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



- A2—6 to 17 inches; very gravelly fine sandy loam
- Bw1—17 to 30 inches; very cobbly sandy loam
- Bw2—30 to 40 inches; very cobbly sandy loam
- C—40 to 60 inches; extremely cobbly coarse sandy loam

### Minor Components

#### Mirror and similar soils

- Composition:* About 10 percent
- Landscape:* Mountains
- Landform:* Mountain slopes
- Position on landform:* Mountainflank, upper third
- Slope:* 5 to 40 percent
- Aspect:* Northwest to south
- Shape (down/across):* Linear/convex
- Depth to restrictive feature:* 20 to 40 inches to bedrock, lithic
- Drainage class:* Well drained
- Ecological site:* Alpine Slopes
- Distinguishing characteristics:* These soils are 20 to 40 inches deep to igneous bedrock.

#### Rock outcrop

- Composition:* About 5 percent
- Landscape:* Mountains
- Landform:* Scarps
- Slope:* 15 to 40 percent
- Aspect:* All aspects
- Depth to restrictive feature:* 0 inches to bedrock, lithic
- Distinguishing characteristics:* Rock outcrop consists of areas of exposed monzonite and diorite.

### Major Uses

Grazing land, wildlife habitat

## MG—Tercio-Graneros complex, 15 to 40 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)
- Mean annual air temperature:* 38 to 42 degrees F. (3.3 to 5.8 degrees C.)
- Frost-free period:* 40 to 60 days
- Note:* Located near Tercio, Torres, and Cucharas Pass in western part of the county.

### Map Unit Composition

- Tercio and similar soils: 60 percent
- Graneros and similar soils: 30 percent
- Minor components: 10 percent

### Component Descriptions

#### Tercio soils

- Landscape:* Mountains
- Landform:* Mountain slopes

*Position on landform:* Mountainflank

*Parent material:* Colluvium and residuum weathered from shale and siltstone

*Slope:* 15 to 40 percent

*Aspect:* Northwest to southwest

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

*Surface fragments:* About 1 percent cobbles

*Depth class:* Very deep

*Drainage class:* Well drained

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

*Available water capacity:* About 7.6 inches (moderate)

*Shrink-swell potential:* About 3.0 percent (moderate)

*Calcium carbonate maximum:* None

*Gypsum maximum:* None

*Salinity maximum:* About 0 mmhos/cm (nonsaline)

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

*Ecological site:* Pseudotsuga menziesii-Abies concolor/Quercus gambelii-

Symphoricarpos albus/Festuca arizonica-Carex geyeri

*Potential native vegetation:*

Common trees: white fir, Rocky Mountain Douglas fir, Engelmann's spruce

Other plants: Thurber's fescue, elk sedge, Parry's danthonia, Arizona fescue, mountain brome, buffaloberry, common juniper, whortleleaf snowberry, kinnikinnick, rose

*Land capability subclass (nonirrigated):* 7e

*Typical Profile:*

Oi—0 to 2 inches; slightly decomposed plant material

E—2 to 10 inches; cobbly loam

E/B—10 to 16 inches; very cobbly clay loam

Bt1—16 to 30 inches; gravelly clay

Bt2—30 to 38 inches; cobbly clay

BC—38 to 60 inches; cobbly clay loam

### **Graneros soils**

*Landscape:* Mountains

*Landform:* Mountain slopes

*Position on landform:* Mountainflank

*Parent material:* Alluvium and residuum weathered from shale and siltstone

*Slope:* 15 to 40 percent

*Aspect:* Northwest to south

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

*Surface fragments:* About 5 percent subrounded stones

*Depth class:* Moderately deep

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

*Drainage class:* Well drained

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

*Available water capacity:* About 4.9 inches (low)

*Shrink-swell potential:* About 4.2 percent (moderate)

*Calcium carbonate maximum:* None

*Gypsum maximum:* None

*Salinity maximum:* About 0 mmhos/cm (nonsaline)

