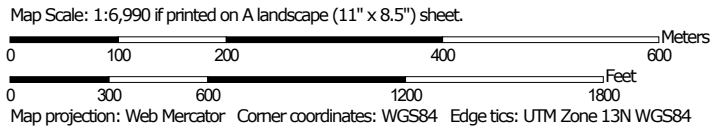


Soil Map—Weld County, Colorado, Southern Part




Soil Map may not be valid at this scale.



## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

### Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

### Water Features



Streams and Canals

### Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

### Background



Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

**Warning:** Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL:  
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Weld County, Colorado, Southern Part  
 Survey Area Data: Version 20, Aug 31, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 19, 2018—Aug 10, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
4	Aquolls and Aquepts, flooded	0.9	4.6%
32	Kim loam, 1 to 3 percent slopes	4.4	22.5%
37	Nelson fine sandy loam, 0 to 3 percent slopes	1.2	6.0%
38	Nelson fine sandy loam, 3 to 9 percent slopes	0.3	1.4%
47	Olney fine sandy loam, 1 to 3 percent slopes	10.8	55.0%
51	Otero sandy loam, 1 to 3 percent slopes	1.7	8.9%
52	Otero sandy loam, 3 to 5 percent slopes	0.3	1.7%
<b>Totals for Area of Interest</b>		<b>19.7</b>	<b>100.0%</b>

## Weld County, Colorado, Southern Part

### 4—Aquolls and Aquepts, flooded

#### Map Unit Setting

*National map unit symbol:* 3621

*Elevation:* 3,600 to 4,700 feet

*Mean annual precipitation:* 12 to 16 inches

*Mean annual air temperature:* 50 to 55 degrees F

*Frost-free period:* 100 to 165 days

*Farmland classification:* Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

#### Map Unit Composition

*Aquolls and similar soils:* 55 percent

*Aquepts, flooded, and similar soils:* 25 percent

*Minor components:* 20 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Aquolls

##### Setting

*Landform:* Drainageways, plains, depressions

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Recent alluvium

##### Typical profile

*H1 - 0 to 8 inches:* variable

*H2 - 8 to 60 inches:* stratified sandy loam to clay

##### Properties and qualities

*Slope:* 0 to 3 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Poorly drained

*Runoff class:* Very low

*Capacity of the most limiting layer to transmit water*

*(Ksat):* Moderately low to high (0.06 to 6.00 in/hr)

*Depth to water table:* About 6 to 36 inches

*Frequency of flooding:* FrequentNone

*Frequency of ponding:* None

*Calcium carbonate, maximum content:* 10 percent

*Maximum salinity:* Moderately saline to strongly saline (8.0 to 16.0 mmhos/cm)

*Sodium adsorption ratio, maximum:* 5.0

*Available water capacity:* Low (about 4.7 inches)

##### Interpretive groups

*Land capability classification (irrigated):* 6w

*Land capability classification (nonirrigated):* 6w

*Hydrologic Soil Group:* D  
*Ecological site:* R067BY035CO - Salt Meadow  
*Hydric soil rating:* Yes

### **Description of Aquepts, Flooded**

#### **Setting**

*Landform:* Stream terraces  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Recent alluvium

#### **Typical profile**

*H1 - 0 to 8 inches:* variable  
*H2 - 8 to 60 inches:* stratified sandy loam to clay

#### **Properties and qualities**

*Slope:* 0 to 3 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Poorly drained  
*Runoff class:* Very low  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to high (0.06 to 6.00 in/hr)  
*Depth to water table:* About 6 to 36 inches  
*Frequency of flooding:* FrequentNone  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 10 percent  
*Maximum salinity:* Moderately saline to strongly saline (8.0 to 16.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 5.0  
*Available water capacity:* Low (about 4.7 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* 6w  
*Land capability classification (nonirrigated):* 6w  
*Hydrologic Soil Group:* D  
*Ecological site:* R067BY038CO - Wet Meadow  
*Hydric soil rating:* Yes

### **Minor Components**

#### **Haverson**

*Percent of map unit:* 10 percent  
*Hydric soil rating:* No

#### **Thedalund**

*Percent of map unit:* 10 percent  
*Hydric soil rating:* No

## **Data Source Information**

Soil Survey Area: Weld County, Colorado, Southern Part  
Survey Area Data: Version 19, Jun 5, 2020

## Weld County, Colorado, Southern Part

### 32—Kim loam, 1 to 3 percent slopes

#### Map Unit Setting

*National map unit symbol:* 362b  
*Elevation:* 4,900 to 5,250 feet  
*Mean annual precipitation:* 13 to 17 inches  
*Mean annual air temperature:* 46 to 52 degrees F  
*Frost-free period:* 125 to 150 days  
*Farmland classification:* Prime farmland if irrigated

#### Map Unit Composition

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

#### Description of Kim

##### Setting

*Landform:* Alluvial fans, plains  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Mixed eolian deposits derived from sedimentary rock

