

045OE—Oska silty clay loam, 3 to 6 percent slopes**Map Unit Composition**

Oska: 88 percent
 Minor components: 12 percent

Component Descriptions**Oska**

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Silty and clayey residuum weathered from limestone and shale
Slope: 3 to 6 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: High
Ecological site: Loamy Upland (pe35-42)
Land capability (irrigated):
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 5 inches; silty clay loam
 H2—5 to 38 inches; silty clay
 R—38 to 42 inches; unweathered bedrock

Minor Components**Gymer**

Composition: About 3 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 8 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-37)

Martin

Composition: About 3 percent
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe35-42)

Vinland

Composition: About 3 percent
Slope: 3 to 7 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Somewhat excessively drained
Ecological site: Loamy Upland (pe35-42)

Sogn

Composition: About 3 percent
Slope: 7 to 15 percent
Depth to restrictive feature: 4 to 20 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Ecological site: Shallow Limy (pe30-37)

045SV—Sibleyville complex, 7 to 15 percent slopes**Map Unit Composition**

Sibleyville: 50 percent
 Minor components: 50 percent

Component Descriptions**Sibleyville**

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Sandy and silty residuum weathered from sandstone and shale
Slope: 7 to 15 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Low (About 4.5 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Loamy Upland (pe35-42)
Land capability (irrigated):
Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 7 inches; loam
 H2—7 to 15 inches; loam
 H3—15 to 27 inches; channery loam
 Cr—27 to 31 inches; weathered bedrock

Minor Components**Unnamed Series 1 - Shallow**

Composition: About 25 percent
Slope: 3 to 7 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Loamy Upland (pe35-42)

Unnamed Series 2 - Deep

Composition: About 15 percent
Slope: 3 to 7 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Loamy Upland (pe35-42)

Vinland

Composition: About 4 percent
Slope: 7 to 15 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Somewhat excessively drained
Ecological site: Loamy Upland (pe35-42)

Gymer

Composition: About 3 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 8 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-37)

Martin

Composition: About 3 percent
Slope: 7 to 11 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe35-42)

045SX—Vinland-Rock outcrop complex, 20 to 40 percent slopes**Map Unit Composition**

Rock outcrop: 60 percent
 Vinland: 26 percent
 Minor components: 14 percent

Component Descriptions**Rock outcrop**

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Slope: 20 to 40 percent
Depth to restrictive feature: 0 inches to bedrock (lithic)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very high
Land capability (irrigated):
Land capability (nonirrigated): 8

Vinland

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland

Parent material: Sandy and silty residuum weathered from shale
Slope: 20 to 30 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Somewhat excessively drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Low (About 3.5 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Loamy Upland (pe35-42)
Land capability (irrigated):
Land capability (nonirrigated): 6e

Typical Profile:

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

Minor Components**Sogn**

Composition: About 10 percent
Slope: 15 to 20 percent
Depth to restrictive feature: 4 to 20 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Ecological site: Shallow Limy (pe30-37)

Martin

Composition: About 2 percent
Slope: 7 to 11 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe35-42)

Oska

Composition: About 2 percent
Slope: 3 to 6 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Loamy Upland (pe35-42)

045VM—Vinland-Martin complex, 7 to 15 percent slopes**Map Unit Composition**

Vinland: 40 percent
 Martin: 25 percent

Minor components: 35 percent

Component Descriptions

Vinland

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Hillslope on upland

Parent material: Sandy and silty residuum weathered from shale

Slope: 7 to 15 percent

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

Drainage class: Somewhat excessively drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Low (About 3.5 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: Loamy Upland (pe35-42)

Land capability (irrigated):

Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 7 inches; silty clay loam

H2—7 to 17 inches; silty clay loam

Cr—17 to 21 inches; weathered bedrock

Martin

MLRA: 106 - Nebraska and Kansas Loess-Drift 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: 7 to 11 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 22 to 26 inches

Runoff class: Very high

Ecological site: Loamy Upland (pe35-42)

Land capability (irrigated):

Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 9 inches; silty clay loam

H2—9 to 14 inches; silty clay loam

H3—14 to 60 inches; silty clay

Minor Components

Unnamed Soil

Composition: About 20 percent

Slope: 3 to 7 percent

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

Drainage class: Somewhat excessively drained

Ecological site: Loamy Upland (pe35-42)

Sibleyville

Composition: About 8 percent

Slope: 7 to 15 percent

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

Drainage class: Well drained

Ecological site: Loamy Upland (pe35-42)

Sogn

Composition: About 7 percent

Slope: 7 to 15 percent

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

Drainage class: Somewhat excessively drained

Ecological site: Shallow Limy (pe30-37)

045WS—Woodson silt loam, 1 to 3 percent slopes

Map Unit Composition

Woodson: 90 percent

Minor components: 10 percent

Component Descriptions

Woodson

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Divide on upland

Parent material: Silty and clayey alluvium over silty and clayey residuum weathered from clayey

shale

Slope: 1 to 3 percent

Drainage class: Somewhat poorly drained

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

Available water capacity: High (About 9.1 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: About 4 to 9 inches

Runoff class: Very high

Ecological site: Clay Upland (pe35-42)

Land capability (irrigated):

Land capability (nonirrigated): 3e

Typical Profile:

- H1—0 to 11 inches; silt loam
- H2—11 to 45 inches; silty clay
- H3—45 to 78 inches; silty clay loam

Minor Components**Martin**

- Composition:* About 5 percent
- Slope:* 3 to 7 percent
- Drainage class:* Moderately well drained
- Ecological site:* Loamy Upland (pe35-42)

Pawnee

- Composition:* About 5 percent
- Slope:* 3 to 7 percent
- Drainage class:* Moderately well drained
- Ecological site:* Clay Upland (pe30-37)

085KB—Kennebec Soils, 0 to 3 percent slopes, occasionally flooded**Map Unit Composition**

- Kennebec: 86 percent
- Minor components: 14 percent

Component Descriptions**Kennebec**

- MLRA:* 106 - Nebraska and Kansas Loess-Drift Hills
- Landform:* Flood plain on river valley
- Parent material:* Fine-silty alluvium
- Slope:* 0 to 3 percent
- Drainage class:* Moderately well drained
- Slowest permeability:* Moderate (About 0.60 in/hr)
- Available water capacity:* Very high (About 13.4 inches)
- Shrink-swell potential:* Moderate (About 4.5 LEP)
- Flooding hazard:* Occasional
- Depth to seasonal water saturation:* About 40 to 44 inches
- Runoff class:* Low
- Ecological site:* Loamy Lowland (pe30-37)
- Land capability (irrigated):*
- Land capability (nonirrigated):* 2w

Typical Profile:

- H1—0 to 48 inches; silt loam
- H2—48 to 60 inches; silt loam

Minor Components**Burchard**

- Composition:* About 3 percent
- Slope:* 12 to 17 percent

Drainage class: Well drained*Ecological site:* Loamy Upland (pe30-37)**Shelby**

- Composition:* About 3 percent
- Geomorphic Position:* hillslope on upland
- Slope:* 12 to 25 percent
- Drainage class:* Moderately well drained
- Ecological site:* Loamy Upland (pe30-37)

Chase

- Composition:* About 3 percent
- Slope:* 0 to 2 percent
- Drainage class:* Somewhat poorly drained
- Ecological site:* Loamy Lowland (pe30-37)

Kennebec

- Composition:* About 3 percent
- Slope:* 0 to 1 percent
- Drainage class:* Moderately well drained
- Ecological site:* Loamy Lowland (pe30-37)

Wabash

- Composition:* About 1 percent
- Slope:* 0 to 2 percent
- Drainage class:* Poorly drained
- Ecological site:* Clay Lowland (pe30-37)

Zook

- Composition:* About 1 percent
- Slope:* 0 to 2 percent
- Drainage class:* Poorly drained
- Ecological site:* Clay Lowland (pe30-37)

085MC—Martin-Vinland silty clay loams, 5 to 10 percent slopes**Map Unit Composition**

- Martin: 48 percent
- Vinland: 40 percent
- Minor components: 12 percent

Component Descriptions**Martin**

- MLRA:* 106 - Nebraska and Kansas Loess-Drift 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:* 5 to 10 percent
- Drainage class:* Moderately well drained

Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: High (About 9.9 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: About 22 to 26 inches
Runoff class: Very high
Ecological site: Loamy Upland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 4e

Typical Profile:

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

Vinland

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Sandy and silty residuum weathered from shale
Slope: 5 to 10 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Somewhat excessively drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Low (About 3.7 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: Loamy Upland (pe30-37)
Land capability (irrigated):

Typical Profile:

H1—0 to 11 inches; silty clay loam
 H2—11 to 17 inches; silty clay loam
 Cr—17 to 21 inches; weathered bedrock

Minor Components

Sogn

Composition: About 3 percent
Slope: 5 to 15 percent
Depth to restrictive feature: 4 to 20 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Ecological site: Shallow Limy (pe30-37)

Pawnee

Composition: About 3 percent
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Ecological site: Clay Upland (pe30-37)

Clime

Composition: About 3 percent
Slope: 5 to 20 percent

Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Limy Upland (pe30-37)

Rock outcrop

Composition: About 3 percent
Slope: 20 to 40 percent
Depth to restrictive feature: 0 inches to bedrock (lithic)

085ZA—Zook silty clay loam, 0 to 2 percent slopes, occasionally flooded

Map Unit Composition

Zook: 90 percent
 Minor components: 10 percent

Component Descriptions

Zook

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Flood plain on river valley
Parent material: Silty and clayey alluvium
Slope: 0 to 2 percent
Drainage class: Poorly drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: Moderate (About 8.9 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: Occasional
Depth to seasonal water saturation: About 2 to 9 inches
Runoff class: High
Ecological site: Clay Lowland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 2w

Typical Profile:

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

Minor Components

Kennebec

Composition: About 3 percent
Slope: 0 to 2 percent
Drainage class: Moderately well drained
Ecological site: Loamy Lowland (pe30-37)

Chase

Composition: About 3 percent
Slope: 0 to 2 percent

Drainage class: Somewhat poorly drained
Ecological site: Loamy Lowland (pe30-37)

Reading

Phase: rare
Composition: About 2 percent
Slope: 0 to 2 percent
Drainage class: Well drained
Ecological site: Loamy Lowland (pe30-37)

Olmitz

Composition: About 2 percent
Slope: 2 to 5 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe30-37)

087EC—Eudora-Bismarckgrove fine sandy loams, 0 to 3 percent slopes, Overwash, occasionally flooded

Map Unit Composition

Eudora: 65 percent
 Bismarckgrove: 20 percent
 Minor components: 15 percent

Component Descriptions

Eudora

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Flood-plain step on river valley
Parent material: Coarse-silty alluvium
Slope: 0 to 3 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 11.9 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Occasional
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Loamy Lowland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 2w

Typical Profile:

Ap—0 to 6 inches; fine sandy loam
 A—6 to 12 inches; silt loam
 AC—12 to 18 inches; silt loam
 C1—18 to 25 inches; silt loam
 C2—25 to 44 inches; silt loam
 C3—44 to 60 inches; silt loam

Bismarckgrove

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Flood-plain step on river valley

Parent material: Fine-silty alluvium

Slope: 0 to 3 percent

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: High (About 10.4 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 (pe30-37)

Land capability (irrigated):

Land capability (nonirrigated): 2w

Typical Profile:

Ap—0 to 7 inches; fine sandy loam
 A—7 to 33 inches; silty clay loam
 Bw—33 to 52 inches; silt loam
 C—52 to 80 inches; loamy very fine sand

Minor Components

Kimo

Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Ecological site: Clay Lowland (pe30-37)

Stonehouse

Composition: About 5 percent
Slope: 0 to 3 percent
Drainage class: Excessively drained

Bourbonais

Composition: About 5 percent
Slope: 0 to 3 percent
Drainage class: Somewhat excessively drained
Ecological site: Clay Lowland (pe30-37)

General Considerations: Most areas of these soils are cultivated. These soils are suited to all major crops commonly grown in the valley. These soils have good potential for hay or tame grasses. Flooding limits the suitability of these soils for many engineering uses. The land capability classification is 1lw.

