 percent

### **Component Descriptions**

#### **Irwin**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Silty and clayey residuum weathered from clayey shale  
*Slope:* 1 to 3 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* Moderate (About 8.3 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very high  
*Ecological site:* Clay Upland (pe30-36)

*Land capability (nonirrigated):* 3e

*Typical Profile:*

H1—0 to 11 inches; silty clay loam  
H2—11 to 53 inches; silty clay  
H3—53 to 60 inches; silty clay

**Minor Components**

**Dwight**

*Composition:* About 5 percent  
*Slope:* 1 to 3 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  
*Slope:* 1 to 3 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe30-36)

**Ladysmith**

*Composition:* About 5 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Clay Upland (pe30-36)

**In—Irwin silty clay loam, 1 to 3 percent slopes, eroded**

**Map Unit Composition**

Irwin: 95 percent  
Minor components: 5 percent

**Component Descriptions**

**Irwin**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Silty and clayey residuum weathered from clayey shale  
*Slope:* 1 to 3 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* Moderate (About 7.6 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very high  
*Ecological site:* Clay Upland (pe30-36)

*Land capability (nonirrigated):* 4e

*Typical Profile:*

H1—0 to 4 inches; silty clay loam  
H2—4 to 53 inches; silty clay  
H3—53 to 60 inches; silty clay

**Minor Components**

**Dwight**

*Composition:* About 5 percent  
*Slope:* 1 to 3 percent  
*Depth to restrictive feature:* 40 to 60 inches to bedrock (lithic)  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Pan (pe30-36)

**INT—Aquolls**

**Map Unit Composition**

Aquolls: 100 percent

**Component Descriptions**

**Aquolls**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Depression on terrace on river valley  
*Parent material:* Alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Very poorly drained  
*Flooding hazard:* None  
*Ponding hazard:* Occasional  
*Depth to seasonal water saturation:* About 0 to 0 inches  
*Runoff class:* Negligible  
*Land capability (nonirrigated):* 5w

*Typical Profile:*

H1—0 to 72 inches; variable

*General Considerations:* This map unit was formerly labeled as an Intermittent Water spot symbol. These depressional areas contain soils that are occasionally ponded for long duration.

**Ir—Irwin silty clay loam, 3 to 5 percent slopes**

**Map Unit Composition**

Irwin: 90 percent  
Minor components: 10 percent

## Component Descriptions

### Irwin

*MLRA:* 76 - Bluestem Hills

*Landform:* Hillslope on upland

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

*Slope:* 3 to 5 percent

*Drainage class:* Moderately well drained

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

*Available water capacity:* Moderate (About 8.3 inches)

*Shrink-swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

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

*Runoff class:* Very high

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

*Land capability (nonirrigated):* 4e

#### Typical Profile:

H1—0 to 11 inches; silty clay loam

H2—11 to 53 inches; silty clay

H3—53 to 60 inches; silty clay

### Minor Components

#### Tully

*Composition:* About 10 percent

*Slope:* 3 to 7 percent

*Drainage class:* Well drained

*Ecological site:* Loamy Upland (pe30-36)

## Is—Irwin silty clay loam, 3 to 5 percent slopes, eroded

### Map Unit Composition

Irwin: 90 percent

Minor components: 10 percent

## Component Descriptions

### Irwin

*MLRA:* 76 - Bluestem Hills

*Landform:* Hillslope on upland

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

*Slope:* 3 to 5 percent

*Drainage class:* Moderately well drained

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

*Available water capacity:* Moderate (About 7.6 inches)

*Shrink-swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

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

*Runoff class:* Very high

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

*Land capability (nonirrigated):* 4e

#### Typical Profile:

H1—0 to 4 inches; silty clay loam

H2—4 to 53 inches; silty clay

H3—53 to 60 inches; silty clay

### Minor Components

#### Tully

*Composition:* About 10 percent

*Slope:* 3 to 7 percent

*Drainage class:* Well drained

*Ecological site:* Loamy Upland (pe30-36)

## Iv—Ivan silt loam, occasionally flooded

### Map Unit Composition

Ivan: 85 percent

Minor components: 15 percent

## Component Descriptions

### Ivan

*MLRA:* 76 - Bluestem Hills

*Landform:* Flood plain on river valley

*Parent material:* Calcareous fine-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 13.0 inches)

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

*Flooding hazard:* Occasional

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

*Runoff class:* Low

*Ecological site:* Loamy Lowland (pe30-36)

*Land capability (nonirrigated):* 2w

#### Typical Profile:

H1—0 to 32 inches; silt loam

H2—32 to 60 inches; silt loam

### Minor Components

#### Kahola

*Composition:* About 8 percent

*Slope:* 0 to 2 percent

*Drainage class:* Well drained

*Ecological site:* Loamy Lowland (pe30-36)

