

007AE—Albion And Shellabarger Soils, 4 to 15 percent slopes

Minor Components
Unnamed Wet Soils
Phase: Sandy, Drainageway

Map Unit Composition

Albion: 55 percent
 Shellabarger: 45 percent

Component Descriptions

Albion

MLRA: 79 - Great Bend Sand Plains
Landform: Paleoterrace on river valley
Parent material: Loamy alluvium
Slope: 4 to 15 percent
Drainage class: Well drained
Slowest permeability: Moderately rapid (About 2.00 in/hr)
Available water capacity: Low (About 5.9 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Sandy (pe20-25)
Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 8 inches; sandy loam
 H2—8 to 16 inches; sandy loam
 H3—16 to 27 inches; loamy sand
 H4—27 to 60 inches; sand

Shellabarger

MLRA: 79 - Great Bend Sand Plains
Landform: Paleoterrace on river valley
Parent material: Loamy alluvium
Slope: 4 to 15 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 9.4 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Sandy (pe20-25)
Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 14 inches; sandy loam
 H2—14 to 48 inches; sandy clay loam
 H3—48 to 60 inches; coarse sandy loam

007FA—Farnum fine sandy loam, 0 to 1 percent slopes

Map Unit Composition

Farnum: 100 percent

Component Descriptions

Farnum

MLRA: 79 - Great Bend Sand Plains
Landform: Paleoterrace on river valley
Parent material: Alluvium
Slope: 0 to 1 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 9.9 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very low
Ecological site: Sandy (pe24-32)
Land capability (irrigated): 1
Land capability (nonirrigated): 2e

Typical Profile:

H1—0 to 9 inches; fine sandy loam
 H2—9 to 60 inches; clay loam

Minor Components
Unnamed Wet Soils
Phase: Loamy, Depression

077KA—Kanza loamy fine sand, frequently flooded

Map Unit Composition

Kanza: 100 percent

Component Descriptions

Kanza

MLRA: 79 - Great Bend Sand Plains

Landform: Flood plain on river valley

Parent material: Alluvium

Slope: 0 to 1 percent

Drainage class: Poorly drained

Slowest permeability: Rapid (About 5.95 in/hr)

Available water capacity: Low (About 5.5 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: Frequent

Depth to seasonal water saturation: About 0 to 36 inches

Runoff class: Negligible

Ecological site: Subirrigated (pe24-32)

Land capability (nonirrigated): 5w

Typical Profile:

H1—0 to 8 inches; loamy fine sand

H2—8 to 60 inches; loamy fine sand

Minor Components

Unnamed Wet Soils

Phase: Sandy, Drainageway

Typical Profile:

H1—0 to 12 inches; clay loam

H2—12 to 34 inches; silty clay

H3—34 to 60 inches; clay

Renfrow

MLRA: 80A - Central Rolling Red Prairies

Landform: Hillslope on upland

Parent material: Residuum

Slope: 1 to 3 percent

Drainage class: Well drained

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

Available water capacity: Moderate (About 8.9 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Low

Ecological site: Clay Upland (pe24-32)

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 9 inches; clay loam

H2—9 to 13 inches; clay loam

H3—13 to 60 inches; clay

077KR—Kirkland-Renfrow clay loams, 1 to 3 percent slopes

Map Unit Composition

Kirkland: 70 percent

Renfrow: 30 percent

Component Descriptions

Kirkland

MLRA: 80A - Central Rolling Red Prairies

Landform: Hillslope on upland

Parent material: Residuum

Slope: 1 to 3 percent

Drainage class: Well drained

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

Available water capacity: Moderate (About 8.4 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Low

Ecological site: Clay Upland (pe24-32)

Land capability (nonirrigated): 3e

077NN—Nashville silt loam, 3 to 6 percent slopes, eroded

Map Unit Composition

Nashville: 100 percent

Component Descriptions

Nashville

MLRA: 80A - Central Rolling Red Prairies

Landform: Hillslope on upland

Parent material: Residuum

Slope: 3 to 6 percent

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

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Moderate (About 6.6 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 (pe24-32)

Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 7 inches; silt loam
H2—7 to 30 inches; silt loam
Cr—30 to 30 inches; weathered bedrock

077PC—Pond Creek silt loam, 0 to 1 percent slopes

Map Unit Composition

Pond Creek: 100 percent

Component Descriptions

Pond Creek

MLRA: 80A - Central Rolling Red Prairies
Landform: Terrace
Parent material: Alluvium
Slope: 0 to 1 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 11.1 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Negligible
Ecological site: Loamy Upland (pe24-32)
Land capability (nonirrigated): 1

Typical Profile:

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

077RC—Renfrow-Vernon clay loams, 1 to 3 percent slopes

Map Unit Composition

Renfrow: 65 percent
Vernon: 35 percent

Component Descriptions

Renfrow

MLRA: 80A - Central Rolling Red Prairies
Landform: Hillslope on upland

Parent material: Residuum

Slope: 1 to 3 percent

Drainage class: Well drained

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

Available water capacity: Moderate (About 8.9 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Low

Ecological site: Clay Upland (pe24-32)

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 9 inches; clay loam
H2—9 to 13 inches; clay loam
H3—13 to 60 inches; clay

Vernon

MLRA: 80A - Central Rolling Red Prairies
Landform: Hillslope on upland
Parent material: Residuum
Slope: 1 to 3 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: Very slow (About 0.00 in/hr)
Available water capacity: Low (About 3.4 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Red Clay Prairie (pe24-32)
Land capability (irrigated): 4e
Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 7 inches; clay loam
H2—7 to 24 inches; silty clay
H3—24 to 28 inches;
H4—28 to 80 inches; weathered bedrock

077SB—Shellabarger fine sandy loam, 0 to 1 percent slopes

Map Unit Composition

Shellabarger: 100 percent

Component Descriptions

Shellabarger

MLRA: 79 - Great Bend Sand Plains

Landform: Paleoterrace on river valley

Parent material: Loamy alluvium

Slope: 0 to 1 percent

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Moderate (About 8.8 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Negligible

Ecological site: Sandy (pe24-32)

Land capability (nonirrigated): 2e

Typical Profile:

H1—0 to 13 inches; fine sandy loam

H2—13 to 38 inches; sandy clay loam

H3—38 to 60 inches; coarse sandy loam

077SE—Shellabarger fine sandy loam, 1 to 3 percent slopes

Map Unit Composition

Shellabarger: 100 percent

Component Descriptions

Shellabarger

MLRA: 79 - Great Bend Sand Plains

Landform: Paleoterrace on river valley

Parent material: Loamy alluvium

Slope: 1 to 3 percent

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Moderate (About 8.8 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Very low

Ecological site: Sandy (pe24-32)

Land capability (nonirrigated): 2e

Typical Profile:

H1—0 to 13 inches; fine sandy loam

H2—13 to 38 inches; fine sandy loam

H3—38 to 60 inches; coarse sandy loam

077SF—Shellabarger fine sandy loam, 3 to 6 percent slopes

Map Unit Composition

Shellabarger: 100 percent

Component Descriptions

Shellabarger

MLRA: 79 - Great Bend Sand Plains

Landform: Paleoterrace on river valley

Parent material: Loamy alluvium

Slope: 3 to 6 percent

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Moderate (About 8.8 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Low

Ecological site: Sandy (pe24-32)

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 13 inches; fine sandy loam

H2—13 to 38 inches; sandy clay loam

H3—38 to 60 inches; coarse sandy loam

Minor Components

Unnamed Wet Soils

Phase: Loamy, Drainageway

077SG—Shellabarger fine sandy loam, 3 to 6 percent slopes, eroded

Map Unit Composition

Shellabarger: 100 percent

Component Descriptions

Shellabarger*MLRA:* 79 - Great Bend Sand Plains*Landform:* Paleoterrace on river valley*Parent material:* Loamy alluvium*Slope:* 3 to 6 percent*Drainage class:* Well drained*Slowest permeability:* Moderate (About 0.60 in/hr)*Available water capacity:* Moderate (About 8.8 inches)*Shrink-swell potential:* Low (About 1.5 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* More than 6 feet*Runoff class:* Low*Ecological site:* Sandy (pe24-32)*Land capability (nonirrigated):* 3e*Typical Profile:*

H1—0 to 13 inches; fine sandy loam

H2—13 to 38 inches; sandy clay loam

H3—38 to 60 inches; coarse sandy loam

Minor Components**Unnamed Wet Soils***Phase:* Loamy, Drainageway**077SH—Stoneburg fine sandy loam, 1 to 3 percent slopes****Map Unit Composition**

Shellabarger: 100 percent

Component Descriptions**Shellabarger***MLRA:* 79 - Great Bend Sand Plains*Landform:* Paleoterrace on river valley*Parent material:* Loamy alluvium*Slope:* 1 to 3 percent*Depth to restrictive feature:* 20 to 40 inches to bedrock (paralithic)*Drainage class:* Well drained*Slowest permeability:* Moderately slow (About 0.20 in/hr)*Available water capacity:* Low (About 5.8 inches)*Shrink-swell potential:* Moderate (About 4.5 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* More than 6 feet*Runoff class:* Very low*Ecological site:* Sandy (pe24-32)*Land capability (nonirrigated):* 3e*Typical Profile:*

H1—0 to 13 inches; fine sandy loam

H2—13 to 35 inches; sandy clay loam

H3—35 to 39 inches; sandy clay loam

Cr—39 to 39 inches;

151AO—Albion sandy loam, 3 to 7 percent slopes, eroded**Map Unit Composition**

Albion: 100 percent

Component Descriptions**Albion***MLRA:* 79 - Great Bend Sand Plains*Landform:* Paleoterrace on river valley*Parent material:* Loamy alluvium*Slope:* 3 to 7 percent*Drainage class:* Well drained*Slowest permeability:* Moderately rapid (About 2.00 in/hr)*Available water capacity:* Moderate (About 6.0 inches)*Shrink-swell potential:* Low (About 1.5 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* More than 6 feet*Runoff class:* Low*Ecological site:* Sandy (pe24-32)*Land capability (nonirrigated):* 4e*Typical Profile:*

H1—0 to 8 inches; sandy loam

H2—8 to 18 inches; sandy loam

H3—18 to 29 inches; coarse sandy loam

H4—29 to 60 inches; gravelly sand

151CN—Clark fine sandy loam, 1 to 3 percent slopes**Map Unit Composition**

Clark: 100 percent

Component Descriptions

Clark*MLRA:* 79 - Great Bend Sand Plains*Landform:* Paleoterrace on river valley*Parent material:* Loamy alluvium*Slope:* 1 to 3 percent*Drainage class:* Well drained*Slowest permeability:* Moderate (About 0.60 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:* Low*Ecological site:* Limy Upland (pe24-32)*Land capability (nonirrigated):* 3e*Typical Profile:*

H1—0 to 8 inches; fine sandy loam

H2—8 to 60 inches; clay loam

H1—0 to 8 inches; clay loam

H2—8 to 60 inches; clay loam

Ost*MLRA:* 79 - Great Bend Sand Plains*Landform:* Paleoterrace on river valley*Parent material:* Loamy alluvium*Slope:* 0 to 1 percent*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:* Low*Ecological site:* Loamy Upland (pe24-32)*Land capability (nonirrigated):* 2c*Typical Profile:*

H1—0 to 9 inches; clay loam

H2—9 to 14 inches; clay loam

H3—14 to 23 inches; clay loam

H4—23 to 60 inches; clay loam

151CO—Clark-Ost clay loams, 0 to 1 percent slopes**Map Unit Composition**

Clark: 70 percent

Ost: 30 percent

Component Descriptions**Clark***MLRA:* 79 - Great Bend Sand Plains*Landform:* Paleoterrace on river valley*Parent material:* Loamy alluvium*Slope:* 0 to 1 percent*Drainage class:* Well drained*Slowest permeability:* Moderate (About 0.60 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:* Low*Ecological site:* Limy Upland (pe24-32)*Land capability (nonirrigated):* 2c*Typical Profile:***151KP—Kanza-Plevna complex, frequently flooded****Map Unit Composition**

Kanza: 50 percent

Plevna: 50 percent

Component Descriptions**Kanza***MLRA:* 79 - Great Bend Sand Plains*Landform:* Flood plain on river valley*Parent material:* Alluvium*Slope:* 0 to 2 percent*Drainage class:* Poorly drained*Slowest permeability:* Rapid (About 5.95 in/hr)*Available water capacity:* Low (About 3.8 inches)*Shrink-swell potential:* Low (About 1.5 LEP)*Flooding hazard:* Frequent*Depth to seasonal water saturation:* About 0 to 36 inches*Runoff class:* Negligible*Land capability (nonirrigated):* 5w*Typical Profile:*

H1—0 to 11 inches; loamy fine sand
H2—11 to 40 inches; fine sand

Plevna

MLRA: 79 - Great Bend Sand Plains

Landform: Flood plain on river valley

Parent material: Alluvium

Slope: 0 to 1 percent

Drainage class: Poorly drained

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

Available water capacity: Moderate (About 6.9 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: Frequent

Depth to seasonal water saturation: About 0 to 24 inches

Runoff class: Negligible

Ecological site: Subirrigated (pe21-28)

Land capability (nonirrigated): 5w

Typical Profile:

H1—0 to 10 inches; fine sandy loam
H2—10 to 40 inches; fine sandy loam
H3—40 to 60 inches; fine sand

151ND—Naron fine sandy loam, 0 to 1 percent slopes**Map Unit Composition**

Naron: 100 percent

Component Descriptions**Naron**

MLRA: 79 - Great Bend Sand Plains

Landform: Dune on paleoterrace on river valley

Parent material: Loamy eolian deposits

Slope: 0 to 1 percent

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: High (About 9.1 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Negligible

Ecological site: Sandy (pe21-28)

Land capability (irrigated): 1

Land capability (nonirrigated): 2e

Typical Profile:

H1—0 to 8 inches; fine sandy loam
H2—8 to 38 inches; fine sandy loam
H3—38 to 60 inches; fine sandy loam

151NF—Naron fine sandy loam, 1 to 3 percent slopes**Map Unit Composition**

Naron: 100 percent

Component Descriptions**Naron**

MLRA: 79 - Great Bend Sand Plains

Landform: Dune on paleoterrace on river valley

Parent material: Loamy eolian deposits

Slope: 1 to 3 percent

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: High (About 9.1 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Very low

Ecological site: Sandy (pe21-28)

Land capability (irrigated): 2e

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 8 inches; fine sandy loam
H2—8 to 38 inches; fine sandy loam
H3—38 to 60 inches; fine sandy loam

Minor Components**Carwile****Unnamed Wet Soils**

Phase: Loamy, Depression

151OC—Ost clay loam, 0 to 1 percent slopes**Map Unit Composition**

Ost: 100 percent

Component Descriptions

Ost

MLRA: 79 - Great Bend Sand Plains

Landform: Paleoterrace on river valley

Parent material: Loamy alluvium

Slope: 0 to 1 percent

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: Low

Ecological site: Loamy Lowland (pe21-28)

