

Soil Maps for Riverview Dairy

Google Maps

Distance from manure lagoons to the Yakima River = 1,250 feet

Distance from manure lagoons to nearest home = 500 ft



NRCS Soil Survey



NRCS Soil Map

- 18 = Cleman very fine sandy loam, 0 to 2 percent slopes
- 32 = Esquatzel silt loam, 0 to 2 percent slopes
- 34 = Fiander silt loam
- 57 = Hezel loamy fine sand, 0 to 2 percent slopes
- 58 = Hezel loamy fine sand, 2 to 15 percent slopes
- 66 = Kittitas silt loam
- 95 = Quincy loamy fine sand, 0 to 10 percent slopes
- 168 Umapine silt loam, 0 to 5 percent slopes
- 169 = Umapine silt loam, drained, 0 to 2 percent slopes
- 170 = Umapine silt loam, drained, 2 to 5 percent slopes
- 172 = Warden fine sandy loam, 0 to 2 percent slopes
- 173 = Warden fine sandy loam, 2 to 5 percent slopes
- 176 = Warden silt loam, 0 to 2 percent slopes
- 177 = Warden silt loam, 2 to 5 percent slopes
- 192 = Zillah silt loam



🗹 🖂 Soil Rating Polygons

<= 0.05
> 0.05 and <= 0.09
> 0.09 and <= 0.13
> 0.13 and <= 0.17
> 0.17 and <= 0.21
Not rated or not available</pre>



🗹 🗆 Soil Rating Polygons

- <= 6.22
- > 6.22 and <= 11.02</li>
   > 11.02 and <= 15.66</li>
   > 15.66 and <= 21.82</li>
   > 21.82 and <= 28.14</li>
   Not rated or not available



✓ □ Soil Rating Polygons
 <= 18.0000</li>
 > 18.0000 and <= 58.4105</li>
 □ > 58.4105 and <= 118.5746</li>
 □ > 118.5746 and <= 194.4179</li>
 □ > 194.4179 and <= 300.0000</li>
 □ Not rated or not available



# 🗹 🗆 Soil Rating Polygons

- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

# Yakima County Area, Washington

#### 18-Cleman very fine sandy loam, 0 to 2 percent slopes

#### Map Unit Setting

- *National map unit symbol:* 29rt
- *Elevation:* 400 to 2,000 feet
- Mean annual precipitation: 8 to 12 inches
- Mean annual air temperature: 48 to 54 degrees F
- Frost-free period: 135 to 200 days
- *Farmland classification:* Prime farmland if irrigated

#### Map Unit Composition

- Cleman and similar soils: 100 percent
- Estimates are based on observations, descriptions, and transects of the mapunit.

# **Description of Cleman**

## Setting

- *Landform:* Alluvial fans, flood plains
- Parent material: Alluvium

## Typical profile

- H1 0 to 10 inches: very fine sandy loam
- H2 10 to 40 inches: stratified loamy fine sand to silt loam
- H3 40 to 60 inches: stratified sand to loamy sand

## Properties and qualities

- *Slope:* 0 to 2 percent
- Depth to restrictive feature: 20 to 40 inches to strongly contrasting textural stratification
- Drainage class: Well drained
- *Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 1.98 in/hr)
- Depth to water table: More than 80 inches
- Frequency of flooding: None
- Frequency of ponding: None
- *Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
- Available water capacity: Low (about 5.8 inches)

## Interpretive groups

- Land capability classification (irrigated): 2e
- Land capability classification (nonirrigated): 3e
- *Hydrologic Soil Group:* B

- Ecological site: R007XY402WA LOAMY BOTTOM 6-10 PZ
- Hydric soil rating: No

# Yakima County Area, Washington

## 32—Esquatzel silt loam, 0 to 2 percent slopes

## Map Unit Setting

- National map unit symbol: 29ss
- *Elevation:* 300 to 2,900 feet
- *Mean annual precipitation:* 6 to 12 inches
- Mean annual air temperature: 48 to 54 degrees F
- Frost-free period: 130 to 200 days
- Farmland classification: Prime farmland if irrigated

## Map Unit Composition

- Esquatzel and similar soils: 100 percent
- Estimates are based on observations, descriptions, and transects of the mapunit.