**Reading**

*Composition:* About 7 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Lowland (pe30-36)

**Ka—Kahola silt loam, rarely flooded****Map Unit Composition**

Kahola: 85 percent  
 Minor components: 15 percent

**Component Descriptions****Kahola**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Flood plain on river valley  
*Parent material:* Fine-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 12.6 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* Occasional  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Loamy Lowland (pe30-36)  
*Land capability (nonirrigated):* 2w

*Typical Profile:*

H1—0 to 25 inches; silt loam  
 H2—25 to 60 inches; loam

**Minor Components****Ivan**

*Composition:* About 8 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Lowland (pe30-36)

**Reading**

*Composition:* About 7 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Lowland (pe30-36)

**La—Labette silty clay loam, 1 to 3 percent slopes****Map Unit Composition**

Labette: 85 percent  
 Minor components: 15 percent

**Component Descriptions****Labette**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Silty and clayey residuum weathered from limestone and shale  
*Slope:* 1 to 3 percent  
*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:* Moderate (About 6.5 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Loamy Upland (pe30-36)  
*Land capability (nonirrigated):* 2e

*Typical Profile:*

H1—0 to 10 inches; silty clay loam  
 H2—10 to 38 inches; silty clay  
 R—38 to 42 inches; unweathered bedrock

**Minor Components****Dwight**

*Composition:* About 5 percent  
*Slope:* 1 to 3 percent  
*Depth to restrictive feature:* 40 to 60 inches to bedrock (lithic)  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Pan (pe30-36)

**Irwin**

*Composition:* About 5 percent  
*Slope:* 1 to 3 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Upland (pe30-36)

**Ladysmith**

*Composition:* About 5 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Clay Upland (pe30-36)



## LAA—Labette silty clay loam, 1 to 4 percent slopes

### Map Unit Composition

Labette: 90 percent  
Minor components: 10 percent

### Component Descriptions

#### Labette

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Silty and clayey residuum weathered from limestone and shale  
*Slope:* 1 to 4 percent  
*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 5.3 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* High  
*Ecological site:* Loamy Upland (pe30-36)  
*Land capability (nonirrigated):* 2e

#### Typical Profile:

H1—0 to 9 inches; silty clay loam  
H2—9 to 31 inches; silty clay  
R—31 to 35 inches; unweathered bedrock

#### Minor Components

##### Sogn

*Composition:* About 10 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 5 to 20 percent  
*Depth to restrictive feature:* 4 to 20 inches to bedrock (lithic)  
*Drainage class:* Somewhat excessively drained  
*Ecological site:* Shallow Limy (pe30-36)

## Lb—Labette silty clay loam, 3 to 5 percent slopes

### Map Unit Composition

Labette: 85 percent  
Minor components: 15 percent

### Component Descriptions

#### Labette

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Silty and clayey residuum weathered from limestone and shale  
*Slope:* 3 to 5 percent  
*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:* Moderate (About 6.5 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Loamy Upland (pe30-36)  
*Land capability (nonirrigated):* 3e

#### Typical Profile:

H1—0 to 10 inches; silty clay loam  
H2—10 to 38 inches; silty clay  
R—38 to 42 inches; unweathered bedrock

#### Minor Components

##### Irwin

*Composition:* About 8 percent  
*Slope:* 1 to 3 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Upland (pe30-36)

##### Dwight

*Composition:* About 7 percent  
*Slope:* 1 to 3 percent  
*Depth to restrictive feature:* 40 to 60 inches to bedrock (lithic)  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Pan (pe30-36)

## Lc—Labette silty clay loam, 2 to 5 percent slopes, eroded

### Map Unit Composition

Labette: 90 percent  
Minor components: 10 percent

### Component Descriptions

#### Labette

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Silty and clayey residuum weathered from limestone and shale  
*Slope:* 2 to 5 percent

*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:* Moderate (About 6.3 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Loamy Upland (pe30-36)  
*Land capability (nonirrigated):* 3e

*Typical Profile:*

H1—0 to 6 inches; silty clay loam  
 H2—6 to 38 inches; silty clay  
 R—38 to 42 inches; unweathered bedrock

**Minor Components**

**Dwight**

*Composition:* About 5 percent  
*Slope:* 1 to 3 percent  
*Depth to restrictive feature:* 40 to 60 inches to bedrock (lithic)  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Pan (pe30-36)

**Irwin**

*Composition:* About 5 percent  
*Slope:* 1 to 3 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Upland (pe30-36)

**Ld—Labette-Dwight complex, 1 to 3 percent slopes**

**Map Unit Composition**

Labette: 50 percent  
 Dwight: 41 percent  
 Minor components: 9 percent

**Component Descriptions**

**Labette**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Silty and clayey residuum weathered from limestone and shale  
*Slope:* 1 to 3 percent  
*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:* Moderate (About 6.5 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Medium  
*Ecological site:* Loamy Upland (pe30-36)  
*Land capability (nonirrigated):* 3e

