

## **Silty Drainages, Frozen (131B\_502)**

### **Ecoregion Classification**

**Section:** Yukon-Kuskokwim Bottomlands (131B)

**Subsection(s):** Eolian Lowlands (131B.L1)

### **Physiographic Features**

*RV Range*

**Elevation (meters):** 402 260 to 649

**Slope Gradient (percent):** 2 0 to 6

**Aspect (clockwise direction):** non-influencing

**Landform:** drainageways on hills and plains

*Frequency Duration Beginning Month Ending Month Depth (cm)*

**Flooding:** Frequent Long May Sep

**Ponding:** Frequent Long May Sep 0 to 20

### **Climatic Features**

*RV Range*

**Annual Precipitation (millimeters):** 479 359 to 651

**Annual Air Temperature (°C):** -2.6 -2.9 to -2.4

Denali National Park Area, Alaska 337

**Frost Free Days:** 100 80 to 110

### **Soil Features**

**Parent Materials:** woody organic material and/or silty alluvium over silty alluvium

**Rooting Depth (cm):** *RV: 53 Range: 15 to 96*

### **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 Texture Permeability AWC pH Effective CEC CEC**

*(cm) (cm/cm) (me/100g) (me/100g)*

9 moderately decomposed plant moderately rapid .34 3.6 30 material

39 stratified silt loam to muck moderate .19 5.3 25

**Restrictive Features:** permafrost at 48 cm

**Water Table (May to September):** 0 to 50 cm

**Drainage Class:** very poorly drained

### **Vegetation Features**

#### **Common Vegetation Types:**

#### **Vegetation Type Ecological Status**

Shrub birch-diamondleaf willow-leatherleaf scrub Climax plant community

#### **Ecological Status-Transition Description:**

A single plant community with shrub birch-diamondleaf willow-leatherleaf 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.

#### **Per Stand Number of**

**Vegetation Type Total Min. Avg. Max. Stands**

Shrub birch-diamondleaf willow-leatherleaf scrub 49 12 21 33 5

#### **Notable Plants:**

Notable plants include rare plants, range extensions, and plants little known from Denali National Park and Preserve.

#### **Vegetation Type Symbol Scientific Name**

Shrub birch-diamondleaf willow-leatherleaf scrub CACH5 Carex chordorrhiza

#### **Characteristics of Shrub birch-diamondleaf willow-leatherleaf 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 = 5. Only those vascular, lichen, and bryophyte

species with average cover  $\geq 5\%$  and constancy  $\geq 15\%$  are listed. **Percent Percent Importance**

**Stratum Symbol Scientific Name Canopy Cover Constancy Value**

*Min. Avg. Max.*

SL-SM BEGL *Betula glandulosa* 10.0 23 50 100 48  
SM SAPU15 *Salix pulchra* 10.0 20 30 100 45  
SM ALVIC *Alnus viridis* ssp. *crispa* 5.0 5 5 60 17  
SL CHCA2 *Chamaedaphne calyculata* 25.0 40 55 80 57  
SL VAUL *Vaccinium uliginosum* 0.1 19 30 100 44  
SL LEPAD *Ledum palustre* ssp. *decumbens* 0.1 7 15 60 20  
SL SAFU *Salix fuscescens* 2.0 7 15 60 20  
SL MYGA *Myrica gale* 5.0 5 5 20 10  
SD EMNI *Empetrum nigrum* 0.1 6 15 80 22  
SD VAVIM99 *Vaccinium vitis-idaea* spp. *Minus* 0.1 8 15 60 22  
GT CACA4 *Calamagrostis canadensis* 0.1 19 45 100 44  
GM CAAQ *Carex aquatilis* 5.0 5 5 20 10  
GM ERRU2 *Eriophorum russeolum* 5.0 5 5 20 10  
FD-FM COPA28 *Comarum palustre* 0.1 7 15 80 24  
FD RUCH *Rubus chamaemorus* 0.1 7 20 60 20

### 338 Soil Survey of

#### **Percent Percent Importance**

#### **Stratum Symbol Scientific Name Canopy Cover Constancy Value**

*Min. Avg. Max.*

L LICHEN total lichens 0.1 0 0 100 0  
M MOSS total bryophytes-mosses and liverworts 35.0 62 80 100 79  
M1 SPHAG2 *Sphagnum* 15.0 40 65 100 63  
M1 ZZMOSS unknown-mosses 5.0 15 25 100 39  
M1 HYSP70 *Hylocomium splendens* 15.0 15 15 20 17  
M1 PLSC70 *Pleurozium schreberi* 0.1 5 10 40 14  
M1 SPSQ99 *Sphagnum squarrosum* 5.0 5 5 20 10  
B LITTER litter-herbaceous, mulch, and woody debris <2.5 cm 5.0 33 70 100 57  
B WATER water 0.0 6 15 100 24  
B SOIL mineral-bare soil 0.0 5 20 100 22  
B LITTER2 litter-woody debris >2.5 cm 0.0 4 15 100 20  
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 Number**

*Min. Avg. Max. Units of Records*

Trees TT, TM, TS 5.0 9.0 16.0 m 4  
Tree regeneration TR 2.0 2.4 2.8 m 2  
Medium shrubs SM 1.8 2.5 3.0 m 6  
Low shrubs SL 40.0 57.5 90.0 cm 4  
Tall and medium grasses and grass-likes GT, GM 50.0 116.7 170.0 cm 3  
Tall and medium forbs FT, FM 40.0 45.0 50.0 cm 2  
Dwarf herbs, lichens, and bryophytes GD, FD, L, M 3.0 4.8 7.0 cm 6

#### **Map Unit Components**

#### **Common Name (Soils Name):**

Boreal-riparian tall scrub silty frozen drains, Yukon-Kuskokwim (Fluvaquentic Aquorthels, coarse-silty)

#### **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):**

3C Boreal Colluvial Hill Footslopes with Continuous Permafrost  
(Typic Histoturbels, coarse-silty and Typic Historthels, coarse-silty Soils, 4 to 15 percent slopes)  
3FU4 Boreal Loess Plains, Hills, and Drains with Continuous Permafrost  
(Typic Historthels, coarse-silty-Typic Umbrorthels, coarse-silty Association, 2 to 35 percent slopes)

#### **Geographically Associated Landtypes**

#### **131B\_400—Loamy Frozen Slopes:**

This site occurs on adjacent uplands that are not flooded and have loamy soils that have permafrost at moderate

depths. The climax plant community is "Black spruce/Labrador tea woodland."

**131B\_402—Loamy Frozen Slopes, Wet:**

This site occurs on toeslopes of hills with wetter, moderately deep soils over permafrost. The climax plant community is "Black spruce/tussock cottongrass woodland."