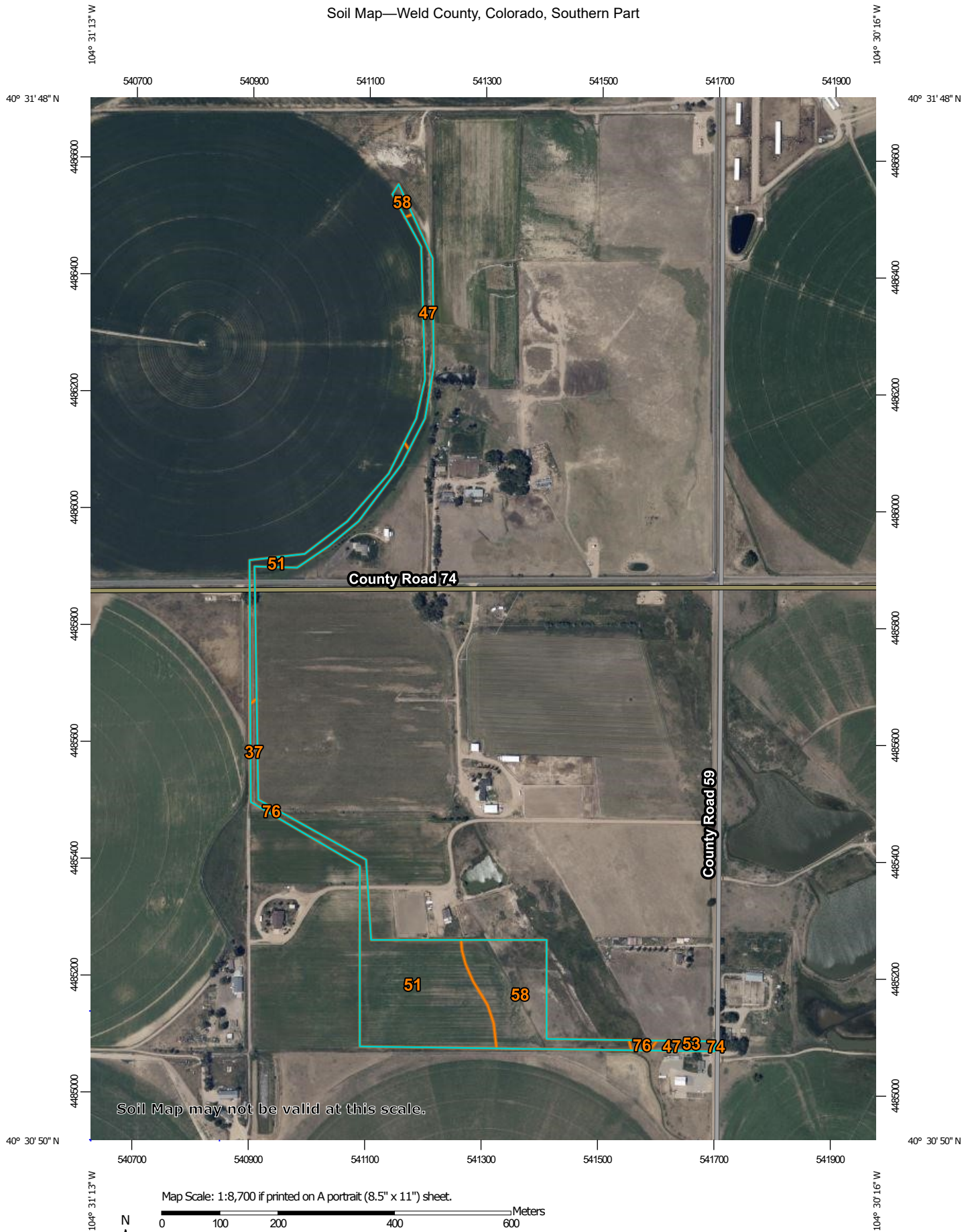


Soil Map—Weld County, Colorado, Southern Part



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 19, Jun 5, 2020

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
37	Nelson fine sandy loam, 0 to 3 percent slopes	0.6	2.7%
47	Olney fine sandy loam, 1 to 3 percent slopes	1.8	8.4%
51	Otero sandy loam, 1 to 3 percent slopes	12.2	57.9%
53	Otero sandy loam, 5 to 9 percent slopes	0.0	0.1%
58	Shingle loam, 1 to 3 percent slopes	6.1	29.0%
74	Vona loamy sand, 5 to 9 percent slopes	0.2	0.8%
76	Vona sandy loam, 1 to 3 percent slopes	0.2	1.1%
Totals for Area of Interest		21.1	100.0%

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

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

53—Otero sandy loam, 5 to 9 percent slopes

Map Unit Setting

National map unit symbol: 3632

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: Not prime farmland

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: 5 to 9 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 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): 4e