Land capability (nonirrigated): 2c

Typical Profile:

H1—0 to 9 inches; clay loam

H2—9 to 14 inches; clay loam

H3—14 to 23 inches; clay loam

H4—23 to 60 inches; clay loam

151OS—Ost clay loam, 1 to 4 percent slopes

Map Unit Composition

Ost: 100 percent

Component Descriptions

Ost

MLRA: 79 - Great Bend Sand Plains

Landform: Paleoterrace on river valley

Parent material: Loamy alluvium

Slope: 1 to 4 percent

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 (pe21-28)

Land capability (nonirrigated): 2e

Typical Profile:

H1—0 to 9 inches; clay loam

H2—9 to 14 inches; clay loam

H3—14 to 23 inches; clay loam

H4—23 to 60 inches; clay loam

Minor Components

Unnamed Wet Soils

Phase: Loamy, Depression

Unnamed Wet Soils

Phase: Loamy, Drainageway

151PN—Pratt loamy fine sand, 5 to 10 percent slopes

Map Unit Composition

Pratt: 100 percent

Component Descriptions

Pratt

MLRA: 79 - Great Bend Sand Plains

Landform: Dune on paleoterrace on river valley

Parent material: Sandy eolian deposits

Slope: 8 to 12 percent

Drainage class: Well drained

Slowest permeability: Rapid (About 5.95 in/hr)

Available water capacity: Moderate (About 6.4 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Low

Ecological site: Sands (pe21-28)

Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 10 inches; loamy fine sand

H2—10 to 40 inches; loamy fine sand

H3—40 to 60 inches; loamy fine sand

151SE—Shellabarger fine sandy loam, 1 to 4 percent slopes

Map Unit Composition

Shellabarger: 100 percent

Component Descriptions

Shellabarger

MLRA: 79 - Great Bend Sand Plains

Landform: Paleoterrace on river valley

Parent material: Loamy alluvium

Slope: 1 to 4 percent

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Moderate (About 8.5 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Very low

Ecological site: Sandy (pe21-28)

Land capability (nonirrigated): 2e

Typical Profile:

H1—0 to 11 inches; fine sandy loam

H2—11 to 34 inches; sandy clay loam

H3—34 to 60 inches; coarse sandy loam

Minor Components

Unnamed Wet Soils

Phase: Sandy, Drainageway

151ZS—Zenda-Drummond complex, occasionally flooded

Map Unit Composition

Zenda: 50 percent

Drummond: 50 percent

Component Descriptions

Zenda

MLRA: 79 - Great Bend Sand Plains

Landform: Dune on paleoterrace on river valley

Parent material: Sandy eolian deposits

Slope: 0 to 2 percent

Drainage class: Somewhat poorly drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: High (About 10.5 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)

Flooding hazard: Occasional

Depth to seasonal water saturation: About 24 to 48 inches

Runoff class: Very low

Ecological site: Subirrigated (pe21-28)

Land capability (nonirrigated): 4s

Typical Profile:

H1—0 to 14 inches; clay loam

H2—14 to 60 inches; clay loam

Drummond

MLRA: 79 - Great Bend Sand Plains

Landform: Terrace on river valley

Parent material: Clayey and/or loamy alluvium

Slope: 0 to 2 percent

Drainage class: Somewhat poorly drained

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

Available water capacity: Very low (About 2.8 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: About 24 to 48 inches

Runoff class: Very low

Ecological site: Saline Lowland (pe21-28)

Land capability (nonirrigated): 6s

Typical Profile:

H1—0 to 8 inches; clay loam

H2—8 to 30 inches; clay

H3—30 to 60 inches; variable

Minor Components

Unnamed Wet Soils

Phase: Clayey, Depression

173MA—Milan loam, 1 to 3 percent slopes

Map Unit Composition

Milan: 100 percent

Component Descriptions

Milan

MLRA: 80A - Central Rolling Red Prairies

Landform: Paleoterrace on river valley

Parent material: Alluvium

Slope: 1 to 3 percent

Drainage class: Well drained

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

Available water capacity: High (About 11.0 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Loamy Upland (pe24-32)
Land capability (irrigated): 2e
Land capability (nonirrigated): 2e

Typical Profile:

H1—0 to 11 inches; loam
H2—11 to 60 inches; clay loam

173PB—Plevna fine sandy loam, frequently flooded

Map Unit Composition

Plevna: 100 percent

Component Descriptions

Plevna

MLRA: 79 - Great Bend Sand Plains
Landform: Flood plain on river valley
Parent material: Alluvium
Slope: 0 to 1 percent
Drainage class: Poorly drained
Slowest permeability: Moderately rapid (About 2.00 in/hr)
Available water capacity: Moderate (About 6.4 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Frequent
Depth to seasonal water saturation: About 0 to 24 inches
Runoff class: Negligible
Ecological site: Subirrigated (pe24-32)
Land capability (nonirrigated): 5w

Typical Profile:

H1—0 to 9 inches; fine sandy loam
H2—9 to 35 inches; sandy loam
H3—35 to 60 inches; fine sand

Minor Components

Unnamed Wet Soils

Phase: Sandy, Drainageway

Unnamed Wet Soils

Phase: Sandy, Depression

173RA—Renfrow silty clay loam, 1 to 3 percent slopes

Map Unit Composition

Renfrow: 100 percent

Component Descriptions

Renfrow

MLRA: 80A - Central Rolling Red Prairies
Landform: Hillslope on upland
Parent material: Residuum
Slope: 1 to 3 percent
Drainage class: Well drained
Slowest permeability: Very slow (About 0.00 in/hr)
Available water capacity: Moderate (About 8.9 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Red Clay Prairie (pe24-32)
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 9 inches; silty clay loam
H2—9 to 13 inches; silty clay loam
H3—13 to 60 inches; silty clay

173RC—Renfrow-Wellsford clay loams, 1 to 4 percent slopes

Map Unit Composition

Renfrow: 65 percent
Wellsford: 35 percent

Component Descriptions

Renfrow

MLRA: 80A - Central Rolling Red Prairies
Landform: Hillslope on upland
Parent material: Residuum
Slope: 1 to 4 percent
Drainage class: Well drained

Slowest permeability: Very slow (About 0.00 in/hr)
Available water capacity: Moderate (About 8.9 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Red Clay Prairie (pe24-32)
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 9 inches; clay loam
 H2—9 to 13 inches; silty clay loam
 H3—13 to 60 inches; silty clay

Wellsford

MLRA: 80A - Central Rolling Red Prairies
Landform: Pediment on upland
Parent material: Residuum
Slope: 1 to 4 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: Very slow (About 0.00 in/hr)
Available water capacity: Very low (About 1.8 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Red Clay Prairie (pe24-32)
Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 7 inches; clay loam
 H2—7 to 15 inches; silty clay
 H3—15 to 20 inches; weathered bedrock

173TA—Tabler silty clay loam, 0 to 1 percent slopes

Map Unit Composition

Tabler: 100 percent

Component Descriptions

Tabler

MLRA: 80A - Central Rolling Red Prairies
Landform: Paleoterrace on river valley

Parent material: Clayey alluvium
Slope: 0 to 1 percent
Drainage class: Moderately well drained
Slowest permeability: Very slow (About 0.00 in/hr)
Available water capacity: High (About 9.8 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very low
Ecological site: Clay Upland (pe25-34)
Land capability (nonirrigated): 2s

Typical Profile:

H1—0 to 9 inches; silty clay loam
 H2—9 to 32 inches; silty clay
 H3—32 to 60 inches; silty clay

Minor Components

Unnamed Wet Soils

Phase: Clayey, Drainageway

Unnamed Wet Soils

Phase: Clayey, Depression

191RA—Renfrow-Grainola complex, 1 to 3 percent slopes

Map Unit Composition

Renfrow: 70 percent

Grainola: 30 percent

Component Descriptions

Renfrow

MLRA: 80A - Central Rolling Red Prairies
Landform: Hillslope on upland
Parent material: Residuum
Slope: 1 to 3 percent
Drainage class: Well drained
Slowest permeability: Very slow (About 0.00 in/hr)
Available water capacity: Moderate (About 8.9 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Clay Upland (pe24-32)
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 9 inches; clay loam
 H2—9 to 13 inches; silty clay loam
 H3—13 to 75 inches; silty clay loam

Grainola

MLRA: 80A - Central Rolling Red Prairies

Landform: Hillslope on upland

Parent material: Residuum

Slope: 1 to 3 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 5.5 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Low

Ecological site: Clay Upland (pe24-32)

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 8 inches; silt loam
 H2—8 to 28 inches; silty clay
 H3—28 to 36 inches; clay
 H4—36 to 42 inches; weathered bedrock

990—Abbyville loam, 0 to 1 percent slope

Map Unit Composition

Abbyville: 95 percent

Minor components: 5 percent

Component Descriptions

Abbyville

MLRA: 79 - Great Bend Sand Plains

Landform: Terrace on river valley

Parent material: Loamy alluvium

Slope: 0 to 1 percent

Drainage class: Somewhat poorly drained

Slowest permeability: Slow (About 0.06 in/hr)

Available water capacity: Moderate (About 7.2 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: About 24 to 48 inches

Runoff class: Very low

Ecological site: Saline Subirrigated (pe21-28)

Land capability (irrigated): 3s

Land capability (nonirrigated): 3s

Typical Profile:

A—0 to 8 inches; loam
 Btknz1—8 to 15 inches; sandy clay loam
 Btknz2—15 to 24 inches; clay loam
 Btknz3—24 to 35 inches; clay loam
 Btknz4—35 to 49 inches; clay loam
 Btkn1—49 to 61 inches; sandy clay loam
 Btkn2—61 to 69 inches; loam
 Btkn3—69 to 80 inches; clay loam

Minor Components**Kisiwa**

Composition: About 5 percent

Slope: 0 to 1 percent

Drainage class: Poorly drained

Ecological site: Saline Subirrigated (pe21-28)

General Considerations: This map unit is poorly suited to the commonly grown crops due to the sodic conditions and wetness. Most areas are used for pasture or range. For areas that are cropped, the hazard of wind or water erosion is slight. Maintaining soil tilth and soil crusting are problems, but they can be improved by adding organic matter. The high sodium content, pH, soluble salts, and water table limit the engineering uses of these soils.

991—Abbyville-Kisiwa complex, 0 to 2 percent slopes, flooded

Map Unit Composition

Abbyville: 45 percent

Kisiwa: 40 percent

Minor components: 15 percent

Component Descriptions

Abbyville

MLRA: 79 - Great Bend Sand Plains

Landform: Terrace on river valley

Parent material: Loamy alluvium

Slope: 0 to 2 percent

Drainage class: Somewhat poorly drained

Slowest permeability: Slow (About 0.06 in/hr)

Available water capacity: Moderate (About 7.1 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)

Flooding hazard: Rare

Depth to seasonal water saturation: About 24 to 48 inches

Runoff class: Very low

Ecological site: Saline Subirrigated (pe21-28)

Land capability (irrigated): 3s

Land capability (nonirrigated): 3s

Typical Profile:

A—0 to 8 inches; fine sandy loam
Btknz1—8 to 15 inches; sandy clay loam
Btknz2—15 to 24 inches; clay loam
Btknz3—24 to 35 inches; clay loam
Btknz4—35 to 49 inches; clay loam
Btkn1—49 to 61 inches; sandy clay loam
Btkn2—61 to 69 inches; loam
Btkn3—69 to 80 inches; clay loam

Kisiwa

MLRA: 79 - Great Bend Sand Plains

Landform: Flood plain on river valley, terrace on river valley

Parent material: Loamy alluvium over clayey alluvium

Slope: 0 to 2 percent

Drainage class: Poorly drained

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

Available water capacity: Moderate (About 8.7 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)

Flooding hazard: Occasional

Ponding hazard: Occasional

Depth to seasonal water saturation: About 0 to 0 inches

Runoff class: Very low

Ecological site: Saline Subirrigated (pe21-28)

Land capability (nonirrigated): 4s

Typical Profile:

Ap1—0 to 4 inches; loam
Ap2—4 to 7 inches; loam
Btkn—7 to 14 inches; clay loam
Btknssg1—14 to 23 inches; clay loam
Btknssg2—23 to 31 inches; clay
Btknssg3—31 to 40 inches; clay
Btknssg4—40 to 46 inches; loam
Btkg—46 to 52 inches; fine sandy loam
BCg—52 to 58 inches; fine sandy loam
Cg—58 to 65 inches; stratified coarse sand to fine sandy loam
2C—65 to 80 inches; stratified coarse sand

Minor Components

Saxman

Composition: About 10 percent

Slope: 0 to 2 percent

Drainage class: Moderately well drained

Ecological site: Sandy Lowland (pe21-28)

Darlow

Composition: About 5 percent

Slope: 0 to 2 percent

Drainage class: Somewhat poorly drained

Ecological site: Clay Pan (pe21-28)

General Considerations: This map unit is poorly suited to the commonly grown crops due to the sodic conditions, wetness, and potential flooding. Most areas are used for pasture or range. For areas that are cropped, The hazard of wind erosion is severe on the Abbyville and Saxman soils. Maintaining soil tilth and soil crusting are problems, but they can be improved by adding organic matter. Ephemeral gully erosion potential is high on the Abbyville and Kisiwa soils. The high sodium content, pH, soluble salts, water tables, and flooding limit the engineering of these soils.

1004—Albion sandy loam, 0 to 1 percent slopes

Map Unit Composition

Albion: 90 percent

Minor components: 10 percent

Component Descriptions

Albion

MLRA: 79 - Great Bend Sand Plains

Landform: Paleoterrace on river valley

Parent material: Loamy alluvium

Slope: 0 to 1 percent

Drainage class: Well drained

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

Available water capacity: Moderate (About 7.3 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Very low

Ecological site: Sandy (pe21-28)

Land capability (nonirrigated): 3e

Typical Profile:

Ap—0 to 9 inches; sandy loam
Bt1—9 to 16 inches; sandy loam
Bt2—16 to 27 inches; sandy loam
BC—27 to 48 inches; loamy coarse sand
C—48 to 80 inches; sand

Minor Components**Shellabarger***Composition:* About 10 percent*Slope:* 0 to 1 percent*Drainage class:* Well drained*Ecological site:* Sandy (pe21-28)

General Considerations: Most areas are used as cropland, but some areas are in pasture or range. This map unit is moderately well suited to all of the commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn are the main crops. The hazard of wind erosion is severe and the hazard of water erosion is slight. Wind erosion can be controlled maintaining plant residue through the use of a conservation tillage system. The moderate water holding capacity can hurt production. This problem can be minimized by increasing organic matter, leaving plant residue, and conservation tillage. In some places, soil test results may show soil reaction (pH) in the strongly acid range. Additions of lime may be required for optimum nutrient balance. The moderately rapid permeability and relatively shallow depths to sandy textures can limit some of the engineering uses of this soil.

