



Aota Technical, LLC
 CPX Piceance Holdings, LLC
 Tepee Park Ranch
 Temporary Water Support Pad 25B
Soil Unit Map
 Garfield County
 SW1/4SE1/4 Sec. 25, T7S R94W, 6th P.M.
 Date
 6/3/22

- Legend**
- Existing Off-location Flowlines
 - Oil and Gas Location
 - Working Pad Surface
 - Forest Service Jurisdiction
 - Parcels
 - Perennial Stream
 - Intermittent Stream
 - Forest Service Road
 - Private Road
 - Private Road Reroute and Access
 - Reclaimed Private Road
 - NRCS Soil Survey**
 - Soil Map Unit

- Soil Map Unit Description**
- 104A: Haplocryolls-Cryaquolls complex, 0 to 15 percent slopes
 - 220B: Angostura family, till substratum, 5 to 40 percent slopes
 - 338B: Wetopa-Doughspon-Echemoor families complex, 5 to 40 percent slopes
 - 449C: Tampico-Echemoor-Eyre families complex, 30 to 65 percent slopes

0 100 200 300 400
 Feet

Data Source:
 COGCC GIS Online
 Natural Resources Conservation Service, Web Soil Survey
 U.S. Geologic Survey, National Hydrography Dataset

Holy Cross Area, Colorado, Parts of Eagle, Garfield, Mesa, Pitkin, and Summit Counties

220B—Angostura family, till substratum, 5 to 40 percent slopes

Map Unit Setting

National map unit symbol: 1jh94
Elevation: 8,990 to 10,990 feet
Mean annual precipitation: 20 to 40 inches
Mean annual air temperature: 32 to 40 degrees F
Frost-free period: 30 to 80 days
Farmland classification: Not prime farmland

Map Unit Composition

Angostura family, till substratum, and similar soils: 95 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Angostura Family, Till Substratum

Setting

Landform: Moraines
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Till derived from igneous and sedimentary rock

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A1 - 2 to 3 inches: loam
A2 - 3 to 9 inches: gravelly silt loam
E1 - 9 to 17 inches: very cobbly silt loam
E2 - 17 to 22 inches: very cobbly fine sandy loam
Bt/E - 22 to 33 inches: extremely cobbly sandy clay loam
Bt1 - 33 to 42 inches: extremely cobbly clay loam
Bt2 - 42 to 59 inches: very cobbly clay loam

Properties and qualities

Slope: 5 to 40 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 (0.21 to 0.71 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: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): 7e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C

Ecological site: F048AY918CO - Spruce-Fir Woodland
Other vegetative classification: Subalpine fir - Engelmann spruce/
myrtle whortleberry (ABLA-PIEN/VAMY2) (C0320)
Hydric soil rating: No

Data Source Information

Soil Survey Area: Holy Cross Area, Colorado, Parts of Eagle, Garfield, Mesa, Pitkin, and Summit Counties
Survey Area Data: Version 4, Sep 2, 2021

Holy Cross Area, Colorado, Parts of Eagle, Garfield, Mesa, Pitkin, and Summit Counties

338B—Wetopa-Doughspon-Echemoor families complex, 5 to 40 percent slopes

Map Unit Setting

National map unit symbol: 1jhcg
Elevation: 8,000 to 10,000 feet
Mean annual precipitation: 20 to 30 inches
Mean annual air temperature: 36 to 40 degrees F
Frost-free period: 60 to 80 days
Farmland classification: Not prime farmland

Map Unit Composition

Wetopa family and similar soils: 40 percent
Doughspon family and similar soils: 30 percent
Echemoor family and similar soils: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wetopa Family

Setting

Landform: Landslides on mountain slopes
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Colluvium derived from sandstone and shale

Typical profile

Oi - 0 to 0 inches: slightly decomposed plant material
A - 0 to 13 inches: silty clay loam
Bt1 - 13 to 17 inches: silty clay loam
Bt2 - 17 to 20 inches: silty clay loam
Bt3 - 20 to 45 inches: silty clay
BCt - 45 to 60 inches: cobbly silty clay loam

Properties and qualities

Slope: 5 to 40 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.07 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 11.1 inches)

Interpretive groups

Land capability classification (irrigated): 7e
Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: D
Ecological site: F048AY449CO - Aspen Woodland
Other vegetative classification: Quaking aspen/mountain snowberry (POTR5/SYOR2) (D0511)
Hydric soil rating: No

Description of Doughspon Family

Setting

Landform: Landslides on mountain slopes
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Colluvium derived from sandstone and shale