087HC—Haig silty clay loam, 0 to 2 percent slopes**Map Unit Composition**

Haig: 85 percent
 Minor components: 15 percent

Component Descriptions**Haig**

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Silty and clayey loess
Slope: 0 to 2 percent
Drainage class: Poorly 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: About 2 to 9 inches
Runoff class: High
Ecological site: Clay Upland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 2w

Typical Profile:

H1—0 to 9 inches; silty clay loam
 H2—9 to 31 inches; silty clay
 H3—31 to 77 inches; silty clay loam

Minor Components**Martin**

Composition: About 5 percent
Slope: 1 to 3 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe30-37)

Pawnee

Composition: About 5 percent
Slope: 1 to 3 percent
Drainage class: Moderately well drained
Ecological site: Clay Upland (pe30-37)

Grundy

Composition: About 5 percent
Slope: 0 to 2 percent
Drainage class: Somewhat poorly drained
Ecological site: Clay Upland (pe30-37)

087KV—Konawa complex, 4 to 10 percent slopes**Map Unit Composition**

Konawa: 91 percent
 Minor components: 9 percent

Component Descriptions**Konawa**

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Fine-loamy eolian deposits
Slope: 4 to 10 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.57 in/hr)
Available water capacity: Moderate (About 7.8 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: Savannah (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 13 inches; fine sandy loam
 H2—13 to 44 inches; sandy clay loam
 H3—44 to 60 inches; fine sandy loam

Minor Components**Sogn**

Composition: About 3 percent
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 (pe30-37)

Morrill

Composition: About 3 percent
Slope: 3 to 7 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-37)

Gymer

Composition: About 3 percent
Slope: 3 to 7 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-37)

engineering uses. The land capability classification is I.

087RS—Rossville silt loam, 0 to 2 percent slopes, very rarely flooded

Map Unit Composition

Rossville: 85 percent
Minor components: 15 percent

Component Descriptions

Rossville

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Terrace 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 12.9 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: Very Rare
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Loamy Lowland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 1

Typical Profile:

Ap—0 to 7 inches; silt loam
A1—7 to 14 inches; silt loam
A2—14 to 21 inches; silt loam
Bw1—21 to 26 inches; silt loam
Bw2—26 to 39 inches; silt loam
Bw3—39 to 57 inches; silt loam
BC—57 to 80 inches; silt loam

Minor Components

Reading

Composition: About 10 percent
Slope: 0 to 2 percent
Drainage class: Moderately well drained

Muscotah

Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained

General Considerations: Most areas of this soil are cultivated. This soil is well suited to all major crops commonly grown in the valley. This soil has good potential for hay or tame grasses. Flooding limits the suitability of this soil for many

087SO—Shelby-Pawnee complex, 8 to 12 percent slopes

Map Unit Composition

Shelby: 65 percent
Pawnee: 25 percent
Minor components: 15 percent

Component Descriptions

Shelby

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Fine-loamy till
Slope: 8 to 12 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 10.5 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Loamy Upland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 12 inches; loam
H2—12 to 48 inches; clay loam
H3—48 to 60 inches; clay loam

Pawnee

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Clayey till
Slope: 8 to 12 percent
Drainage class: Moderately well drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: Moderate (About 7.0 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: About 9 to 14 inches

Runoff class: Very high
Ecological site: Clay Upland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 4e

Typical Profile:
 H1—0 to 14 inches; clay loam
 H2—14 to 60 inches; clay

Minor Components

Vinland

Composition: About 3 percent
Slope: 7 to 15 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe30-37)

Sogn

Composition: About 3 percent
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 (pe30-37)

Oska

Composition: About 3 percent
Slope: 3 to 6 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Loamy Upland (pe35-42)

Morrill

Composition: About 3 percent
Slope: 3 to 7 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-37)

Martin

Composition: About 3 percent
Slope: 3 to 8 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe30-37)

087WC—Wabash silty clay loam, 0 to 1 percent slopes, very rarely flooded

Map Unit Composition

Wabash: 94 percent
 Minor components: 6 percent

Component Descriptions

Wabash

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Terrace 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 8.4 inches)

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

Flooding hazard: Very Rare

Depth to seasonal water saturation: About 2 to 9 inches

Runoff class: Very high

Ecological site: Clay Lowland (pe30-37)

Land capability (irrigated):

Land capability (nonirrigated): 3w

Typical Profile:

H1—0 to 19 inches; silty clay loam

H2—19 to 60 inches; silty clay

Minor Components

Kennebec

Composition: About 3 percent

Slope: 0 to 2 percent

Drainage class: Moderately well drained

Ecological site: Loamy Lowland (pe30-37)

Reading

Composition: About 3 percent

Slope: 0 to 1 percent

Drainage class: Well drained

Ecological site: Loamy Lowland (pe30-37)

139ED—Elmont loam, 3 to 7 percent slopes

Map Unit Composition

Elmont: 85 percent
 Minor components: 15 percent

Component Descriptions

Elmont

MLRA: 112 - Cherokee Prairies

Landform: Hillslope on upland

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

Slope: 3 to 7 percent

Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 10.3 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: Loamy Upland (pe35-42)
Land capability (irrigated):
Land capability (nonirrigated): 3e

Typical Profile:

A—0 to 8 inches; loam
 AB—8 to 16 inches; loam
 Bt—16 to 42 inches; clay loam
 BC—42 to 52 inches; clay loam
 Cr—52 to 60 inches; unweathered bedrock

Minor Components

Eram

Composition: About 10 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 12 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Moderately well drained
Ecological site: Clay Upland (pe35-42)

Kenoma

Composition: About 5 percent
Slope: 1 to 4 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (lithic)
Drainage class: Moderately well drained
Ecological site: Clay Upland (pe35-42)

149KM—Kimo silty clay, rarely flooded

Map Unit Composition

Kimo: 90 percent
 Minor components: 10 percent

Component Descriptions

Kimo

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Flood-plain step on river valley
Parent material: Clayey alluvium over loamy alluvium
Slope: 0 to 1 percent

Drainage class: Somewhat poorly drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: High (About 11.4 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: Rare
Depth to seasonal water saturation: About 22 to 26 inches
Runoff class: High
Ecological site: Clay Lowland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 2w

Typical Profile:

H1—0 to 22 inches; silty clay
 H2—22 to 60 inches; silt loam

Minor Components

Eudora

Composition: About 4 percent
Slope: 0 to 2 percent
Drainage class: Well drained
Ecological site: Loamy Lowland (pe30-37)

Sarpy

Composition: About 3 percent
Slope: 0 to 3 percent
Drainage class: Excessively drained
Ecological site: Sandy Lowland (pe30-37)

Haynie

Composition: About 3 percent
Slope: 0 to 1 percent
Drainage class: Moderately well drained
Ecological site: Loamy Lowland (pe30-37)

Unnamed Hydric Soil

Composition: About

197IB—Irwin silty clay loam, 1 to 3 percent slopes

Map Unit Composition

Irwin: 80 percent
 Minor components: 20 percent

Component Descriptions

Irwin

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Hillslope position: Shoulder

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 8.6 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 (irrigated):
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 12 inches; silty clay loam
 H2—12 to 42 inches; silty clay, clay
 H3—42 to 60 inches; clay

Minor Components

Ladysmith

Composition: About 10 percent
Geomorphic Position: divide on upland
Slope: 0 to 2 percent
Drainage class: Somewhat poorly drained
Ecological site: Clay Upland (pe30-36)

Dwight

Composition: About 10 percent
Slope: 1 to 3 percent
Drainage class: Moderately well drained
Ecological site: Clay Pan (pe35-42)

197IV—Ivan silt loam, occasionally flooded

Map Unit Composition

Ivan: 90 percent
 Minor components: 10 percent

Component Descriptions

Ivan

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Flood plain on 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 13.1 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 (irrigated):
Land capability (nonirrigated): 2w

Typical Profile:

H1—0 to 36 inches; silt loam
 H2—36 to 60 inches; silt loam

Minor Components

Chase

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

Reading

Composition: About 4 percent
Slope: 0 to 1 percent
Drainage class: Moderately well drained
Ecological site: Loamy Lowland (pe30-36)

Unnamed Hydric Soil (saturation)

Composition: About 1 percent
Slope: 0 to 2 percent
Drainage class: Poorly drained

197IX—Ivan silty clay loam, channeled

Map Unit Composition

Ivan: 80 percent
 Minor components: 20 percent

Component Descriptions

Ivan

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Flood plain on 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 12.8 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 (irrigated):

Land capability (nonirrigated): 5w

Typical Profile:

H1—0 to 40 inches; silty clay loam

H2—40 to 60 inches; silt loam

Minor Components

Martin

Composition: About 10 percent

Geomorphic Position: hillslope on upland

Slope: 3 to 7 percent

Drainage class: Moderately well drained

Ecological site: Loamy Upland (pe30-36)

Reading

Composition: About 10 percent

Slope: 0 to 1 percent

Drainage class: Moderately well drained

Ecological site: Loamy Lowland (pe30-36)

Unnamed Hydric Soil

Composition: About

Slope: 0 to 2 percent

Drainage class: Poorly drained

197MR—Morrill loam, 4 to 7 percent slopes

Map Unit Composition

Morrill: 75 percent

Minor components: 25 percent

Component Descriptions

Morrill

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Hillslope on upland

Hillslope position: Backslope

Parent material: Fine-loamy glaciofluvial deposits

Slope: 4 to 7 percent

Drainage class: Well drained

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

Available water capacity: High (About 10.1 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: High

Ecological site: Loamy Upland (pe30-37)

Land capability (irrigated):