## Description of Esquatzel

## Setting

- Landform: Flood plains
- Parent material: Alluvium

## **Typical profile**

- *H1 0 to 17 inches:* silt loam
- H2 17 to 60 inches: silt loam
- H3 60 to 64 inches: stratified fine sandy loam to silt loam

- Slope: 0 to 2 percent
- Depth to restrictive feature: More than 80 inches
- Drainage class: Well drained
- Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
- Depth to water table: More than 80 inches
- Frequency of flooding: None
- Frequency of ponding: None
- Calcium carbonate, maximum content: 5 percent
- *Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

• Available water capacity: Very high (about 12.6 inches)

## Interpretive groups

- Land capability classification (irrigated): 2c
- Land capability classification (nonirrigated): 3c
- Hydrologic Soil Group: B
- *Hydric soil rating:* No

## 34—Fiander silt loam

## Map Unit Setting

- National map unit symbol: 29sv
- Elevation: 700 to 900 feet
- Mean annual precipitation: 6 to 9 inches
- Mean annual air temperature: 50 to 52 degrees F
- Frost-free period: 130 to 180 days
- *Farmland classification:* Not prime farmland

## **Map Unit Composition**

- Fiander, drained, and similar soils: 85 percent
- *Minor components:* 15 percent
- Estimates are based on observations, descriptions, and transects of the mapunit.

## Description of Fiander, Drained

## Setting

- Landform: Flood plains
- Parent material: Alluvium

## **Typical profile**

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- H1 0 to 2 inches: silt loam
- H2 2 to 25 inches: silty clay loam
- H3 25 to 50 inches: silt loam
  - H4 50 to 60 inches: loamy very fine sand

- *Slope:* 0 to 3 percent
- Depth to restrictive feature: More than 80 inches
- Drainage class: Moderately well drained

- *Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)
- Depth to water table: About 6 to 36 inches
- *Frequency of flooding:* None
- *Frequency of ponding:* None
- Calcium carbonate, maximum content: 35 percent
- *Gypsum, maximum content:* 5 percent
- *Maximum salinity:* Moderately saline to strongly saline (8.0 to 16.0 mmhos/cm)
- Sodium adsorption ratio, maximum: 15.0
- *Available water capacity:* Moderate (about 8.2 inches)

#### Interpretive groups

- Land capability classification (irrigated): 4w
- Land capability classification (nonirrigated): 6s
- Hydrologic Soil Group: C/D
- Ecological site: R007XY401WA ALKALI BOTTOM 6-10 PZ
- *Hydric soil rating:* Yes

#### **Minor Components**

#### Toppenish

- Percent of map unit: 5 percent
- Landform: Depressions
- *Hydric soil rating:* Yes

#### Kittitas

- *Percent of map unit:* 5 percent
- Landform: Flood plains
- *Hydric soil rating:* Yes

#### Fiander, undrained

- *Percent of map unit:* 5 percent
- Landform: Depressions
- *Hydric soil rating:* Yes

## 57—Hezel loamy fine sand, 0 to 2 percent slopes

#### Map Unit Setting

- National map unit symbol: 29tn
- *Elevation:* 400 to 2,500 feet
- *Mean annual precipitation:* 6 to 10 inches

- Mean annual air temperature: 52 to 54 degrees F
- Frost-free period: 150 to 200 days
- *Farmland classification:* Farmland of statewide importance

#### Map Unit Composition

- *Hezel and similar soils:* 100 percent
- Estimates are based on observations, descriptions, and transects of the mapunit.

## **Description of Hezel**

## Setting

- Landform: Terraces
- Parent material: Eolian sands over silty lacustrine deposits

## **Typical profile**

- *H1 0 to 6 inches:* loamy fine sand
- *H2 6 to 22 inches:* loamy fine sand
- H3 22 to 60 inches: stratified fine sandy loam to silt loam

## Properties and qualities

- Slope: 0 to 2 percent
- Depth to restrictive feature: More than 80 inches
- Drainage class: Somewhat excessively drained
- *Capacity of the most limiting layer to transmit water (Ksat):* Moderately high (0.20 to 0.57 in/hr)
- Depth to water table: More than 80 inches
- Frequency of flooding: None
- Frequency of ponding: None
- Calcium carbonate, maximum content: 20 percent
- *Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
- Available water capacity: Moderate (about 8.7 inches)

## Interpretive groups

- Land capability classification (irrigated): 3e
- Land capability classification (nonirrigated): 6e
- Hydrologic Soil Group: C
- Ecological site: R007XY502WA SANDS 6-10 PZ
- *Hydric soil rating:* No

## 58-Hezel loamy fine sand, 2 to 15 percent slopes

# Map Unit Setting

• *National map unit symbol:* 29tp

- *Elevation:* 400 to 2,500 feet
- *Mean annual precipitation:* 6 to 10 inches
- Mean annual air temperature: 52 to 54 degrees F
- *Frost-free period:* 150 to 200 days
- *Farmland classification:* Farmland of statewide importance

#### **Map Unit Composition**

- *Hezel and similar soils:* 100 percent
- Estimates are based on observations, descriptions, and transects of the mapunit.

