



United States  
Department of  
Agriculture



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In cooperation with  
Colorado Agricultural  
Experiment Station, the  
Spanish Peaks-Purgatoire  
River Conservation District,  
the Branson-Trinchera  
Conservation District, the  
United States Forest  
Service, and the state of  
Colorado

received 10/27/2014

Project 8737

DOC 2142484

Pit Facility 285604

E&P waste Facility 292833

# Soil Survey of Las Animas County Area, Colorado, parts of Huerfano and Las Animas Counties



*Typical Profile:*

- A—0 to 16 inches; loam
- AB—16 to 23 inches; sandy clay loam
- Bt—23 to 38 inches; gravelly clay loam
- BC—38 to 64 inches; very gravelly loam

**Minor Components**

Groomer and similar soils

*Composition:* About 10 percent

*Landscape:* Lava plateaus

*Landform:* Fan remnants

*Position on landform:* Rise

*Slope:* 6 to 9 percent

*Aspect:* All aspects

*Shape (down/across):* Linear/linear

*Drainage class:* Well drained

*Ecological site:* Subalpine Loam

*Distinguishing characteristics:* These soils average more than 35 percent clay content.

Embargo and similar soils

*Composition:* About 5 percent

*Landscape:* Lava plateaus

*Landform:* Fans

*Position on landform:* Rise

*Slope:* 3 to 9 percent

*Aspect:* All aspects

*Shape (down/across):* Linear/linear

*Depth to restrictive feature:* 20 to 40 inches to bedrock, lithic

*Drainage class:* Well drained

*Ecological site:* Subalpine Loam

*Distinguishing characteristics:* These soils are 20 to 40 inches deep to basalt bedrock and average more than 35 percent clay content.

**Major Uses**

Rangeland, wildlife habitat

**DFV—Fuera-Dargol-Vamer complex, 10 to 45 percent slopes****Map Unit Setting**

*Major Land Resource Area:* 49

*Elevation:* 7,500 to 9,000 feet (2,286 to 2,743 meters)

*Mean annual precipitation:* 17 to 22 inches (432 to 559 millimeters)

*Mean annual air temperature:* 43 to 46 degrees F. (6.0 to 8.0 degrees C.)

*Frost-free period:* 70 to 100 days

*Note:* Located on steep north-facing hillsides in the foothills.

**Map Unit Composition**

Fuera and similar soils: 35 percent

Dargol and similar soils: 30 percent  
 Vamer and similar soils: 20 percent  
 Minor components: 15 percent

### Component Descriptions

#### **Fuera soils**

*Landscape:* Foothills

*Landform:* Hills

*Position on landform:* Side slope, base slope

*Parent material:* Alluvium and colluvium derived from shale and siltstone

*Slope:* 10 to 45 percent

*Aspect:* West to east

*Shape (down/across):* Linear/convex

*Surface fragments:* About 8 percent subrounded gravel

*Depth class:* Very deep

*Drainage class:* Well drained

*Slowest permeability:* .06 to 0.2 in/hr (slow)

*Available water capacity:* About 7.3 inches (moderate)

*Shrink-swell potential:* About 3.8 percent (moderate)

*Calcium carbonate maximum:* None

*Gypsum maximum:* None

*Salinity maximum:* About 2 mmhos/cm (nonsaline)

*Sodium adsorption ratio maximum:* About 0 (nonsodic)

*Ecological site:* Pseudotsuga menziesii-Pinus ponderosa/Festuca arizonica

*Potential native vegetation:*

Common trees: ponderosa pine, Rocky Mountain Douglas fir, white fir

Other plants: mountain muhly, Arizona fescue, nodding brome, Parry's danthonia, bluegrass, common juniper, elk sedge, Gambel's oak, kinnikinnick, pine dropseed, prairie junegrass

*Land capability subclass (nonirrigated):* 7e

*Typical Profile:*

Oi—0 to 2 inches; slightly decomposed plant material

E—2 to 7 inches; cobbly loam

E and Bt—7 to 10 inches; cobbly loam

E and Bt—10 to 11 inches; cobbly clay loam

Bt1—11 to 27 inches; cobbly clay

Bt2—27 to 47 inches; cobbly clay

C—47 to 60 inches; cobbly clay

#### **Dargol soils**

*Landscape:* Foothills

*Landform:* Hills

*Position on landform:* Head slope, side slope

*Parent material:* Slope alluvium and residuum weathered from shale and siltstone

*Slope:* 10 to 45 percent

*Aspect:* West to east

*Shape (down/across):* Linear/linear

*Surface fragments:* About 15 percent subrounded gravel, about 4 percent subrounded cobbles, about 1 percent subrounded stones

*Depth class:* Moderately deep

*Depth to restrictive feature:* 20 to 40 inches to bedrock, lithic

*Drainage class:* Well drained

*Slowest permeability:* .001 to .06 in/hr (very slow)

*Available water capacity:* About 4.7 inches (low)

*Shrink-swell potential:* About 6.1 percent (high)

*Calcium carbonate maximum:* None

*Gypsum maximum:* None

*Salinity maximum:* About 2 mmhos/cm (nonsaline)

*Sodium adsorption ratio maximum:* About 0 (nonsodic)

*Ecological site:* Pseudotsuga menziesii-Pinus ponderosa/Festuca arizonica

*Potential native vegetation:*

Common trees: ponderosa pine, Rocky Mountain Douglas fir, white fir

Other plants: mountain muhly, Arizona fescue, nodding brome, Parry's danthonia, common juniper, elk sedge, Gambel's oak, kinnikinnick, pine dropseed, prairie junegrass, western wheatgrass