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 8 inches; loam

H2—8 to 37 inches; clay loam

H3—37 to 60 inches; clay loam

Minor Components

Pawnee

Composition: About 10 percent

Geomorphic Position: hillslope on upland

Slope: 3 to 7 percent

Drainage class: Moderately well drained

Ecological site: Clay Upland (pe30-37)

Sogn

Composition: About 5 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)

Wymore

Composition: About 5 percent

Geomorphic Position: hillslope on upland

Slope: 2 to 6 percent

Drainage class: Moderately well drained

Ecological site: Clay Upland (pe30-37)

Martin

Composition: About 5 percent

Geomorphic Position: hillslope on upland

Slope: 3 to 7 percent

Drainage class: Moderately well drained

Ecological site: Loamy Upland (pe30-36)

197MS—Morrill loam, 5 to 12 percent slopes, very stony

Map Unit Composition

Morrill: 75 percent

Minor components: 25 percent

Component Descriptions

Morrill

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Hillslope on upland

Hillslope position: Backslope

Parent material: Fine-loamy glaciofluvial deposits

Slope: 5 to 12 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 9.7 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Loamy Upland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 10 inches; very stony loam
 H2—10 to 15 inches; loam
 H3—15 to 42 inches; clay loam
 H4—42 to 60 inches; gravelly sandy clay loam

Minor Components**Clime**

Composition: About 15 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 7 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Limy Upland (pe30-36)

Pawnee

Composition: About 10 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Ecological site: Clay Upland (pe30-37)

197SA—Sarpy loamy sand, frequently flooded**Map Unit Composition**

Sarpy: 85 percent
 Minor components: 15 percent

Component Descriptions**Sarpy**

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Flood plain on river valley
Parent material: Sandy alluvium
Slope: 0 to 4 percent
Drainage class: Excessively drained
Slowest permeability: Rapid (About 5.95 in/hr)
Available water capacity: Low (About 4.1 inches)
Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: Frequent
Depth to seasonal water saturation: More than 6 feet
Runoff class: Negligible
Ecological site: Sandy Lowland (pe30-36)
Land capability (irrigated):
Land capability (nonirrigated): 4s

Typical Profile:

H1—0 to 5 inches; loamy sand
 H2—5 to 60 inches; sand

Minor Components**Haynie**

Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Well drained
Ecological site: Loamy Lowland (pe30-37)

Paxico

Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained

Eudora

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

197WF—Wamego silty clay loam, 7 to 15 percent slopes**Map Unit Composition**

Wamego: 75 percent
 Minor components: 25 percent

Component Descriptions**Wamego**

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Sandy and silty residuum weathered from shale
Slope: 7 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: Very high
Ecological site: Loamy Upland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 11 inches; silty clay loam
 H2—11 to 25 inches; silty clay loam
 Cr—25 to 29 inches; weathered bedrock

Minor Components**Sogn**

Composition: About 5 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)

Elmont

Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 7 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-37)

Martin

Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe30-36)

Clime

Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 7 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Limy Upland (pe30-36)

Rock outcrop

Composition: About 5 percent
Geomorphic Position: hillslope on upland

197WY—Wymore silty clay loam, 2 to 6 percent slopes**Map Unit Composition**

Wymore: 100 percent
 Minor components:

Component Descriptions**Wymore**

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Hillslope position: Backslope, shoulder
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 9.5 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: About 9 to 14 inches
Runoff class: High
Ecological site: Clay Upland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 8 inches; silty clay loam
 H2—8 to 40 inches; silty clay
 H3—40 to 60 inches; silty clay loam

2797—Morrill gravelly loam, 4 to 20 percent slopes, stony**Map Unit Composition**

Morrill: 85 percent
 Minor components: 15 percent

Component Descriptions**Morrill**

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Fine-loamy glaciofluvial deposits
Slope: 4 to 20 percent

Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 9.7 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Loamy Upland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 10 inches; gravelly loam
 H2—10 to 15 inches; gravelly clay loam
 H3—15 to 42 inches; gravelly clay loam
 H4—42 to 60 inches; gravelly sandy clay loam

Minor Components

Sogn

Composition: About 10 percent
Slope: 3 to 20 percent
Depth to restrictive feature: 4 to 20 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Ecological site: Shallow Limy (pe35-42)

Pawnee

Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 7 to 11 percent
Drainage class: Moderately well drained
Ecological site: Clay Upland (pe30-37)

AED—Arents, Earthen Dam

An—Kennebec silt loam, channeled

Map Unit Composition

Kennebec: 90 percent
 Minor components: 10 percent

Component Descriptions

Kennebec

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Flood plain on valley
Parent material: Silty alluvium
Slope: 0 to 2 percent
Drainage class: Moderately well drained
Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Very high (About 13.4 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: Frequent
Depth to seasonal water saturation: About 40 to 44 inches
Runoff class: Low
Ecological site: Loamy Lowland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 5w

Typical Profile:

H1—0 to 48 inches; silt loam
 H2—48 to 80 inches; silty clay loam

Minor Components

Wabash

Composition: About 10 percent
Slope: 0 to 1 percent
Drainage class: Poorly drained
Ecological site: Clay Lowland (pe30-37)

Bk—Martin-Kennebec complex, 0 to 12 percent slopes

Map Unit Composition

Martin: 54 percent
 Kennebec: 43 percent
 Minor components: 3 percent

Component Descriptions

Martin

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Silty and clayey colluvium derived from limestone and shale over silty and clayey residuum weathered from limestone and shale
Slope: 3 to 12 percent
Drainage class: Moderately well drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: High (About 9.9 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: About 21 to 26 inches
Runoff class: Very high
Ecological site: Loamy Upland (pe30-37)
Land capability (irrigated):

Land capability (nonirrigated): 6e

Typical Profile:

- H1—0 to 12 inches; silty clay loam
- H2—12 to 17 inches; silty clay loam
- H3—17 to 72 inches; silty clay

Kennebec

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Flood plain on valley

Parent material: Silty alluvium

Slope: 0 to 2 percent

Drainage class: Moderately well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Very high (About 13.4 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)

Flooding hazard: Frequent

Depth to seasonal water saturation: About 40 to 44 inches

Runoff class: Low

Ecological site: Loamy Lowland (pe30-37)

Land capability (irrigated):

Land capability (nonirrigated): 5w

Typical Profile:

- H1—0 to 48 inches; silt loam
- H2—48 to 80 inches; silt loam

Minor Components

Wabash

Composition: About 3 percent

Slope: 0 to 1 percent

Drainage class: Poorly drained

Ecological site: Clay Lowland (pe30-37)

BOA—Borrow Areas

Br—Fluents, channeled, frequently flooded

Map Unit Composition

Fluents: 97 percent

Minor components: 3 percent

Component Descriptions

Fluents

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Flood plain on valley

Parent material: Fine-silty alluvium

Slope: 0 to 2 percent

Drainage class: Moderately well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Moderate (About 8.9 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)

Flooding hazard: Frequent

Depth to seasonal water saturation: About 33 to 38 inches

Runoff class: Low

Land capability (irrigated):

Land capability (nonirrigated): 6w

Typical Profile:

- H1—0 to 60 inches; silty clay loam

Minor Components

Wabash

Composition: About 3 percent

Slope: 0 to 1 percent

Drainage class: Poorly drained

Ecological site: Clay Lowland (pe30-37)

Dm—Dwight-Martin silty clay loams, 1 to 3 percent slopes

Map Unit Composition

Dwight: 60 percent

Martin: 30 percent

Minor components: 10 percent

Component Descriptions

Dwight

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills, 112 - Cherokee Prairies

Landform: Hillslope on upland

Parent material: Silty and clayey residuum weathered from cherty limestone

Slope: 1 to 3 percent

Drainage class: Moderately well drained

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

Available water capacity: Moderate (About 8.0 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 (pe35-42)

Land capability (irrigated):

Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 5 inches; silty clay loam
H2—5 to 22 inches; clay
H3—22 to 50 inches; silty clay
2C—50 to 80 inches; silty clay

Martin

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills, 112 - Cherokee Prairies

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: 1 to 3 percent

Drainage class: Moderately well drained

Slowest permeability: Slow (About 0.06 in/hr)

Available water capacity: High (About 9.9 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: About 21 to 26 inches

Runoff class: High

Ecological site: Loamy Upland (pe35-42)

Land capability (irrigated):

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 12 inches; silty clay loam
H2—12 to 17 inches; silty clay loam
H3—17 to 60 inches; silty clay

Minor Components

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: Limy Upland (pe35-42)

Ladysmith

Composition: About 5 percent

Slope: 1 to 3 percent

Drainage class: Somewhat poorly drained

Ecological site: Clay Upland (pe35-42)

Ds—Dwight silty clay loam, 0 to 1 percent slopes

Map Unit Composition

Dwight: 97 percent

Minor components: 3 percent

Component Descriptions

Dwight

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills, 112 - Cherokee Prairies

Landform: Hillslope on upland

Parent material: Silty and clayey residuum weathered from cherty limestone

Slope: 0 to 1 percent

Drainage class: Moderately well drained

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

Available water capacity: Moderate (About 8.0 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 (pe35-42)

Land capability (irrigated):

Land capability (nonirrigated): 4s

Typical Profile:

H1—0 to 5 inches; silty clay loam
H2—5 to 22 inches; clay
H3—22 to 50 inches; silty clay
2C—50 to 80 inches;

Minor Components

Ladysmith

Composition: About 3 percent

Slope: 0 to 1 percent

Drainage class: Somewhat poorly drained

Ecological site: Clay Upland (pe35-42)

Dw—Dwight silty clay loam, 1 to 3 percent slopes

Map Unit Composition

Dwight: 85 percent

Minor components: 15 percent

Component Descriptions

Dwight

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills, 112 - Cherokee Prairies

Landform: Hillslope on upland

Parent material: Silty and clayey residuum weathered from cherty limestone

Slope: 1 to 3 percent

Drainage class: Moderately well drained

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

Available water capacity: Moderate (About 8.0 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 (pe35-42)

Land capability (irrigated):

Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 5 inches; silty clay loam

H2—5 to 22 inches; clay

H3—22 to 50 inches; silty clay

2C—50 to 80 inches;

Minor Components

Martin

Composition: About 5 percent

Slope: 1 to 3 percent

Drainage class: Moderately well drained

Ecological site: Loamy Upland (pe35-42)

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: Limy Upland (pe35-42)

Ladysmith

Composition: About 5 percent

Slope: 1 to 3 percent

Drainage class: Somewhat poorly drained

Ecological site: Clay Upland (pe35-42)

El—Elmont silt loam, 3 to 7 percent slopes

Map Unit Composition

Elmont: 90 percent

Minor components: 10 percent

Component Descriptions

Elmont

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills, 112 - Cherokee Prairies

Landform: Hillslope on upland

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

Slope: 3 to 7 percent

Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)

Drainage class: Well drained

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

Available water capacity: High (About 9.2 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: Limy Upland (pe35-42)

Land capability (irrigated):