1005—Albion sandy loam, 1 to 3 percent slopes**Map Unit Composition**

Albion: 75 percent

Minor components: 25 percent

Component Descriptions**Albion***MLRA:* 79 - Great Bend Sand Plains*Landform:* Paleoterrace on river valley*Parent material:* Loamy alluvium*Slope:* 1 to 3 percent*Drainage class:* Well drained*Slowest permeability:* Moderately rapid (About 2.00 in/hr)*Available water capacity:* Moderate (About 7.3 inches)*Shrink-swell potential:* Low (About 1.5 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* More than 6 feet*Runoff class:* Low*Ecological site:* Sandy (pe21-28)*Land capability (nonirrigated):* 3e*Typical Profile:*

Ap—0 to 9 inches; sandy loam

Bt1—9 to 16 inches; sandy loam

Bt2—16 to 27 inches; sandy loam

BC—27 to 48 inches; loamy coarse sand

C—48 to 80 inches; sand

Minor Components**Shellabarger***Composition:* About 25 percent*Slope:* 1 to 3 percent*Drainage class:* Well drained*Ecological site:* Sandy (pe21-28)**Unnamed Wet Soils**

General Considerations: Most areas are used as cropland, but some areas are in pasture or range. This map unit is moderately well suited to all of the commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn are the main crops. The hazard of wind erosion is severe and the hazard of water erosion is moderate for these soils. Ephemeral gully erosion potential is moderate for these soils. Wind and water erosion can be controlled maintaining plant residue through the use of a conservation tillage system, strip cropping, field windbreaks, contour farming, tall grass barriers, terraces and grassed waterways. The moderate water holding capacity of these soils can limit production. This problem can be minimized by increasing organic matter, leaving plant residue, and conservation tillage. In some places, soil test results may show soil reaction (pH) in the strongly acid range. Additions of lime may be required for optimum nutrient balance. The moderately rapid permeability and relatively shallow depths to sandy textures can limit some of the engineering uses of these soils.

1006—Albion sandy loam, 3 to 7 percent slopes, eroded**Map Unit Composition**

Albion: 100 percent

Component Descriptions

Albion*MLRA:* 79 - Great Bend Sand Plains*Landform:* Paleoterrace on river valley*Parent material:* Loamy alluvium*Slope:* 3 to 7 percent*Drainage class:* Well drained*Slowest permeability:* Moderately rapid (About 2.00 in/hr)*Available water capacity:* Moderate (About 7.3 inches)*Shrink-swell potential:* Low (About 1.5 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* More than 6 feet*Runoff class:* Low*Ecological site:* Sandy (pe21-28)*Land capability (nonirrigated):* 3e*Typical Profile:*

Ap—0 to 9 inches; sandy loam
 Bt1—9 to 16 inches; sandy loam
 Bt2—16 to 27 inches; sandy loam
 BC—27 to 48 inches; loamy coarse sand
 C—48 to 80 inches; sand

General Considerations: Most areas are used as cropland, but some areas are in pasture or range. This map unit is moderately well suited to all of the commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn are the main crops. The hazard of wind erosion is severe and the hazard of water erosion is moderate for these soils. Ephemeral gully erosion potential is moderate for these soils. Wind and water erosion can be controlled maintaining plant residue through the use of a conservation tillage system, strip cropping, field windbreaks, contour farming, tall grass barriers, terraces and grassed waterways. The moderate water holding capacity of these soils can limit production. This problem can be minimized by increasing organic matter, leaving plant residue, and conservation tillage. In some places, soil test results may show soil reaction (pH) in the strongly acid range. Additions of lime may be required for optimum nutrient balance. The moderately rapid permeability and relatively shallow depths to sandy textures can limit some of the engineering uses of these soils.

1011—Albion-Shellabarger sandy loams, 1 to 3 percent slopes

Map Unit Composition

Albion: 70 percent

Shellabarger: 30 percent

Component Descriptions**Albion***MLRA:* 79 - Great Bend Sand Plains*Landform:* Paleoterrace on river valley*Parent material:* Loamy alluvium*Slope:* 1 to 3 percent*Drainage class:* Well drained*Slowest permeability:* Moderately rapid (About 2.00 in/hr)*Available water capacity:* Moderate (About 7.3 inches)*Shrink-swell potential:* Low (About 1.5 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* More than 6 feet*Runoff class:* Low*Ecological site:* Sandy (pe21-28)*Land capability (nonirrigated):* 3e*Typical Profile:*

Ap—0 to 9 inches; sandy loam
 Bt1—9 to 16 inches; sandy loam
 Bt2—16 to 27 inches; sandy loam
 BC—27 to 48 inches; loamy coarse sand
 C—48 to 80 inches; sand

Shellabarger*MLRA:* 79 - Great Bend Sand Plains*Landform:* Paleoterrace on river valley*Parent material:* Loamy alluvium*Slope:* 1 to 3 percent*Drainage class:* Well drained*Slowest permeability:* Moderate (About 0.60 in/hr)*Available water capacity:* Moderate (About 8.5 inches)*Shrink-swell potential:* Low (About 1.5 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* More than 6 feet*Runoff class:* Low*Ecological site:* Sandy (pe21-28)*Land capability (nonirrigated):* 2e*Typical Profile:*

Ap—0 to 7 inches; sandy loam
 Bt1—7 to 11 inches; sandy clay loam
 Bt2—11 to 19 inches; sandy clay loam
 Bt3—19 to 33 inches; sandy loam
 BC—33 to 47 inches; coarse sandy loam
 C1—47 to 59 inches; loamy sand
 C2—59 to 73 inches; sand

C3—73 to 80 inches; sand

Minor Components Unnamed Wet Soils

General Considerations: Most areas are used as cropland, but some areas are in pasture or range. This map unit is moderately well suited to all of the commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn are the main crops. The hazard of wind erosion is severe and the hazard of water erosion is moderate for these soils. Ephemeral gully erosion potential is moderate for these soils. Wind and water erosion can be controlled maintaining plant residue through the use of a conservation tillage system, strip cropping, field windbreaks, contour farming, tall grass barriers, terraces and grassed waterways. The moderate water holding capacity of these soils can limit production. This problem can be minimized by increasing organic matter, leaving plant residue, and conservation tillage. In some places, soil test results may show soil reaction (pH) in the strongly acid range. Additions of lime may be required for optimum nutrient balance. The moderately rapid permeability and relatively shallow depths to sandy textures can limit some of the engineering uses of these soils.

1017—Albion And Shellabarger sandy loams, 7 to 15 percent slopes

Map Unit Composition

Albion: 45 percent
Shellabarger: 40 percent
Minor components: 15 percent

Component Descriptions

Albion

MLRA: 79 - Great Bend Sand Plains
Landform: Paleoterrace on river valley
Parent material: Loamy alluvium
Slope: 7 to 15 percent
Drainage class: Well drained
Slowest permeability: Moderately rapid (About 2.00 in/hr)
Available water capacity: Moderate (About 7.3 inches)

Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet

Runoff class: Very high
Ecological site: Sandy (pe21-28)
Land capability (nonirrigated): 3e

Typical Profile:

Ap—0 to 9 inches; sandy loam
Bt1—9 to 16 inches; sandy loam
Bt2—16 to 27 inches; sandy loam
BC—27 to 48 inches; loamy coarse sand
C—48 to 80 inches; sand

Shellabarger

MLRA: 79 - Great Bend Sand Plains
Landform: Paleoterrace on river valley
Parent material: Loamy alluvium
Slope: 7 to 15 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Moderate (About 8.5 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very high
Ecological site: Sandy (pe21-28)
Land capability (nonirrigated): 2e

Typical Profile:

Ap—0 to 5 inches; sandy loam
Bt1—5 to 11 inches; sandy clay loam
Bt2—11 to 19 inches; sandy clay loam
Bt3—19 to 33 inches; sandy loam
BC—33 to 47 inches; coarse sandy loam
C1—47 to 59 inches; loamy sand
C2—59 to 73 inches; sand
C3—73 to 80 inches; sand

Minor Components

Clark

Composition: About 15 percent
Slope: 7 to 15 percent
Drainage class: Well drained
Ecological site: Limy Upland (pe21-28)

Unnamed Wet Soils

General Considerations: Most areas are used for pasture or range. This map unit is poorly suited for cropland. The steep slopes of this map unit will limit most engineering practices for this soil.

1061—Arents, Earthen Dam**Map Unit Composition**

Arents, Earthen Dam: 100 percent

Component Descriptions**Arents, Earthen Dam**

MLRA: -

Depth to seasonal water saturation: More than 6 feet

Land capability (nonirrigated): 8

MLRA: 79 - Great Bend Sand Plains

Landform: Paleoterrace on river valley

Parent material: Loamy alluvium

Slope: 3 to 6 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 (pe24-32)

Land capability (nonirrigated): 2c

1359—Clark-Ost loams, 3 to 7 percent slopes**Map Unit Composition**

Clark: 70 percent

Ost: 30 percent

Component Descriptions**Clark**

MLRA: 79 - Great Bend Sand Plains

Landform: Paleoterrace on river valley

Parent material: Loamy alluvium

Slope: 3 to 7 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: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Medium

Ecological site: Limy Upland (pe21-28)

Land capability (nonirrigated): 2c

Typical Profile:

Ap—0 to 11 inches; loam

Bw—11 to 16 inches; loam

Bk1—16 to 28 inches; loam

Bk2—28 to 45 inches; fine sandy loam

BCK1—45 to 65 inches; fine sandy loam

Ck2—65 to 80 inches; very fine sandy loam

Typical Profile:

Ap—0 to 8 inches; loam

Bt1—8 to 12 inches; loam

Bt2—12 to 18 inches; loam

Bk1—18 to 23 inches; clay loam

Bk2—23 to 38 inches; clay loam

BCK—38 to 54 inches; loam

C—54 to 80 inches; loam

Minor Components**Unnamed Wet Soils**

General Considerations: Most areas are used as pasture or rangeland. Some areas are used as cropland. The hazard of wind and water erosion is moderately severe. This mapunit is well suited for most engineering practices. The slopes and amount of calcium carbonates can limit some practices.

1555—Dillhut-Plev complex, 0 to 2 percent slopes**Map Unit Composition**

Dillhut: 35 percent

Plev: 35 percent

Minor components: 30 percent

Component Descriptions**Dillhut**

MLRA: 79 - Great Bend Sand Plains

Landform: Dune on paleoterrace on river valley

Parent material: Eolian deposits over alluvium

Slope: 0 to 2 percent

Drainage class: Moderately well drained

Ost

Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Moderate (About 6.0 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very low
Ecological site: Sands (pe21-28)
Land capability (irrigated): 3e
Land capability (nonirrigated): 3e

Typical Profile:

A—0 to 4 inches; fine sand
 AC—4 to 9 inches; fine sand
 C1—9 to 18 inches; fine sand
 C2—18 to 26 inches; fine sand
 2Btb1—26 to 41 inches; fine sandy loam
 2Btb2—41 to 55 inches; fine sandy loam
 2BCb1—55 to 65 inches; fine sandy loam
 2BCb2—65 to 70 inches; fine sandy loam
 2Cg—70 to 80 inches; fine sandy loam

Plev

MLRA: 79 - Great Bend Sand Plains

Landform: Depression on paleoterrace on river valley, interdune on paleoterrace on river valley

Parent material: Sandy eolian deposits over loamy alluvium

Slope: 0 to 1 percent

Drainage class: Poorly drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Low (About 3.9 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: About 6 to 6 inches

Runoff class: Very low

Ecological site: Subirrigated (pe21-28)

Land capability (nonirrigated): 5w

Typical Profile:

A1—0 to 4 inches; loamy fine sand
 A2—4 to 12 inches; fine sand
 Cg1—12 to 35 inches; fine sand
 Cg2—35 to 46 inches; fine sand
 2Btgb1—46 to 57 inches; fine sandy loam
 2Btgb2—57 to 75 inches; fine sandy loam
 2BCb—75 to 80 inches; loamy fine sand

Minor Components

Dillwyn

Composition: About 20 percent

Slope: 0 to 2 percent

Drainage class: Somewhat poorly drained

Ecological site: Subirrigated (pe21-28)

Warnut

Composition: About 10 percent

Slope: 0 to 1 percent

Drainage class: Poorly drained

Ecological site: Subirrigated (pe21-28)

General Considerations: Most areas are in pasture or range. This mapunit is poorly suited for most commonly grown crops. The hazard for wind erosion is severe and water erosion is slight. The presence of water tables and sandy textures limits many of the engineering uses of this soil.

1728—Funmar And Farnum loams, 3 to 6 percent slopes

Map Unit Composition

Farnum: 40 percent

Funmar: 40 percent

Minor components: 20 percent

Component Descriptions

Farnum

MLRA: 79 - Great Bend Sand Plains

Landform: Paleoterrace on river valley

Parent material: Alluvium

Slope: 3 to 6 percent

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 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: Medium

Ecological site: Loamy Upland (pe21-28)

Land capability (irrigated): 1

Land capability (nonirrigated): 2c

Typical Profile:

Ap—0 to 5 inches; loam
 A—5 to 15 inches; loam
 Bt1—15 to 21 inches; loam
 Bt2—21 to 34 inches; sandy clay loam
 Bt3—34 to 48 inches; loam
 Bt4—48 to 61 inches; clay loam
 Bt5—61 to 73 inches; clay loam
 Btk—73 to 80 inches; loam

Funmar

MLRA: 79 - Great Bend Sand Plains

Landform: Paleoterrace on river valley
Parent material: Loamy alluvium over alluvium
Slope: 3 to 6 percent
Drainage class: Moderately well drained
Slowest permeability: Slow (About 0.06 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 (pe21-28)
Land capability (irrigated): 1
Land capability (nonirrigated): 2c

Typical Profile:

Ap—0 to 6 inches; loam
 A—6 to 12 inches; loam
 Bt1—12 to 17 inches; loam
 Bt2—17 to 26 inches; clay loam
 Bt3—26 to 32 inches; loam
 2Ab—32 to 38 inches; silty clay loam
 2Btb—38 to 54 inches; silty clay loam
 2Btkb1—54 to 66 inches; silty clay loam
 2Btkb2—66 to 80 inches; silty clay loam

Minor Components

Naron

Composition: About 20 percent
Slope: 3 to 6 percent
Drainage class: Well drained
Ecological site: Sandy (pe21-28)

Carbika

Slope: 0 to 1 percent
Drainage class: Poorly drained
Ecological site: Subirrigated (pe21-28)

Carway

Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Ecological site: Subirrigated (pe21-28)

General Considerations: Most areas are in cropland, but some areas are in pasture or range. This mapunit is moderately well suited for the most commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn are the predominant crops grown. The hazard for wind and water erosion is slight. The potential for high shrink-swell may limit some of the engineering practices of this mapunit.