## **Description of Hezel**

## Setting

- Landform: Terraces
- *Parent material:* Eolian sands over silty lacustrine deposits

## **Typical profile**

- *H1 0 to 6 inches:* loamy fine sand
- *H2* 6 to 22 inches: loamy fine sand
- H3 22 to 60 inches: stratified fine sandy loam to silt loam

## Properties and qualities

- *Slope:* 2 to 15 percent
- Depth to restrictive feature: More than 80 inches
- Drainage class: Somewhat excessively drained
- *Capacity of the most limiting layer to transmit water (Ksat):* Moderately high (0.20 to 0.57 in/hr)
- Depth to water table: More than 80 inches
- Frequency of flooding: None
- Frequency of ponding: None
- *Calcium carbonate, maximum content:* 20 percent
- *Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
- Available water capacity: Moderate (about 8.7 inches)

## Interpretive groups

- Land capability classification (irrigated): 4e
- Land capability classification (nonirrigated): 6e
- *Hydrologic Soil Group:* C
- Ecological site: R007XY502WA SANDS 6-10 PZ
- *Hydric soil rating:* No

#### 66—Kittitas silt loam

#### Map Unit Setting

- National map unit symbol: 29tz
- *Elevation:* 500 to 1,100 feet
- *Mean annual precipitation:* 6 to 12 inches
- Mean annual air temperature: 48 to 52 degrees F
- *Frost-free period:* 130 to 180 days
- *Farmland classification:* Farmland of statewide importance

#### Map Unit Composition

- *Kittitas and similar soils:* 90 percent
- *Minor components:* 10 percent
- Estimates are based on observations, descriptions, and transects of the mapunit.

## Description of Kittitas

#### Setting

- Landform: Flood plains
- Parent material: Alluvium

## **Typical profile**

- H1 0 to 19 inches: silt loam
- H2 19 to 41 inches: silt loam
- H3 41 to 60 inches: stratified fine sandy loam to silty clay loam

## Properties and qualities

- *Slope:* 0 to 2 percent
- Depth to restrictive feature: More than 80 inches
- Drainage class: Somewhat poorly drained
- *Capacity of the most limiting layer to transmit water (Ksat):* Moderately high (0.20 to 0.57 in/hr)
- Depth to water table: About 0 to 6 inches
- Frequency of flooding: None
- Frequency of ponding: None
- Calcium carbonate, maximum content: 15 percent
- *Maximum salinity:* Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)
- Available water capacity: High (about 11.4 inches)

## Interpretive groups

- Land capability classification (irrigated): 4w
- Land capability classification (nonirrigated): 4w
- Hydrologic Soil Group: C/D
- *Hydric soil rating:* Yes

#### **Minor Components**

#### Toppenish

- *Percent of map unit:* 5 percent
- Landform: Depressions
- *Hydric soil rating:* Yes

## Kittitas, undrained

- Percent of map unit: 5 percent
- Landform: Flood plains
- *Hydric soil rating:* Yes

## 95-Quincy loamy fine sand, 0 to 10 percent slopes

## Map Unit Setting

- National map unit symbol: 29w0
- *Elevation:* 200 to 4,500 feet
- *Mean annual precipitation:* 6 to 12 inches
- Mean annual air temperature: 46 to 54 degrees F
- *Frost-free period:* 100 to 200 days
- Farmland classification: Farmland of statewide importance

## **Map Unit Composition**

- Quincy and similar soils: 100 percent
- Estimates are based on observations, descriptions, and transects of the mapunit.