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 7 inches; silt loam

H2—7 to 22 inches; silty clay loam

H3—22 to 50 inches; silty clay loam

Cr—50 to 54 inches; unweathered bedrock

Minor Components

Sibleyville

Composition: About 5 percent

Geomorphic Position: hillslope on upland

Slope: 3 to 7 percent

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

Drainage class: Well drained

Ecological site: Loamy Upland (pe35-42)

Martin

Composition: About 5 percent

Slope: 3 to 7 percent

Drainage class: Moderately well drained

Ecological site: Loamy Upland (pe35-42)

Em—Elmont silt loam, 3 to 7 percent slopes, eroded**Map Unit Composition**

Elmont: 90 percent
 Minor components: 10 percent

Component Descriptions**Elmont**

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills, 112 - Cherokee Prairies
Landform: Hillslope on upland
Parent material: Silty and clayey residuum weathered from shale and siltstone
Slope: 3 to 7 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 9.2 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: Limy Upland (pe35-42)
Land capability (irrigated):
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 7 inches; silt loam
 H2—7 to 22 inches; silty clay loam
 H3—22 to 50 inches; silty clay loam
 Cr—50 to 54 inches; unweathered bedrock

Minor Components**Sibleyville**

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

Martin

Composition: About 5 percent
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe35-42)

En—Elmont silt loam, 7 to 12 percent slopes**Map Unit Composition**

Elmont: 90 percent
 Minor components: 10 percent

Component Descriptions**Elmont**

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills, 112 - Cherokee Prairies
Landform: Hillslope on upland
Parent material: Silty and clayey residuum weathered from shale and siltstone
Slope: 7 to 12 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 9.2 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Limy Upland (pe35-42)
Land capability (irrigated):
Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 7 inches; silt loam
 H2—7 to 22 inches; silty clay loam
 H3—22 to 50 inches; silty clay loam
 Cr—50 to 60 inches; unweathered bedrock

Minor Components**Sibleyville**

Composition: About 5 percent
Slope: 7 to 11 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Loamy Upland (pe35-42)

Martin

Composition: About 5 percent
Slope: 7 to 11 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe35-42)

Eo—Elmont silt loam, 7 to 12 percent slopes, eroded**Map Unit Composition**

Elmont: 90 percent
 Minor components: 10 percent

Component Descriptions**Elmont**

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills, 112 - Cherokee Prairies

Landform: Hillslope on upland

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

Slope: 7 to 12 percent

Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)

Drainage class: Well drained

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

Available water capacity: High (About 9.2 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: High

Ecological site: Limy Upland (pe35-42)

Land capability (irrigated):

Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 7 inches; silt loam

H2—7 to 22 inches; silty clay loam

H3—22 to 50 inches; silty clay loam

Cr—50 to 54 inches; unweathered bedrock

Minor Components**Sibleyville**

Composition: About 5 percent

Slope: 7 to 11 percent

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

Drainage class: Well drained

Ecological site: Loamy Upland (pe35-42)

Martin

Composition: About 5 percent

Slope: 7 to 11 percent

Drainage class: Moderately well drained

Ecological site: Loamy Upland (pe35-42)

Ep—Elmont-Dwight silty clay loams, 3 to 7 percent slopes, eroded**Map Unit Composition**

Elmont: 75 percent
 Dwight: 25 percent
 Minor components:

Component Descriptions**Elmont**

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Hillslope on upland

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

Slope: 3 to 7 percent

Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)

Drainage class: Well drained

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

Available water capacity: High (About 9.1 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: Limy Upland (pe35-42)

Land capability (irrigated):

Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 7 inches; silty clay loam

H2—7 to 22 inches; silty clay loam

H3—22 to 50 inches; silty clay loam

Cr—50 to 54 inches; unweathered bedrock

Dwight

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Hillslope on upland

Parent material: Silty and clayey loess

Slope: 3 to 3 percent

Drainage class: Moderately well drained

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

Available water capacity: Moderate (About 8.0 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 (pe35-42)
Land capability (irrigated):
Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 5 inches; silty clay loam
 H2—5 to 22 inches; clay
 H3—22 to 50 inches; silty clay
 2C—50 to 80 inches; silty clay

Es—Eudora fine sandy loam, 1 to 3 percent slopes

Map Unit Composition

Eudora: 95 percent
 Minor components: 5 percent

Component Descriptions

Eudora

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Fan terrace on river valley
Parent material: Coarse-loamy colluvium
Slope: 1 to 3 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 11.5 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Rare
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Sandy Lowland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 2e

Typical Profile:

H1—0 to 12 inches; fine sandy loam
 H2—12 to 60 inches; fine sandy loam

Minor Components

Kennebec

Composition: About 5 percent
Slope: 0 to 2 percent
Drainage class: Moderately well drained
Ecological site: Loamy Lowland (pe30-37)

Et—Eudora silt loam, rarely flooded

Map Unit Composition

Eudora: 90 percent
 Minor components: 10 percent

Component Descriptions

Eudora

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Flood plain on river valley
Parent material: Coarse-silty alluvium
Slope: 0 to 1 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Very high (About 12.0 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Rare
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Loamy Lowland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 1

Typical Profile:

H1—0 to 12 inches; silt loam
 H2—12 to 72 inches; silt loam

Minor Components

Kimo

Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Ecological site: Clay Lowland (pe30-37)

Sarpy

Composition: About 5 percent
Slope: 0 to 2 percent
Drainage class: Somewhat excessively drained
Ecological site: Sandy Lowland (pe30-37)

Unnamed Hydric Soil

Composition: About
Drainage class: Poorly drained

Eu—Eudora Soils, 6 to 12 percent slopes, eroded**Map Unit Composition**

Eudora: 85 percent
 Minor components: 15 percent

Component Descriptions**Eudora**

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Flood plain on river valley
Parent material: Coarse-silty alluvium
Slope: 6 to 12 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Very high (About 12.0 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Rare
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Loamy Lowland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 12 inches; silt loam
 H2—12 to 72 inches; silt loam

Minor Components**Kimo**

Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Ecological site: Clay Lowland (pe30-37)

Muir

Composition: About 5 percent
Slope: 0 to 2 percent
Drainage class: Well drained
Ecological site: Loamy Lowland (pe30-37)

Reading

Composition: About 5 percent
Slope: 0 to 2 percent
Drainage class: Well drained
Ecological site: Loamy Lowland (pe30-37)

Ev—Eudora-Kimo complex, rarely flooded**Map Unit Composition**

Eudora: 60 percent
 Kimo: 30 percent
 Minor components: 10 percent

Component Descriptions**Eudora**

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Flood plain on river valley
Parent material: Coarse-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 12.0 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Rare
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Loamy Lowland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 2w

Typical Profile:

H1—0 to 12 inches; silt loam
 H2—12 to 72 inches; silt loam

Kimo

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Flood plain on river valley
Parent material: Clayey over loamy alluvium
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: High (About 11.3 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: Rare
Depth to seasonal water saturation: About 22 to 26 inches
Runoff class: Medium
Ecological site: Clay Lowland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 2w

Typical Profile:

H1—0 to 6 inches; silty clay loam
 H2—6 to 28 inches; silty clay
 H3—28 to 60 inches; silt loam

Minor Components**Sarpy**

Composition: About 5 percent
Slope: 0 to 2 percent
Drainage class: Somewhat excessively drained
Ecological site: Sandy Lowland (pe30-37)

Wabash

Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Poorly drained
Ecological site: Clay Lowland (pe30-37)

**Ew—Eudora-Kimo complex,
Overwash, rarely flooded****Map Unit Composition**

Eudora: 60 percent
 Kimo: 30 percent
 Minor components: 10 percent

Component Descriptions**Eudora**

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Flood plain on river valley
Parent material: Coarse-silty alluvium
Slope: 0 to 2 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 11.5 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Rare
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Loamy Lowland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 2w

Typical Profile:

H1—0 to 12 inches; fine sandy loam
 H2—12 to 60 inches; silt loam

Kimo

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Flood plain on river valley
Parent material: Clayey over loamy alluvium
Slope: 0 to 1 percent

Drainage class: Somewhat poorly drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: High (About 11.3 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: Rare

Depth to seasonal water saturation: About 22 to 26 inches

Runoff class: High

Ecological site: Clay Lowland (pe30-37)

Land capability (irrigated):

Land capability (nonirrigated): 2w

Typical Profile:

H1—0 to 8 inches; fine sandy loam
 H2—8 to 24 inches; silty clay loam
 H3—24 to 60 inches; silt loam

Minor Components**Sarpy**

Phase: OVERWASH
Composition: About 10 percent
Slope: 0 to 1 percent
Drainage class: Excessively drained
Ecological site: Sandy Lowland (pe30-37)

**Gm—Gymer silt loam, 3 to 8
percent slopes****Map Unit Composition**

Gymer: 88 percent
 Minor components: 12 percent

Component Descriptions**Gymer**

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Terrace on river valley
Hillslope position: Backslope
Parent material: Fine-silty alluvium
Slope: 3 to 8 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: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High

Ecological site: Loamy Upland (pe30-37)

Land capability (irrigated):

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 15 inches; silt loam

H2—15 to 34 inches; silty clay loam

H3—34 to 68 inches; silty clay loam

Minor Components

Morrill

Composition: About 3 percent

Geomorphic Position: hillslope on upland

Slope: 3 to 7 percent

Drainage class: Well drained

Ecological site: Loamy Upland (pe30-37)

Martin

Composition: About 3 percent

Geomorphic Position: hillslope on upland

Slope: 3 to 7 percent

Drainage class: Moderately well drained

Ecological site: Loamy Upland (pe35-42)

Thurman

Composition: About 3 percent

Geomorphic Position: hillslope on upland

Slope: 4 to 10 percent

Drainage class: Somewhat excessively drained

Ecological site: Savannah (pe30-37)

Sharpsburg

Composition: About 3 percent

Geomorphic Position: hillslope on upland

Slope: 4 to 10 percent

Drainage class: Moderately well drained

Ecological site: Loamy Upland (pe30-37)

Gy—Gymer silt loam, 3 to 8 percent slopes, eroded

Map Unit Composition

Gymer: 100 percent

Minor components:

Component Descriptions

Gymer

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Hillslope on upland

Hillslope position: Backslope

Parent material: Fine-silty loess

Slope: 3 to 8 percent

Drainage class: Well drained

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

Available water capacity: High (About 10.2 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: High

Ecological site: Loamy Upland (pe30-37)

Land capability (irrigated):

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 4 inches; silt loam

H2—4 to 42 inches; silty clay loam

H3—42 to 60 inches; silty clay loam

INL—Aquolls

Map Unit Composition

Aquolls: 100 percent

Minor components:

Component Descriptions

Aquolls

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: River valley,

Slope: 0 to 1 percent

Drainage class: Very poorly drained

Flooding hazard: Occasional

Ponding hazard: Frequent

Depth to seasonal water saturation: About 0 to 2 inches

Runoff class: Negligible

Land capability (irrigated):