*Typical Profile:*

H1—0 to 10 inches; silty clay loam  
 H2—10 to 38 inches; silty clay  
 R—38 to 42 inches; unweathered bedrock

**Dwight**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Silty and clayey residuum weathered from cherty limestone  
*Slope:* 1 to 3 percent  
*Depth to restrictive feature:* 40 to 60 inches to bedrock (lithic)  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* Low (About 5.8 inches)  
*Shrink-swell potential:* High (About 7.5 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):* 4

*Typical Profile:*

H1—0 to 5 inches; silt loam  
 H2—5 to 21 inches; silty clay  
 H3—21 to 42 inches; silty clay  
 R—42 to 46 inches; unweathered bedrock

**Minor Components**

**Irwin**

*Composition:* About 3 percent  
*Slope:* 1 to 3 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Upland (pe30-36)

**Ladysmith**

*Composition:* About 3 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Clay Upland (pe30-36)

**Zaar**

*Composition:* About 3 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 3 to 7 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Clay Upland (pe30-36)

## Le—Labette-Sogn complex, 2 to 12 percent slopes

### Map Unit Composition

Labette: 47 percent  
Sogn: 38 percent  
Minor components: 15 percent

### Component Descriptions

#### Labette

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Silty and clayey residuum weathered from limestone and shale  
*Slope:* 2 to 8 percent  
*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:* Moderate (About 6.5 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* High  
*Ecological site:* Loamy Upland (pe30-36)  
*Land capability (nonirrigated):* 6e

#### Typical Profile:

H1—0 to 10 inches; silty clay loam  
H2—10 to 38 inches; silty clay  
R—38 to 42 inches; unweathered bedrock

#### Sogn

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Loamy residuum weathered from limestone  
*Slope:* 2 to 12 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 1.2 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 (pe30-36)

*Land capability (nonirrigated):* 7

#### Typical Profile:

H1—0 to 6 inches; silty clay loam  
R—6 to 10 inches;

### Minor Components

#### Florence

*Composition:* About 8 percent  
*Slope:* 2 to 12 percent  
*Depth to restrictive feature:* 40 to 60 inches to bedrock (lithic)  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe30-36)

#### Dwight

*Composition:* About 7 percent  
*Slope:* 1 to 3 percent  
*Depth to restrictive feature:* 40 to 60 inches to bedrock (lithic)  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Pan (pe30-36)

## LEE—Labette-Sogn complex, 2 to 8 percent slopes

### Map Unit Composition

Labette: 70 percent  
Sogn: 20 percent  
Minor components: 10 percent

### Component Descriptions

#### Labette

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Silty and clayey residuum weathered from limestone and shale  
*Slope:* 2 to 8 percent  
*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 4.5 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* High  
*Ecological site:* Loamy Upland (pe30-36)  
*Land capability (nonirrigated):* 6e

*Typical Profile:*

H1—0 to 8 inches; silty clay loam  
 H2—8 to 26 inches; silty clay  
 R—26 to 30 inches; unweathered bedrock

**Sogn**

*MLRA:* 76 - Bluestem Hills

*Landform:* Hillslope on upland

*Parent material:* Loamy residuum weathered from limestone

*Slope:* 2 to 8 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 1.6 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 (pe30-36)

*Land capability (nonirrigated):* 7s

*Typical Profile:*

H1—0 to 8 inches; silty clay loam  
 R—8 to 12 inches; unweathered bedrock

**Minor Components****Dwight**

*Composition:* About 3 percent

*Slope:* 1 to 3 percent

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

*Drainage class:* Moderately well drained

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

**Kipson**

*Composition:* About 3 percent

*Slope:* 3 to 15 percent

*Depth to restrictive feature:* 7 to 20 inches to bedrock (paralithic)

*Drainage class:* Somewhat excessively drained

*Ecological site:* Limy Upland (pe30-36)

**Florence**

*Composition:* About 3 percent

*Slope:* 2 to 12 percent

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

*Drainage class:* Well drained

*Ecological site:* Loamy Upland (pe30-36)

**Unnamed Hydric Soil (saturation)**

*Composition:* About 1 percent

*Slope:* 0 to 2 percent

*Drainage class:* Poorly drained

**Lm—Ladysmith silty clay loam, 0 to 1 percent slopes****Map Unit Composition**

Ladysmith: 85 percent

Minor components: 15 percent

**Component Descriptions****Ladysmith**

*MLRA:* 76 - Bluestem Hills

*Landform:* Paleoterrace on upland

*Parent material:* Clayey alluvium

*Slope:* 0 to 1 percent

*Drainage class:* Somewhat poorly drained

*Slowest permeability:* Impermeable (About 0.00 in/hr)