## **Description of Quincy**

## Setting

- Landform: Terraces
- Parent material: Eolian sands

## **Typical profile**

- *H1 0 to 20 inches:* loamy fine sand
- *H2 20 to 60 inches:* sand

- *Slope:* 0 to 10 percent
- Depth to restrictive feature: More than 80 inches
- Drainage class: Excessively drained
- Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
- Depth to water table: More than 80 inches

- Frequency of flooding: None
- Frequency of ponding: None
- Calcium carbonate, maximum content: 3 percent
- *Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
- Available water capacity: Moderate (about 6.2 inches)

#### Interpretive groups

- Land capability classification (irrigated): 3s
- Land capability classification (nonirrigated): 4e
- Hydrologic Soil Group: A
- *Hydric soil rating:* No

#### 168—Umapine silt loam, 0 to 5 percent slopes

#### Map Unit Setting

- National map unit symbol: 29rd
- *Elevation:* 250 to 3,500 feet
- *Mean annual precipitation:* 6 to 12 inches
- Mean annual air temperature: 48 to 50 degrees F
- *Frost-free period:* 110 to 195 days
- *Farmland classification:* Not prime farmland

#### **Map Unit Composition**

- Umapine and similar soils: 95 percent
- *Minor components:* 5 percent
- Estimates are based on observations, descriptions, and transects of the mapunit.

#### **Description of Umapine**

#### Setting

- *Landform:* Flood plains, terraces
- Parent material: Alluvium

#### **Typical profile**

- H1 0 to 7 inches: silt loam
- H2 7 to 60 inches: silt loam

- *Slope:* 0 to 5 percent
- Depth to restrictive feature: More than 80 inches
- Drainage class: Somewhat poorly drained
- Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)

- Depth to water table: About 6 to 42 inches
- Frequency of flooding: Occasional, None
- Frequency of ponding: None
- Calcium carbonate, maximum content: 30 percent
- *Maximum salinity:* Slightly saline to moderately saline (4.0 to 8.0 mmhos/cm)
- Sodium adsorption ratio, maximum: 20.0
- Available water capacity: High (about 11.9 inches)

#### Interpretive groups

- Land capability classification (irrigated): None specified
- Land capability classification (nonirrigated): 6s
- *Hydrologic Soil Group:* C
- Ecological site: R007XY401WA ALKALI BOTTOM 6-10 PZ
- *Hydric soil rating:* No

#### **Minor Components**

#### Toppenish

- *Percent of map unit:* 5 percent
- Landform: Depressions
- *Hydric soil rating:* Yes

## 169-Umapine silt loam, drained, 0 to 2 percent slopes

## Map Unit Setting

- National map unit symbol: 29rf
- Elevation: 250 to 3,500 feet
- *Mean annual precipitation:* 6 to 12 inches
- Mean annual air temperature: 48 to 50 degrees F
- *Frost-free period:* 130 to 195 days
- *Farmland classification:* Not prime farmland

## Map Unit Composition

- Umapine, drained, and similar soils: 90 percent
- *Minor components:* 10 percent
- Estimates are based on observations, descriptions, and transects of the mapunit.

## Description of Umapine, Drained

## Setting

- *Landform:* Flood plains, terraces
- Parent material: Alluvium

#### **Typical profile**

- H1 0 to 7 inches: silt loam
- H2 7 to 60 inches: silt loam

## Properties and qualities

- *Slope:* 0 to 2 percent
- Depth to restrictive feature: More than 80 inches
- Drainage class: Somewhat poorly drained
- Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
- Depth to water table: About 24 to 48 inches
- Frequency of flooding: None
- Frequency of ponding: None
- Calcium carbonate, maximum content: 30 percent
- *Maximum salinity:* Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)
- Sodium adsorption ratio, maximum: 20.0
- Available water capacity: High (about 11.9 inches)

## Interpretive groups

- Land capability classification (irrigated): 4s
- Land capability classification (nonirrigated): 6s
- Hydrologic Soil Group: C
- *Hydric soil rating:* No

## **Minor Components**

## Toppenish

- Percent of map unit: 5 percent
- Landform: Depressions
- *Hydric soil rating:* Yes

## Kittitas

- *Percent of map unit:* 5 percent
- Landform: Flood plains
- *Hydric soil rating:* Yes

## 170-Umapine silt loam, drained, 2 to 5 percent slopes

## Map Unit Setting

- National map unit symbol: 29rh
- *Elevation:* 250 to 3,500 feet
- *Mean annual precipitation:* 6 to 12 inches

- Mean annual air temperature: 48 to 50 degrees F
- *Frost-free period:* 130 to 195 days
- *Farmland classification:* Not prime farmland

#### Map Unit Composition

- Umapine, drained, and similar soils: 95 percent
- *Minor components:* 5 percent
- Estimates are based on observations, descriptions, and transects of the mapunit.