Land capability (nonirrigated): 5w

Typical Profile:

H1—0 to 60 inches; variable

Kb—Kennebec silt loam, occasionally flooded

Map Unit Composition

Kennebec: 95 percent
Minor components: 5 percent

Component Descriptions

Kennebec

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Flood plain on valley
Parent material: Fine-silty alluvium
Slope: 0 to 2 percent
Drainage class: Moderately well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Very high (About 13.4 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: Occasional
Depth to seasonal water saturation: About 40 to 44 inches
Runoff class: Low
Ecological site: Loamy Lowland (pe35-42)
Land capability (irrigated):
Land capability (nonirrigated): 2w

Typical Profile:

H1—0 to 48 inches; silt loam
H2—48 to 60 inches; silt loam

Minor Components

Wabash

Composition: About 4 percent
Slope: 0 to 1 percent
Drainage class: Poorly drained
Ecological site: Clay Lowland (pe30-37)

Unnamed Hydric Soil

Composition: About 1 percent
Slope: 0 to 2 percent
Drainage class: Poorly drained

Kc—Chase silt loam, occasionally flooded

Map Unit Composition

Chase: 85 percent
Minor components: 15 percent

Component Descriptions

Chase

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Terrace on river valley
Parent material: Silty and clayey alluvium
Slope: 0 to 2 percent
Drainage class: Moderately well drained

Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: High (About 11.3 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: Occasional

Depth to seasonal water saturation: About 22 to 26 inches

Runoff class: High

Ecological site: Loamy Lowland (pe30-37)

Land capability (irrigated):

Land capability (nonirrigated): 2w

Typical Profile:

H1—0 to 30 inches; silt loam
H2—30 to 48 inches; silty clay loam
H3—48 to 60 inches; silty clay loam

Minor Components

Wabash

Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Poorly drained
Ecological site: Clay Lowland (pe30-37)

Kennebec

Composition: About 5 percent
Slope: 0 to 2 percent
Drainage class: Moderately well drained
Ecological site: Loamy Lowland (pe30-37)

Reading

Composition: About 5 percent
Slope: 0 to 2 percent
Drainage class: Well drained
Ecological site: Loamy Lowland (pe30-37)

KF—Kennebec silt loam, 0 to 2 percent slopes, channeled, frequently flooded

Map Unit Composition

Kennebec: 98 percent
Minor components: 2 percent

Component Descriptions

Kennebec

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Flood plain on river valley
Parent material: Silty alluvium
Slope: 0 to 2 percent
Drainage class: Moderately well drained

Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Very high (About 13.3 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: Frequent
Depth to seasonal water saturation: About 40 to 44 inches
Runoff class: Low
Ecological site: Loamy Lowland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 5w

Typical Profile:
 H1—0 to 47 inches; silt loam
 H2—47 to 60 inches; silt loam

Minor Components

Colo

Composition: About 2 percent

Km—Kimo silty clay loam, rarely flooded

Map Unit Composition

Kimo: 90 percent
 Minor components: 10 percent

Component Descriptions

Kimo

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Flood plain on river valley
Parent material: Clayey over loamy alluvium
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: High (About 11.3 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: Rare
Depth to seasonal water saturation: About 22 to 26 inches
Runoff class: Medium
Ecological site: Clay Lowland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 2w

Typical Profile:
 H1—0 to 6 inches; silty clay loam
 H2—6 to 28 inches; silty clay
 H3—28 to 60 inches; silt loam

Minor Components

Wabash

Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Poorly drained
Ecological site: Clay Lowland (pe30-37)

Eudora

Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Well drained
Ecological site: Loamy Lowland (pe30-37)

Ko—Kimo Soils, Depressional, occasionally flooded

Map Unit Composition

Kimo: 95 percent
 Minor components: 5 percent

Component Descriptions

Kimo

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Flood plain on river valley
Parent material: Clayey over loamy alluvium
Slope: 0 to 1 percent
Drainage class: Poorly drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: High (About 11.3 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: Occasional
Ponding hazard: Frequent
Depth to seasonal water saturation: About 0 to 2 inches
Runoff class: Negligible
Ecological site: Clay Lowland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 5w

Typical Profile:

H1—0 to 15 inches; silty clay loam
 H2—15 to 24 inches; silty clay loam
 H3—24 to 60 inches; very fine sandy loam

Minor Components

Wabash

Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Poorly drained
Ecological site: Clay Lowland (pe30-37)

Ks—Kipson-Sogn complex, 3 to 25 percent slopes

Map Unit Composition

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

Component Descriptions

Kipson

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Calcareous loamy residuum weathered from shale
Slope: 3 to 25 percent
Depth to restrictive feature: 7 to 20 inches to bedrock (paralithic)
Drainage class: Somewhat excessively drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Low (About 3.1 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: Limy Upland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 8 inches; silty clay loam
H2—8 to 17 inches; silty clay loam
Cr—17 to 21 inches; weathered bedrock

Sogn

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Loamy residuum weathered from limestone
Slope: 0 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 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 (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 6e

Typical Profile:

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

Minor Components

Martin

Composition: About 5 percent
Slope: 7 to 11 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe35-42)

Elmont

Composition: About 5 percent
Slope: 7 to 12 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Limy Upland (pe35-42)

Labette

Composition: About 5 percent
Slope: 3 to 6 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Limy Upland (pe35-42)

Ku—Konawa fine sandy loam, 4 to 8 percent slopes

Map Unit Composition

Konawa: 85 percent
Minor components: 15 percent

Component Descriptions

Konawa

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Fine-loamy glaciofluvial deposits
Slope: 4 to 8 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Moderate (About 8.7 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Savannah (pe30-37)
Land capability (irrigated):

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 20 inches; fine sandy loam
H2—20 to 50 inches; sandy clay loam
H3—50 to 60 inches; sandy clay loam

Minor Components

Morrill

Composition: About 5 percent
Slope: 4 to 8 percent
Drainage class: Well drained

Gymer

Composition: About 5 percent
Slope: 4 to 8 percent
Drainage class: Well drained

Morrill

Phase: SHELLABARGER
Composition: About 5 percent
Slope: 3 to 8 percent
Drainage class: Well drained
Ecological site: Sandy (pe30-37)

Kw—Konawa fine sandy loam, 8 to 12 percent slopes

Map Unit Composition

Konawa: 85 percent
Minor components: 15 percent

Component Descriptions

Konawa

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Fine-loamy glaciofluvial deposits
Slope: 8 to 12 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Moderate (About 8.7 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Savannah (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 20 inches; fine sandy loam
H2—20 to 50 inches; clay loam

H3—50 to 60 inches; sandy clay loam

Minor Components

Morrill

Composition: About 5 percent
Slope: 8 to 12 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-37)

Shelby

Composition: About 5 percent
Slope: 8 to 12 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-37)

Morrill

Phase: SHELLABARGER
Composition: About 5 percent
Slope: 8 to 12 percent
Drainage class: Well drained
Ecological site: Sandy (pe30-37)

La—Labette silty clay loam, 1 to 3 percent slopes

Map Unit Composition

Labette: 88 percent
Minor components: 12 percent

Component Descriptions

Labette

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills, 112 - Cherokee Prairies
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 6.6 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 (pe35-42)
Land capability (irrigated):
Land capability (nonirrigated): 2e

Typical Profile:

H1—0 to 13 inches; silty clay loam
 H2—13 to 38 inches; silty clay
 R—38 to 42 inches; unweathered bedrock

Minor Components

Dwight

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

Sogn

Composition: About 3 percent
Slope: 3 to 20 percent
Depth to restrictive feature: 4 to 20 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Ecological site: Shallow Limy (pe30-37)

Ladysmith

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

Martin

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

Lb—Labette silty clay loam, 3 to 6 percent slopes

Map Unit Composition

Labette: 85 percent
 Minor components: 15 percent

Component Descriptions

Labette

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills, 112 - Cherokee Prairies
Landform: Hillslope on upland
Parent material: Silty and clayey residuum weathered from limestone and shale
Slope: 3 to 6 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 6.6 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 (pe35-42)

Land capability (irrigated):

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 13 inches; silty clay loam
 H2—13 to 38 inches; silty clay
 R—38 to 42 inches; unweathered bedrock

Minor Components

Vinland

Composition: About 5 percent
Slope: 4 to 10 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Somewhat excessively drained
Ecological site: Limy Upland (pe35-42)

Sogn

Composition: About 5 percent
Slope: 3 to 20 percent
Depth to restrictive feature: 4 to 20 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Ecological site: Shallow Limy (pe30-37)

Martin

Composition: About 5 percent
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe35-42)

Lc—Labette silty clay loam, 3 to 6 percent slopes, eroded

Map Unit Composition

Labette: 95 percent
 Minor components: 5 percent

Component Descriptions

Labette

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills, 112 - Cherokee Prairies
Landform: Hillslope on upland
Parent material: Silty and clayey residuum weathered from limestone and shale
Slope: 3 to 6 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 5.9 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: Limy Upland (pe35-42)
Land capability (irrigated):
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 4 inches; silty clay loam
 H2—4 to 36 inches; silty clay
 R—36 to 40 inches; unweathered bedrock

Minor Components

Martin

Composition: About 5 percent
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe35-42)

Ld—Ladysmith silty clay loam, 0 to 1 percent slopes

Map Unit Composition

Ladysmith: 90 percent
 Minor components: 10 percent

Component Descriptions

Ladysmith

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills, 112 - Cherokee Prairies
Landform: Paleoterrace on upland
Parent material: Clayey alluvium
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Slowest permeability: Very slow (About 0.00 in/hr)
Available water capacity: Moderate (About 8.8 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: About 21 to 26 inches
Runoff class: Very high
Ecological site: Clay Upland (pe35-42)
Land capability (irrigated):
Land capability (nonirrigated): 2s

Typical Profile:

H1—0 to 10 inches; silty clay loam

H2—10 to 48 inches; silty clay
 H3—48 to 60 inches; silty clay

Minor Components

Martin

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

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: Limy Upland (pe35-42)

LIQ—Limestone Quarries And Gravel Pits

Map Unit Composition

Limestone Quarry: 100 percent
 Minor components:

Component Descriptions

Limestone Quarry

MLRA: -
Depth to seasonal water saturation: More than 6 feet
Land capability (irrigated):

Lm—Ladysmith silty clay loam, 1 to 3 percent slopes

Map Unit Composition

Ladysmith: 85 percent
 Minor components: 15 percent

Component Descriptions

Ladysmith

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills, 112 - Cherokee Prairies
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 8.8 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: About 22 to 26 inches
Runoff class: Very high
Ecological site: Clay Upland (pe35-42)
Land capability (irrigated):
Land capability (nonirrigated): 3e

Typical Profile:

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

Minor Components

Martin

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

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: Limy Upland (pe35-42)

Pawnee

Composition: About 5 percent
Slope: 1 to 3 percent
Drainage class: Moderately well drained
Ecological site: Clay Upland (pe30-37)