##### Typical profile

*H1 - 0 to 12 inches:* loam  
*H2 - 12 to 40 inches:* loam  
*H3 - 40 to 60 inches:* fine sandy loam

##### Properties and qualities

*Slope:* 1 to 3 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Well drained  
*Runoff class:* Very low  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 5.95 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 15 percent  
*Available water capacity:* Moderate (about 9.0 inches)

##### Interpretive groups

*Land capability classification (irrigated):* 3e  
*Land capability classification (nonirrigated):* 4e  
*Hydrologic Soil Group:* A  
*Ecological site:* R067BY002CO - Loamy Plains  
*Hydric soil rating:* No

### **Minor Components**

#### **Otero**

*Percent of map unit:* 10 percent

*Hydric soil rating:* No

### **Data Source Information**

Soil Survey Area: Weld County, Colorado, Southern Part

Survey Area Data: Version 19, Jun 5, 2020

## Weld County, Colorado, Southern Part

### 37—Nelson fine sandy loam, 0 to 3 percent slopes

#### Map Unit Setting

*National map unit symbol:* 362h

*Elevation:* 4,800 to 5,050 feet

*Mean annual precipitation:* 13 to 15 inches

*Mean annual air temperature:* 48 to 57 degrees F

*Frost-free period:* 145 to 190 days

*Farmland classification:* Farmland of statewide importance

#### Map Unit Composition

*Nelson and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Nelson

##### Setting

*Landform:* Plains

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Residuum weathered from sandstone

##### Typical profile

*H1 - 0 to 9 inches:* fine sandy loam

*H2 - 9 to 30 inches:* fine sandy loam

*H3 - 30 to 34 inches:* weathered bedrock

##### Properties and qualities

*Slope:* 0 to 3 percent

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

*Drainage class:* Well drained

*Runoff class:* Low

*Capacity of the most limiting layer to transmit water*

*(Ksat):* Moderately low to high (0.06 to 2.00 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Calcium carbonate, maximum content:* 10 percent

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Available water capacity:* Low (about 3.7 inches)

##### Interpretive groups

*Land capability classification (irrigated):* 4e

*Land capability classification (nonirrigated):* 4e

*Hydrologic Soil Group:* B

*Ecological site:* R067BY024CO - Sandy Plains

*Hydric soil rating:* No

### **Minor Components**

#### **Thedalund**

*Percent of map unit:* 10 percent

*Hydric soil rating:* No

#### **Olney**

*Percent of map unit:* 5 percent

*Hydric soil rating:* No

## **Data Source Information**

Soil Survey Area: Weld County, Colorado, Southern Part

Survey Area Data: Version 19, Jun 5, 2020

## Weld County, Colorado, Southern Part

### 38—Nelson fine sandy loam, 3 to 9 percent slopes

#### Map Unit Setting

*National map unit symbol:* 362j  
*Elevation:* 4,800 to 5,050 feet  
*Mean annual precipitation:* 13 to 15 inches  
*Mean annual air temperature:* 48 to 57 degrees F  
*Frost-free period:* 145 to 190 days  
*Farmland classification:* Farmland of local importance

#### Map Unit Composition

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

#### Description of Nelson

##### Setting

*Landform:* Plains  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Residuum weathered from sandstone

##### Typical profile

*H1 - 0 to 9 inches:* fine sandy loam  
*H2 - 9 to 30 inches:* fine sandy loam  
*H3 - 30 to 34 inches:* weathered bedrock

##### Properties and qualities

*Slope:* 3 to 9 percent  
*Depth to restrictive feature:* 20 to 40 inches to paralithic bedrock  
*Drainage class:* Well drained  
*Runoff class:* Medium  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to high (0.06 to 2.00 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 10 percent  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Available water supply, 0 to 60 inches:* Low (about 3.7 inches)

##### Interpretive groups

*Land capability classification (irrigated):* 4e  
*Land capability classification (nonirrigated):* 6e  
*Hydrologic Soil Group:* B  
*Ecological site:* R067BY024CO - Sandy Plains  
*Hydric soil rating:* No

### **Minor Components**

#### **Thedalund**

*Percent of map unit:* 10 percent

*Hydric soil rating:* No

#### **Terry**

*Percent of map unit:* 5 percent

*Hydric soil rating:* No

## **Data Source Information**

Soil Survey Area: Weld County, Colorado, Southern Part

Survey Area Data: Version 19, Jun 5, 2020

## Weld County, Colorado, Southern Part

### 47—Olney fine sandy loam, 1 to 3 percent slopes

#### Map Unit Setting

*National map unit symbol:* 362v

*Elevation:* 4,600 to 5,200 feet

*Mean annual precipitation:* 11 to 15 inches

*Mean annual air temperature:* 46 to 54 degrees F

*Frost-free period:* 125 to 175 days

*Farmland classification:* Prime farmland if irrigated and the product of  
I (soil erodibility) x C (climate factor) does not exceed 60

