Loamy Drainages, High Elevation (M135A_505)

Ecoregion Classification

Section: Alaska Mountains (M135A)

Subsection(s): Toklat Basin Lowlands (M135A.M7)
Teklanika Boreal Mountains & Plateaus (M135A.M6L)
Teklanika Alpine Mountains & Plateaus (M135A.M6)
Glaciated Uplands (M135A.G1)

Physiographic Features

	RV	Range
Elevation (meters):	512	304 to 1222
Slope Gradient (percent):	1	0 to 10

Aspect (clockwise direction): non-influencing

Landform: drainageways on mountains; drainageways on hills; drainageways on till plains; drainageways on outwash plains

	Frequency	Duration	Beginning Month	Ending Month
Flooding:	Occasional	Brief	May	Sep
Ponding:	None			

Climatic Features

	RV	Range
Annual Precipitation (millimeters):	598	405 to 856
Annual Air Temperature (°C):	-2.7	-4.8 to -2.0
Frost Free Days:	60	50 to 70

Soil Features

Parent Materials: sandy and silty alluvium over sandy and gravelly alluvium

Rooting Depth (cm): *RV:* 44 *Range:* 17 to 100

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. CEC = cation exchange capacity.

Thickness (cm)	Texture	Permeability	AWC (cm/cm)	pH	Effective CEC (me/100g)	CEC (me/100g)
3	slightly decomposed plant material	moderately rapid	.30	5.8		80
8	stratified sand to silt	moderately rapid	.16	6.0		16
2 to 31	stratified gravelly coarse sand to silt; extremely gravelly coarse sand	moderately rapid to very rapid	.03 to .16	6.2		2 to 16

Restrictive Features: strongly contrasting textural stratification at 42 cm

Water Table (May to September): 50 to 70 cm

Drainage Class: somewhat poorly drained

Vegetation Features

Common Vegetation Types:

Vegetation Type	Ecological Status
Diamondleaf willow-green alder scrub	Climax plant community

Ecological Status-Transition Description:

A single plant community with diamondleaf willow-green alder scrub is identified on this site and flooding is considered a transitional pathway between this site and other geographically associated sites.

Vascular Plant Species Richness:

Vascular plant species richness is based on 1999-2002 field season data only. Data from 1997 and 1998 were not used in the calculations.

Vegetation Type	Total	Per Stand Min.	Per Stand Avg.	Per Stand Max.	Number of Stands
Diamondleaf willow-green alder scrub	43	16	19	22	4

Characteristics of Diamondleaf willow-green alder scrub

Ecological Status: Climax plant community

Plant Species Cover, Constancy, and Importance:

Cover, constancy, and importance are based on 1997-2002 field season data. Number of stands sampled = 15. Only those vascular, lichen, and bryophyte species with average cover >=5% and constancy >=15% are listed.

Stratum	Symbol	Scientific Name	Percent Canopy Cover Min.	Percent Canopy Cover Avg.	Percent Canopy Cover Max.	Percent Constancy	Importance Value
SL-ST	SAPU15	Salix pulchra	35.0	72	100	93	82
SM-ST	ALVIC	Alnus viridis ssp. crispa	2.0	29	85	40	34
SD-SM	BEGL	Betula glandulosa	0.1	6	20	73	21
SL	VAUL	Vaccinium uliginosum	0.1	11	40	47	23
SD	LIBO3	Linnaea borealis	3.0	6	10	20	11
GM-GT	CACA4	Calamagrostis canadensis	5.0	34	90	67	48
FD-FM	EQAR	Equisetum arvense	0.1	30	50	33	31
FD-FM	PEFR5	Petasites frigidus	0.1	14	60	67	31
FD-FM	COCA13	Cornus canadensis	0.1	9	20	33	17
L	LICHEN	total lichens	0.0	0	0	100	0
M	MOSS	total bryophytes-mosses and liverworts	0.0	25	90	100	50
M1	SPHAG2	Sphagnum	10.0	43	80	27	34
M1	ZZMOSS	unknown-mosses	5.0	23	50	20	21
B	LITTER	litter-herbaceous, mulch, and woody debris <2.5 cm	0.0	51	95	100	71
B	LITTER2	litter-woody debris >2.5 cm	0.0	5	15	100	22
B	WATER	water	0.0	4	20	100	20
B	SOIL	mineral-bare soil	0.0	3	40	100	17
B	ROCK	mineral-surface rock fragments	0.0	0	0	100	0

Stratum Height:

Stratum height is based on 1997-2002 field season data. All plant species and ground layer records from all stands are included in the calculations.