## Description of Umapine, Drained

## Setting

- Landform: Flood plains, terraces
- Parent material: Alluvium

## **Typical profile**

- H1 0 to 7 inches: silt loam
- H2 7 to 60 inches: silt loam

## Properties and qualities

- Slope: 2 to 5 percent
- Depth to restrictive feature: More than 80 inches
- Drainage class: Somewhat poorly drained
- Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
- Depth to water table: About 24 to 48 inches
- Frequency of flooding: None
- Frequency of ponding: None
- Calcium carbonate, maximum content: 30 percent
- *Maximum salinity:* Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)
- Sodium adsorption ratio, maximum: 20.0
- Available water capacity: High (about 11.9 inches)

## Interpretive groups

- Land capability classification (irrigated): 4s
- Land capability classification (nonirrigated): 6s
- Hydrologic Soil Group: C
- *Hydric soil rating:* No

## **Minor Components**

## Toppenish

• Percent of map unit: 5 percent

- Landform: Depressions
- *Hydric soil rating:* Yes

## 172—Warden fine sandy loam, 0 to 2 percent slopes

## Map Unit Setting

- *National map unit symbol:* 29rk
- *Elevation:* 600 to 1,300 feet
- *Mean annual precipitation:* 6 to 9 inches
- Mean annual air temperature: 48 to 52 degrees F
- *Frost-free period:* 135 to 200 days
- Farmland classification: Prime farmland if irrigated

## Map Unit Composition

- *Warden and similar soils:* 100 percent
- Estimates are based on observations, descriptions, and transects of the mapunit.

## **Description of Warden**

## Setting

- Landform: Terraces
- Parent material: Loess over lacustrine deposits

## **Typical profile**

- H1 0 to 5 inches: fine sandy loam
- *H2 5 to 19 inches:* very fine sandy loam
- H3 19 to 60 inches: stratified very fine sandy loam to silt loam

## **Properties and qualities**

- Slope: 0 to 2 percent
- Depth to restrictive feature: More than 80 inches
- Drainage class: Well drained
- Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
- Depth to water table: More than 80 inches
- Frequency of flooding: None
- *Frequency of ponding:* None
- Calcium carbonate, maximum content: 30 percent
- *Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
- Available water capacity: High (about 11.4 inches)

## Interpretive groups

• Land capability classification (irrigated): 2e

- Land capability classification (nonirrigated): 6e
- Hydrologic Soil Group: B
- Ecological site: R007XY501WA SANDY 6-10 PZ
- *Hydric soil rating:* No

## 173-Warden fine sandy loam, 2 to 5 percent slopes

# Map Unit Setting

- National map unit symbol: 29rl
- *Elevation:* 600 to 1,300 feet
- *Mean annual precipitation:* 6 to 9 inches
- Mean annual air temperature: 48 to 52 degrees F
- Frost-free period: 135 to 200 days
- *Farmland classification:* Farmland of statewide importance

## Map Unit Composition

- Warden and similar soils: 95 percent
- *Minor components:* 5 percent
- Estimates are based on observations, descriptions, and transects of the mapunit.

# Description of Warden

## Setting

- Landform: Terraces
- Parent material: Loess over lacustrine deposits

## **Typical profile**

- H1 0 to 5 inches: fine sandy loam
- *H2 5 to 19 inches:* very fine sandy loam
- H3 19 to 60 inches: stratified very fine sandy loam to silt loam

- Slope: 2 to 5 percent
- Depth to restrictive feature: More than 80 inches
- Drainage class: Well drained
- Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
- Depth to water table: More than 80 inches
- Frequency of flooding: None
- Frequency of ponding: None
- Calcium carbonate, maximum content: 30 percent
- *Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

• Available water capacity: High (about 11.4 inches)

## Interpretive groups

- Land capability classification (irrigated): 2e
- Land capability classification (nonirrigated): 6e
- Hydrologic Soil Group: B
- Ecological site: R007XY501WA SANDY 6-10 PZ
- *Hydric soil rating:* No

## **Minor Components**

## Outlook

- Percent of map unit: 5 percent
- Landform: Alluvial cones
- Hydric soil rating: Yes

## 176—Warden silt loam, 0 to 2 percent slopes

## Map Unit Setting

- National map unit symbol: 29rp
- *Elevation:* 600 to 1,300 feet
- *Mean annual precipitation:* 6 to 9 inches
- Mean annual air temperature: 48 to 52 degrees F
- *Frost-free period:* 135 to 200 days
- Farmland classification: Prime farmland if irrigated

# Map Unit Composition

- Warden and similar soils: 100 percent
- Estimates are based on observations, descriptions, and transects of the mapunit.