2205—Jamash-Piedmont clay loams, 1 to 3 percent slopes

Map Unit Composition

Jamash: 60 percent
 Piedmont: 40 percent

Component Descriptions

Jamash

MLRA: 80A - Central Rolling Red Prairies
Landform: Pediment on upland
Parent material: Residuum weathered from shale, unspecified
Slope: 1 to 3 percent
Depth to restrictive feature: 12 to 15 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: Very slow (About 0.00 in/hr)
Available water capacity: Very low (About 2.5 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Shallow Prairie (pe24-32)
Land capability (nonirrigated): 4e

Typical Profile:

Ap—0 to 4 inches; clay loam
 Bw—4 to 11 inches; silty clay loam
 BC—11 to 15 inches; silty clay loam
 Cr1—15 to 28 inches; weathered bedrock
 Cr2—28 to 80 inches; weathered bedrock

Piedmont

MLRA: 80A - Central Rolling Red Prairies
Landform: Pediment on upland
Parent material: Residuum weathered from shale, clayey
Slope: 1 to 3 percent
Depth to restrictive feature: 32 to 36 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: Very slow (About 0.00 in/hr)
Available water capacity: Low (About 5.4 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Clay Upland (pe24-32)

Land capability (nonirrigated): 3e

Typical Profile:

Ap1—0 to 4 inches; clay loam
 Ap2—4 to 7 inches; clay loam
 Bt1—7 to 13 inches; clay
 Bt2—13 to 20 inches; clay
 Btk—20 to 24 inches; silty clay
 BCk—24 to 32 inches; silty clay
 Cr—32 to 80 inches; weathered bedrock

Minor Components

Unnamed Wet Soils

General Considerations: Some areas are used as cropland, but most areas are used for pasture or range. Many areas of this map unit are also in the Conservation Reserve Program. This map unit is poorly suited for the commonly grown crops such as wheat and grain sorghum. The hazard of wind erosion is severe and water erosion is slight. Wind erosion can be controlled through conservation tillage practices. The shallow depth to bedrock and slow permeability can limit some engineering uses of this soil.

2381—Kanza-Ninnescah sandy loams, 0 to 2 percent slopes, Commonly flooded

Map Unit Composition

Kanza: 50 percent
 Ninnescah: 50 percent

Component Descriptions

Kanza

MLRA: 79 - Great Bend Sand Plains
Landform: Flood plain on river valley
Parent material: Alluvium
Slope: 0 to 2 percent
Drainage class: Poorly drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Low (About 5.7 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: Frequent
Depth to seasonal water saturation: About 0 to 36 inches
Runoff class: Very low
Ecological site: Subirrigated (pe21-28)
Land capability (nonirrigated): 5w

Typical Profile:

A1—0 to 4 inches; sandy loam
 A2—4 to 9 inches; loamy fine sand
 AC—9 to 17 inches; loamy fine sand
 C1—17 to 33 inches; loamy fine sand
 C2—33 to 80 inches; sand

Ninnescah

MLRA: 79 - Great Bend Sand Plains
Landform: Flood plain on river valley
Parent material: Loamy alluvium
Slope: 0 to 2 percent
Drainage class: Poorly drained
Slowest permeability: Moderately rapid (About 1.98 in/hr)
Available water capacity: Moderate (About 7.4 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Occasional
Depth to seasonal water saturation: About 24 to 24 inches
Runoff class: Very low
Ecological site: Subirrigated (pe21-28)
Land capability (nonirrigated): 5w

Typical Profile:

Ak1—0 to 6 inches; sandy loam
 Ak2—6 to 14 inches; sandy loam
 Ak3—14 to 19 inches; sandy loam
 Bkg1—19 to 30 inches; sandy loam
 Bkg2—30 to 37 inches; sandy loam
 Cg1—37 to 52 inches; sandy loam
 Cg2—52 to 80 inches; loamy sand

General Considerations: Most areas are in pasture or range. This map unit is poorly suited for the most commonly grown crops. The hazard for wind and water erosion is slight. The water tables, flooding, and depth to sand limit most engineering uses for this mapunit.

2390—Kaskan loam, 0 To 1 Percent, rarely flooded

Map Unit Composition

Kaskan: 85 percent
 Minor components: 15 percent

Component Descriptions

Kaskan

MLRA: 79 - Great Bend Sand Plains
Landform: Flood plain on river valley
Parent material: Loamy alluvium

Slope: 0 to 1 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Moderate (About 8.7 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: Rare
Depth to seasonal water saturation: About 60 to 60 inches
Runoff class: Very low
Ecological site: Loamy Lowland (pe21-28)
Land capability (nonirrigated): 2w

Typical Profile:

Ap—0 to 7 inches; loam
 A—7 to 17 inches; clay loam
 Bw1—17 to 24 inches; loam
 Bw2—24 to 35 inches; fine sandy loam
 BC—35 to 41 inches; loamy fine sand
 C1—41 to 47 inches; fine sand
 C2—47 to 66 inches; sand
 C3—66 to 80 inches; stratified gravelly coarse sand to sand

Minor Components

Tobin

Composition: About 15 percent
Slope: 0 to 1 percent
Drainage class: Well drained
Ecological site: Loamy Lowland (pe25-34)

General Considerations: Most areas are in cropland, but some are in pasture or range. This map unit is moderately well suited for most commonly grown crops. Wheat and grain sorghum are the predominant crops. The hazard for wind and water erosion is slight. The water table and rare chance of flooding may limit some of the engineering practices.

2556—Langdon fine sand, 0 to 15 percent slopes

Map Unit Composition

Langdon: 50 percent
 Minor components: 50 percent

Component Descriptions

Langdon

MLRA: 79 - Great Bend Sand Plains
Landform: Dune on paleoterrace on river valley
Parent material: Sandy eolian deposits

Slope: 0 to 15 percent
Drainage class: Somewhat excessively drained
Slowest permeability: Rapid (About 6.00 in/hr)
Available water capacity: Low (About 3.2 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Choppy Sands (pe21-28)
Land capability (nonirrigated): 6e

Typical Profile:

A—0 to 8 inches; fine sand
 E&Bt—8 to 47 inches; stratified sand to loamy sand
 C—47 to 64 inches; fine sand
 E&Btb—64 to 80 inches; stratified sand to loamy sand

Minor Components

Turon

Composition: About 25 percent
Slope: 0 to 10 percent
Drainage class: Well drained
Ecological site: Sands (pe21-28)

Tivin

Composition: About 25 percent
Slope: 1 to 15 percent
Drainage class: Somewhat excessively drained
Ecological site: Choppy Sands (pe21-28)

Carway

Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Ecological site: Subirrigated (pe21-28)

Warnut

Slope: 0 to 1 percent
Drainage class: Poorly drained
Ecological site: Subirrigated (pe21-28)

General Considerations: Most areas are in pasture or range. This mapunit is poorly suited for the most commonly grown crops. The hazard for wind erosion is severe and water erosion is moderate. The sandy textures limit most engineering practices.

2812—Mahone loamy fine sand, 0 to 2 percent slopes, rarely flooded

Map Unit Composition

Mahone: 95 percent
Minor components: 5 percent

Component Descriptions

Mahone

MLRA: 79 - Great Bend Sand Plains
Landform: Flood plain on river valley
Parent material: Loamy alluvium
Slope: 0 to 2 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Moderate (About 8.9 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Rare
Depth to seasonal water saturation: About 60 to 60 inches
Runoff class: Very low
Ecological site: Loamy Lowland (pe21-28)
Land capability (nonirrigated): 2w

Typical Profile:

Ap—0 to 8 inches; loamy fine sand
A—8 to 14 inches; fine sandy loam
Bw1—14 to 20 inches; fine sandy loam
Bw2—20 to 25 inches; very fine sandy loam
Bw3—25 to 33 inches; silt loam
2C—33 to 39 inches; stratified silt loam to fine sandy loam
2Ab1—39 to 42 inches; clay loam
2Ab2—42 to 48 inches; fine sandy loam
2Bwb1—48 to 54 inches; very fine sandy loam
2Bwb2—54 to 61 inches; fine sandy loam
2Ab—61 to 66 inches; fine sandy loam
2Bwb—66 to 71 inches; fine sandy loam
3BC—71 to 78 inches; loamy fine sand
3C—78 to 80 inches; coarse sand

Minor Components

Yaggy

Composition: About 5 percent
Slope: 0 to 2 percent
Drainage class: Somewhat poorly drained
Ecological site: Sandy Lowland (pe21-28)

General Considerations: Most areas are in cropland, but some are in pasture or range. Some areas are also in the Conservation Reserve Program. This map unit is somewhat poorly suited for most commonly grown crops. Wheat and grain sorghum are

major crops. The hazard for wind erosion is severe and water erosion is slight. The high water tables and depth to sand will many engineering practices.

2948—Nalim loam, 0 to 1 percent slopes

Map Unit Composition

Nalim: 80 percent
Minor components: 20 percent

Component Descriptions

Nalim

MLRA: 79 - Great Bend Sand Plains
Landform: Paleoterrace on river valley
Parent material: Loamy alluvium
Slope: 0 to 1 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 10.4 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very low
Ecological site: Loamy Upland (pe24-32)
Land capability (irrigated): 2e
Land capability (nonirrigated): 2e

Typical Profile:

Ap—0 to 6 inches; loam
Bt1—6 to 9 inches; loam
Bt2—9 to 13 inches; clay loam
Bt3—13 to 21 inches; clay loam
Bt4—21 to 31 inches; clay loam
Bt5—31 to 39 inches; sandy clay loam
Bt6—39 to 44 inches; gravelly sandy clay loam
Bt7—44 to 52 inches; sandy clay loam
BC—52 to 62 inches; loamy coarse sand
C1—62 to 72 inches; gravelly loamy coarse sand
C2—72 to 80 inches; stratified sand to gravelly loamy coarse sand

Minor Components

Farnum

Composition: About 20 percent
Slope: 0 to 1 percent
Drainage class: Well drained
Ecological site: Loamy Upland (pe21-28)

Unnamed Wet Soils

General Considerations: Most areas are used as cropland. This mapunit is well suited to all commonly grown crops. Wheat, grain sorghum, and soybeans are the major crops. A few areas are planted to irrigated corn. The hazard of water erosion is slight and wind erosion is moderate. This problem can be overcome by using conservation tillage and residue management. This mapunit is moderately well suited for most engineering uses.

3051—Ost loam, 0 to 1 percent slopes**Map Unit Composition**

Ost: 90 percent
Minor components: 10 percent

Component Descriptions**Ost**

MLRA: 79 - Great Bend Sand Plains
Landform: Paleoterrace on river valley
Parent material: Loamy alluvium
Slope: 0 to 1 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: Very low
Ecological site: Loamy Upland (pe24-32)
Land capability (nonirrigated): 2c

Typical Profile:

Ap—0 to 8 inches; loam
Bt1—8 to 12 inches; loam
Bt2—12 to 18 inches; loam
Bk1—18 to 23 inches; clay loam
Bk2—23 to 38 inches; clay loam
BCk—38 to 54 inches; loam
C—54 to 80 inches; loam

Minor Components**Clark**

Composition: About 10 percent

Slope: 0 to 1 percent
Drainage class: Well drained
Ecological site: Limy Upland (pe21-28)

Unnamed Wet Soils

General Considerations: Most areas are used as cropland. This mapunit is well suited to all commonly grown crops. Wheat, grain sorghum, and soybeans are the predominant crops. The hazard of wind and water erosion is slight. This mapunit is well suited for most engineering practices.

3052—Ost-Clark loams, 1 to 3 percent slopes**Map Unit Composition**

Ost: 55 percent
Clark: 45 percent

Component Descriptions**Ost**

MLRA: 79 - Great Bend Sand Plains
Landform: Paleoterrace on river valley
Parent material: Loamy alluvium
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: Low
Ecological site: Loamy Upland (pe24-32)
Land capability (nonirrigated): 2c

Typical Profile:

Ap—0 to 8 inches; loam
Bt1—8 to 12 inches; loam
Bt2—12 to 18 inches; loam
Bk1—18 to 23 inches; clay loam
Bk2—23 to 38 inches; clay loam
BCk—38 to 54 inches; loam
C—54 to 80 inches; loam

Clark

MLRA: 79 - Great Bend Sand Plains
Landform: Paleoterrace on river valley

Parent material: Loamy alluvium
Slope: 1 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: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Limy Upland (pe21-28)
Land capability (nonirrigated): 2c

Typical Profile:

Ap—0 to 11 inches; loam
 Bw—11 to 16 inches; loam
 Bk1—16 to 28 inches; loam
 Bk2—28 to 45 inches; fine sandy loam
 Bck1—45 to 65 inches; fine sandy loam
 Ck2—65 to 80 inches; very fine sandy loam

Minor Components
Unnamed Wet Soils

General Considerations: Most areas are used as cropland. This mapunit is well suited to all commonly grown crops. Wheat, grain sorghum, and soybeans are the predominant crops. The hazard of wind erosion is moderate and water erosion is slight. This mapunit is well suited for most engineering practices.

Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very low
Ecological site: Loamy Upland (pe21-28)
Land capability (irrigated): 1
Land capability (nonirrigated): 2c

Typical Profile:

Ap1—0 to 5 inches; silt loam
 Ap2—5 to 10 inches; silt loam
 Bt1—10 to 14 inches; silty clay loam
 Bt2—14 to 22 inches; silty clay loam
 Btss1—22 to 28 inches; silty clay loam
 Btss2—28 to 34 inches; silty clay loam
 Btss3—34 to 39 inches; silty clay loam
 BC—39 to 48 inches; silt loam
 2Btkssb1—48 to 61 inches; silty clay loam
 2Btkssb2—61 to 71 inches; silty clay loam
 2Btkssb3—71 to 80 inches; clay loam

Minor Components

Carbika

Slope: 0 to 1 percent
Drainage class: Poorly drained
Ecological site: Subirrigated (pe21-28)

General Considerations: Most areas are used for cropland but some areas are in pasture. This mapunit is well suited for most commonly grown crops. Wheat, grain sorghum, soybeans and irrigated corn are the predominant crops in the area. The hazard of wind and water erosion is slight. The slow permeability and high shrink-swell can limit the engineering uses of the soil.

3170—Penalosa silt loam, 0 to 1 percent slopes

Map Unit Composition

Penalosa: 100 percent

Component Descriptions

Penalosa

MLRA: 79 - Great Bend Sand Plains
Landform: Paleoterrace on river valley
Parent material: Loamy alluvium
Slope: 0 to 1 percent
Drainage class: Moderately well drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: High (About 10.9 inches)
Shrink-swell potential: High (About 7.5 LEP)

3171—Penalosa silt loam, 1 to 3 percent slopes

Map Unit Composition

Penalosa: 100 percent

Component Descriptions

Penalosa

MLRA: 79 - Great Bend Sand Plains
Landform: Paleoterrace on river valley
Parent material: Loamy alluvium
Slope: 1 to 3 percent
Drainage class: Moderately well drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: High (About 10.9 inches)
Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Low

Ecological site: Loamy Upland (pe21-28)

Land capability (irrigated): 1

Land capability (nonirrigated): 2c

Typical Profile:

Ap1—0 to 5 inches; silt loam

Ap2—5 to 10 inches; silty clay loam

Bt1—10 to 14 inches; silty clay loam

Bt2—14 to 22 inches; silty clay loam

Btss1—22 to 28 inches; silty clay loam

Btss2—28 to 34 inches; silty clay loam

Btss3—34 to 39 inches; silty clay loam

BC—39 to 48 inches; silt loam

2Btkssb1—48 to 61 inches; silty clay loam

2Btkssb2—61 to 71 inches; silty clay loam

2Btkssb3—71 to 80 inches; clay loam

Minor Components

Unnamed Wet Soils

General Considerations: Most areas are used for cropland but some areas are in pasture. This mapunit is well suited for most commonly grown crops. Wheat, grain sorghum, soybeans and irrigated corn are the predominant crops in the area. The hazard of wind and water erosion is slight. The slow permeability and high shrink-swell can limit the engineering uses of the soil.