#### Map Unit Composition

*Olney and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of  
the mapunit.*

#### Description of Olney

##### Setting

*Landform:* Plains

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Mixed deposit outwash

##### Typical profile

*H1 - 0 to 10 inches:* fine sandy loam

*H2 - 10 to 20 inches:* sandy clay loam

*H3 - 20 to 25 inches:* sandy clay loam

*H4 - 25 to 60 inches:* fine sandy loam

##### Properties and qualities

*Slope:* 1 to 3 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Runoff class:* Low

*Capacity of the most limiting layer to transmit water*

*(Ksat):* Moderately high to high (0.57 to 2.00 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Calcium carbonate, maximum content:* 15 percent

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0  
mmhos/cm)

*Available water capacity:* Moderate (about 7.0 inches)

##### Interpretive groups

*Land capability classification (irrigated):* 3e

*Land capability classification (nonirrigated):* 4c

*Hydrologic Soil Group:* B

*Ecological site:* R067BY024CO - Sandy Plains  
*Hydric soil rating:* No

**Minor Components**

**Zigweid**

*Percent of map unit:* 10 percent  
*Hydric soil rating:* No

**Vona**

*Percent of map unit:* 5 percent  
*Hydric soil rating:* No

**Data Source Information**

Soil Survey Area: Weld County, Colorado, Southern Part  
Survey Area Data: Version 19, Jun 5, 2020

## Weld County, Colorado, Southern Part

### 51—Otero sandy loam, 1 to 3 percent slopes

#### Map Unit Setting

*National map unit symbol:* 3630

*Elevation:* 4,700 to 5,250 feet

*Mean annual precipitation:* 12 to 15 inches

*Mean annual air temperature:* 48 to 52 degrees F

*Frost-free period:* 130 to 180 days

*Farmland classification:* Prime farmland if irrigated and the product of  
I (soil erodibility) x C (climate factor) does not exceed 60

#### Map Unit Composition

*Otero and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of  
the mapunit.*

#### Description of Otero

##### Setting

*Landform:* Plains

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Eolian deposits and/or mixed outwash

##### Typical profile

*H1 - 0 to 12 inches:* sandy loam

*H2 - 12 to 60 inches:* fine sandy loam

##### Properties and qualities

*Slope:* 1 to 3 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Runoff class:* Very low

*Capacity of the most limiting layer to transmit water*

*(Ksat):* Moderately high to high (0.57 to 5.95 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Calcium carbonate, maximum content:* 10 percent

*Maximum salinity:* Nonsaline to slightly saline (0.0 to 4.0  
mmhos/cm)

*Available water capacity:* Moderate (about 7.7 inches)

##### Interpretive groups

*Land capability classification (irrigated):* 3e

*Land capability classification (nonirrigated):* 4e

*Hydrologic Soil Group:* A

*Ecological site:* R067BY024CO - Sandy Plains

*Hydric soil rating:* No

### **Minor Components**

#### **Kim**

*Percent of map unit:* 10 percent

*Hydric soil rating:* No

#### **Vona**

*Percent of map unit:* 5 percent

*Hydric soil rating:* No

## **Data Source Information**

Soil Survey Area: Weld County, Colorado, Southern Part

Survey Area Data: Version 19, Jun 5, 2020

## Weld County, Colorado, Southern Part

### 52—Otero sandy loam, 3 to 5 percent slopes

#### Map Unit Setting

*National map unit symbol:* 3631

*Elevation:* 4,700 to 5,250 feet

*Mean annual precipitation:* 12 to 15 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

*Otero and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Otero

##### Setting

*Landform:* Plains

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Eolian deposits and/or mixed outwash

##### Typical profile

*H1 - 0 to 12 inches:* sandy loam

*H2 - 12 to 60 inches:* fine sandy loam

##### Properties and qualities

*Slope:* 3 to 5 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Runoff class:* Very low

*Capacity of the most limiting layer to transmit water*

*(Ksat):* Moderately high to high (0.57 to 5.95 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Calcium carbonate, maximum content:* 10 percent

*Maximum salinity:* Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)

*Available water capacity:* Moderate (about 7.7 inches)

##### Interpretive groups

*Land capability classification (irrigated):* 3e

*Land capability classification (nonirrigated):* 4e

*Hydrologic Soil Group:* A

*Ecological site:* R067BY024CO - Sandy Plains

*Hydric soil rating:* No

### **Minor Components**

#### **Kim**

*Percent of map unit:* 12 percent

*Hydric soil rating:* No

#### **Vona**

*Percent of map unit:* 3 percent

*Hydric soil rating:* No

## **Data Source Information**

Soil Survey Area: Weld County, Colorado, Southern Part

Survey Area Data: Version 19, Jun 5, 2020