Typical profile

Oi - 0 to 0 inches: slightly decomposed plant material
A1 - 0 to 4 inches: loam
A2 - 4 to 14 inches: cobbly silt loam
Bt1 - 14 to 19 inches: very cobbly silty clay loam
Bt2 - 19 to 30 inches: very cobbly clay loam
Bc - 30 to 60 inches: very cobbly clay

Properties and qualities

Slope: 5 to 40 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.07 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 6.5 inches)

Interpretive groups

Land capability classification (irrigated): 7e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Ecological site: F048AY449CO - Aspen Woodland
Other vegetative classification: Quaking aspen/mountain snowberry (POTR5/SYOR2) (D0511)
Hydric soil rating: No

Description of Echemoor Family

Setting

Landform: Landslides on mountain slopes
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Colluvium over residuum weathered from shale

Typical profile

Oe - 0 to 0 inches: moderately decomposed plant material

A1 - 0 to 6 inches: silt loam
A2 - 6 to 17 inches: silt loam
ABt - 17 to 22 inches: clay loam
Bt - 22 to 34 inches: sandy clay loam
Cr - 34 to 60 inches: bedrock

Properties and qualities

Slope: 5 to 40 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.00 to 0.28 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: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): 7e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Ecological site: F048AY449CO - Aspen Woodland
Other vegetative classification: Quaking aspen/mountain snowberry (POTR5/SYOR2) (D0511)
Hydric soil rating: No

Data Source Information

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Survey Area Data: Version 4, Sep 2, 2021

Holy Cross Area, Colorado, Parts of Eagle, Garfield, Mesa, Pitkin, and Summit Counties

449C—Tampico-Echemoor-Eyre families complex, 30 to 65 percent slopes

Map Unit Setting

National map unit symbol: 1jhg3
Elevation: 8,990 to 10,500 feet
Mean annual precipitation: 20 to 30 inches
Mean annual air temperature: 36 to 40 degrees F
Frost-free period: 60 to 80 days
Farmland classification: Not prime farmland

Map Unit Composition

Tampico family and similar soils: 50 percent
Echemoor family and similar soils: 35 percent
Eyre family and similar soils: 15 percent
*Estimates are based on observations, descriptions, and transects of
the mapunit.*

Description of Tampico Family

Setting

Landform: Landslides on mountain slopes
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Colluvium over residuum weathered from
sandstone

Typical profile

O_i - 0 to 1 inches: slightly decomposed plant material
E₁ - 1 to 4 inches: loam
E₂ - 4 to 14 inches: clay loam
B_w - 14 to 19 inches: sandy clay loam
C - 19 to 24 inches: sandy clay loam
Cr - 24 to 60 inches: bedrock

Properties and qualities

Slope: 30 to 65 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (K_{sat}): Low to
moderately high (0.00 to 0.28 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: Low (about 4.4 inches)

Interpretive groups

Land capability classification (irrigated): 7e
Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: C
Ecological site: F048AY449CO - Aspen Woodland
Other vegetative classification: Quaking aspen/mountain
snowberry (POTR5/SYOR2) (D0511)
Hydric soil rating: No

Description of Echemoor Family

Setting

Landform: Landslides on mountain slopes
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Colluvium over residuum weathered from shale

Typical profile

Oe - 0 to 0 inches: moderately decomposed plant material
A1 - 0 to 6 inches: silt loam
A2 - 6 to 17 inches: silt loam
ABt - 17 to 22 inches: clay loam
Bt - 22 to 34 inches: sandy clay loam
Cr - 34 to 60 inches: bedrock

Properties and qualities

Slope: 30 to 65 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Low to
moderately high (0.00 to 0.28 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: Moderate (about 6.6
inches)

Interpretive groups

Land capability classification (irrigated): 7e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Ecological site: F048AY449CO - Aspen Woodland
Other vegetative classification: Quaking aspen/mountain
snowberry (POTR5/SYOR2) (D0511)
Hydric soil rating: No

Description of Eyre Family

Setting

Landform: Landslides on mountain slopes
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Colluvium over residuum weathered from
sandstone

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material

A1 - 1 to 6 inches: gravelly loam
A2 - 6 to 13 inches: very gravelly loam
Bw - 13 to 17 inches: extremely cobbly sandy clay loam
R - 17 to 60 inches: bedrock

Properties and qualities

Slope: 30 to 65 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.01 to 0.57 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 2.2 inches)

Interpretive groups

Land capability classification (irrigated): 7e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Ecological site: F048AY924CO - Douglas Fir/Gambel Oak
Other vegetative classification: Douglas-fir/Gambel oak (PSME/
QUGA) (C1214)
Hydric soil rating: No

Data Source Information

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