*Available water capacity:* Moderate (About 8.9 inches)

*Shrink-swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

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

*Runoff class:* High

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

*Land capability (nonirrigated):* 2s

*Typical Profile:*

H1—0 to 9 inches; silty clay loam  
 H2—9 to 37 inches; silty clay  
 H3—37 to 60 inches; silty clay loam

**Minor Components****Irwin**

*Composition:* About 8 percent

*Slope:* 1 to 3 percent

*Drainage class:* Moderately well drained

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

**Dwight**

*Composition:* About 7 percent

*Slope:* 1 to 3 percent

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

*Drainage class:* Moderately well drained

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

## Lo—Ladysmith silty clay loam, 1 to 3 percent slopes

### Map Unit Composition

Ladysmith: 85 percent  
Minor components: 15 percent

### Component Descriptions

#### Ladysmith

*MLRA:* 76 - Bluestem Hills  
*Landform:* Paleoterrace on upland  
*Parent material:* Clayey alluvium  
*Slope:* 1 to 3 percent  
*Drainage class:* Somewhat poorly drained  
*Slowest permeability:* Impermeable (About 0.00 in/hr)  
*Available water capacity:* Moderate (About 8.9 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very high  
*Ecological site:* Clay Upland (pe30-36)  
*Land capability (nonirrigated):* 3e

#### Typical Profile:

H1—0 to 9 inches; silty clay loam  
H2—9 to 37 inches; silty clay  
H3—37 to 60 inches; silty clay loam

### Minor Components

#### Irwin

*Composition:* About 8 percent  
*Slope:* 1 to 3 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Upland (pe30-36)

#### Dwight

*Composition:* About 7 percent  
*Slope:* 1 to 3 percent  
*Depth to restrictive feature:* 40 to 60 inches to bedrock (lithic)  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Pan (pe30-36)

## Ls—Ladysmith silty clay loam, 1 to 3 percent slopes, eroded

### Map Unit Composition

Ladysmith: 85 percent

Minor components: 15 percent

### Component Descriptions

#### Ladysmith

*MLRA:* 76 - Bluestem Hills  
*Landform:* Paleoterrace on upland  
*Parent material:* Clayey alluvium  
*Slope:* 1 to 3 percent  
*Drainage class:* Somewhat poorly drained  
*Slowest permeability:* Impermeable (About 0.00 in/hr)  
*Available water capacity:* Moderate (About 8.6 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very high  
*Ecological site:* Clay Upland (pe30-36)  
*Land capability (nonirrigated):* 4e

#### Typical Profile:

H1—0 to 5 inches; silty clay loam  
H2—5 to 37 inches; silty clay  
H3—37 to 60 inches; silty clay loam

### Minor Components

#### Irwin

*Composition:* About 8 percent  
*Slope:* 1 to 3 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Upland (pe30-36)

#### Dwight

*Composition:* About 7 percent  
*Slope:* 1 to 3 percent  
*Depth to restrictive feature:* 40 to 60 inches to bedrock (lithic)  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Pan (pe30-36)

## LSS—Ladysmith silty clay loam, 0 to 2 percent slopes

### Map Unit Composition

Ladysmith: 90 percent  
Minor components: 10 percent

### Component Descriptions

#### Ladysmith

*MLRA:* 76 - Bluestem Hills  
*Landform:* Paleoterrace on upland  
*Parent material:* Clayey alluvium

*Slope:* 0 to 2 percent  
*Drainage class:* Somewhat poorly drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* Moderate (About 8.9 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* High  
*Ecological site:* Clay Upland (pe25-34)  
*Land capability (nonirrigated):* 3s

*Typical Profile:*

H1—0 to 8 inches; silty clay loam  
 H2—8 to 35 inches; silty clay  
 H3—35 to 60 inches; silty clay

**Minor Components**

**Dwight**

*Composition:* About 5 percent  
*Slope:* 1 to 3 percent  
*Depth to restrictive feature:* 40 to 60 inches to bedrock (lithic)  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Pan (pe30-36)

**Irwin**

*Composition:* About 5 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Upland (pe25-34)

**M-W—Miscellaneous Water**

**Ma—Martin silty clay loam, 2 to 6 percent slopes**

**Map Unit Composition**

Martin: 85 percent  
 Minor components: 15 percent

**Component Descriptions**

**Martin**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Silty and clayey colluvium derived from limestone and shale over silty and clayey residuum weathered from limestone and shale

*Slope:* 2 to 6 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 9.7 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* High  
*Ecological site:* Loamy Upland (pe30-36)  
*Land capability (nonirrigated):* 3e

