

## Arapahoe County, Colorado

### BuE—Bresser-Stapleton sandy loams, 9 to 20 percent slopes

#### Map Unit Setting

*National map unit symbol:* 34y4

*Elevation:* 5,300 to 6,800 feet

*Mean annual precipitation:* 12 to 16 inches

*Mean annual air temperature:* 46 to 52 degrees F

*Frost-free period:* 135 to 170 days

*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Bresser and similar soils:* 41 percent

*Stapleton and similar soils:* 39 percent

*Minor components:* 20 percent

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

#### Description of Bresser

##### Setting

*Landform:* Drainageways, stream terraces

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Noncalcareous sandy alluvium and/or noncalcareous sandy eolian deposits

##### Typical profile

*H1 - 0 to 7 inches:* sandy loam

*H2 - 7 to 18 inches:* sandy clay loam

*H3 - 18 to 28 inches:* gravelly sandy loam

*H4 - 28 to 60 inches:* gravelly loamy coarse sand

##### Properties and qualities

*Slope:* 9 to 15 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 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:* 10 percent

*Available water supply, 0 to 60 inches:* Moderate (about 6.1 inches)

##### Interpretive groups

*Land capability classification (irrigated):* 6e

*Land capability classification (nonirrigated):* 6e

*Hydrologic Soil Group:* B  
*Ecological site:* R049XB210CO - Sandy Foothill  
*Hydric soil rating:* No

## **Description of Stapleton**

### **Setting**

*Landform:* Hills, ridges  
*Landform position (two-dimensional):* Summit, shoulder  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Arkosic sandstone

### **Typical profile**

*H1 - 0 to 6 inches:* sandy loam  
*H2 - 6 to 19 inches:* gravelly sandy loam  
*H3 - 19 to 23 inches:* weathered bedrock

### **Properties and qualities**

*Slope:* 9 to 20 percent  
*Depth to restrictive feature:* 10 to 20 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  
*Available water supply, 0 to 60 inches:* Very low (about 2.0 inches)

### **Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 6e  
*Hydrologic Soil Group:* D  
*Ecological site:* R049XB210CO - Sandy Foothill  
*Hydric soil rating:* No

## **Minor Components**

### **Buick**

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

### **Litle**

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

### **Renohill**

*Percent of map unit:* 5 percent

*Hydric soil rating:* No

## Data Source Information

Soil Survey Area: Arapahoe County, Colorado  
Survey Area Data: Version 17, Aug 31, 2021

## Arapahoe County, Colorado

### RtE—Renohill-Little-Thedalund complex, 9 to 30 percent slopes

#### Map Unit Setting

*National map unit symbol:* 34z4

*Elevation:* 3,600 to 6,200 feet

*Mean annual precipitation:* 11 to 16 inches

*Mean annual air temperature:* 46 to 52 degrees F

*Frost-free period:* 100 to 170 days

*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Renohill and similar soils:* 40 percent

*Little and similar soils:* 32 percent

*Thedalund and similar soils:* 20 percent

*Minor components:* 8 percent

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

#### Description of Renohill

##### Setting

*Landform:* Drainageways

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Loam clayey

##### Typical profile

*H1 - 0 to 3 inches:* loam

*H2 - 3 to 15 inches:* clay

*H3 - 15 to 24 inches:* clay loam

*H4 - 24 to 28 inches:* unweathered bedrock

##### Properties and qualities

*Slope:* 9 to 30 percent

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

*Drainage class:* Well drained

*Runoff class:* High

*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:* 15 percent

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

*Available water supply, 0 to 60 inches:* Low (about 4.1 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 6e  
*Hydrologic Soil Group:* D  
*Ecological site:* R049XB208CO - Clayey Foothill  
*Hydric soil rating:* No

## Description of Little

### Setting

*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Eolian deposits

### Typical profile

*H1 - 0 to 3 inches:* silty clay loam  
*H2 - 3 to 30 inches:* silty clay  
*H3 - 30 to 34 inches:* weathered bedrock

### Properties and qualities

*Slope:* 5 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 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:* 15 percent  
*Gypsum, maximum content:* 2 percent  
*Maximum salinity:* Very slightly saline to moderately saline (2.0 to 8.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 5.0  
*Available water supply, 0 to 60 inches:* Low (about 4.9 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 4e  
*Hydrologic Soil Group:* D  
*Ecological site:* R049XB208CO - Clayey Foothill  
*Hydric soil rating:* No

