
DUST MITIGATION PLAN

Wavetech  **Helium, Inc.**

1 Wavetech FPI Burlington Farms 43-2

Sec. 2 T12S R43W (NE/4 SE/4)

Cheyenne County, Colorado

Surface: Fee

Submitted as an accompaniment to the Form 2A Application
and consistent with the requirements of Rule 427.a.

November 9, 2022

Wavetech Helium, Inc. Cheyenne County, Colorado

Dust Mitigation Plan

Project Summary:

Wavetech Helium, Inc.'s ("Wavetech's") proposed 1 Wavetech FPI Burlington Farms 43-2 "Location" is in Sec. 2 T12S R43W in Cheyenne County, Colorado. Wavetech plans to drill and test this conventional well which will produce helium containing natural gas, water and possibly oil. All gas production will go directly to the existing Ladder Creek Pipeline gathering system at the tie-in point in Sec. 2 T12S R43W (SE/4). The Ladder Creek Pipeline is operated by Tumbleweed Midstream. The gas processing facility will be on lands outside of this Oil and Gas Development Plan. This well will be drilled, perforated, and tested. The proposed location is fee surface and fee minerals with a total pad disturbance of ±3.4 acres. The graded site elevation is expected to be approximately 4,138'. No federal surface or minerals are involved in this project. All operations would be conducted in compliance with all federal, state, and local applicable laws, rules, and regulations.

Plan:

Project Overview:

Wavetech's Dust Mitigation Plan is intended to facilitate compliance with the applicable regulations of the Colorado Oil and Gas Conservation Commission, the Colorado Department of Public Health and Environment and Cheyenne County.

Wavetech's development of the 1 Wavetech FPI Burlington Farms 43-2 ("Location") requires earth disturbing activities and travel on unpaved roads which has the potential to produce fugitive dust emissions.

Dust associated with the Location activities and traffic on roads will be minimized throughout all phases such that there are minimal visible dust emissions from the Location or associated roads to the maximum extent practicable given wind and other weather conditions.

Any chemical application will have Safety Data Sheets on location.

Compliance with Rule 427.a.

1. Wellpad soil types:
 - 20 - Keith-Ulysses silt loams, 1 to 4 percent slopes
 - 21 - Kim loam, 1 to 3 percent slopes, eroded
 - 38 - Satanta loam, 0 to 3 percent slopes

Access Road soil types:

- 19 - Keith-Richfield silt loams, 0 to 2 percent slopes
- 21 - Kim loam, 1 to 3 percent slopes, eroded
- 23 - Kim-Canyon loams, 2 to 5 percent slopes
- 37 - Sampson loam, 0 to 2 percent slopes
- 38 - Satanta loam, 0 to 3 percent slopes
- 39 - Satanta-Colby complex, 3 to 5 percent slopes
- 53 - Weld silt loam, 0 to 3 percent slopes

2. Proposed vehicle speed limit: 20 MPH or less on roads; 5 MPH or less on the Location.
3. Total disturbed area:
 - Wellpad: 3.4 acres
 - Access Road: 9.3 acres.
 - Pipeline: The existing pipeline will not require any additional disturbance.

Total Acres of disturbance: 12.7 acres

4. Access roads will not be paved. During the drilling and testing phase, the new access road will be minimally upgraded to allow for construction and if needed emergency vehicles. If the well proves to be commercial, road will be crowned (with a minimum of 4 inches of gravel) and ditched, as agreed to by the private surface owner. Road surfacing material will consist of limestone, scoria or river rock or as agreed upon by the private surface owner and will be sourced as locally as possible to minimize travel distance.
5. Number of truck trips during the Construction, Drilling, Completion and Production stages:

Phase of Development	Monthly Truck Trips	Post Construction/Drilling Yearly Truck Trips
Construction (Wellpad & Access)	15	NA
Drilling Operations	222	NA
Completion/Equipment Installation	24	NA
Production/Daily Operations	38	456
Total Truck Trips	299	456

Traffic counts are approximate, based on round trips, and may vary due to circumstances.

6. Plan for Suppressing Fugitive Dust Caused by Wind:

- Stop work orders will be issued during high wind conditions when possible with contiguous activities on location (sustained winds of 25 MPH or greater).
- Regular road maintenance will be implemented to mitigate fugitive dust.
- Avoid unnecessary work on dust generating on high wind days.
- Natural or artificial windbreaks may be utilized as appropriate.
- Utilize gravel in high wind areas on specific portions of roads and wellpads.