*Typical Profile:*

H1—0 to 9 inches; silty clay loam  
 H2—9 to 15 inches; silty clay loam  
 H3—15 to 60 inches; silty clay

**Minor Components**

**Tully**

*Composition:* About 5 percent  
*Slope:* 3 to 7 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe30-36)

**Clime**

*Composition:* About 5 percent  
*Slope:* 3 to 25 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Ecological site:* Limy Upland (pe30-36)

**Zaar**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 3 to 7 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Clay Upland (pe30-36)

**MBB—Martin silty clay loam, 4 to 7 percent slopes**

**Map Unit Composition**

Martin: 100 percent

**Component Descriptions**

**Martin**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Silty and clayey colluvium derived from limestone-shale over silty and clayey

residuum weathered from limestone-shale  
*Slope:* 4 to 7 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 9.7 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* About 24 to 36 inches  
*Runoff class:* Very high  
*Ecological site:* Loamy Upland (pe35-42)  
*Land capability (nonirrigated):* 3e

*Typical Profile:*

H1—0 to 12 inches; silty clay loam  
 H2—12 to 60 inches; silty clay

## **Mc—Martin silty clay loam, 2 to 6 percent slopes, eroded**

### **Map Unit Composition**

Martin: 85 percent  
 Minor components: 15 percent

### **Component Descriptions**

#### **Martin**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Silty and clayey colluvium derived from limestone and shale over silty and clayey residuum weathered from limestone and shale  
*Slope:* 2 to 6 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 9.5 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* High  
*Ecological site:* Loamy Upland (pe30-36)  
*Land capability (nonirrigated):* 4e

*Typical Profile:*

H1—0 to 6 inches; silty clay loam  
 H2—6 to 12 inches; silty clay loam  
 H3—12 to 60 inches; silty clay

#### **Minor Components**

#### **Tully**

*Composition:* About 5 percent  
*Slope:* 3 to 7 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe30-36)

#### **Clime**

*Composition:* About 5 percent  
*Slope:* 3 to 25 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Ecological site:* Limy Upland (pe30-36)

#### **Zaar**

*Composition:* About 5 percent  
*Geomorphic Position:* hillslope on upland  
*Slope:* 3 to 7 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Clay Upland (pe30-36)

## **Mg—Martin-Gullied land complex, 3 to 10 percent slopes**

### **Map Unit Composition**

Martin: 80 percent  
 Gullied land: 20 percent

### **Component Descriptions**

#### **Martin**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Silty and clayey colluvium derived from limestone and shale over silty and clayey residuum weathered from limestone and shale  
*Slope:* 3 to 10 percent  
*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 9.5 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very high  
*Ecological site:* Loamy Upland (pe30-36)  
*Land capability (nonirrigated):* 6e

*Typical Profile:*

H1—0 to 6 inches; silty clay loam  
 H2—6 to 12 inches; silty clay loam

H3—12 to 60 inches; silty clay

#### **Gullied land**

*MLRA:* 76 - Bluestem Hills

*Landform:* Hillslope on upland

*Drainage class:* Moderately well drained

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

#### **Minor Components**

##### **Clime**

*Slope:* 3 to 25 percent

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

*Drainage class:* Well drained

*Ecological site:* Limy Upland (pe30-36)

##### **Zaar**

*Geomorphic Position:* hillslope on upland

*Slope:* 3 to 7 percent

*Drainage class:* Somewhat poorly drained

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

### **Om—Olpe-Smolan complex, 2 to 10 percent slopes**

#### **Map Unit Composition**

Olpe: 60 percent

Smolan: 40 percent

#### **Component Descriptions**

##### **Olpe**

*MLRA:* 76 - Bluestem Hills

*Landform:* Paleoterrace on upland

*Parent material:* Clayey alluvium

*Slope:* 2 to 10 percent

*Drainage class:* Well drained

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

*Available water capacity:* Very low (About 1.5 inches)

*Shrink-swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

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

*Runoff class:* Very high

*Ecological site:* Loamy Upland (pe30-36)

*Land capability (nonirrigated):* 6e

##### *Typical Profile:*

H1—0 to 9 inches; gravelly silt loam

H2—9 to 18 inches; very gravelly silty clay loam

H3—18 to 60 inches; extremely gravelly silty clay

##### **Smolan**

*MLRA:* 76 - Bluestem Hills

*Landform:* Paleoterrace on upland

*Hillslope position:* Summit

*Parent material:* Silty and clayey loess

*Slope:* 2 to 10 percent

*Drainage class:* Well drained

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

*Available water capacity:* High (About 10.2 inches)

*Shrink-swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

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

*Runoff class:* Very high

*Ecological site:* Loamy Upland (pe30-36)