*Land capability subclass (nonirrigated):* 7e

*Typical Profile:*

Oe—0 to 1 inch; moderately decomposed plant material

E—1 inch to 6 inches; loam

Bt1—6 to 10 inches; clay

Bt2—10 to 29 inches; clay

R—29 to 60 inches; bedrock

### **Vamer soils**

*Landscape:* Foothills

*Landform:* Hills

*Position on landform:* Interfluve, base slope

*Parent material:* Slope alluvium and residuum weathered from siltstone over sandstone

*Slope:* 10 to 40 percent

*Aspect:* West to east

*Shape (down/across):* Linear/linear

*Surface fragments:* About 2 percent subangular cobbles, about 1 percent subangular stones

*Depth class:* Shallow

*Depth to restrictive feature:* 10 to 20 inches to bedrock, lithic

*Drainage class:* Well drained

*Slowest permeability:* .06 to 0.2 in/hr (slow)

*Available water capacity:* About 2.6 inches (very low)

*Shrink-swell potential:* About 6.0 percent (moderate)

*Calcium carbonate maximum:* None

*Gypsum maximum:* None

*Salinity maximum:* About 2 mmhos/cm (nonsaline)

*Sodium adsorption ratio maximum:* About 0 (nonsodic)

*Ecological site:* Pinus ponderosa-Juniperus scopulorum/Quercus gambelii

*Potential native vegetation:*

Common trees: ponderosa pine, Rocky Mountain Douglas fir, white fir

Other plants: mountain muhly, Arizona fescue, nodding brome, western wheatgrass, Gambel's oak, little bluestem, Parry's danthonia, pine dropseed, prairie junegrass

*Land capability subclass (nonirrigated):* 7e

*Typical Profile:*

Oi—0 to 1 inch; slightly decomposed plant material

A—1 inch to 3 inches; fine sandy loam

E—3 to 7 inches; fine sandy loam

Bt—7 to 16 inches; clay  
R—16 to 60 inches; bedrock

### Minor Components

#### Rock outcrop

*Composition:* About 5 percent  
*Landscape:* Foothills  
*Landform:* Scarps  
*Slope:* 15 to 45 percent  
*Aspect:* All aspects  
*Depth to restrictive feature:* 0 inches to bedrock, lithic  
*Distinguishing characteristics:* Rock outcrop consists of areas of exposed sandstone or siltstone from the Raton formation.

#### Saruche and similar soils

*Composition:* About 5 percent  
*Landscape:* Foothills  
*Landform:* Hills  
*Position on landform:* Head slope, side slope  
*Slope:* 10 to 45 percent  
*Aspect:* All aspects  
*Shape (down/across):* Convex/convex  
*Depth to restrictive feature:* 8 to 20 inches to bedrock, paralithic  
*Drainage class:* Well drained  
*Ecological site:* Shrubby Foothill  
*Distinguishing characteristics:* These soils are less than 20 inches deep to soft shale bedrock.

#### Stout and similar soils

*Composition:* About 5 percent  
*Landscape:* Foothills  
*Landform:* Hills  
*Position on landform:* Interfluvium, head slope  
*Slope:* 10 to 30 percent  
*Aspect:* All aspects  
*Shape (down/across):* Linear/linear  
*Depth to restrictive feature:* 10 to 20 inches to bedrock, lithic  
*Drainage class:* Somewhat excessively drained  
*Ecological site:* Pinus ponderosa-Juniperus scopulorum/Quercus gambelii  
*Distinguishing characteristics:* These soils are similar to Vamer but have less than 35 percent clay content and more sand in the profile.

### Major Uses

Woodland, livestock grazing, wildlife habitat

## DH—Davtone-Histic Cryaquolls complex, 2 to 5 percent slopes

### Map Unit Setting

*Major Land Resource Area:* 48A  
*Elevation:* 8,000 to 10,000 feet (2,438 to 3,048 meters)  
*Mean annual precipitation:* 20 to 26 inches (508 to 660 millimeters)

Table 22.--Chemical soil properties--continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum	Salinity	Sodium adsorp- tion ratio
	Inches	meq/100 g	meq/100 g	pH	Pct.	Pct.	mmhos/cm	
De:								
Davtone-----	0-16	9.4-22	---	6.1-7.3	0	0	0	0
	16-23	17-23	---	6.1-7.3	0	0	0	0
	23-38	16-27	---	6.6-7.3	0	0	0	0
	38-64	11-21	---	6.6-7.3	0	0	0	0
DFV:								
Fuera-----	0-2	50-90	30-60	5.6-6.5	0	0	0.0-2.0	0
	2-7	15-22	---	6.1-7.3	0	0	0	0
	7-10	14-30	---	6.1-7.3	0	0	0	0
	10-11	14-30	---	6.1-7.3	0	0	0	0
	11-27	29-44	---	6.1-7.3	0	0	0	0
	27-47	29-44	---	6.1-7.3	0	0	0	0
	47-60	23-37	---	6.1-7.8	0	0	0	0
Dargol-----	0-1	50-90	30-60	5.6-6.5	0	0	0.0-2.0	0
	1-6	17-22	---	5.6-6.5	0	0	0	0
	6-10	27-41	---	5.6-6.5	0	0	0	0
	10-29	26-40	---	5.6-6.5	0	0	0	0
	29-60	---	---	---	---	---	---	---
Vamer-----	0-1	50-90	30-60	5.6-6.5	0	0	0.0-2.0	0
	1-3	11-18	---	6.1-7.3	0	0	0	0
	3-7	11-18	---	6.1-7.3	0	0	0	0
	7-16	6.0-27	---	6.1-7.3	0	0	0	0
	16-60	---	---	---	---	---	---	---