## Description of Warden

## Setting

- Landform: Terraces
- Parent material: Loess over lacustrine deposits

## **Typical profile**

- H1 0 to 5 inches: silt loam
- H2 5 to 19 inches: silt loam
- H3 19 to 60 inches: stratified very fine sandy loam to silt loam

## Properties and qualities

• *Slope:* 0 to 2 percent

- Depth to restrictive feature: More than 80 inches
- Drainage class: Well drained
- Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
- Depth to water table: More than 80 inches
- Frequency of flooding: None
- Frequency of ponding: None
- Calcium carbonate, maximum content: 5 percent
- *Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
- Available water capacity: High (about 11.7 inches)

## Interpretive groups

- Land capability classification (irrigated): 2c
- Land capability classification (nonirrigated): 6c
- Hydrologic Soil Group: B
- Ecological site: R007XY102WA LOAMY 6-10 PZ
- Hydric soil rating: No

#### 177—Warden silt loam, 2 to 5 percent slopes

#### Map Unit Setting

- National map unit symbol: 29rq
- *Elevation:* 600 to 1,300 feet
- Mean annual precipitation: 6 to 9 inches
- Mean annual air temperature: 48 to 52 degrees F
- Frost-free period: 135 to 200 days
- *Farmland classification:* Farmland of statewide importance

#### Map Unit Composition

- Warden and similar soils: 100 percent
- Estimates are based on observations, descriptions, and transects of the mapunit.

## **Description of Warden**

#### Setting

- Landform: Terraces
- Parent material: Loess over lacustrine deposits

## **Typical profile**

- H1 0 to 5 inches: silt loam
- H2 5 to 19 inches: silt loam
- H3 19 to 60 inches: stratified very fine sandy loam to silt loam

#### Properties and qualities

- *Slope:* 2 to 5 percent
- Depth to restrictive feature: More than 80 inches
- Drainage class: Well drained
- Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
- Depth to water table: More than 80 inches
- Frequency of flooding: None
- Frequency of ponding: None
- *Calcium carbonate, maximum content:* 5 percent
- *Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
- Available water capacity: High (about 11.7 inches)

#### Interpretive groups

- Land capability classification (irrigated): 2e
- Land capability classification (nonirrigated): 6e
- Hydrologic Soil Group: B
- Ecological site: R007XY102WA LOAMY 6-10 PZ
- *Hydric soil rating:* No

#### 192—Zillah silt loam

#### Map Unit Setting

- National map unit symbol: 29s8
- *Elevation:* 600 to 1,000 feet
- Mean annual precipitation: 6 to 9 inches
- Mean annual air temperature: 46 to 50 degrees F
- *Frost-free period:* 130 to 180 days
- *Farmland classification:* Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

## Map Unit Composition

- Zillah and similar soils: 98 percent
- *Minor components:* 2 percent
- Estimates are based on observations, descriptions, and transects of the mapunit.

#### **Description of Zillah**

#### Setting

- Landform: Flood plains
- Parent material: Alluvium

## **Typical profile**

- *H1 0 to 12 inches:* silt loam
- H2 12 to 42 inches: silt loam
- *H3 42 to 60 inches:* loamy sand

## Properties and qualities

- *Slope:* 0 to 2 percent
- Depth to restrictive feature: 40 to 60 inches to strongly contrasting textural stratification
- Drainage class: Somewhat poorly drained
- Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
- Depth to water table: About 24 to 48 inches
- Frequency of flooding: None
- Frequency of ponding: None
- *Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
- Available water capacity: Moderate (about 8.4 inches)

## Interpretive groups

- Land capability classification (irrigated): 2w
- Land capability classification (nonirrigated): 6e
- Hydrologic Soil Group: C
- *Hydric soil rating:* No

## Minor Components

## Toppenish

- Percent of map unit: 1 percent
- Landform: Depressions
- *Hydric soil rating:* Yes

#### Weirman

- *Percent of map unit:* 1 percent
- Landform: Alluvial cones
- *Hydric soil rating:* Yes