*Land capability (nonirrigated):* 3

##### *Typical Profile:*

H1—0 to 15 inches; silty clay loam

H2—15 to 19 inches; silty clay loam

H3—19 to 60 inches; silty clay

### **Os—Osage silty clay, occasionally flooded**

#### **Map Unit Composition**

Osage: 90 percent

Minor components: 10 percent

#### **Component Descriptions**

##### **Osage**

*MLRA:* 76 - Bluestem Hills

*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 6.5 inches)

*Shrink-swell potential:* Very high (About 17.0 LEP)

*Flooding hazard:* Occasional

*Ponding hazard:* Occasional

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

*Runoff class:* Negligible

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

*Land capability (nonirrigated):* 3w



*Typical Profile:*

H1—0 to 21 inches; silty clay  
H2—21 to 60 inches; silty clay

**Minor Components****Chase**

*Composition:* About 5 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Loamy Lowland (pe30-36)

**Solomon**

*Composition:* About 5 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Poorly drained  
*Ecological site:* Clay Lowland (pe30-36)

**Minor Components****Kahola**

*Composition:* About 8 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Lowland (pe30-36)

**Chase**

*Composition:* About 7 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Loamy Lowland (pe30-36)

**RAA—Reading silt loam, 0 to 2 percent slopes, rarely flooded****QUA—Quarries****Ra—Reading silt loam, 0 to 1 percent slopes, rarely flooded****Map Unit Composition**

Reading: 85 percent  
Minor components: 15 percent

**Component Descriptions****Reading**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Terrace on river valley  
*Parent material:* Silty alluvium  
*Slope:* 0 to 1 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* High (About 11.7 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* Rare  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Loamy Lowland (pe30-36)  
*Land capability (nonirrigated):* 1

*Typical Profile:*

H1—0 to 17 inches; silt loam  
H2—17 to 48 inches; silty clay loam  
H3—48 to 60 inches; silty clay loam

**Map Unit Composition**

Reading: 90 percent  
Minor components: 10 percent

**Component Descriptions****Reading**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Stream terrace on valley  
*Parent material:* Fine-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 11.5 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* Rare  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Low  
*Ecological site:* Loamy Lowland (pe30-36)  
*Land capability (nonirrigated):* 1

*Typical Profile:*

H1—0 to 6 inches; silt loam  
H2—6 to 60 inches; silty clay loam

**Minor Components****Chase**

*Composition:* About 5 percent  
*Slope:* 0 to 1 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Loamy Lowland (pe25-34)

**Wells**

*Composition:* About 5 percent

*Geomorphic Position:* hillslope on upland  
*Slope:* 1 to 3 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe25-34)

## **Rd—Reading silt loam, 1 to 3 percent slopes, rarely flooded**

### **Map Unit Composition**

Reading: 90 percent  
 Minor components: 10 percent

### **Component Descriptions**

#### **Reading**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Terrace on river valley  
*Parent material:* Silty alluvium  
*Slope:* 1 to 3 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* High (About 11.7 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 (pe30-36)  
*Land capability (nonirrigated):* 2e

#### *Typical Profile:*

H1—0 to 17 inches; silt loam  
 H2—17 to 48 inches; silty clay loam  
 H3—48 to 60 inches; silty clay loam

#### **Minor Components**

##### **Tully**

*Composition:* About 10 percent  
*Slope:* 3 to 7 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe30-36)

## **Re—Reading Soils, 6 to 12 percent slopes, eroded**

### **Map Unit Composition**

Reading: 90 percent

Minor components: 10 percent

### **Component Descriptions**

#### **Reading**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Terrace on river valley  
*Parent material:* Silty alluvium  
*Slope:* 6 to 12 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Moderately slow (About 0.20 in/hr)  
*Available water capacity:* High (About 11.3 inches)  
*Shrink-swell potential:* Moderate (About 4.5 LEP)  
*Flooding hazard:* Rare  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* High  
*Ecological site:* Loamy Lowland (pe30-36)  
*Land capability (nonirrigated):* 4e

#### *Typical Profile:*

H1—0 to 7 inches; silt loam  
 H2—7 to 48 inches; silty clay loam  
 H3—48 to 60 inches; silty clay loam

#### **Minor Components**

##### **Ivan**

*Composition:* About 5 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Lowland (pe30-36)

##### **Kahola**

*Composition:* About 5 percent  
*Slope:* 0 to 2 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Lowland (pe30-36)

## **Sm—Smolan silty clay loam, 2 to 6 percent slopes**

### **Map Unit Composition**

Smolan: 90 percent  
 Minor components: 10 percent

### **Component Descriptions**

#### **Smolan**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Paleoterrace on upland  
*Hillslope position:* Summit  
*Parent material:* Silty and clayey loess  
*Slope:* 2 to 6 percent