7. Best Management Practices:

- The wellpad will be constructed to a minimum size to accommodate all equipment but allowing for maximum safety precautions.
- Utilize existing vegetation, trees slash or brush piles to cover disturbed areas not used for vehicle traffic.
- Application of fresh water during dry season.
- Operations will be confined to the wellpad working surface.
- Continuous monitoring of disturbed areas to evaluate additional BMPs needed.
- Fresh water application to disturbed areas during construction.
- Fresh water or magnesium chloride application to graveled surfaced of the Location and associated roads.
- Speed limit signs will be posted per surface owner agreement.
- Contractors will be notified of speed limits if no signs are posted.
- Regular road maintenance such as grading and adding additional gravel as needed.

Cheyenne County, Colorado

19—Keith-Richfield silt loams, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2s7w6

Elevation: 3,940 to 4,590 feet

Mean annual precipitation: 15 to 24 inches

Mean annual air temperature: 50 to 57 degrees F

Frost-free period: 140 to 190 days

Farmland classification: Prime farmland if irrigated

Map Unit Composition

Keith and similar soils: 50 percent

Richfield and similar soils: 30 percent

Minor components: 20 percent

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

Description of Keith

Setting

Landform: Plains

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Interfluve

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Loess

Typical profile

Ap - 0 to 6 inches: silt loam

Bt1 - 6 to 10 inches: silty clay loam

Bt2 - 10 to 25 inches: silty clay loam

C - 25 to 79 inches: silt loam

Properties and qualities

Slope: 0 to 2 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 (0.20 to 0.60 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: Very high (about 12.6 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: R067BY002CO - Loamy Plains
Hydric soil rating: No

Description of Richfield

Setting

Landform: Plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess

Typical profile

Ap - 0 to 6 inches: silt loam
Bt1 - 6 to 18 inches: silty clay loam
Bt2 - 18 to 24 inches: silty clay loam
Bk - 24 to 79 inches: silt loam

Properties and qualities

Slope: 0 to 2 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 (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 14 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0
mmhos/cm)
Available water supply, 0 to 60 inches: Very high (about 12.6
inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: R067BY002CO - Loamy Plains
Hydric soil rating: No

Minor Components

Goshen

Percent of map unit: 10 percent
Landform: Swales
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope

Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R067BY002CO - Loamy Plains
Hydric soil rating: No

Ulysses

Percent of map unit: 5 percent
Landform: Rises
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R067BY002CO - Loamy Plains
Hydric soil rating: No

Satanta

Percent of map unit: 5 percent
Landform: Plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R067BY002CO - Loamy Plains
Hydric soil rating: No

Data Source Information

Soil Survey Area: Cheyenne County, Colorado
Survey Area Data: Version 23, Aug 31, 2021

Cheyenne County, Colorado

20—Keith-Ulysses silt loams, 1 to 4 percent slopes

Map Unit Setting

National map unit symbol: 2tv5w

Elevation: 3,840 to 4,720 feet

Mean annual precipitation: 14 to 16 inches

Mean annual air temperature: 50 to 54 degrees F

Frost-free period: 130 to 170 days

Farmland classification: Prime farmland if irrigated

Map Unit Composition

Keith and similar soils: 45 percent

Ulysses and similar soils: 30 percent

Minor components: 25 percent

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

Description of Keith

Setting

Landform: Plains

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Interfluve

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Loess

Typical profile

Ap - 0 to 6 inches: silt loam

Bt1 - 6 to 10 inches: silty clay loam

Bt2 - 10 to 25 inches: silty clay loam

C - 25 to 79 inches: silt loam

Properties and qualities

Slope: 1 to 2 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 (0.20 to 0.60 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 8 percent

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

Available water supply, 0 to 60 inches: Very high (about 12.6 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: R072XY100KS - Loamy Tableland
Hydric soil rating: No

Description of Ulysses

Setting

Landform: Hillslopes
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess

Typical profile

Ap - 0 to 3 inches: silt loam
Bw - 3 to 8 inches: silt loam
Bk - 8 to 13 inches: silt loam
C - 13 to 79 inches: silt loam