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

Map Unit Composition

Ladysmith: 100 percent
 Minor components:

Component Descriptions

Ladysmith

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills, 112 - Cherokee Prairies
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 8.4 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: About 21 to 26 inches
Runoff class: Very high
Ecological site: Clay Upland (pe35-42)
Land capability (irrigated):
Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 6 inches; silty clay loam
 H2—6 to 48 inches; silty clay
 H3—48 to 60 inches; silty clay

Ma—Made Land

Map Unit Composition

Made Land: 100 percent
 Minor components:

Component Descriptions

Made Land

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Depth to seasonal water saturation: More than 6 feet
Land capability (irrigated):

Mb—Martin silty clay loam, 1 to 3 percent slopes

Map Unit Composition

Martin: 90 percent
 Minor components: 10 percent

Component Descriptions

Martin

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills, 112 - Cherokee Prairies
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: 1 to 3 percent

Drainage class: Moderately well drained

Slowest permeability: Slow (About 0.06 in/hr)

Available water capacity: High (About 9.9 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: About 21 to 26 inches

Runoff class: High

Ecological site: Loamy Upland (pe35-42)

Land capability (irrigated):

Land capability (nonirrigated): 2e

Typical Profile:

H1—0 to 12 inches; silty clay loam

H2—12 to 17 inches; silty clay loam

H3—17 to 60 inches; silty clay

Minor Components

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: Limy Upland (pe35-42)

Ladysmith

Composition: About 5 percent

Slope: 1 to 3 percent

Drainage class: Somewhat poorly drained

Ecological site: Clay Upland (pe35-42)

Mc—Martin silty clay loam, 3 to 7 percent slopes

Map Unit Composition

Martin: 85 percent

Minor components: 15 percent

Component Descriptions

Martin

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills, 112 - Cherokee Prairies

Landform: Hillslope on upland

Hillslope position: Backslope

Parent material: Silty and clayey colluvium derived from limestone and shale over silty and

clayey residuum weathered from limestone and shale

Slope: 3 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 21 to 26 inches

Runoff class: High

Ecological site: Loamy Upland (pe35-42)

Land capability (irrigated):

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 9 inches; silty clay loam

H2—9 to 14 inches; silty clay loam

H3—14 to 60 inches; silty clay

Minor Components

Sogn

Composition: About 3 percent

Geomorphic Position: hillslope on upland

Slope: 7 to 15 percent

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

Drainage class: Somewhat excessively drained

Ecological site: Shallow Limy (pe30-37)

Pawnee

Composition: About 3 percent

Geomorphic Position: hillslope on upland

Slope: 1 to 3 percent

Drainage class: Moderately well drained

Ecological site: Clay Upland (pe30-37)

Oska

Composition: About 3 percent

Slope: 3 to 6 percent

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

Drainage class: Well drained

Ecological site: Loamy Upland (pe35-42)

Gymer

Composition: About 3 percent

Geomorphic Position: hillslope on upland

Slope: 3 to 8 percent

Drainage class: Well drained

Ecological site: Loamy Upland (pe30-37)

Vinland

Composition: About 2 percent

Geomorphic Position: hillslope on upland

Slope: 3 to 7 percent

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

Drainage class: Somewhat excessively drained
Ecological site: Loamy Upland (pe35-42)

Sibleyville

Phase: eroded
Composition: About 1 percent
Slope: 3 to 7 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Loamy Upland (pe35-42)

Me—Martin silty clay loam, 3 to 7 percent slopes, eroded

Map Unit Composition

Martin: 90 percent
 Minor components: 10 percent

Component Descriptions

Martin

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills, 112 - Cherokee Prairies
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 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: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: About 21 to 26 inches
Runoff class: High
Ecological site: Loamy Upland (pe35-42)
Land capability (irrigated):
Land capability (nonirrigated): 4e

Typical Profile:

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

Minor Components

Elmont

Phase: eroded
Composition: About 10 percent
Slope: 3 to 7 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Limy Upland (pe35-42)

Mf—Martin silty clay loam, 7 to 11 percent slopes

Map Unit Composition

Martin: 90 percent
 Minor components: 10 percent

Component Descriptions

Martin

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills, 112 - Cherokee Prairies
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: 7 to 11 percent
Drainage class: Moderately well drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: High (About 9.9 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: About 21 to 26 inches
Runoff class: Very high
Ecological site: Loamy Upland (pe35-42)
Land capability (irrigated):
Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 12 inches; silty clay loam
 H2—12 to 17 inches; silty clay loam
 H3—17 to 60 inches; silty clay

Minor Components

Elmont

Composition: About 5 percent
Slope: 7 to 11 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Limy Upland (pe35-42)

Martin

Composition: About 5 percent
Slope: 7 to 11 percent
Drainage class: Moderately well drained
Ecological site: Limy Upland (pe35-42)

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

Mh—Martin silty clay loam, 7 to 11 percent slopes, eroded

Map Unit Composition

Martin: 85 percent
 Minor components: 15 percent

Component Descriptions

Martin

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills, 112 - Cherokee Prairies
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: 7 to 11 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: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: About 21 to 26 inches
Runoff class: Very high
Ecological site: Loamy Upland (pe35-42)
Land capability (irrigated):
Land capability (nonirrigated): 6e

Typical Profile:

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

Minor Components

Vinland

Composition: About 5 percent
Slope: 4 to 10 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Somewhat excessively drained
Ecological site: Limy Upland (pe35-42)

Elmont

Composition: About 5 percent
Slope: 7 to 11 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Limy Upland (pe35-42)

Martin

Composition: About 5 percent
Slope: 7 to 11 percent

Mk—Martin Soils, 3 to 7 percent slopes, severely eroded

Map Unit Composition

Martin: 90 percent
 Minor components: 10 percent

Component Descriptions

Martin

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills, 112 - Cherokee Prairies
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 7 percent
Drainage class: Moderately well drained
Slowest permeability: Slow (About 0.06 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: About 21 to 26 inches
Runoff class: High
Ecological site: Loamy Upland (pe35-42)
Land capability (irrigated):
Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 4 inches; silty clay
 H2—4 to 60 inches; silty clay

Minor Components

Vinland

Composition: About 5 percent
Slope: 4 to 10 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Somewhat excessively drained
Ecological site: Limy Upland (pe35-42)

Martin

Composition: About 5 percent
Slope: 7 to 11 percent
Drainage class: Moderately well drained
Ecological site: Limy Upland (pe35-42)

Mm—Morrill clay loam, 3 to 8 percent slopes

Map Unit Composition

Morrill: 91 percent
Minor components: 9 percent

Component Descriptions

Morrill

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Fine-loamy glaciofluvial deposits
Slope: 3 to 8 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 10.2 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Loamy Upland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 17 inches; clay loam
H2—17 to 32 inches; clay loam
H3—32 to 60 inches; sandy clay loam

Minor Components

Gymer

Composition: About 3 percent
Slope: 3 to 8 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-37)

Pawnee

Composition: About 3 percent
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Ecological site: Clay Upland (pe30-37)

Shelby

Composition: About 3 percent
Slope: 3 to 8 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-37)

Mn—Morrill clay loam, 3 to 8 percent slopes, eroded

Map Unit Composition

Morrill: 91 percent
Minor components: 9 percent

Component Descriptions

Morrill

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Fine-loamy glaciofluvial deposits
Slope: 3 to 8 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 10.1 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Loamy Upland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 6 inches; clay loam
H2—6 to 32 inches; clay loam
H3—32 to 60 inches; sandy clay loam

Minor Components

Martin

Composition: About 3 percent
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe35-42)

Pawnee

Composition: About 3 percent
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Ecological site: Clay Upland (pe30-37)

Shelby

Composition: About 3 percent
Slope: 3 to 8 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-37)

Mo—Morrill clay loam, 8 to 12 percent slopes**Map Unit Composition**

Morrill: 91 percent
 Minor components: 9 percent

Component Descriptions**Morrill**

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Fine-loamy glaciofluvial deposits
Slope: 8 to 12 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 10.2 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Loamy Upland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 17 inches; clay loam
 H2—17 to 32 inches; clay loam
 H3—32 to 60 inches; sandy clay loam

Minor Components**Martin**

Composition: About 3 percent
Slope: 7 to 11 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe35-42)

Pawnee

Composition: About 3 percent
Slope: 7 to 11 percent
Drainage class: Moderately well drained
Ecological site: Clay Upland (pe30-37)

Shelby

Composition: About 3 percent
Slope: 8 to 12 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-37)

MOO—Morrill loam, 3 to 7 percent slopes**Map Unit Composition**

Morrill: 90 percent
 Minor components: 10 percent

Component Descriptions**Morrill**

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Fine-loamy glaciofluvial deposits
Slope: 3 to 7 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 10.2 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: Loamy Upland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 13 inches; loam
 H2—13 to 34 inches; clay loam
 H3—34 to 60 inches; clay loam

Minor Components**Ortello**

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

Pawnee

Composition: About 5 percent
Slope: 1 to 3 percent
Drainage class: Moderately well drained
Ecological site: Clay Upland (pe30-37)

Mp—Morrill-gravelly Land complex, 4 to 12 percent slopes

Map Unit Composition

Morrill: 55 percent
Gravelly Land: 30 percent
Minor components: 15 percent

Component Descriptions

Morrill

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Fine-loamy glaciofluvial deposits
Slope: 4 to 12 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 10.2 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Loamy Upland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 17 inches; clay loam
H2—17 to 32 inches; clay loam
H3—32 to 60 inches; sandy clay loam

Gravelly Land

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Gravelly alluvium
Slope: 4 to 12 percent
Drainage class: Well drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: Very low (About 1.9 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Loamy Upland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 6e

Minor Components

Limestone Outcrops

Composition: About 5 percent

Pawnee

Composition: About 5 percent
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Ecological site: Clay Upland (pe30-37)

Shelby

Composition: About 5 percent
Slope: 8 to 12 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-37)

Mr—Muir silt loam, rarely flooded

Map Unit Composition

Muir: 85 percent
Minor components: 15 percent

Component Descriptions

Muir

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Terrace 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 12.4 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 (pe30-37)
Land capability (irrigated): 1
Land capability (nonirrigated): 1

Typical Profile:

H1—0 to 20 inches; silt loam
H2—20 to 62 inches; silty clay loam
H3—62 to 80 inches; silt loam

Minor Components

Eudora

Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Well drained
Ecological site: Loamy Lowland (pe30-37)

Wabash

Composition: About 5 percent

Slope: 0 to 1 percent
Drainage class: Poorly drained
Ecological site: Clay Lowland (pe30-37)

Ecological site: Clay Upland (pe30-37)

Reading

Composition: About 5 percent
Slope: 0 to 2 percent
Drainage class: Well drained
Ecological site: Loamy Lowland (pe30-37)

Pa—Pawnee clay loam, 0 to 3 percent slopes

Map Unit Composition

Pawnee: 100 percent
 Minor components:

Component Descriptions

Pawnee

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Hillslope on upland

Parent material: Clayey drift

Slope: 0 to 3 percent

Drainage class: Moderately well drained

Slowest permeability: Slow (About 0.06 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: About 9 to 14 inches

Runoff class: High

Ecological site: Clay Upland (pe30-37)

Land capability (irrigated):

Land capability (nonirrigated): 2e

Typical Profile:

H1—0 to 19 inches; clay loam

H2—19 to 79 inches; clay

MRR—Morrill clay loam, 3 to 7 percent slopes

Map Unit Composition

Morrill: 90 percent
 Minor components: 10 percent

Component Descriptions

Morrill

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Hillslope on upland

Parent material: Fine-loamy glaciofluvial deposits

Slope: 3 to 7 percent

Drainage class: Well drained

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

Available water capacity: High (About 10.1 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: Loamy Upland (pe30-37)

Land capability (irrigated):

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 10 inches; clay loam

H2—10 to 56 inches; clay loam

H3—56 to 66 inches; clay loam

Minor Components

Oska

Composition: About 5 percent

Slope: 3 to 6 percent

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

Drainage class: Well drained

Ecological site: Loamy Upland (pe35-42)

Pawnee

Composition: About 5 percent

Slope: 1 to 3 percent

Drainage class: Moderately well drained

Map Unit Composition

Pawnee: 85 percent
 Minor components: 15 percent

Component Descriptions

Pawnee

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Hillslope on upland

Hillslope position: Backslope

Parent material: Clayey drift
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Slowest permeability: Slow (About 0.06 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: About 9 to 14 inches
Runoff class: High
Ecological site: Clay Upland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 14 inches; clay loam
 H2—14 to 34 inches; clay
 H3—34 to 72 inches; sandy clay loam

Minor Components

Oska

Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 6 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Loamy Upland (pe35-42)

Morrill

Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 7 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-37)

Martin

Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe35-42)

Pe—Pawnee clay loam, 3 to 7 percent slopes, eroded

Map Unit Composition

Pawnee: 90 percent
 Minor components: 10 percent

Component Descriptions

Pawnee

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Clayey drift
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Slowest permeability: Slow (About 0.06 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: About 9 to 14 inches
Runoff class: High
Ecological site: Clay Upland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 14 inches; clay loam
 H2—14 to 34 inches; clay
 H3—34 to 72 inches; sandy clay loam

Minor Components

Morrill

Phase: eroded
Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 7 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-37)

Martin

Phase: eroded
Composition: About 5 percent
Geomorphic Position: hillslope on upland
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe35-42)

Pn—Pawnee clay loam, 7 to 11 percent slopes

Map Unit Composition

Pawnee: 85 percent
 Minor components: 15 percent

Component Descriptions

Pawnee

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Hillslope on upland

Parent material: Clayey drift

Slope: 7 to 11 percent

Drainage class: Moderately well drained

Slowest permeability: Slow (About 0.06 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: About 9 to 14 inches

Runoff class: Very high

Ecological site: Clay Upland (pe30-37)

Land capability (irrigated):

Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 19 inches; clay loam

H2—19 to 79 inches; clay

Minor Components

Morrill

Composition: About 5 percent

Slope: 8 to 12 percent

Drainage class: Well drained

Ecological site: Loamy Upland (pe30-37)

Martin

Composition: About 5 percent

Slope: 7 to 11 percent

Drainage class: Moderately well drained

Ecological site: Loamy Upland (pe35-42)

Shelby

Composition: About 5 percent

Slope: 8 to 12 percent

Drainage class: Well drained

Ecological site: Loamy Upland (pe30-37)

RD—Reading silt loam, 0 to 2 percent slopes, rarely flooded

Map Unit Composition

Reading: 90 percent

Minor components: 10 percent

Component Descriptions

Reading

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Terrace on river 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 (pe35-42)

Land capability (irrigated):

Land capability (nonirrigated): 1

Typical Profile:

H1—0 to 15 inches; silt loam

H2—15 to 41 inches; silty clay loam

H3—41 to 60 inches; silty clay

Minor Components

Wabash

Composition: About 5 percent

Slope: 0 to 1 percent

Drainage class: Poorly drained

Ecological site: Clay Lowland (pe30-37)

Chase

Composition: About 5 percent

Slope: 0 to 2 percent

Drainage class: Somewhat poorly drained

Ecological site: Loamy Lowland (pe35-42)

Re—Reading silty clay loam, 0 to 2 percent slopes, rarely flooded

Map Unit Composition

Reading: 85 percent

Minor components: 15 percent

Component Descriptions

Reading

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Stream terrace on valley

Parent material: Silty alluvium

Slope: 0 to 2 percent

Drainage class: Well drained

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

Available water capacity: High (About 11.6 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: Rare
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Loamy Lowland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 1

Typical Profile:

H1—0 to 14 inches; silty clay loam
 H2—14 to 56 inches; silty clay loam
 H3—56 to 70 inches; silty clay loam

Minor Components

Wabash

Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Poorly drained
Ecological site: Clay Lowland (pe30-37)

Kennebec

Composition: About 5 percent
Slope: 0 to 2 percent
Drainage class: Moderately well drained
Ecological site: Loamy Lowland (pe30-37)

Muir

Composition: About 5 percent
Slope: 0 to 2 percent
Drainage class: Well drained
Ecological site: Loamy Lowland (pe30-37)

Rv—Riverwash

Sa—Sarpy sand, Frequently flooded

Map Unit Composition

Sarpy: 100 percent
 Minor components:

Component Descriptions

Sarpy

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Flood plain on river valley
Parent material: Sandy alluvium
Slope: 0 to 2 percent
Drainage class: Excessively drained
Slowest permeability: Rapid (About 5.95 in/hr)
Available water capacity: Low (About 4.1 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Frequent
Depth to seasonal water saturation: More than 6 feet

Runoff class: Negligible
Ecological site: Sandy Lowland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 6s

Typical Profile:

H1—0 to 7 inches; sand
 H2—7 to 66 inches; fine sand

SAP—sand Pit

Se—Sarpy-Eudora complex, overwash, occasionally flooded

Map Unit Composition

Sarpy: 55 percent
 Eudora: 45 percent
 Minor components:

Component Descriptions

Sarpy

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Flood plain on river valley
Parent material: Sandy alluvium
Slope: 0 to 1 percent
Drainage class: Excessively drained
Slowest permeability: Rapid (About 5.95 in/hr)
Available water capacity: Low (About 4.1 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Occasional
Depth to seasonal water saturation: More than 6 feet
Runoff class: Negligible
Ecological site: Sandy Lowland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 3w

Typical Profile:

H1—0 to 12 inches; loamy fine sand
 H2—12 to 60 inches; fine sand

Eudora

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Flood plain on river valley
Parent material: Coarse-silty alluvium
Slope: 0 to 1 percent
Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 11.6 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Occasional
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Loamy Lowland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 3w

Typical Profile:

H1—0 to 8 inches; fine sandy loam
H2—8 to 60 inches; silt loam

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

Pawnee

Composition: About 3 percent
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Ecological site: Clay Upland (pe30-37)

Shelby

Composition: About 3 percent
Slope: 1 to 3 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-37)

Sg—Sharpsburg silty clay loam, 1 to 3 percent slopes

Map Unit Composition

Sharpsburg: 88 percent
Minor components: 12 percent

Component Descriptions

Sharpsburg

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Silty and clayey loess
Slope: 1 to 3 percent
Drainage class: Moderately well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 11.9 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 (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 2e

Typical Profile:

H1—0 to 23 inches; silty clay loam
H2—23 to 72 inches; silty clay loam

Minor Components

Gymer

Composition: About 3 percent
Slope: 3 to 8 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-37)

Ladysmith

Composition: About 3 percent

Sh—Sharpsburg silty clay loam, 3 to 6 percent slopes

Map Unit Composition

Sharpsburg: 85 percent
Minor components: 15 percent

Component Descriptions

Sharpsburg

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Silty and clayey loess
Slope: 3 to 6 percent
Drainage class: Moderately well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 11.9 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 (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 23 inches; silty clay loam
H2—23 to 72 inches; silty clay loam

Minor Components

Martin

Composition: About 5 percent
Slope: 3 to 7 percent
Drainage class: Moderately well drained

Ecological site: Loamy Upland (pe35-42)

Pawnee

Composition: About 5 percent

Slope: 3 to 7 percent

Drainage class: Moderately well drained

Ecological site: Clay Upland (pe30-37)

Shelby

Composition: About 5 percent

Slope: 3 to 8 percent

Drainage class: Well drained

Ecological site: Loamy Upland (pe30-37)

Sk—Shelby clay loam, 1 to 3 percent slopes

Map Unit Composition

Shelby: 95 percent

Minor components: 5 percent

Component Descriptions

Shelby

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Hillslope on upland

Parent material: Fine-loamy drift

Slope: 1 to 3 percent

Drainage class: Well drained

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

Available water capacity: High (About 10.0 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: Loamy Upland (pe30-37)

Land capability (irrigated):

Land capability (nonirrigated): 2e

Typical Profile:

H1—0 to 17 inches; clay loam

H2—17 to 44 inches; clay loam

H3—44 to 60 inches; clay loam

Minor Components

Pawnee

Composition: About 5 percent

Slope: 0 to 3 percent

Drainage class: Moderately well drained

Ecological site: Clay Upland (pe30-37)

Sm—Shelby clay loam, 3 to 8 percent slopes

Map Unit Composition

Shelby: 88 percent

Minor components: 12 percent

Component Descriptions

Shelby

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Hillslope on upland

Parent material: Fine-loamy drift

Slope: 3 to 8 percent

Drainage class: Well drained

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

Available water capacity: High (About 10.0 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: High

Ecological site: Loamy Upland (pe30-37)

Land capability (irrigated):

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 17 inches; clay loam

H2—17 to 44 inches; clay loam

H3—44 to 60 inches; clay loam

Minor Components

Morrill

Composition: About 3 percent

Slope: 3 to 8 percent

Drainage class: Well drained

Ecological site: Loamy Upland (pe30-37)

Elmont

Composition: About 3 percent

Slope: 3 to 7 percent

Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)

Drainage class: Well drained

Ecological site: Limy Upland (pe35-42)

Martin

Composition: About 3 percent

Slope: 3 to 7 percent

Drainage class: Moderately well drained

Ecological site: Loamy Upland (pe35-42)

Pawnee

Composition: About 3 percent
Slope: 3 to 7 percent
Drainage class: Moderately well drained
Ecological site: Clay Upland (pe30-37)

Sn—Shelby clay loam, 3 to 8 percent slopes, eroded

Map Unit Composition

Shelby: 100 percent
 Minor components:

Component Descriptions

Shelby

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Fine-loamy drift
Slope: 3 to 8 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 10.0 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Loamy Upland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 6 inches; clay loam
 H2—6 to 44 inches; clay loam
 H3—44 to 60 inches; clay loam