3180—Pratt fine sand, 5 to 10 percent slopes

Map Unit Composition

Pratt: 85 percent

Minor components: 15 percent

Component Descriptions

Pratt

MLRA: 79 - Great Bend Sand Plains

Landform: Dune on paleoterrace on river valley

Parent material: Sandy eolian deposits

Slope: 5 to 10 percent

Drainage class: Well drained

Slowest permeability: Rapid (About 5.95 in/hr)

Available water capacity: Moderate (About 6.3 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Low

Ecological site: Sands (pe21-28)

Land capability (irrigated): 3e

Land capability (nonirrigated): 3e

Typical Profile:

Ap—0 to 8 inches; fine sand

Bt—8 to 24 inches; loamy fine sand

E&Bt—24 to 64 inches; stratified fine sand to loamy fine sand

C—64 to 80 inches; fine sand

Minor Components

Attica

Composition: About 15 percent

Slope: 5 to 10 percent

Drainage class: Well drained

Ecological site: Sandy (pe21-28)

General Considerations: Most areas are in pasture or range, but some are in cropland. This mapunit is poorly suited for the most commonly grown crops. The hazard for wind erosion is severe and water erosion is moderate. This mapunit is poorly suited for most engineering practices due to the sandy textures.

3181—Pratt-Turon fine sand, 1 to 5 percent slopes

Map Unit Composition

Pratt: 45 percent

Turon: 30 percent

Minor components: 25 percent

Component Descriptions

Pratt

MLRA: 79 - Great Bend Sand Plains

Landform: Dune on paleoterrace on river valley

Parent material: Sandy eolian deposits

Slope: 1 to 5 percent

Drainage class: Well drained

Slowest permeability: Rapid (About 5.95 in/hr)

Available water capacity: Moderate (About 6.3 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Low

Ecological site: Sands (pe21-28)

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

Typical Profile:

Ap—0 to 8 inches; fine sand
 Bt—8 to 24 inches; loamy fine sand
 E&Bt—24 to 64 inches; stratified fine sand to loamy fine sand
 C—64 to 80 inches; fine sand

Turon

MLRA: 79 - Great Bend Sand Plains
Landform: Dune on paleoterrace on river valley
Parent material: Sandy eolian deposits over alluvium
Slope: 1 to 5 percent
Drainage class: Well drained
Slowest permeability: Very slow (About 0.00 in/hr)
Available water capacity: Moderate (About 7.1 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Sands (pe21-28)
Land capability (irrigated): 3e
Land capability (nonirrigated): 3e

Typical Profile:

Ap—0 to 8 inches; fine sand
 Bt—8 to 28 inches; loamy fine sand
 E&Bt—28 to 40 inches; stratified loamy fine sand to fine sandy loam
 2Btb1—40 to 58 inches; silty clay
 2Btb2—58 to 75 inches; silty clay
 2Btb3—75 to 80 inches; silty clay

Minor Components

Hayes

Composition: About 25 percent
Slope: 1 to 5 percent
Drainage class: Well drained
Ecological site: Sandy (pe21-28)

Carway

Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Ecological site: Subirrigated (pe21-28)

Warnut

Slope: 0 to 1 percent
Drainage class: Poorly drained
Ecological site: Subirrigated (pe21-28)

General Considerations: Most areas are in cropland, but some are in pasture and range. Some areas are also in the Conservation Reserve Program. This mapunit is

somewhat poorly suited for the most commonly grown crops. Wheat, grain sorghum, and irrigated corn are the predominant crops. The hazard for wind erosion is severe and water erosion is slight. Wind erosion can be controlled by plant residue management, conservation tillage, and tall grass barriers. This mapunit is moderately well suited for most engineering practices.

3445—Shellabarger sandy loam, 3 to 7 percent slopes

Map Unit Composition

Shellabarger: 100 percent

Component Descriptions

Shellabarger

MLRA: 79 - Great Bend Sand Plains
Landform: Paleoterrace on river valley
Parent material: Loamy alluvium
Slope: 3 to 7 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Moderate (About 8.5 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: Sandy (pe21-28)
Land capability (nonirrigated): 2e

Typical Profile:

Ap—0 to 6 inches; sandy loam
 Bt1—6 to 11 inches; sandy clay loam
 Bt2—11 to 19 inches; sandy clay loam
 Bt3—19 to 33 inches; sandy loam
 BC—33 to 47 inches; coarse sandy loam
 C1—47 to 59 inches; loamy sand
 C2—59 to 73 inches; sand
 C3—73 to 80 inches; sand

General Considerations: Most areas are used as cropland or hayland, but some areas are in pasture or range. This map unit is moderately well suited to all of the commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn are the main crops. The hazard of wind erosion is slight

and water erosion is severe for these soils. Ephemeral gully erosion potential is moderate for these soils. Wind and water erosion can be controlled by maintaining plant residue through the use of a conservation tillage system, strip cropping, field windbreaks, contour farming, tall grass barriers, terraces and grassed waterways. The moderate water holding capacity of these soils can limit production. This problem can be minimized by increasing organic matter, leaving plant residue, and conservation tillage. These soils are moderately well suited for most engineering uses of these soils, except where steep slopes can limit the practice.

3510—Saltcreek-Funmar-Farnum complex, 1 to 3 percent slopes

Map Unit Composition

Saltcreek: 50 percent
Funmar: 30 percent
Farnum: 20 percent

Component Descriptions

Saltcreek

MLRA: 79 - Great Bend Sand Plains
Landform: Dune on paleoterrace on river valley
Parent material: Loamy eolian deposits over alluvium
Slope: 1 to 3 percent
Drainage class: Well drained
Slowest permeability: Slow (About 0.06 in/hr)
Available water capacity: High (About 9.0 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Sandy (pe21-28)
Land capability (irrigated): 1
Land capability (nonirrigated): 3e

Typical Profile:

Ap—0 to 5 inches; fine sandy loam
Bt1—5 to 10 inches; sandy clay loam
Bt2—10 to 26 inches; sandy clay loam
Bt3—26 to 39 inches; fine sandy loam
2Btb—39 to 56 inches; silty clay
2Btkb1—56 to 66 inches; silty clay loam
2Btkb2—66 to 80 inches; silty clay loam

Funmar

MLRA: 79 - Great Bend Sand Plains
Landform: Paleoterrace on river valley
Parent material: Loamy alluvium over alluvium
Slope: 1 to 3 percent
Drainage class: Moderately well drained
Slowest permeability: Slow (About 0.06 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: Low
Ecological site: Loamy Upland (pe21-28)
Land capability (irrigated): 1
Land capability (nonirrigated): 2c

Typical Profile:

Ap—0 to 6 inches; loam
A—6 to 12 inches; loam
Bt1—12 to 17 inches; loam
Bt2—17 to 26 inches; clay loam
Bt3—26 to 32 inches; loam
2Ab—32 to 38 inches; silty clay loam
2Btb—38 to 54 inches; silty clay loam
2Btkb1—54 to 66 inches; silty clay loam
2Btkb2—66 to 80 inches; silty clay loam

Farnum

MLRA: 79 - Great Bend Sand Plains
Landform: Paleoterrace on river valley
Parent material: Alluvium
Slope: 1 to 3 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 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: Low
Ecological site: Loamy Upland (pe21-28)
Land capability (irrigated): 1
Land capability (nonirrigated): 2c

Typical Profile:

Ap—0 to 5 inches; loam
A—5 to 15 inches; loam
Bt1—15 to 21 inches; loam
Bt2—21 to 34 inches; sandy clay loam
Bt3—34 to 48 inches; loam
Bt4—48 to 61 inches; clay loam
Bt5—61 to 73 inches; clay loam

Btk—73 to 80 inches; loam

Minor Components

Carway

Slope: 0 to 1 percent

Drainage class: Somewhat poorly drained

Ecological site: Subirrigated (pe21-28)

Carbika

Slope: 0 to 1 percent

Drainage class: Poorly drained

Ecological site: Subirrigated (pe21-28)

General Considerations: Most areas are in cropland, but some areas are in pasture or range. This mapunit is well suited for most commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn. The hazard for wind and water erosion is slight. The potential for high shrink-swell may limit some engineering practices for this mapunit.

3530—Shellabarger, eroded And Albion Soils, 7 to 15 percent slopes

Map Unit Composition

Shellabarger: 45 percent

Albion: 40 percent

Minor components: 15 percent

Component Descriptions

Shellabarger

MLRA: 79 - Great Bend Sand Plains

Landform: Paleoterrace on river valley

Parent material: Loamy alluvium

Slope: 7 to 15 percent

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Moderate (About 8.5 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Very high

Ecological site: Sandy (pe21-28)

Land capability (nonirrigated): 2e

Typical Profile:

Ap—0 to 5 inches; sandy loam

Bt1—5 to 11 inches; sandy clay loam

Bt2—11 to 19 inches; sandy clay loam

Bt3—19 to 33 inches; sandy loam

BC—33 to 47 inches; coarse sandy loam

C1—47 to 59 inches; loamy sand

C2—59 to 73 inches; sand

C3—73 to 80 inches; sand

Albion

MLRA: 79 - Great Bend Sand Plains

Landform: Paleoterrace on river valley

Parent material: Loamy alluvium

Slope: 7 to 15 percent

Drainage class: Well drained

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

Available water capacity: Moderate (About 7.3 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Very high

Ecological site: Sandy (pe21-28)

Land capability (nonirrigated): 3e

Typical Profile:

Ap—0 to 9 inches; sandy loam

Bt1—9 to 16 inches; sandy loam

Bt2—16 to 27 inches; sandy loam

BC—27 to 48 inches; loamy coarse sand

C—48 to 80 inches; sand

Minor Components

Clark

Composition: About 15 percent

Slope: 7 to 15 percent

Drainage class: Well drained

Ecological site: Limy Upland (pe21-28)

Unnamed Wet Soils

General Considerations: Most areas are used for pasture or range. This map unit is poorly suited for cropland. The steep slopes of this map unit will limit most engineering practices for this soil.

3531—Shellabarger And Nalim Soils, 3 to 7 percent slopes

Map Unit Composition

Shellabarger: 50 percent

Nalim: 50 percent

Component Descriptions

Shellabarger*MLRA:* 79 - Great Bend Sand Plains*Landform:* Paleoterrace on river valley*Parent material:* Loamy alluvium*Slope:* 3 to 7 percent*Drainage class:* Well drained*Slowest permeability:* Moderate (About 0.60 in/hr)*Available water capacity:* Moderate (About 8.5 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:* Sandy (pe21-28)*Land capability (nonirrigated):* 2e*Typical Profile:*

- Ap—0 to 6 inches; sandy loam
- Bt1—6 to 11 inches; sandy clay loam
- Bt2—11 to 19 inches; sandy clay loam
- Bt3—19 to 33 inches; sandy loam
- BC—33 to 47 inches; coarse sandy loam
- C1—47 to 59 inches; loamy sand
- C2—59 to 73 inches; sand
- C3—73 to 80 inches; sand

Nalim*MLRA:* 79 - Great Bend Sand Plains*Landform:* Paleoterrace on river valley*Parent material:* Loamy alluvium*Slope:* 3 to 7 percent*Drainage class:* Well drained*Slowest permeability:* Moderately slow (About 0.20 in/hr)*Available water capacity:* High (About 10.4 inches)*Shrink-swell potential:* Moderate (About 4.5 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* More than 6 feet*Runoff class:* Medium*Ecological site:* Loamy Upland (pe24-32)*Land capability (irrigated):* 2e*Land capability (nonirrigated):* 2e*Typical Profile:*

- Ap—0 to 6 inches; loam
- Bt1—6 to 9 inches; loam
- Bt2—9 to 13 inches; clay loam
- Bt3—13 to 21 inches; clay loam
- Bt4—21 to 31 inches; clay loam
- Bt5—31 to 39 inches; sandy clay loam
- Bt6—39 to 44 inches; gravelly sandy clay loam
- Bt7—44 to 52 inches; sandy clay loam
- BC—52 to 62 inches; loamy coarse sand

C1—62 to 72 inches; gravelly loamy coarse sand

C2—72 to 80 inches; stratified sand to gravelly loamy coarse sand

General Considerations: Most areas are used as cropland or hayland, but some areas are in pasture or range. This map unit is moderately well suited to all of the commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn are the main crops. The hazard of wind erosion is slight and water erosion is severe for these soils. Ephemeral gully erosion potential is moderate for these soils. Wind and water erosion can be controlled by maintaining plant residue through the use of a conservation tillage system, strip cropping, field windbreaks, contour farming, tall grass barriers, terraces and grassed waterways. The moderate water holding capacity of these soils can limit production. This problem can be minimized by increasing organic matter, leaving plant residue, and conservation tillage. These soils are moderately well suited for most engineering uses of these soils, except where steep slopes can limit the practice.

3532—Shellabarger loamy sand, 0 to 3 percent slopes**Map Unit Composition**

Shellabarger: 80 percent

Minor components: 20 percent

Component Descriptions**Shellabarger***MLRA:* 79 - Great Bend Sand Plains*Landform:* Paleoterrace on river valley*Parent material:* Loamy alluvium*Slope:* 0 to 3 percent*Drainage class:* Well drained*Slowest permeability:* Moderate (About 0.60 in/hr)*Available water capacity:* Moderate (About 8.1 inches)*Shrink-swell potential:* Low (About 1.5 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* More than 6 feet*Runoff class:* Very low*Ecological site:* Sandy (pe21-28)*Land capability (nonirrigated):* 2e

Typical Profile:

A—0 to 6 inches; loamy sand
 Bt1—6 to 11 inches; sandy clay loam
 Bt2—11 to 19 inches; sandy clay loam
 Bt3—19 to 33 inches; sandy loam
 BC—33 to 47 inches; coarse sandy loam
 C1—47 to 59 inches; loamy sand
 C2—59 to 73 inches; sand
 C3—73 to 80 inches; sand

Minor Components**Albion**

Composition: About 20 percent
Slope: 0 to 3 percent
Drainage class: Well drained
Ecological site: Sandy (pe21-28)

General Considerations: Most areas are used as cropland, but some areas are in pasture or range. This map unit is moderately well suited to all of the commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn are the main crops. The hazard of wind erosion is severe and the hazard of water erosion is moderate for these soils. Ephemeral gully erosion potential is moderate for these soils. Wind and water erosion can be controlled maintaining plant residue through the use of a conservation tillage system, strip cropping, field windbreaks, contour farming, tall grass barriers, terraces and grassed waterways. The moderate water holding capacity of these soils can limit production. This problem can be minimized by increasing organic matter, leaving plant residue, and conservation tillage. In some places, soil test results may show soil reaction (pH) in the strongly acid range. Additions of lime may be required for optimum nutrient balance. The moderately rapid permeability and relatively shallow depths to sandy textures can limit some of the engineering uses of these soils.