Properties and qualities

Slope: 2 to 4 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 (0.60 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: 6 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0
mmhos/cm)
Available water supply, 0 to 60 inches: Very high (about 12.7
inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: R072XY100KS - Loamy Tableland
Hydric soil rating: No

Minor Components

Colby

Percent of map unit: 10 percent
Landform: Hillslopes
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Nose slope

Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R072XY101KS - Limy Slopes
Hydric soil rating: No

Goshen

Percent of map unit: 5 percent
Landform: Swales
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R072XY117KS - Tableland Swale
Hydric soil rating: No

Richfield

Percent of map unit: 5 percent
Landform: Rises
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R072XY100KS - Loamy Tableland
Hydric soil rating: No

Wiley

Percent of map unit: 5 percent
Landform: Plains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R072XY100KS - Loamy Tableland
Hydric soil rating: No

Data Source Information

Soil Survey Area: Cheyenne County, Colorado
Survey Area Data: Version 23, Aug 31, 2021

Cheyenne County, Colorado

21—Kim loam, 1 to 3 percent slopes, eroded

Map Unit Setting

National map unit symbol: 3547
Elevation: 4,500 to 5,900 feet
Mean annual precipitation: 13 to 15 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 135 to 150 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

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

Description of Kim

Setting

Landform: Plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium and/or eolian deposits

Typical profile

A - 0 to 7 inches: loam
C - 7 to 60 inches: clay 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 (0.60 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: 20 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.6 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: R067BY002CO - Loamy Plains
Hydric soil rating: No

Minor Components

Fort collins

Percent of map unit: 10 percent

Stoneham

Percent of map unit: 5 percent

Data Source Information

Soil Survey Area: Cheyenne County, Colorado

Survey Area Data: Version 23, Aug 31, 2021

Cheyenne County, Colorado

23—Kim-Canyon loams, 2 to 5 percent slopes

Map Unit Setting

National map unit symbol: 3549

Elevation: 3,000 to 5,900 feet

Mean annual precipitation: 13 to 19 inches

Mean annual air temperature: 46 to 55 degrees F

Frost-free period: 120 to 150 days

Farmland classification: Not prime farmland

Map Unit Composition

Kim and similar soils: 40 percent

Canyon and similar soils: 20 percent

Minor components: 40 percent

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

Description of Kim

Setting

Landform: Hills

Landform position (three-dimensional): Side slope, crest

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Alluvium and/or eolian deposits

Typical profile

A - 0 to 9 inches: loam

C - 9 to 60 inches: clay loam

Properties and qualities

Slope: 2 to 5 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 (0.60 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: 20 percent

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

Available water supply, 0 to 60 inches: High (about 9.6 inches)

Interpretive groups

Land capability classification (irrigated): 2e

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: B

Ecological site: R067BY002CO - Loamy Plains

Hydric soil rating: No

Description of Canyon

Setting

Landform: Hills

Landform position (three-dimensional): Side slope, crest

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Residuum

Typical profile

A - 0 to 3 inches: loam

C - 3 to 13 inches: gravelly loam

Cr - 13 to 17 inches: weathered bedrock

Properties and qualities

Slope: 2 to 5 percent

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

Drainage class: Well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water

(Ksat): Moderately high (0.20 to 0.60 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: Very low (about 1.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: D

Ecological site: R067BY060CO - Limestone Breaks

Hydric soil rating: No

Minor Components

Stoneham

Percent of map unit: 15 percent

Satanta

Percent of map unit: 10 percent

Wiley

Percent of map unit: 10 percent

Rock outcrop

Percent of map unit: 5 percent

Data Source Information

Soil Survey Area: Cheyenne County, Colorado

Survey Area Data: Version 23, Aug 31, 2021

Cheyenne County, Colorado

37—Sampson loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 354s
Elevation: 3,800 to 5,100 feet
Mean annual precipitation: 13 to 17 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 140 to 170 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Sampson and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sampson

Setting

Landform: Drainageways, swales
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Calcareous, medium-textured alluvium

Typical profile

A - 0 to 5 inches: loam
Bt - 5 to 30 inches: clay loam
C - 30 to 78 inches: loam

Properties and qualities

Slope: 0 to 2 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 (0.60 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 supply, 0 to 60 inches: High (about 9.8 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 3c
Hydrologic Soil Group: B
Ecological site: R067BY036CO - Overflow
Hydric soil rating: No

