

Soil Survey of the Delta River Area, Alaska

Ecological Site Description

Gravelly Mountains, High Elevation (R228XY310AK)

Ecological Site Characteristics

Site Type: Rangeland

Site Name: Gravelly Mountains, High Elevation

Site ID: R228XY310AK (Old: R173XY310AK)

Major Land Resource 228 - Interior Alaska Mountains

Ecoregion Classification

Section: Alaska Mountains (M135A)

Subsection(s): Alpine Mountains (M135A.M2)

Nonvegetated Alpine Mountains (M135A.B1)

Physiographic Features

Elevation (feet): 2,546 to 5,295

Slope Gradient (percent): 2 to 65

Aspect (clockwise direction): non-influencing

Landform: mountains

Landform Positions: backslopes; shoulders; summits

Flooding: ^{Frequency} None

Ponding: None

Climatic Features

Annual Precipitation 25 to 52

Annual Air Temperature (°F): 24 to 25

Frost Free Days: 50 to 70

Soil Features

Parent Materials: silty eolian deposits over colluvium and/or gravelly till
silty eolian deposits over gravelly outwash

Rooting Depth (inches): *RV:* 7 *Range:* 2 to 13

Soil Layers and Properties within Representative Rooting Depth:

Layers are described from the surface downward. If more than one texture is listed, the predominant texture is listed first. AWC = available water capacity. pH = hydrogen ion activity in the soil using the 1:1 soil-water ratio method. CEC = cation exchange capacity.

Thickness (inches)	Texture	Permeability	AWC (inches/inch)	pH	Effective CEC (me/100g)	CEC (me/100g)
1	slightly decomposed plant material	moderately rapid	.34	3.9 to 4.0	30	
1 to 3	silt loam	moderate	.19	4.2 to 4.6	15	
3 to 5	very cobbly loam; extremely cobbly coarse sand	moderate to rapid	.03 to .13	5.4	2 to 6	

Restrictive Features: bedrock (lithic) at 17 inches
strongly contrasting textural stratification at 2 to 4 inches

Drainage Class: somewhat excessively drained or well drained

Soil Survey of the Delta River Area, Alaska

Ecological Site Description

Gravelly Mountains, High Elevation (R228XY310AK)

Vegetation Features

Common Vegetation Types:

Vegetation Type	Ecological Status
White mountain avens-mixed ericaceous shrub dwarf alpine scrub	Climax plant community

Vascular Plant Species Richness:

Vegetation Type	Total	Per Stand			Number of Stands
		Min.	Avg.	Max.	
White mountain avens-mixed ericaceous shrub dwarf alpine scrub	49	9	19	29	6

Characteristics of White mountain avens-mixed ericaceous shrub dwarf alpine scrub

Ecological Status: Climax plant community

Plant Species Cover, Constancy, and Importance:

Number of stands sampled = 6. Only those vascular, lichen, and bryophyte species with average cover $\geq 5\%$ and constancy $\geq 15\%$ are listed. Importance value equals the square root of Percent Constancy times Average Cover.

Stratum	Symbol	Scientific Name	Percent Canopy Cover			Percent Constancy	Importance Value
			Min.	Avg.	Max.		
SD-SL	VAUL	Vaccinium uliginosum	1.0	9	20	100	30
SD-SL	BEGL	Betula glandulosa	2.0	7	15	67	22
SD-SL	LEDE5	Ledum decumbens	0.2	6	15	83	22
SL	BENA	Betula nana	15.0	15	15	17	16
SD	DROC	Dryas octopetala	1.0	9	15	67	25
SD	ARAL2	Arctostaphylos alpina	0.2	7	20	83	24
SD	EMNI	Empetrum nigrum	1.0	6	15	100	24
SD	DRYAS	Dryas	25.0	25	25	17	21
SD	ARRU	Arctostaphylos rubra	5.0	5	5	17	9
L	LICHEN	total lichens	2.0	40	75	100	63
L	L2ALL	total lichens-crustose and soil crust	20.0	20	20	17	18
M	MOSS	total bryophytes-mosses and liverworts	0.0	7	15	100	26
B	ROCK	mineral-surface rock fragments	0.2	22	60	100	47
B	SOIL	mineral-bare soil	0.0	5	15	100	22
B	LITTER	litter-herbaceous, mulch, and woody debris <2.5 cm	0.0	4	15	100	20
B	ROCKB	mineral-surface bedrock	15.0	15	15	17	16
B	LITTER2	litter-woody debris >2.5 cm	0.0	0	0	100	0
B	WATER	water	0.0	0	0	100	0

Map Unit Components

Component Name (Classification):

Minya, cool
(Loamy-skeletal, mixed, superactive, subgelic Lithic Haplogelods)

Schleyer, cool
(Sandy-skeletal, mixed, subgelic Typic Haplogelods)

Soil Map Units

Only those map units in which the landtype is a major component are listed. The landtype also may occur as a minor component in other map units.

Symbol: Map Unit Name:

MSB Fields-Minya-Frostcircle association, 0 to 75 percent slopes
MSD Frostcircle-Minya-Minya, cool, complex, 0 to 28 percent slopes

Ecological Site Descriptions
Gravelly Mountains, high Elevation R228XY310AK

M135A.B1-Alaska Mountains-Nonvegetated Alpine Mountains Subsection



M135A.M2- Alaska Mountains-Alpine Mountains Subsection



Ecological Site Descriptions
Gravelly Mountains, High Elevations R228XY310AK

Plate 5 (DR Soil Survey). Rock outcrops and dwarf scrub vegetation in map unit MSD-Frostcircle-minya-Minya, cool complex, 0-28 percent slopes near Upper Tangle Lake.



Plate 8. The Fields soil is formed in a thin loess mantle over gravelly colluvium underlain by consolidated bedrock. This soil is a major component of map unit MSB-Fields-Minya-Frostcircle complex, 0 to 75% slopes.