3533—Shellabarger sandy loam, 0 to 1 percent slopes

Map Unit Composition

Shellabarger: 85 percent
 Minor components: 15 percent

Component Descriptions

Shellabarger

MLRA: 79 - Great Bend Sand Plains

Landform: Paleoterrace on river valley

Parent material: Loamy alluvium

Slope: 0 to 1 percent

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Moderate (About 8.5 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Very low

Ecological site: Sandy (pe21-28)

Land capability (nonirrigated): 2e

Typical Profile:

Ap—0 to 7 inches; sandy loam
 Bt1—7 to 11 inches; sandy clay loam
 Bt2—11 to 19 inches; sandy clay loam
 Bt3—19 to 33 inches; sandy loam
 BC—33 to 47 inches; coarse sandy loam
 C1—47 to 59 inches; loamy sand
 C2—59 to 73 inches; sand
 C3—73 to 80 inches; sand

Minor Components**Nalim**

Composition: About 15 percent

Slope: 0 to 1 percent

Drainage class: Well drained

Ecological site: Loamy Upland (pe24-32)

Unnamed Wet Soils

General Considerations: Most areas are used as cropland, but some areas are in pasture or range. This map unit is moderately well suited to all of the commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn are the main crops. The hazard of wind erosion is severe and the hazard of water erosion is slight. Wind erosion can be controlled by maintaining plant residue through the use of a conservation tillage system. The moderate water holding capacity can hurt production. This problem can be minimized by increasing organic matter, leaving plant residue, and conservation tillage. In some places, soil test results may show soil reaction (pH) in the strongly acid range. Additions of lime may be required for optimum nutrient balance. The moderately rapid permeability and relatively shallow depths to sandy textures can limit some of the engineering uses of this soil.

3534—Shellabarger sandy loam, 1 to 3 percent slopes

Map Unit Composition

Shellabarger: 85 percent
Minor components: 15 percent

Component Descriptions

Shellabarger

MLRA: 79 - Great Bend Sand Plains

Landform: Paleoterrace on river valley

Parent material: Loamy alluvium

Slope: 1 to 3 percent

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Moderate (About 8.5 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Low

Ecological site: Sandy (pe21-28)

Land capability (nonirrigated): 2e

Typical Profile:

Ap—0 to 7 inches; sandy loam
Bt1—7 to 11 inches; sandy clay loam
Bt2—11 to 19 inches; sandy clay loam
Bt3—19 to 33 inches; sandy loam
BC—33 to 47 inches; coarse sandy loam
C1—47 to 59 inches; loamy sand
C2—59 to 73 inches; sand
C3—73 to 80 inches; sand

Minor Components

Albion

Composition: About 15 percent

Slope: 1 to 3 percent

Drainage class: Well drained

Ecological site: Sandy (pe21-28)

Unnamed Wet Soils

General Considerations: Most areas are used as cropland, but some areas are in pasture or range. This map unit is moderately well suited to all of the commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn are the main crops. The hazard of wind erosion is severe and the hazard of water erosion is moderate for these soils. Ephemeral gully erosion potential is moderate for these soils. Wind

and water erosion can be controlled by maintaining plant residue through the use of a conservation tillage system, strip cropping, field windbreaks, contour farming, tall grass barriers, terraces and grassed waterways. The moderate water holding capacity of these soils can limit production. This problem can be minimized by increasing organic matter, leaving plant residue, and conservation tillage. In some places, soil test results may show soil reaction (pH) in the strongly acid range. Additions of lime may be required for optimum nutrient balance. The moderately rapid permeability and relatively shallow depths to sandy textures can limit some of the engineering uses of these soils.

3535—Shellabarger-Nalim complex, 1 to 3 percent slopes

Map Unit Composition

Shellabarger: 55 percent
Nalim: 45 percent

Component Descriptions

Shellabarger

MLRA: 79 - Great Bend Sand Plains

Landform: Paleoterrace on river valley

Parent material: Loamy alluvium

Slope: 1 to 3 percent

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Moderate (About 8.5 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Low

Ecological site: Sandy (pe21-28)

Land capability (nonirrigated): 2e

Typical Profile:

Ap—0 to 7 inches; sandy loam
Bt1—7 to 11 inches; sandy clay loam
Bt2—11 to 19 inches; sandy clay loam
Bt3—19 to 33 inches; sandy loam
BC—33 to 47 inches; coarse sandy loam
C1—47 to 59 inches; loamy sand
C2—59 to 73 inches; sand
C3—73 to 80 inches; sand

Nalim*MLRA:* 79 - Great Bend Sand Plains*Landform:* Paleoterrace on river valley*Parent material:* Loamy alluvium*Slope:* 1 to 3 percent*Drainage class:* Well drained*Slowest permeability:* Moderately slow (About 0.20 in/hr)*Available water capacity:* High (About 10.4 inches)*Shrink-swell potential:* Moderate (About 4.5 LEP)*Flooding hazard:* None*Depth to seasonal water saturation:* More than 6 feet*Runoff class:* Low*Ecological site:* Loamy Upland (pe24-32)*Land capability (irrigated):* 2e*Land capability (nonirrigated):* 2e*Typical Profile:*

Ap—0 to 6 inches; loam

Bt1—6 to 9 inches; loam

Bt2—9 to 13 inches; clay loam

Bt3—13 to 21 inches; clay loam

Bt4—21 to 31 inches; clay loam

Bt5—31 to 39 inches; sandy clay loam

Bt6—39 to 44 inches; gravelly sandy clay loam

Bt7—44 to 52 inches; sandy clay loam

BC—52 to 62 inches; loamy coarse sand

C1—62 to 72 inches; gravelly loamy coarse sand

C2—72 to 80 inches; stratified sand to gravelly loamy coarse sand

Minor Components**Unnamed Wet Soils**

General Considerations: Most areas are used as cropland, but some areas are in pasture or range. This map unit is moderately well suited to all of the commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn are the main crops. The hazard of wind and water erosion is moderate for these soils. Ephemeral gully erosion potential is moderate for these soils. Wind and water erosion can be controlled by maintaining plant residue through the use of a conservation tillage system, strip cropping, field windbreaks, contour farming, tall grass barriers, terraces and grassed waterways. The moderate water holding capacity of these soils can limit production. This problem can be minimized by increasing organic matter, leaving plant residue, and conservation tillage. These soils are

moderately well suited for most engineering uses of these soils.

3926—Water**3966—Willowbrook fine sandy loam, 0 to 1 percent slope, occasionally flooded****Map Unit Composition**

Willowbrook: 90 percent

Minor components: 10 percent

Component Descriptions**Willowbrook***MLRA:* 79 - Great Bend Sand Plains*Landform:* Flood plain on river valley*Parent material:* Loamy alluvium over sandy alluvium*Slope:* 0 to 1 percent*Drainage class:* Somewhat poorly drained*Slowest permeability:* Moderately rapid (About 2.00 in/hr)*Available water capacity:* Low (About 5.7 inches)*Shrink-swell potential:* Low (About 1.7 LEP)*Flooding hazard:* Occasional*Ponding hazard:* None*Depth to seasonal water saturation:* About 24 to 48 inches*Runoff class:* Very low*Ecological site:* Subirrigated (pe21-28)*Land capability (irrigated):* 2e*Land capability (nonirrigated):* 3e*Typical Profile:*

Ap1—0 to 4 inches; fine sandy loam

Ap2—4 to 9 inches; fine sandy loam

AB—9 to 13 inches; fine sandy loam

Bw—13 to 17 inches; fine sandy loam

Bk1—17 to 19 inches; loam

Bk2—19 to 26 inches; fine sandy loam

2C1—26 to 45 inches; coarse sand

2C2—45 to 51 inches; coarse sand

2C3—51 to 80 inches; stratified gravelly coarse sand to sand

Minor Components**Nickerson***Composition:* About 10 percent*Slope:* 0 to 1 percent*Drainage class:* Moderately well drained*Ecological site:* Sandy (pe21-28)**Kanza**

Slope: 0 to 2 percent
Drainage class: Poorly drained
Ecological site: Subirrigated (pe21-28)

Ninnescah

Slope: 0 to 2 percent
Drainage class: Poorly drained
Ecological site: Subirrigated (pe21-28)

General Considerations: Most areas are used for pasture or range, some areas are used for hay production. This map unit is poorly suited for most commonly grown crops. The hazard for water erosion is slight and wind erosion is severe. Depth to sand and water tables can limit most engineering uses for this map unit. Most areas are used for pasture or range, some areas are used for hay production. This map unit is poorly suited for most commonly grown crops. The hazard for water erosion is slight and wind erosion is severe. Depth to sand and water tables can limit most engineering uses for this map unit.

4005—Yaggy-Saxman complex, 0 to 2 percent slopes, occasionally flooded

Map Unit Composition

Yaggy: 60 percent
 Saxman: 30 percent
 Minor components: 10 percent

Component Descriptions

Yaggy

MLRA: 79 - Great Bend Sand Plains
Landform: Flood plain on river valley
Parent material: Loamy alluvium over sandy alluvium
Slope: 0 to 2 percent
Drainage class: Somewhat poorly 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: Occasional
Depth to seasonal water saturation: About 24 to 48 inches
Runoff class: Very low
Ecological site: Sandy Lowland (pe21-28)
Land capability (irrigated): 2e
Land capability (nonirrigated): 3e

Typical Profile:

Ap1—0 to 5 inches; fine sandy loam
 Ap2—5 to 11 inches; fine sandy loam
 2C1—11 to 14 inches; stratified very fine sandy loam to silt loam
 3C2—14 to 24 inches; fine sand
 3C3—24 to 31 inches; fine sand
 3C4—31 to 42 inches; fine sand
 3C5—42 to 53 inches; stratified gravelly coarse sand
 3C6—53 to 69 inches; stratified gravelly coarse sand to sand
 3C7—69 to 80 inches; stratified gravelly coarse sand to sand

Saxman

MLRA: 79 - Great Bend Sand Plains
Landform: Flood plain on river valley
Parent material: Sandy alluvium
Slope: 0 to 2 percent
Drainage class: Moderately well drained
Slowest permeability: Rapid (About 5.95 in/hr)
Available water capacity: Low (About 4.4 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Rare
Depth to seasonal water saturation: About 24 to 36 inches
Runoff class: Very low
Ecological site: Sandy Lowland (pe21-28)
Land capability (irrigated): 2e
Land capability (nonirrigated): 3e

Typical Profile:

Ap1—0 to 4 inches; loamy sand
 Ap2—4 to 8 inches; loamy sand
 A—8 to 13 inches; loamy sand
 AC—13 to 22 inches; loamy sand
 C1—22 to 30 inches; sand
 C2—30 to 37 inches; sand
 C3—37 to 48 inches; sand
 C4—48 to 54 inches; fine sand
 C5—54 to 80 inches; stratified gravelly coarse sand

Minor Components

Solvay

Composition: About 10 percent
Slope: 0 to 2 percent
Drainage class: Somewhat poorly drained
Ecological site: Subirrigated (pe21-28)

Kanza

Slope: 0 to 2 percent
Drainage class: Poorly drained
Ecological site: Subirrigated (pe21-28)

Ninnescah

Slope: 0 to 2 percent
Drainage class: Poorly drained
Ecological site: Subirrigated (pe21-28)

General Considerations: Most areas are used for pasture or range, some areas are used for hay production. This map unit is poorly suited for most commonly grown crops. The hazard for water erosion is slight and wind erosion is severe. Depth to sand and water tables can limit most engineering uses for this map unit.

4110—Zellmont And Poxmash sandy loams, 0 to 3 percent slopes

Map Unit Composition

Zellmont: 70 percent
Poxmash: 30 percent

Component Descriptions

Zellmont

MLRA: 80A - Central Rolling Red Prairies

Landform: Strath terrace on river valley

Parent material: Loamy alluvium over residuum weathered from permian shale

Slope: 0 to 3 percent

Depth to restrictive feature: 20 to 39 inches to bedrock (paralithic)

Drainage class: Well drained

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

Available water capacity: Low (About 4.9 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Low

Ecological site: Sandy (pe21-28)

Land capability (nonirrigated): 2e

Typical Profile:

Ap—0 to 8 inches; sandy loam
Bt1—8 to 18 inches; sandy clay loam
Bt2—18 to 26 inches; sandy clay loam
2C—26 to 32 inches; loam
Cr—32 to 80 inches; weathered bedrock

Poxmash

MLRA: 80A - Central Rolling Red Prairies

Landform: Strath terrace on river valley

Parent material: Alluvium over residuum weathered from permian shale

Slope: 0 to 3 percent

Depth to restrictive feature: 48 to 53 inches to bedrock (paralithic)

Drainage class: Well drained

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

Available water capacity: Low (About 4.9 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Low

Ecological site: Sandy (pe21-28)

Land capability (nonirrigated): 3e

Typical Profile:

Ap—0 to 5 inches; sandy loam
A—5 to 9 inches; sandy loam
Bt1—9 to 15 inches; sandy loam
Bt2—15 to 20 inches; loamy sand
C1—20 to 33 inches; sand
C2—33 to 48 inches; sand
2Cr—48 to 80 inches; weathered bedrock

Minor Components

Unnamed Wet Soils

General Considerations: Most areas are used as cropland, but some areas are in pasture or range. Some areas are also in the Conservation Reserve Program. This map unit is moderately well suited to all of the commonly grown crops. Wheat, grain sorghum, soybeans, and irrigated corn are the main crops. The hazard of wind erosion is severe and the hazard of water erosion is moderate for these soils. Ephemeral gully erosion potential is moderate for these soils. Wind and water erosion can be controlled maintaining plant residue through the use of a conservation tillage system, strip cropping, field windbreaks, contour farming, tall grass barriers, terraces and grassed waterways. The moderate water holding capacity of these soils can limit production. This problem can be minimized by increasing organic matter, leaving plant residue, and conservation tillage. In some places, soil test results may show soil reaction (pH) in the strongly acid range. Additions of lime may be required for optimum nutrient balance. The moderately rapid permeability and relatively shallow depths to bedrock can limit some of the engineering uses of these soils.