*Drainage class:* Moderately well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* High (About 10.2 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* High  
*Ecological site:* Loamy Upland (pe30-36)  
*Land capability (nonirrigated):* 3e

*Typical Profile:*

H1—0 to 15 inches; silty clay loam  
 H2—15 to 19 inches; silty clay loam  
 H3—19 to 60 inches; silty clay

**Minor Components**

**Irwin**

*Composition:* About 5 percent  
*Slope:* 1 to 3 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Upland (pe30-36)

**Tully**

*Composition:* About 5 percent  
*Slope:* 3 to 7 percent  
*Drainage class:* Well drained  
*Ecological site:* Loamy Upland (pe30-36)

**So—Solomon silty clay, occasionally flooded**

**Map Unit Composition**

Solomon: 100 percent

**Component Descriptions**

**Solomon**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Flood plain on river valley  
*Parent material:* Calcareous 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:* High (About 7.5 LEP)  
*Flooding hazard:* Occasional  
*Ponding hazard:* Frequent  
*Depth to seasonal water saturation:* About 0 to 24 inches  
*Runoff class:* Negligible

*Ecological site:* Clay Lowland (pe30-36)  
*Land capability (irrigated):* 3w  
*Land capability (nonirrigated):* 3w

*Typical Profile:*

H1—0 to 18 inches; silty clay  
 H2—18 to 60 inches; silty clay

**St—Clime silty clay loam, 20 to 40 percent slopes, stony**

**Map Unit Composition**

Clime: 100 percent

**Component Descriptions**

**Clime**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Silty and clayey residuum weathered from calcareous shale  
*Slope:* 20 to 40 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Somewhat excessively drained  
*Slowest permeability:* Very slow (About 0.01 in/hr)  
*Available water capacity:* Low (About 5.3 inches)  
*Shrink-swell potential:* High (About 7.5 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):* 7e

*Typical Profile:*

H1—0 to 2 inches; stony silty clay loam  
 H2—2 to 9 inches; silty clay  
 H3—9 to 27 inches; silty clay  
 H4—27 to 33 inches; silty clay  
 Cr—33 to 37 inches; unweathered bedrock

**Tc—Tully silty clay loam, 3 to 7 percent slopes**

**Map Unit Composition**

Tully: 85 percent  
 Minor components: 15 percent

## Component Descriptions

### Tully

*MLRA:* 76 - Bluestem Hills

*Landform:* Hillslope on upland

*Parent material:* Clayey colluvium

*Slope:* 3 to 7 percent

*Drainage class:* Well drained

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

*Available water capacity:* Moderate (About 8.8 inches)

*Shrink-swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

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

*Runoff class:* High

*Ecological site:* Loamy Upland (pe30-36)

*Land capability (nonirrigated):* 3e

#### Typical Profile:

H1—0 to 14 inches; silty clay loam

H2—14 to 60 inches; silty clay

### Minor Components

#### Irwin

*Composition:* About 5 percent

*Slope:* 1 to 3 percent

*Drainage class:* Moderately well drained

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

#### Martin

*Composition:* About 5 percent

*Slope:* 2 to 6 percent

*Drainage class:* Moderately well drained

*Ecological site:* Loamy Upland (pe30-36)

#### Smolan

*Composition:* About 3 percent

*Geomorphic Position:* paleoterrace on upland

*Slope:* 2 to 6 percent

*Drainage class:* Moderately well drained

*Ecological site:* Loamy Upland (pe30-36)

#### Dwight

*Composition:* About 2 percent

*Slope:* 1 to 3 percent

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

*Drainage class:* Moderately well drained

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

## Ts—Tully silty clay loam, 3 to 7 percent slopes, eroded

### Map Unit Composition

Tully: 85 percent

Minor components: 15 percent

### Component Descriptions

#### Tully

*MLRA:* 76 - Bluestem Hills

*Landform:* Hillslope on upland

*Parent material:* Clayey colluvium

*Slope:* 3 to 7 percent

*Drainage class:* Well drained

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

*Available water capacity:* Moderate (About 8.1 inches)

*Shrink-swell potential:* High (About 7.5 LEP)

*Flooding hazard:* None

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

*Runoff class:* High

*Ecological site:* Loamy Upland (pe30-36)

*Land capability (nonirrigated):* 4e

#### Typical Profile:

H1—0 to 5 inches; silty clay loam

H2—5 to 60 inches; silty clay

### Minor Components

#### Irwin

*Composition:* About 5 percent

*Slope:* 1 to 3 percent

*Drainage class:* Moderately well drained

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

#### Martin

*Composition:* About 5 percent

*Slope:* 2 to 6 percent

*Drainage class:* Moderately well drained

*Ecological site:* Loamy Upland (pe30-36)