Land capability classification (nonirrigated): 6e

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

Cushman

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

58—Shingle loam, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: 3637

Elevation: 4,850 to 5,200 feet

Mean annual precipitation: 10 to 13 inches

Mean annual air temperature: 46 to 48 degrees F

Frost-free period: 110 to 140 days

Farmland classification: Not prime farmland

Map Unit Composition

Shingle and similar soils: 85 percent

Minor components: 15 percent

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

Description of Shingle

Setting

Landform: Plains

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Residuum weathered from shale

Typical profile

H1 - 0 to 6 inches: loam

H2 - 6 to 18 inches: clay loam

H3 - 18 to 22 inches: unweathered bedrock

Properties and qualities

Slope: 1 to 3 percent

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

Natural drainage class: Well drained

Runoff class: Low

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: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 15 percent

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water storage in profile: Low (about 3.3 inches)

Interpretive groups

Land capability classification (irrigated): 6s

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: D

Ecological site: Shaly Plains (R067BY045CO)

Hydric soil rating: No

Minor Components

Renohill

Percent of map unit: 6 percent

Hydric soil rating: No

Terry

Percent of map unit: 5 percent

Hydric soil rating: No

Ulm

Percent of map unit: 4 percent

Hydric soil rating: No

Data Source Information

Soil Survey Area: Weld County, Colorado, Southern Part

Survey Area Data: Version 17, Sep 10, 2018

Weld County, Colorado, Southern Part

74—Vona loamy sand, 5 to 9 percent slopes

Map Unit Setting

National map unit symbol: 2x0j9

Elevation: 4,100 to 5,200 feet

Mean annual precipitation: 12 to 17 inches

Mean annual air temperature: 46 to 52 degrees F

Frost-free period: 130 to 155 days

Farmland classification: Not prime farmland

Map Unit Composition

Vona and similar soils: 85 percent

Minor components: 15 percent

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

Description of Vona

Setting

Landform: Hills, hillslopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Linear, convex

Across-slope shape: Linear, convex

Parent material: Eolian sands

Typical profile

A - 0 to 7 inches: loamy sand

Bt1 - 7 to 14 inches: sandy loam

Bt2 - 14 to 20 inches: sandy loam

Bk - 20 to 45 inches: sandy loam

C - 45 to 80 inches: loamy sand

Properties and qualities

Slope: 5 to 9 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): High
(2.00 to 6.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 10 percent

Salinity, maximum in profile: Nonsaline (0.1 to 1.0 mmhos/cm)

Available water storage in profile: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): 6e

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: A
Ecological site: Deep Sand (R067BY015CO)
Hydric soil rating: No

Minor Components

Ascalon

Percent of map unit: 5 percent
Landform: Interfluves
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Sandy Plains (R067BY024CO)
Hydric soil rating: No

Manter

Percent of map unit: 5 percent
Landform: Interfluves, hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Ecological site: Sandy Plains (R067BY024CO)
Hydric soil rating: No

Olneest

Percent of map unit: 3 percent
Landform: Interfluves, hills
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Interfluve, base slope
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: Sandy Plains (R067BY024CO)
Hydric soil rating: No

Valent

Percent of map unit: 2 percent
Landform: Dunes
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, side slope, nose slope
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Ecological site: Deep Sand (R067BY015CO)
Hydric soil rating: No

Data Source Information

Soil Survey Area: Weld County, Colorado, Southern Part
Survey Area Data: Version 17, Sep 10, 2018

Weld County, Colorado, Southern Part

76—Vona sandy loam, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: 363w

Elevation: 4,600 to 5,200 feet

Mean annual precipitation: 13 to 15 inches

Mean annual air temperature: 48 to 55 degrees F

Frost-free period: 130 to 160 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Vona and similar soils: 85 percent

Minor components: 15 percent

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

Description of Vona

Setting

Landform: Plains, terraces

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Alluvium and/or eolian deposits

Typical profile

H1 - 0 to 6 inches: sandy loam

H2 - 6 to 28 inches: fine sandy loam

H3 - 28 to 60 inches: sandy loam

Properties and qualities

Slope: 1 to 3 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

Runoff class: Very low

Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 6.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 15 percent

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 4.0 mmhos/cm)

Available water storage in profile: Moderate (about 6.8 inches)

Interpretive groups

Land capability classification (irrigated): 3e

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: A

Ecological site: Sandy plains (R067BY024CO)

Minor Components

Remmit

Percent of map unit: 9 percent

Olney

Percent of map unit: 3 percent

Julesburg

Percent of map unit: 3 percent

Data Source Information

Soil Survey Area: Weld County, Colorado, Southern Part
Survey Area Data: Version 13, Sep 23, 2014