Aa—Albion sandy loam, 0 to 1 percent slopes

Map Unit Composition

Albion: 100 percent

Component Descriptions

Albion

MLRA: 79 - Great Bend Sand Plains

Landform: Paleoterrace on river valley

Parent material: Loamy alluvium

Slope: 0 to 1 percent

Drainage class: Well drained

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

Available water capacity: Low (About 5.8 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Negligible

Ecological site: Sandy (pe24-32)

Land capability (nonirrigated): 3s

Typical Profile:

H1—0 to 8 inches; sandy loam

H2—8 to 16 inches; sandy loam

H3—16 to 26 inches; coarse sandy loam

H4—26 to 60 inches;

Depth to seasonal water saturation: More than 6 feet

Runoff class: Very low

Ecological site: Sandy (pe24-32)

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 8 inches; sandy loam

H2—8 to 16 inches; sandy loam

H3—16 to 26 inches; coarse sandy loam

H4—26 to 60 inches; sand

Ac—Albion sandy loam, 3 to 6 percent slopes

Map Unit Composition

Albion: 100 percent

Component Descriptions

Albion

MLRA: 79 - Great Bend Sand Plains

Landform: Paleoterrace on river valley

Parent material: Loamy alluvium

Slope: 3 to 6 percent

Drainage class: Well drained

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

Available water capacity: Low (About 5.8 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Low

Ecological site: Sandy (pe24-32)

Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 8 inches; sandy loam

H2—8 to 16 inches; sandy loam

H3—16 to 26 inches; loamy sand

H4—26 to 60 inches; sand

Ab—Albion sandy loam, 1 to 3 percent slopes

Map Unit Composition

Albion: 100 percent

Component Descriptions

Albion

MLRA: 79 - Great Bend Sand Plains

Landform: Paleoterrace on river valley

Parent material: Loamy alluvium

Slope: 1 to 3 percent

Drainage class: Well drained

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

Available water capacity: Low (About 5.8 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Ad—Albion sandy loam, 6 to 15 percent slopes

Map Unit Composition

Albion: 100 percent

Component Descriptions

Albion

MLRA: 79 - Great Bend Sand Plains

Landform: Paleoterrace on river valley

Parent material: Loamy alluvium

Slope: 6 to 15 percent

Drainage class: Well drained

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

Available water capacity: Low (About 5.8 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: Sandy (pe24-32)

Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 8 inches; sandy loam

H2—8 to 16 inches; sandy loam

H3—16 to 26 inches; coarse sandy loam

H4—26 to 60 inches; sand

Minor Components

Unnamed Wet Soils

Phase: Sandy, Depression

Unnamed Wet Soils

Phase: Sandy, Drainageway

AED—Arents, Earthen Dam

Ba—Blanket silt loam, 0 to 1 percent slopes

Map Unit Composition

Blanket: 100 percent

Component Descriptions

Blanket

MLRA: 80A - Central Rolling Red Prairies

Landform: Paleoterrace on river valley

Parent material: Clayey alluvium

Slope: 0 to 1 percent

Drainage class: Well drained

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

Available water capacity: High (About 9.4 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Negligible

Ecological site: Loamy Upland (pe24-32)

Land capability (nonirrigated): 2c

Typical Profile:

H1—0 to 18 inches; silt loam

H2—18 to 50 inches; silty clay

H3—50 to 60 inches; silty clay loam

Minor Components

Unnamed Wet Soils

Phase: Clayey, Depression

Bb—Blanket silt loam, 1 to 3 percent slopes

Map Unit Composition

Blanket: 100 percent

Component Descriptions

Blanket

MLRA: 80A - Central Rolling Red Prairies

Landform: Paleoterrace on river valley

Parent material: Clayey alluvium

Slope: 1 to 3 percent

Drainage class: Well drained

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

Available water capacity: High (About 9.4 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Very low

Ecological site: Loamy Upland (pe24-32)

Land capability (nonirrigated): 2e

Typical Profile:

H1—0 to 18 inches; silt loam

H2—18 to 50 inches; silty clay

H3—50 to 60 inches; silty clay loam

Bc—Blanket silty clay loam, 1 to 4 percent slopes, eroded

Map Unit Composition

Blanket: 100 percent

Component Descriptions

Blanket

MLRA: 80A - Central Rolling Red Prairies

Landform: Paleoterrace on river valley

Parent material: Clayey alluvium

Slope: 1 to 4 percent

Drainage class: Well drained

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

Available water capacity: High (About 9.0 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Low

Ecological site: Loamy Upland (pe24-32)

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 5 inches; silty clay loam

H2—5 to 40 inches; silty clay

H3—40 to 60 inches; silty clay loam

Available water capacity: Moderate (About 8.3 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: Rare

Depth to seasonal water saturation: More than 6 feet

Runoff class: Negligible

Ecological site: Sandy Terrace (pe24-32)

Land capability (nonirrigated): 2e

Typical Profile:

H1—0 to 16 inches; fine sandy loam

H2—16 to 32 inches; fine sandy loam

H3—32 to 60 inches; fine sandy loam

Cb—Carwile fine sandy loam, 0 to 1 percent slopes

Map Unit Composition

Carwile: 100 percent

Component Descriptions

Carwile

MLRA: 80A - Central Rolling Red Prairies

Landform: Depression on paleoterrace on river valley

Parent material: Alluvium

Slope: 0 to 1 percent

Drainage class: Somewhat poorly drained

Slowest permeability: Slow (About 0.06 in/hr)

Available water capacity: High (About 9.4 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: About 0 to 0 inches

Runoff class: Negligible

Ecological site: Sandy (pe24-32)

Land capability (nonirrigated): 2w

Typical Profile:

H1—0 to 10 inches; fine sandy loam

H2—10 to 18 inches; clay loam

H3—18 to 36 inches; clay

H4—36 to 60 inches; sandy clay loam

Minor Components

Unnamed Wet Soils

Phase: Loamy, Depression

Ca—Canadian fine sandy loam, rarely flooded

Map Unit Composition

Canadian: 100 percent

Component Descriptions

Canadian

MLRA: 80A - Central Rolling Red Prairies

Landform: River valley, flood plain

Parent material: Alluvium

Slope: 0 to 1 percent

Drainage class: Well drained

Slowest permeability: Moderately rapid (About 1.98 in/hr)

Cc—Case-Clark clay loams, 2 to 6 percent slopes

Map Unit Composition

Case: 60 percent
Clark: 40 percent

Component Descriptions

Case

MLRA: 80A - Central Rolling Red Prairies
Landform: Paleoterrace on river valley
Parent material: Alluvium
Slope: 2 to 6 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 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: Limy Upland (pe24-32)
Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 8 inches; clay loam
H2—8 to 60 inches; clay loam

Clark

MLRA: 80A - Central Rolling Red Prairies
Landform: Paleoterrace on river valley
Parent material: Loamy alluvium
Slope: 2 to 6 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: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Limy Upland (pe24-32)
Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 11 inches; clay loam
H2—11 to 60 inches; clay loam

Cd—Case-Clark clay loams, 6 to 15 percent slopes

Map Unit Composition

Case: 60 percent
Clark: 40 percent

Component Descriptions

Case

MLRA: 80A - Central Rolling Red Prairies
Landform: Paleoterrace on river valley
Parent material: Alluvium
Slope: 6 to 15 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 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: High
Ecological site: Limy Upland (pe24-32)
Land capability (nonirrigated): 6e

Typical Profile:

H1—0 to 8 inches; clay loam
H2—8 to 60 inches; clay loam

Clark

MLRA: 80A - Central Rolling Red Prairies
Landform: Paleoterrace on river valley
Parent material: Loamy alluvium
Slope: 6 to 8 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: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Limy Upland (pe24-32)
Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 11 inches; clay loam
H2—11 to 60 inches; clay loam

Ce—Clark clay loam, 0 to 1 percent slopes

Map Unit Composition

Clark: 100 percent

Component Descriptions

Clark

MLRA: 79 - Great Bend Sand Plains

Landform: Paleoterrace on river valley

Parent material: Loamy alluvium

Slope: 0 to 1 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: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Very low

Ecological site: Limy Upland (pe24-32)

Land capability (nonirrigated): 2c

Typical Profile:

H1—0 to 11 inches; clay loam

H2—11 to 60 inches; clay loam

Cf—Clark clay loam, 1 to 4 percent slopes

Map Unit Composition

Clark: 100 percent

Component Descriptions

Clark

MLRA: 79 - Great Bend Sand Plains

Landform: Paleoterrace on river valley

Parent material: Loamy alluvium

Slope: 1 to 4 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: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Low

Ecological site: Limy Upland (pe24-32)

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 11 inches; clay loam

H2—11 to 60 inches; clay loam

Da—Dillwyn-Plevna complex, occasionally flooded

Map Unit Composition

Dillwyn: 60 percent

Plevna: 40 percent

Component Descriptions

Dillwyn

MLRA: 79 - Great Bend Sand Plains

Landform: Dune on paleoterrace on river valley, interdune on paleoterrace on river valley

Parent material: Sandy eolian deposits

Slope: 0 to 1 percent

Drainage class: Somewhat poorly drained

Slowest permeability: Rapid (About 5.95 in/hr)

Available water capacity: Low (About 4.9 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: Occasional

Depth to seasonal water saturation: About 12 to 36 inches

Runoff class: Negligible

Ecological site: Subirrigated (pe24-32)

Land capability (nonirrigated): 4w

Typical Profile:

H1—0 to 8 inches; loamy fine sand

H2—8 to 60 inches; loamy fine sand

Plevna

MLRA: 79 - Great Bend Sand Plains

Landform: Flood plain on river valley

Parent material: Alluvium

Slope: 0 to 1 percent

Drainage class: Poorly drained

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

Available water capacity: Moderate (About 6.5 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: Frequent

Depth to seasonal water saturation: About 0 to 24 inches

Runoff class: Negligible

Ecological site: Subirrigated (pe24-32)

Land capability (nonirrigated): 5w

Typical Profile:

H1—0 to 11 inches; fine sandy loam

H2—11 to 36 inches; fine sandy loam

H3—36 to 60 inches; sand

Minor Components

Unnamed Wet Soils

Phase: Sandy, Depression

Fa—Farnum sandy loam, 0 to 2 percent slopes

Map Unit Composition

Farnum: 100 percent

Component Descriptions

Farnum

MLRA: 79 - Great Bend Sand Plains

Landform: Paleoterrace on river valley

Parent material: Alluvium

Slope: 0 to 2 percent

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 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: Very low

Ecological site: Sandy (pe24-32)

Land capability (irrigated): 2e

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 16 inches; sandy loam

H2—16 to 50 inches; clay loam

H3—50 to 60 inches; clay loam

Minor Components

Carwile

Unnamed Wet Soils

Phase: Loamy, Depression

Unnamed Wet Soils

Phase: Loamy, Drainageway

Fb—Farnum loam, 0 to 1 percent slopes

Map Unit Composition

Farnum: 100 percent

Component Descriptions

Farnum

MLRA: 79 - Great Bend Sand Plains

Landform: Paleoterrace on river valley

Parent material: Alluvium

Slope: 0 to 1 percent

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 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: Very low

Ecological site: Loamy Upland (pe24-32)

Land capability (irrigated): 1

Land capability (nonirrigated): 2c

Typical Profile:

H1—0 to 13 inches; loam

H2—13 to 18 inches; loam

H3—18 to 52 inches; clay loam

H4—52 to 60 inches; fine sandy loam

Minor Components

Carwile

Unnamed Wet Soils

Phase: Loamy, Depression

Fc—Farnum loam, 1 to 3 percent slopes**Map Unit Composition**

Farnum: 100 percent

Component Descriptions**Farnum**

MLRA: 79 - Great Bend Sand Plains

Landform: Paleoterrace on river valley

Parent material: Alluvium

Slope: 1 to 3 percent

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 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: Low

Ecological site: Loamy Upland (pe24-32)

Land capability (irrigated): 2e

Land capability (nonirrigated): 2e

Typical Profile:

H1—0 to 13 inches; loam

H2—13 to 18 inches; loam

H3—18 to 52 inches; sandy clay loam

H4—52 to 60 inches; fine sandy loam

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: Medium

Ecological site: Loamy Upland (pe24-32)

Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 13 inches; loam

H2—13 to 18 inches; loam

H3—18 to 52 inches; sandy clay loam

H4—52 to 60 inches; fine sandy loam

Fe—Farnum clay loam, 2 to 6 percent slopes, eroded**Map Unit Composition**

Farnum: 100 percent

Component Descriptions**Farnum**

MLRA: 79 - Great Bend Sand Plains

Landform: Paleoterrace on river valley

Parent material: Alluvium

Slope: 2 to 6 percent

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 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 (pe24-32)

Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 8 inches; clay loam

H2—8 to 40 inches; clay loam

H3—40 to 60 inches; clay loam

Fd—Farnum loam, 3 to 6 percent slopes**Map Unit Composition**

Farnum: 100 percent

Component Descriptions**Farnum**

MLRA: 79 - Great Bend Sand Plains

Landform: Paleoterrace on river valley

Parent material: Alluvium

Slope: 3 to 6 percent

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Ff—Farnum-Natrustolls complex, 0 to 1 percent slopes

Map Unit Composition

Farnum: 60 percent
Natrustolls: 40 percent

Component Descriptions

Farnum

MLRA: 79 - Great Bend Sand Plains
Landform: Paleoterrace on river valley
Parent material: Alluvium
Slope: 0 to 1 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 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: Very low
Ecological site: Loamy Upland (pe24-32)
Land capability (nonirrigated): 4s

Typical Profile:

H1—0 to 13 inches; loam
H2—13 to 18 inches; loam
H3—18 to 52 inches; sandy clay loam
H4—52 to 60 inches; fine sandy loam

Natrustolls

MLRA: 79 - Great Bend Sand Plains
Slope: 0 to 1 percent
Drainage class: Moderately well drained
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very low
Land capability (nonirrigated): 6s

Minor Components

Unnamed Wet Soils

Phase: Loamy, Depression

Ka—Kaski loam, occasionally flooded

Map Unit Composition

Kaski: 100 percent

Component Descriptions

Kaski

MLRA: 80A - Central Rolling Red Prairies
Landform: Flood plain on river valley
Parent material: Alluvium
Slope: 0 to 1 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 10.6 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: Occasional
Depth to seasonal water saturation: More than 6 feet
Runoff class: Negligible
Ecological site: Loamy Lowland (pe24-32)
Land capability (nonirrigated): 2w

Typical Profile:

H1—0 to 28 inches; loam
H2—28 to 42 inches; loam
H3—42 to 60 inches; loam

Minor Components

Unnamed Wet Soils

Phase: Loamy, Depression

Unnamed Wet Soils

Phase: Loamy, Drainageway

Kb—Kingman silty clay loam, occasionally flooded

Map Unit Composition

Kingman: 100 percent

Component Descriptions

Kingman

MLRA: 80A - Central Rolling Red Prairies
Landform: Flood plain
Parent material: Alluvium
Slope: 0 to 2 percent
Drainage class: Poorly drained

Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 11.4 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: Occasional
Depth to seasonal water saturation: About 0 to 24 inches
Runoff class: Very low
Ecological site: Subirrigated (pe24-32)
Land capability (nonirrigated): 5w

Typical Profile:

H1—0 to 18 inches; silty clay loam
 H2—18 to 48 inches; silty clay loam
 H3—48 to 60 inches; silty clay loam