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

*Ecological site:* Pseudotsuga menziesii-Abies concolor/Quercus gambelii-

Symphoricarpos albus/Festuca arizonica-Carex geyeri

*Potential native vegetation:*

Common trees: white fir, Rocky Mountain Douglas fir, Engelmann's spruce  
 Other plants: Thurber's fescue, elk sedge, Parry's danthonia, Arizona fescue,  
 mountain brome, buffaloberry, creeping juniper, muttongrass, kinnikinnick,  
 Woods' rose

*Land capability subclass (nonirrigated): 7e*

*Typical Profile:*

Oi—0 to 1 inch; slightly decomposed plant material  
 A—1 inch to 3 inches; gravelly loam  
 E—3 to 7 inches; gravelly loam  
 Bt/E—7 to 13 inches; gravelly clay loam  
 Bt1—13 to 23 inches; gravelly clay  
 Bt2—23 to 32 inches; parachannery silty clay loam  
 Cr—32 to 60 inches; bedrock

**Minor Components**

Cucharas and similar soils

*Composition:* About 8 percent

*Landscape:* Mountains

*Landform:* Mountain slopes

*Position on landform:* Mountainflank

*Slope:* 15 to 35 percent

*Aspect:* All aspects

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

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

*Drainage class:* Well drained

*Ecological site:* Loamy Park

*Distinguishing characteristics:* These soils have a high organic surface layer and are in open grassy meadows.

Rock outcrop

*Composition:* About 2 percent

*Landscape:* Mountains

*Landform:* Scarps

*Slope:* 20 to 40 percent

*Aspect:* All aspects

*Depth to restrictive feature:* 0 inches to bedrock, lithic

*Distinguishing characteristics:* Rock outcrop consists of areas of exposed sandstone and siltstone of the Raton formation.

**Major Uses**

Woodland, recreation, wildlife habitat

**MGR—Midway-Ritoazul-Rock outcrop complex, 1 to 15 percent slopes****Map Unit Setting**

*Major Land Resource Area:* 67

*Elevation:* 5,000 to 6,500 feet (1,524 to 1,981 meters)

*Mean annual precipitation:* 14 to 16 inches (356 to 406 millimeters)

*Mean annual air temperature:* 50 to 53 degrees F. (10.0 to 11.7 degrees C.)

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	
MD: Dumps, mine-----	0-60	---	---	---	---	---	---	---
Mf: Moran-----	0-6	10-25	---	4.5-5.5	0	0	0	0
	6-17	10-25	---	4.5-5.5	0	0	0	0
	17-30	10-20	---	4.5-6.0	0	0	0	0
	30-40	3.0-10	---	5.1-6.0	0	0	0	0
	40-60	2.0-10	---	5.1-6.0	0	0	0	0
MG: Tercio-----	0-2	50-90	30-60	5.1-6.0	0	0	0.0-0.5	0
	2-10	10-18	---	5.1-6.0	0	0	0	0
	10-16	4.8-20	---	5.6-6.5	0	0	0	0
	16-30	6.7-27	---	5.6-6.5	0	0	0	0
	30-38	6.7-27	---	5.6-6.5	0	0	0	0
	38-60	6.0-27	---	5.1-6.0	0	0	0	0
Graneros-----	0-1	50-90	30-60	5.1-6.0	0	0	0.0-0.5	0
	1-3	13-23	---	6.1-7.3	0	0	0	0
	3-7	11-18	---	5.6-7.3	0	0	0	0
	7-13	6.0-23	---	6.1-7.3	0	0	0	0
	13-23	6.0-23	---	6.1-7.3	0	0	0	0
	23-32	6.0-23	---	6.1-7.3	0	0	0	0
	32-60	---	---	---	---	---	---	---
MGR: Midway, moist-----	0-5	16-36	---	7.4-8.4	0-5	0-1	2.0-4.0	0-5
	5-14	6.0-25	---	7.9-9.0	5-15	1-15	2.0-8.0	1-15
	14-60	---	---	---	---	---	---	---