## Description of Thedalund

### Setting

*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Interbedded residuum weathered from sandstone and shale

### Typical profile

*H1 - 0 to 5 inches:* clay loam  
*H2 - 5 to 23 inches:* loam  
*H3 - 23 to 27 inches:* weathered bedrock

### **Properties and qualities**

*Slope:* 9 to 30 percent

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

*Drainage class:* Well drained

*Runoff class:* High

*Capacity of the most limiting layer to transmit water*

*(Ksat):* Moderately low to moderately high (0.06 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:* 15 percent

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

*Available water supply, 0 to 60 inches:* Low (about 4.2 inches)

### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 6e

*Hydrologic Soil Group:* C

*Ecological site:* R049XB208CO - Clayey Foothill

*Hydric soil rating:* No

### **Minor Components**

#### **Buick**

*Percent of map unit:* 5 percent

*Hydric soil rating:* No

#### **Tassel**

*Percent of map unit:* 3 percent

*Hydric soil rating:* No

## **Data Source Information**

Soil Survey Area: Arapahoe County, Colorado

Survey Area Data: Version 17, Aug 31, 2021

## Arapahoe County, Colorado

### FoC—Fondis-Colby silt loams, 3 to 5 percent slopes

#### Map Unit Setting

*National map unit symbol:* 34yl

*Elevation:* 4,700 to 6,200 feet

*Mean annual precipitation:* 12 to 16 inches

*Mean annual air temperature:* 46 to 52 degrees F

*Frost-free period:* 150 to 170 days

*Farmland classification:* Prime farmland if irrigated

#### Map Unit Composition

*Fondis and similar soils:* 65 percent

*Colby and similar soils:* 25 percent

*Minor components:* 10 percent

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

#### Description of Fondis

##### Setting

*Landform:* Drainageways

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Silty and/or loamy

##### Typical profile

*H1 - 0 to 5 inches:* silt loam

*H2 - 5 to 17 inches:* clay

*H3 - 17 to 60 inches:* clay 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 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:* 15 percent

*Available water supply, 0 to 60 inches:* High (about 10.8 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 3c

*Hydrologic Soil Group:* C

*Ecological site:* R049XB202CO - Loamy Foothill

*Hydric soil rating:* No

## Description of Colby

### Setting

*Landform:* Ridges

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Fine-loamy eolian deposits and/or fine-silty eolian deposits

### Typical profile

*H1 - 0 to 4 inches:* silt loam

*H2 - 4 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:* 20 percent

*Available water supply, 0 to 60 inches:* High (about 10.2 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 3c

*Hydrologic Soil Group:* B

*Ecological site:* R049XB202CO - Loamy Foothill

*Hydric soil rating:* No

## Minor Components

### Weld

*Percent of map unit:* 6 percent

*Hydric soil rating:* No

### Ft collins

*Percent of map unit:* 4 percent

*Hydric soil rating:* No

## Data Source Information

Soil Survey Area: Arapahoe County, Colorado

Survey Area Data: Version 18, Sep 1, 2022



## Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
BuE	Bresser-Stapleton sandy loams, 9 to 20 percent slopes	B	6.2	8.3%
FoC	Fondis-Colby silt loams, 3 to 5 percent slopes	C	7.3	9.7%
RtE	Renohill-Little-Thedalund complex, 9 to 30 percent slopes	D	61.1	81.9%
<b>Totals for Area of Interest</b>			<b>74.5</b>	<b>100.0%</b>

## Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

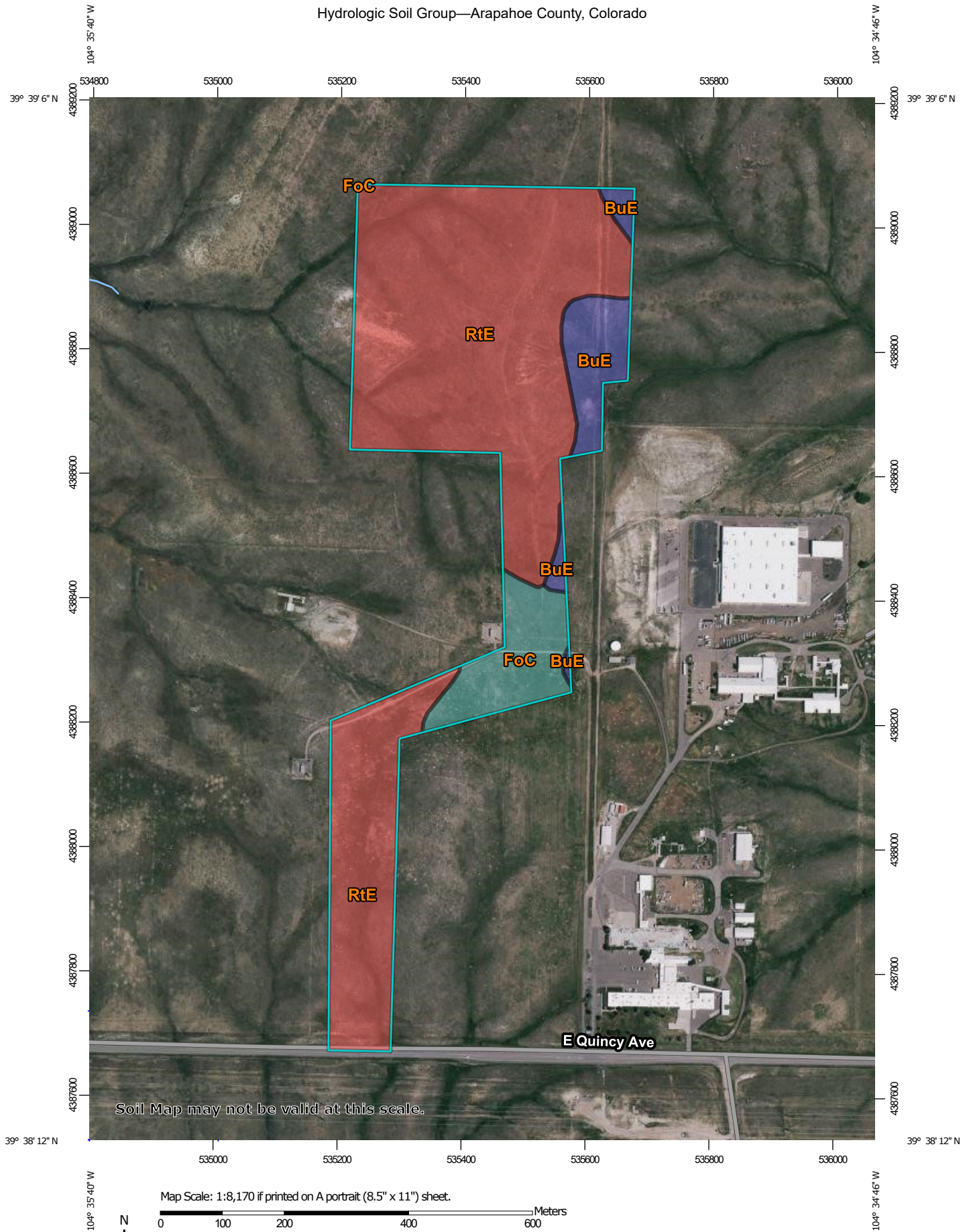
## Rating Options

*Aggregation Method:* Dominant Condition

*Component Percent Cutoff:* None Specified

*Tie-break Rule:* Higher









Hydrologic Soil Group—Arapahoe County, Colorado



**MAP LEGEND****Area of Interest (AOI)**
 Area of Interest (AOI)
**Soils****Soil Rating Polygons**





-  A
-  A/D
-  B
-  B/D
-  C
-  C/D
-  D
-  Not rated or not available


**Soil Rating Lines**






-  A
-  A/D
-  B
-  B/D
-  C
-  C/D
-  D
-  Not rated or not available


**Soil Rating Points**

-  A
-  A/D
-  B
-  B/D

-  C
-  C/D
-  D
-  Not rated or not available

**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 1:20,000.

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: Arapahoe County, Colorado  
Survey Area Data: Version 18, Sep 1, 2022

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

Date(s) aerial images were photographed: Jun 9, 2021—Jun 12, 2021

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.