#### Smolan

*Composition:* About 3 percent

*Geomorphic Position:* paleoterrace on upland

*Slope:* 2 to 6 percent

*Drainage class:* Moderately well drained

*Ecological site:* Loamy Upland (pe30-36)

#### Dwight

*Composition:* About 2 percent

*Slope:* 1 to 3 percent

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

*Drainage class:* Moderately well drained

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

**Tu—Tully Cherty silty clay loam, 5 to 15 percent slopes****Map Unit Composition**

Tully: 70 percent  
 Minor components: 30 percent

**Component Descriptions****Tully**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Parent material:* Clayey colluvium  
*Slope:* 5 to 15 percent  
*Drainage class:* Well drained  
*Slowest permeability:* Slow (About 0.06 in/hr)  
*Available water capacity:* Moderate (About 7.8 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* More than 6 feet  
*Runoff class:* Very high  
*Ecological site:* Loamy Upland (pe30-36)  
*Land capability (nonirrigated):* 4e

*Typical Profile:*

H1—0 to 14 inches; gravelly silty clay loam  
 H2—14 to 60 inches; silty clay

**Minor Components****Martin**

*Composition:* About 15 percent  
*Slope:* 2 to 6 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Loamy Upland (pe30-36)

**Clime**

*Composition:* About 15 percent  
*Slope:* 3 to 25 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Ecological site:* Limy Upland (pe30-36)

**W—Water Areas, Streams, Lakes****Za—Zaar silty clay, 3 to 7 percent slopes****Map Unit Composition**

Zaar: 85 percent  
 Minor components: 15 percent

**Component Descriptions****Zaar**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Hillslope position:* Backslope  
*Parent material:* Ancient alluvium and/or clayey colluvium and/or residuum weathered from shale  
*Slope:* 3 to 7 percent  
*Drainage class:* Somewhat poorly drained  
*Slowest permeability:* Very slow (About 0.00 in/hr)  
*Available water capacity:* Moderate (About 8.5 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* About 12 to 24 inches  
*Runoff class:* Very high  
*Ecological site:* Clay Upland (pe30-36)  
*Land capability (nonirrigated):* 4e

*Typical Profile:*

H1—0 to 15 inches; silty clay  
 H2—15 to 54 inches; silty clay  
 H3—54 to 60 inches; silty clay

**Minor Components****Dwight**

*Composition:* About 5 percent  
*Slope:* 1 to 3 percent  
*Depth to restrictive feature:* 40 to 60 inches to bedrock (lithic)  
*Drainage class:* Moderately well drained  
*Ecological site:* Clay Pan (pe30-36)

**Martin**

*Composition:* About 5 percent  
*Slope:* 2 to 6 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Loamy Upland (pe30-36)

**Clime**

*Composition:* About 5 percent  
*Slope:* 3 to 25 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Ecological site:* Limy Upland (pe30-36)

## **Zd—Zaar-Dwight complex, 1 to 3 percent slopes**

### **Map Unit Composition**

Zaar: 55 percent  
Dwight: 45 percent

### **Component Descriptions**

#### **Zaar**

*MLRA:* 76 - Bluestem Hills  
*Landform:* Hillslope on upland  
*Hillslope position:* Summit  
*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:* Very slow (About 0.00 in/hr)  
*Available water capacity:* Moderate (About 8.5 inches)  
*Shrink-swell potential:* High (About 7.5 LEP)  
*Flooding hazard:* None  
*Depth to seasonal water saturation:* About 12 to 24 inches  
*Runoff class:* Very high  
*Ecological site:* Clay Upland (pe30-36)  
*Land capability (nonirrigated):* 4e

#### *Typical Profile:*

H1—0 to 15 inches; silty clay  
H2—15 to 54 inches; silty clay  
H3—54 to 60 inches; silty clay

#### **Dwight**

*MLRA:* 76 - Bluestem Hills

*Landform:* Hillslope on upland

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

*Slope:* 1 to 3 percent

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

*Drainage class:* Moderately well drained

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

*Available water capacity:* Low (About 5.8 inches)

*Shrink-swell potential:* High (About 7.5 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):* 4

#### *Typical Profile:*

H1—0 to 5 inches; silt loam  
H2—5 to 21 inches; silty clay  
H3—21 to 42 inches; silty clay  
R—42 to 46 inches;

### **Minor Components**

#### **Martin**

*Slope:* 2 to 6 percent  
*Drainage class:* Moderately well drained  
*Ecological site:* Loamy Upland (pe30-36)

#### **Clime**

*Slope:* 3 to 25 percent  
*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)  
*Drainage class:* Well drained  
*Ecological site:* Limy Upland (pe30-36)

#### **Ladysmith**

*Slope:* 0 to 1 percent  
*Drainage class:* Somewhat poorly drained  
*Ecological site:* Clay Upland (pe30-36)