La—Lincoln loamy sand, occasionally flooded

Map Unit Composition

Lincoln: 100 percent

Component Descriptions

Lincoln

MLRA: 80A - Central Rolling Red Prairies
Landform: Flood plain on river valley
Parent material: Alluvium
Slope: 0 to 2 percent
Drainage class: Somewhat excessively drained
Slowest permeability: Rapid (About 5.95 in/hr)
Available water capacity: Low (About 3.3 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Occasional
Depth to seasonal water saturation: About 60 to 72 inches
Runoff class: Negligible
Ecological site: Sandy Lowland (pe24-32)
Land capability (nonirrigated): 6w

Typical Profile:

H1—0 to 10 inches; loamy fine sand
 H2—10 to 60 inches; stratified fine sand to clay loam

Minor Components

Unnamed Wet Soils

Phase: Sandy, Drainageway

Ma—Mclain silt loam, rarely flooded

Map Unit Composition

Mclain: 100 percent

Component Descriptions

Mclain

MLRA: 80A - Central Rolling Red Prairies
Landform: Flood plain
Parent material: Alluvium
Slope: 0 to 1 percent
Drainage class: Moderately well drained
Slowest permeability: Impermeable (About 0.00 in/hr)
Available water capacity: High (About 10.6 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: Rare
Depth to seasonal water saturation: More than 6 feet
Runoff class: Negligible
Ecological site: Loamy Terrace (pe24-32)
Land capability (nonirrigated): 1

Typical Profile:

H1—0 to 14 inches; silt loam
 H2—14 to 42 inches; silty clay loam
 H3—42 to 60 inches; silty clay loam

Minor Components

Unnamed Wet Soils

Phase: Loamy, Depression

Na—Nashville silt loam, 1 to 3 percent slopes

Map Unit Composition

Nashville: 100 percent

Component Descriptions

Nashville

MLRA: 80A - Central Rolling Red Prairies
Landform: Hillslope on upland
Parent material: Residuum
Slope: 1 to 3 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 6.1 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very low
Ecological site: Loamy Upland (pe24-32)
Land capability (nonirrigated): 2e

Typical Profile:
 H1—0 to 28 inches; silt loam
 Cr—28 to 28 inches; weathered bedrock

Nb—Nashville-Quinlan complex, 5 to 15 percent slopes

Map Unit Composition

Nashville: 60 percent
 Quinlan: 40 percent

Component Descriptions

Nashville

MLRA: 80A - Central Rolling Red Prairies
Landform: Hillslope on upland
Parent material: Residuum
Slope: 5 to 12 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 6.1 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Loamy Upland (pe24-32)
Land capability (nonirrigated): 4e

Typical Profile:
 H1—0 to 28 inches; silt loam
 Cr—28 to 28 inches; weathered bedrock

Quinlan

MLRA: 80A - Central Rolling Red Prairies
Landform: Hillslope on upland
Parent material: Residuum

Slope: 5 to 15 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Very low (About 2.5 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Shallow Prairie (pe24-32)
Land capability (nonirrigated): 6e

Typical Profile:
 H1—0 to 13 inches; loam
 Cr—13 to 13 inches; weathered bedrock

Minor Components

Unnamed Wet Soils

Phase: Loamy, Depression

Unnamed Wet Soils

Phase: Loamy, Drainageway

Oa—Wellsford clay loam, 1 to 4 percent slopes

Map Unit Composition

Owens: 100 percent

Component Descriptions

Owens

MLRA: 80A - Central Rolling Red Prairies
Landform: Hillslope on upland
Parent material: Residuum
Slope: 1 to 4 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: Very slow (About 0.00 in/hr)
Available water capacity: Very low (About 1.9 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: Red Clay Prairie (pe24-32)
Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 6 inches; clay loam
 H2—6 to 16 inches; clay
 Cr—16 to 16 inches; weathered bedrock

Pa—Pond Creek silt loam, 1 to 3 percent slopes

Map Unit Composition

Pond Creek: 100 percent

Component Descriptions

Pond Creek

MLRA: 80A - Central Rolling Red Prairies
Landform: Terrace
Parent material: Alluvium
Slope: 1 to 3 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 11.1 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Loamy Upland (pe24-32)
Land capability (nonirrigated): 2e

Typical Profile:

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

Pb—Pratt loamy fine sand, 1 to 5 percent slopes

Map Unit Composition

Pratt: 100 percent

Component Descriptions

Pratt

MLRA: 79 - Great Bend Sand Plains
Landform: Dune on paleoterrace on river valley
Parent material: Sandy eolian deposits
Slope: 3 to 8 percent
Drainage class: Well drained

Slowest permeability: Rapid (About 5.95 in/hr)
Available water capacity: Moderate (About 6.4 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Low

Ecological site: Sands (pe24-32)

Land capability (irrigated): 3e

Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 12 inches; loamy fine sand
 H2—12 to 36 inches; loamy fine sand
 H3—36 to 60 inches; loamy fine sand

Minor Components

Carwile

Unnamed Wet Soils

Phase: Sandy, Depression

Pc—Pratt-Carwile complex, 0 to 5 percent slopes

Map Unit Composition

Pratt: 60 percent

Carwile: 40 percent

Component Descriptions

Pratt

MLRA: 79 - Great Bend Sand Plains
Landform: Dune on paleoterrace on river valley
Parent material: Sandy eolian deposits
Slope: 2 to 6 percent
Drainage class: Well drained
Slowest permeability: Rapid (About 5.95 in/hr)
Available water capacity: Moderate (About 6.4 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Sands (pe24-32)
Land capability (irrigated): 3e
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 12 inches; loamy fine sand
 H2—12 to 36 inches; loamy fine sand

H3—36 to 60 inches; fine sand

Carwile

MLRA: 79 - Great Bend Sand Plains

Landform: Depression on paleoterrace on river valley

Parent material: Alluvium

Slope: 0 to 1 percent

Drainage class: Somewhat poorly drained

Slowest permeability: Slow (About 0.06 in/hr)

Available water capacity: High (About 9.4 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: About 0 to 0 inches

Runoff class: Negligible

Ecological site: Sandy (pe24-32)

Land capability (nonirrigated): 2w

Typical Profile:

H1—0 to 10 inches; fine sandy loam

H2—10 to 18 inches; sandy clay loam

H3—18 to 36 inches; clay loam

H4—36 to 60 inches; sandy clay loam

Minor Components

Unnamed Wet Soils

Phase: Sandy, Depression

Pd—Pratt-Tivoli loamy fine sands, 5 to 15 percent slopes

Map Unit Composition

Pratt: 50 percent

Tivoli: 50 percent

Component Descriptions

Pratt

MLRA: 79 - Great Bend Sand Plains

Landform: Dune on paleoterrace on river valley

Parent material: Sandy eolian deposits

Slope: 5 to 12 percent

Drainage class: Well drained

Slowest permeability: Rapid (About 5.95 in/hr)

Available water capacity: Moderate (About 6.4 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Low

Ecological site: Sands (pe24-32)

Land capability (irrigated): 3e

Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 12 inches; loamy fine sand

H2—12 to 36 inches; loamy fine sand

H3—36 to 60 inches; fine sand

Tivoli

MLRA: 79 - Great Bend Sand Plains

Landform: Dune on paleoterrace on river valley

Parent material: Sandy eolian deposits

Slope: 5 to 15 percent

Drainage class: Excessively drained

Slowest permeability: Rapid (About 5.95 in/hr)

Available water capacity: Low (About 3.3 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Low

Ecological site: Sands (pe24-32)

Land capability (nonirrigated): 7e

Typical Profile:

H1—0 to 8 inches; loamy fine sand

H2—8 to 60 inches; fine sand

Minor Components

Carwile

Unnamed Wet Soils

Phase: Sandy, Depression

Qa—Quinlan loam, 1 to 3 percent slopes

Map Unit Composition

Quinlan: 100 percent

Component Descriptions

Quinlan

MLRA: 80A - Central Rolling Red Prairies

Landform: Hillslope on upland

Parent material: Residuum

Slope: 1 to 3 percent

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

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Very low (About 2.5 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Shallow Prairie (pe24-32)
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 13 inches; loam
 Cr—13 to 13 inches; weathered bedrock

Qb—Quinlan loam, 3 to 5 percent slopes

Map Unit Composition

Quinlan: 100 percent

Component Descriptions

Quinlan

MLRA: 80A - Central Rolling Red Prairies
Landform: Hillslope on upland
Parent material: Residuum
Slope: 3 to 5 percent
Depth to restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Very low (About 2.5 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: Shallow Prairie (pe24-32)
Land capability (nonirrigated): 4e

Typical Profile:

H1—0 to 13 inches; loam
 Cr—13 to 13 inches; weathered bedrock

Minor Components

Unnamed Wet Soils

Phase: Loamy, Drainageway

Ra—Renfrow clay loam, 1 to 3 percent slopes

Map Unit Composition

Renfrow: 100 percent

Component Descriptions

Renfrow

MLRA: 80A - Central Rolling Red Prairies
Landform: Hillslope on upland
Parent material: Residuum
Slope: 0 to 3 percent
Drainage class: Well drained
Slowest permeability: Very slow (About 0.00 in/hr)
Available water capacity: Moderate (About 7.6 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Clay Upland (pe24-32)
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 8 inches; clay loam
 H2—8 to 12 inches; clay loam
 H3—12 to 50 inches; clay

Rb—Ruella clay loam, 1 to 4 percent slopes

Map Unit Composition

Ruella: 100 percent

Component Descriptions

Ruella

MLRA: 80A - Central Rolling Red Prairies
Landform: Hillslope on upland
Parent material: Alluvium
Slope: 1 to 4 percent
Depth to restrictive feature: 9 to 20 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Very low (About 2.0 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 (pe24-32)
Land capability (nonirrigated): 2e

Typical Profile:

H1—0 to 10 inches; clay loam
 H2—10 to 60 inches; clay loam

Rc—Ruella-Rock outcrop complex, 3 to 40 percent slopes

Map Unit Composition

Ruella: 60 percent
 Rock outcrop: 40 percent

Component Descriptions

Ruella

MLRA: 80A - Central Rolling Red Prairies
Landform: Hillslope on upland
Parent material: Alluvium
Slope: 3 to 6 percent
Depth to restrictive feature: 9 to 20 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Very low (About 2.0 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 (pe24-32)
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 10 inches; clay loam
 H2—10 to 60 inches; clay loam

Rock outcrop

MLRA: 80A - Central Rolling Red Prairies
Slope: 3 to 40 percent
Drainage class: Excessively drained
Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet
Runoff class: Very high
Land capability (nonirrigated): 8s

Sa—Shellabarger loamy sand, 0 to 3 percent slopes

Map Unit Composition

Shellabarger: 100 percent

Component Descriptions

Shellabarger

MLRA: 79 - Great Bend Sand Plains
Landform: Paleoterrace on river valley
Parent material: Loamy alluvium
Slope: 0 to 3 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Moderate (About 8.2 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very low
Ecological site: Sandy (pe24-32)
Land capability (nonirrigated): 2e

Typical Profile:

H1—0 to 12 inches; loamy sand
 H2—12 to 38 inches; sandy clay loam
 H3—38 to 60 inches; fine sandy loam

Sb—Shellabarger sandy loam, 1 to 3 percent slopes

Map Unit Composition

Shellabarger: 100 percent

Component Descriptions

Shellabarger

MLRA: 79 - Great Bend Sand Plains
Landform: Paleoterrace on river valley

Parent material: Loamy alluvium
Slope: 1 to 3 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 9.2 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very low
Ecological site: Sandy (pe24-32)
Land capability (nonirrigated): 2e

Typical Profile:

H1—0 to 10 inches; sandy loam
 H2—10 to 45 inches; sandy clay loam
 H3—45 to 60 inches; coarse sandy loam

Minor Components

Unnamed Wet Soils

Phase: Loamy, Depression

Sc—Shellabarger sandy loam, 3 to 6 percent slopes

Map Unit Composition

Shellabarger: 100 percent

Component Descriptions

Shellabarger

MLRA: 79 - Great Bend Sand Plains
Landform: Paleoterrace on river valley
Parent material: Loamy alluvium
Slope: 3 to 6 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 9.2 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Sandy (pe24-32)
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 10 inches; sandy loam
 H2—10 to 45 inches; sandy clay loam

H3—45 to 60 inches; coarse sandy loam

Sd—Shellabarger sandy loam, 3 to 6 percent slopes, eroded

Map Unit Composition

Shellabarger: 100 percent

Component Descriptions

Shellabarger

MLRA: 79 - Great Bend Sand Plains
Landform: Paleoterrace on river valley
Parent material: Loamy alluvium
Slope: 3 to 6 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 9.2 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Sandy (pe24-32)
Land capability (nonirrigated): 3e

Typical Profile:

H1—0 to 10 inches; sandy loam
 H2—10 to 45 inches; sandy clay loam
 H3—45 to 60 inches; coarse sandy loam

Minor Components

Unnamed Wet Soils

Phase: Loamy, Drainageway

Ta—Tivoli fine sand, 15 to 30 percent slopes

Map Unit Composition

Tivoli: 100 percent

Component Descriptions

Tivoli

MLRA: 79 - Great Bend Sand Plains
Landform: Dune on paleoterrace on river valley

Parent material: Sandy eolian deposits
Slope: 10 to 30 percent
Drainage class: Excessively drained
Slowest permeability: Rapid (About 5.95 in/hr)
Available water capacity: Very low (About 3.0 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: Choppy Sands (pe24-32)
Land capability (nonirrigated): 7e

Typical Profile:

H1—0 to 7 inches; fine sand
 H2—7 to 60 inches; fine sand

Minor Components
Plevna

Unnamed Wet Soils
Phase: Sandy, Depression

Typical Profile:

H1—0 to 12 inches; fine sandy loam
 H2—12 to 36 inches; sandy loam
 H3—36 to 60 inches; sand

Minor Components
Plevna

Unnamed Wet Soils
Phase: Sandy, Depression

Unnamed Wet Soils
Phase: Sandy, Drainageway

Za—Zenda clay loam, occasionally flooded

Map Unit Composition

Zenda: 100 percent

W—Water

Wa—Waldeck fine sandy loam, occasionally flooded

Map Unit Composition

Waldeck: 100 percent

Component Descriptions

Waldeck

MLRA: 80A - Central Rolling Red Prairies
Landform: Flood plain on river valley
Parent material: Alluvium
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Slowest permeability: Moderately rapid (About 2.00 in/hr)
Available water capacity: Moderate (About 6.9 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Occasional
Depth to seasonal water saturation: About 24 to 48 inches
Runoff class: Negligible
Ecological site: Subirrigated (pe24-32)
Land capability (nonirrigated): 3w

Component Descriptions

Zenda

MLRA: 80A - Central Rolling Red Prairies
Landform: Dune on paleoterrace on river valley
Parent material: Sandy eolian deposits
Slope: 0 to 1 percent
Drainage class: Somewhat poorly 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: About 24 to 48 inches
Runoff class: Very low
Ecological site: Subirrigated (pe24-32)
Land capability (nonirrigated): 2w

Typical Profile:

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

Minor Components
Unnamed Wet Soils
Phase: Loamy, Depression