So—Shelby clay loam, 8 to 12 percent slopes

Map Unit Composition

Shelby: 85 percent
 Minor components: 15 percent

Component Descriptions

Shelby

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland

Parent material: Fine-loamy drift
Slope: 8 to 12 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 10.0 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Loamy Upland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 17 inches; clay loam
 H2—17 to 44 inches; clay loam
 H3—44 to 60 inches; clay loam

Minor Components**Morrill**

Composition: About 5 percent
Slope: 8 to 12 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-37)

Elmont

Composition: About 5 percent
Slope: 7 to 12 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Limy Upland (pe35-42)

Martin

Composition: About 5 percent
Slope: 7 to 11 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe35-42)

Sp—Morrill fine sandy loam, 3 to 8 percent slopes

Map Unit Composition

Morrill: 85 percent
 Minor components: 15 percent

Component Descriptions

Morrill

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Hillslope on upland

Parent material: Fine-loamy glaciofluvial deposits

Slope: 3 to 8 percent

Drainage class: Well drained

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

Available water capacity: High (About 9.7 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: High

Ecological site: Sandy (pe30-37)

Land capability (irrigated):

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 19 inches; fine sandy loam

H2—19 to 42 inches; sandy clay loam

H3—42 to 60 inches; fine sandy loam

Minor Components

Morrill

Composition: About 5 percent

Slope: 3 to 8 percent

Drainage class: Well drained

Ecological site: Loamy Upland (pe30-37)

Gymer

Composition: About 5 percent

Slope: 3 to 8 percent

Drainage class: Well drained

Ecological site: Loamy Upland (pe30-37)

Shelby

Composition: About 5 percent

Slope: 3 to 8 percent

Drainage class: Well drained

Ecological site: Loamy Upland (pe30-37)

Sr—Morrill fine sandy loam, 3 to 8 percent slopes, eroded

Map Unit Composition

Morrill: 85 percent

Minor components: 15 percent

Component Descriptions

Morrill

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Hillslope on upland

Parent material: Fine-loamy glaciofluvial deposits

Slope: 3 to 8 percent

Drainage class: Well drained

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

Available water capacity: High (About 9.8 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: High

Ecological site: Sandy (pe30-37)

Land capability (irrigated):

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 6 inches; fine sandy loam

H2—6 to 42 inches; sandy clay loam

H3—42 to 60 inches; fine sandy loam

Minor Components

Morrill

Composition: About 5 percent

Slope: 3 to 8 percent

Drainage class: Well drained

Ecological site: Loamy Upland (pe30-37)

Gymer

Composition: About 5 percent

Slope: 3 to 8 percent

Drainage class: Well drained

Ecological site: Loamy Upland (pe30-37)

Shelby

Composition: About 5 percent

Slope: 3 to 8 percent

Drainage class: Well drained

Ecological site: Loamy Upland (pe30-37)

Ss—Morrill fine sandy loam, 8 to 12 percent slopes

Map Unit Composition

Morrill: 85 percent

Minor components: 15 percent

Component Descriptions

Morrill

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills

Landform: Hillslope on upland

Parent material: Fine-loamy glaciofluvial deposits

Slope: 8 to 12 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 9.5 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Sandy (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 19 inches; fine sandy loam
 H2—19 to 42 inches; sandy clay loam
 H3—42 to 60 inches; fine sandy loam

Minor Components

Morrill

Composition: About 5 percent
Slope: 8 to 12 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-37)

Gymer

Composition: About 5 percent
Slope: 3 to 8 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-37)

Shelby

Composition: About 5 percent
Slope: 8 to 12 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe30-37)

St—Sibleyville loam, 3 to 7 percent slopes

Map Unit Composition

Sibleyville: 90 percent
 Minor components: 10 percent

Component Descriptions

Sibleyville

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills, 112 - Cherokee Prairies
Landform: Hillslope on upland
Parent material: Sandy and silty residuum weathered from sandstone and shale
Slope: 3 to 7 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: Moderate (About 7.2 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Loamy Upland (pe35-42)
Land capability (irrigated):
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 14 inches; loam
 H2—14 to 38 inches;
 Cr—38 to 42 inches;

Minor Components

Vinland

Composition: About 5 percent
Slope: 4 to 10 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Somewhat excessively drained
Ecological site: Limy Upland (pe35-42)

Elmont

Composition: About 5 percent
Slope: 3 to 7 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Limy Upland (pe35-42)

Su—Sibleyville loam, 7 to 11 percent slopes

Map Unit Composition

Sibleyville: 90 percent
 Minor components: 10 percent

Component Descriptions

Sibleyville

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills, 112 - Cherokee Prairies
Landform: Hillslope on upland
Parent material: Sandy and silty residuum weathered from sandstone and shale
Slope: 7 to 11 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: Moderate (About 7.2 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Loamy Upland (pe35-42)
Land capability (irrigated):
Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 14 inches; loam
 H2—14 to 38 inches; sandy clay loam
 Cr—38 to 42 inches; weathered bedrock

Minor Components

Vinland

Composition: About 5 percent
Slope: 4 to 10 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Somewhat excessively drained
Ecological site: Limy Upland (pe35-42)

Elmont

Composition: About 5 percent
Slope: 7 to 11 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Limy Upland (pe35-42)

Sv—Sogn-Vinland complex, 3 to 25 percent slopes

Map Unit Composition

Sogn: 55 percent
 Vinland: 25 percent
 Minor components: 20 percent

Component Descriptions

Sogn

MLRA: 106 - Nebraska and Kansas Loess-Drift 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 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 (irrigated):
Land capability (nonirrigated): 7s

Typical Profile:

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

Vinland

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Sandy and silty residuum weathered from shale
Slope: 3 to 25 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Somewhat excessively drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Low (About 3.1 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: Limy Upland (pe35-42)
Land capability (irrigated):
Land capability (nonirrigated): 6s

Typical Profile:

H1—0 to 6 inches; silty clay loam
 H2—6 to 15 inches; channery silty clay loam
 Cr—15 to 19 inches; weathered bedrock

Minor Components

Elmont

Composition: About 5 percent
Slope: 7 to 12 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Limy Upland (pe35-42)

Martin

Composition: About 5 percent
Slope: 7 to 11 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe35-42)

Rock outcrop

Composition: About 5 percent

Labette

Composition: About 5 percent
Slope: 3 to 6 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Limy Upland (pe35-42)

Sw—Vinland-Rock outcrop complex, 15 to 45 percent slopes

Map Unit Composition

Stony Steep Land: 60 percent
 Vinland: 26 percent
 Minor components: 14 percent

Component Descriptions

Stony Steep Land

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Slope: 15 to 45 percent
Drainage class: Excessively drained
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Land capability (irrigated):
Land capability (nonirrigated): 8

Vinland

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Sandy and silty residuum weathered from shale
Slope: 15 to 30 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Somewhat excessively drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Low (About 3.7 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: Loamy Upland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 11 inches; silty clay loam
 H2—11 to 17 inches;
 Cr—17 to 20 inches;

Minor Components**Sogn**

Composition: About 10 percent
Slope: 15 to 20 percent
Depth to restrictive feature: 4 to 20 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Ecological site: Shallow Limy (pe30-37)

Martin

Composition: About 2 percent
Slope: 7 to 11 percent
Drainage class: Moderately well drained
Ecological site: Loamy Upland (pe35-42)

Labette

Composition: About 2 percent
Slope: 3 to 6 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Ecological site: Limy Upland (pe35-42)

Vn—Vinland silty clay loam, 4 to 10 percent slopes

Map Unit Composition

Vinland: 100 percent
 Minor components:

Component Descriptions

Vinland

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland
Parent material: Sandy and silty residuum weathered from shale
Slope: 4 to 10 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Somewhat excessively drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Low (About 3.1 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: Limy Upland (pe35-42)
Land capability (irrigated):
Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 6 inches; silty clay loam
 H2—6 to 15 inches; channery silty clay loam
 Cr—15 to 19 inches; weathered bedrock

W—Water

Wa—Wabash silty clay, occasionally flooded

Map Unit Composition

Wabash: 90 percent
 Minor components: 10 percent

Component Descriptions

Wabash

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Terrace on river valley
Parent material: Clayey alluvium
Slope: 0 to 1 percent
Drainage class: Poorly drained
Slowest permeability: Very slow (About 0.00 in/hr)
Available water capacity: Moderate (About 6.4 inches)
Shrink-swell potential: Very high (About 17.0 LEP)
Flooding hazard: Occasional
Depth to seasonal water saturation: About 2 to 9 inches
Runoff class: Very high
Ecological site: Clay Lowland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 3w

Typical Profile:

H1—0 to 16 inches; silty clay
 H2—16 to 70 inches; silty clay

Minor Components

Reading

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

Wabash

Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Poorly drained
Ecological site: Clay Lowland (pe30-37)

Wb—Wabash silty clay loam, occasionally flooded

Map Unit Composition

Wabash: 88 percent
 Minor components: 12 percent

Component Descriptions

Wabash

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Terrace 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 8.0 inches)
Shrink-swell potential: Very high (About 17.0 LEP)
Flooding hazard: Occasional
Depth to seasonal water saturation: About 2 to 9 inches
Runoff class: Very high
Ecological site: Clay Lowland (pe30-37)
Land capability (irrigated):
Land capability (nonirrigated): 3w

Typical Profile:

H1—0 to 16 inches; silty clay loam
 H2—16 to 70 inches; silty clay

Minor Components

Kennebec

Composition: About 3 percent
Slope: 0 to 2 percent
Drainage class: Moderately well drained
Ecological site: Loamy Lowland (pe30-37)

Reading

Composition: About 3 percent
Slope: 0 to 2 percent
Drainage class: Well drained
Ecological site: Loamy Lowland (pe35-42)

Wabash

Composition: About 3 percent
Slope: 0 to 1 percent
Drainage class: Poorly drained
Ecological site: Clay Lowland (pe30-37)

Leanna

Composition: About 3 percent
Geomorphic Position: flood plain on valley
Slope: 0 to 2 percent
Drainage class: Somewhat poorly drained
Ecological site: Clay Lowland (pe35-42)

We—Welda silt loam, 4 to 10 percent slopes**Map Unit Composition**

Welda: 95 percent
 Minor components: 5 percent

Component Descriptions**Welda**

MLRA: 106 - Nebraska and Kansas Loess-Drift Hills
Landform: Hillslope on upland

Parent material: Silty and clayey sediments

Slope: 4 to 10 percent

Drainage class: Well drained

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

Available water capacity: High (About 10.7 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: High

Ecological site: Savannah (pe30-37)

Land capability (irrigated):

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 12 inches; silt loam

H2—12 to 60 inches; silty clay

H3—60 to 72 inches; silty clay loam

Minor Components**Gymer**

Composition: About 5 percent

Slope: 3 to 8 percent

Drainage class: Well drained

Ecological site: Loamy Upland (pe30-37)