Minor Components

Satanta

Percent of map unit: 10 percent

Goshen

Percent of map unit: 10 percent

Glenberg

Percent of map unit: 5 percent

Data Source Information

Soil Survey Area: Cheyenne County, Colorado
Survey Area Data: Version 23, Aug 31, 2021

Cheyenne County, Colorado

38—Satanta loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 354t
Elevation: 3,000 to 6,500 feet
Mean annual precipitation: 15 to 25 inches
Mean annual air temperature: 45 to 57 degrees F
Frost-free period: 130 to 200 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

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

Description of Satanta

Setting

Landform: Paleoterraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Typical profile

A - 0 to 8 inches: loam
Bt - 8 to 16 inches: clay loam
Bk - 16 to 60 inches: loam

Properties and qualities

Slope: 0 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 (0.60 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
Available water supply, 0 to 60 inches: High (about 9.8 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: R067BY002CO - Loamy Plains
Hydric soil rating: No

Minor Components

Ascalon

Percent of map unit: 5 percent

Kim

Percent of map unit: 5 percent

Data Source Information

Soil Survey Area: Cheyenne County, Colorado

Survey Area Data: Version 23, Aug 31, 2021

Cheyenne County, Colorado

39—Satanta-Colby complex, 3 to 5 percent slopes

Map Unit Setting

National map unit symbol: 354v
Elevation: 3,000 to 6,500 feet
Mean annual precipitation: 12 to 25 inches
Mean annual air temperature: 45 to 57 degrees F
Frost-free period: 130 to 200 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Satanta and similar soils: 50 percent
Colby and similar soils: 20 percent
Minor components: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Satanta

Setting

Landform: Paleoterraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Typical profile

A - 0 to 8 inches: loam
Bt - 8 to 16 inches: clay loam
Bk - 16 to 60 inches: loam

Properties and qualities

Slope: 3 to 5 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 (0.60 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
Available water supply, 0 to 60 inches: High (about 9.8 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: R067BY002CO - Loamy Plains
Hydric soil rating: No

Description of Colby

Setting

Landform: Hills
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess

Typical profile

A - 0 to 3 inches: silt loam
C - 3 to 60 inches: silt loam

Properties and qualities

Slope: 3 to 5 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
Available water supply, 0 to 60 inches: High (about 10.8 inches)

Interpretive groups

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

Minor Components

Manter

Percent of map unit: 15 percent

Sampson

Percent of map unit: 15 percent

Data Source Information

Soil Survey Area: Cheyenne County, Colorado
Survey Area Data: Version 23, Aug 31, 2021

Cheyenne County, Colorado

53—Weld silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2x0hx
Elevation: 3,600 to 6,000 feet
Mean annual precipitation: 12 to 18 inches
Mean annual air temperature: 46 to 54 degrees F
Frost-free period: 115 to 155 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Weld and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Weld

Setting

Landform: Interfluves
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Calcareous loess

Typical profile

Ap - 0 to 3 inches: silt loam
Bt1 - 3 to 11 inches: silty clay
Bt2 - 11 to 15 inches: silty clay
Btk - 15 to 21 inches: silty clay
Bk - 21 to 31 inches: silt loam
C - 31 to 80 inches: silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
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 content: 14 percent
Maximum salinity: Nonsaline to very slightly saline (0.1 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 5.0
Available water supply, 0 to 60 inches: High (about 11.7 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 3c
Hydrologic Soil Group: C
Ecological site: R067BY002CO - Loamy Plains
Hydric soil rating: No

Minor Components

Colby

Percent of map unit: 7 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R067BY002CO - Loamy Plains
Hydric soil rating: No

Adena

Percent of map unit: 5 percent
Landform: Interfluves
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R067BY002CO - Loamy Plains
Hydric soil rating: No

Keith

Percent of map unit: 5 percent
Landform: Interfluves
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R067BY002CO - Loamy Plains
Hydric soil rating: No

Rago, rarely flooded

Percent of map unit: 2 percent
Landform: Drainageways
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R067BY036CO - Overflow
Hydric soil rating: No

Pleasant, ponded

Percent of map unit: 1 percent
Landform: Closed depressions, playas
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R067BY010CO - Closed Upland Depression

Hydric soil rating: Yes

Data Source Information

Soil Survey Area: Cheyenne County, Colorado
Survey Area Data: Version 23, Aug 31, 2021