Stratum Name	Included Strata	Height Min.	Height Avg.	Height Max.	Height Units	Number of Records
Trees	TT, TM, TS	1.5	8.8	21.0	m	9
Tree regeneration	TR	2.0	2.1	2.2	m	3
Tall shrubs	ST	3.0	3.6	4.0	m	6
Medium shrubs	SM	1.0	1.9	2.5	m	18
Low shrubs	SL	20.0	71.1	100.0	cm	18
Dwarf shrubs	SD	18.0	18.0	18.0	cm	1
Tall and medium grasses and grass-likes	GT, GM	30.0	83.3	130.0	cm	6
Tall and medium forbs	FT, FM	10.0	27.5	70.0	cm	20
Dwarf herbs, lichens, and bryophytes	GD, FD, L, M	2.0	8.6	15.0	cm	22

Tree Basal Area (all trees >1.5 m tall):

Min.	Avg.	Max.	Number of Stands
------	m2 / ha	------	
0.2	0.2	0.2	1

Mapunit Components

Common Name (Soils Name):

Subalpine-riparian scrub loamy drains (Aquic Cryofluvents, coarse-loamy over sandy-skeletal)

Soil Map Units

This landtype is a minor component in the map units listed. It does not occur as a major component in any map units.

Symbol:	***Common Name (Soils Name):***
10ES1	Boreal Terrace Escarpments with Discontinuous Permafrost (Typic Eutrocryepts, coarse-loamy-Typic Historthels, coarse-silty-Typic Historthels, loamy-skeletal Complex, 5 to 70 percent slopes)
10LM	Alpine Low Mountains with Discontinuous Permafrost, Nenana Gravels (Typic Historthels, loamy-skeletal-Typic Eutrogelepts, loamy-skeletal Association, 2 to 30 percent slopes)
10TS1	Boreal Mountain Toeslopes with Discontinuous Permafrost, Nenana Gravels (Typic Historthels, loamy-skeletal-Typic Histoturbels, coarse-silty Association, 0 to 14 percent slopes)
11P	Alpine Plains with Continuous Permafrost (Typic Histoturbels, coarse-silty, 0 to 5 percent slopes)
7FGA	Alpine Plains and Hills with Continuous Permafrost, Nenana Gravels (Typic Histoturbels, coarse-silty-Typic Historthels, loamy-skeletal Association, 0 to 15 percent slopes)

Geographically Associated Landtypes

M135A_180—Gravelly Frozen Slopes:

This site is not flooded, occurs on adjacent uplands with soils that have permafrost at moderate depths. The climax plant community is "Shrub birch-mixed ericaceous shrub/sedge scrub."

M135A_358—Gravelly Slopes:

This site occurs on well drained soils that are very shallow to sand and gravel. The climax plant community is "Shrub birch-bog blueberry scrub."

M135A_405—Swales:

This site occurs on swales with seasonally wet soils. The climax plant community is "Green alder scrub mosaic."

Similar Landtypes

131B_108—Gravelly and Sandy Terraces:

This site occurs in uplands and is not flooded. The climax plant community is "Spruce/ericaceous woodland."

M135A_253—Loamy Slopes, High Elevation:

This site occurs in uplands and is not flooded. The climax plant community is "Diamondleaf willow scrub, moist."

M135A_420—Swales, High Elevation:

This site occurs in upland swales and is not flooded. The climax plant community is "Diamondleaf willow-mixed willow scrub mosaic."

M135A_502—Loamy Drainages, Frozen:

This site occurs within the boreal biome at lower elevation. The climax plant community is "Diamondleaf willow-green alder-leatherleaf scrub."