

## Peat Plateaus (131B\_111)

### Ecoregion Classification

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

**Subsection(s):** Minchumina Basin Lowlands (131B.V2)

Lowland Flood Plains & Terraces (131B.V1)

Eolian Lowlands (131B.L1)

### Physiographic Features

**Elevation (meters):** *RV* 254 *Range* 149 to 599

**Slope Gradient (percent):** 0 0 to 3

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

**Landform:** peat plateaus on plains  
*Frequency*

**Flooding:** None

**Ponding:** None

### Climatic Features

**Annual Precipitation (millimeters):** *RV* 480 *Range* 359 to 651

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

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

### Soil Features

**Parent Materials:** mossy organic material and/or woody organic material over silty eolian deposits

**Rooting Depth (cm):** *RV:* 48 *Range:* 18 to 150

### 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)
45	peat	moderately rapid	.34	4.7	30	

**Restrictive Features:** permafrost at 45 cm

**Water Table (May to September):** none

**Drainage Class:** well drained

### Vegetation Features

#### Common Vegetation Types:

##### Vegetation Type

Black spruce-tamarack/lichen woodland

Labrador tea/cloudberry scrub

##### Ecological Status

Climax plant community

Early stage of fire induced secondary succession

#### Ecological Status-Transition Description:

Two plant communities are identified within this fire influenced site including a potential community with black spruce-tamarack/lichen woodland and an early-seral community with Labrador tea/cloudberry scrub. Fire is considered a transitional pathway between seral communities within this site.

### 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			Number of Stands
		Min.	Avg.	Max.	
Black spruce-tamarack/lichen woodland	35	11	15	20	11
Labrador tea/cloudberry scrub	17	12	14	16	3

### Characteristics of Black spruce-tamarack/lichen woodland

**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 = 17. Only those vascular, lichen, and bryophyte species with average cover >=5% and constancy >=15% are listed.

Stratum	Symbol	Scientific Name	Percent Canopy Cover			Percent Constancy	Importance Value
			Min.	Avg.	Max.		
TM	PIMA	Picea mariana	10.0	16	20	53	29
TS	PIMA	Picea mariana	3.0	10	20	47	22
TS	LALA	Larix laricina	0.1	5	7	29	12
TR	PIMA	Picea mariana	0.1	7	20	76	23
SL-SM	BEGL	Betula glandulosa	0.1	6	15	82	22
SL	LEPAD	Ledum palustre ssp. decumbens	5.0	22	40	100	47
SL	VAUL	Vaccinium uliginosum	5.0	12	25	100	35
SL	CHCA2	Chamaedaphne calyculata	0.1	9	30	82	27
SD-SL	ANPO	Andromeda polifolia	0.1	6	40	65	20
SD	VAVIM99	Vaccinium vitis-idaea spp. Minus	2.0	9	35	100	30
GM	CAREX	Carex	0.1	8	35	29	15
GM	ERBR6	Eriophorum brachyantherum	0.1	7	20	24	13
FD-FM	RUCH	Rubus chamaemorus	0.1	6	15	100	24
L	LICHEN	total lichens	2.0	33	70	100	57
L1	CLADI3	Cladina	1.0	14	45	47	26
L1	CLRA61	Cladina rangiferina group	5.0	8	15	53	21
L1	CLADO3	Cladonia	0.1	7	20	59	20
L1	CLMI61	Cladonia mitis group	5.0	12	20	24	17
L1	CLMU60	Cladonia multiformis	0.1	5	10	47	15
M	MOSS	total bryophytes-mosses and liverworts	35.0	65	95	100	81
M1	SPHAG2	Sphagnum	5.0	46	95	82	61
M1	PLSC70	Pleurozium schreberi	5.0	20	40	65	36
M1	ZZMOSS	unknown-mosses	2.0	7	15	65	21
B	LITTER	litter-herbaceous, mulch, and woody debris <2.5 cm	0.0	8	20	100	28
B	LITTER2	litter-woody debris >2.5 cm	0.0	1	5	100	10
B	SOIL	mineral-bare soil	0.0	0	0	100	0
B	ROCK	mineral-surface rock fragments	0.0	0	0	100	0
B	WATER	water	0.0	0	2	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			Units	Number of Records
		Min.	Avg.	Max.		
Trees	TT, TM, TS	2.0	4.9	9.0	m	20
Tree regeneration	TR	0.3	1.2	2.0	m	13
Medium shrubs	SM	1.0	1.1	1.4	m	5
Low shrubs	SL	20.0	37.6	100.0	cm	29
Dwarf shrubs	SD	4.0	8.3	10.0	cm	18
Tall and medium grasses and grass-likes	GT, GM	30.0	60.0	130.0	cm	5
Tall and medium forbs	FT, FM	20.0	20.0	20.0	cm	1
Dwarf herbs, lichens, and bryophytes	GD, FD, L, M	2.0	4.9	10.0	cm	35

**Site Tree Measurements:**

Only dominant, codominant, and open grown trees were measured. Height of Measurements = height above ground at which age and diameter was measured. G = ground level, B = breast height (ca 1.5 m).

Tree Species	Age (years)	Diameter (cm)	Height (m)		Number of Trees	Height of Measurements
Picea mariana	181	9.9	4.0	Min.	1	G
	181	9.9	4.0	Avg.		
	181	9.9	4.0	Max.		

**Characteristics of Labrador tea/cloudberry scrub**

**Ecological Status:** Early stage of fire induced secondary succession

**Plant Species Cover, Constancy, and Importance:**

Cover, constancy, and importance are based on 1997-2002 field season data. Number of stands sampled = 3. Only those vascular, lichen, and bryophyte species with average cover >=5% and constancy >=15% are listed.

Stratum	Symbol	Scientific Name	Percent Canopy Cover			Percent Constancy	Importance Value
			Min.	Avg.	Max.		
TM	PIMA	Picea mariana	5.0	6	6	67	20
TS	PIMA	Picea mariana	5.0	5	5	33	13
TR	PIMA	Picea mariana	1.0	10	25	100	32
SD-SL	LEPAD	Ledum palustre ssp. decumbens	40.0	48	65	100	69
SL	CHCA2	Chamaedaphne calyculata	4.0	10	15	100	32
SD-SL	VAUL	Vaccinium uliginosum	1.0	9	15	100	30
SD	VAVIM99	Vaccinium vitis-idaea spp. Minus	5.0	8	15	100	28
GM	ERBR6	Eriophorum brachyantherum	0.1	5	10	67	18
FD	RUCH	Rubus chamaemorus	15.0	32	45	100	57
L	LICHEN	total lichens	2.0	9	20	100	30
L1	CLMI61	Cladina mitis group	5.0	5	5	33	13
M	MOSS	total bryophytes-mosses and liverworts	40.0	65	80	100	81
M1	SPHAG2	Sphagnum	15.0	42	65	100	65
M1	ZZMOSS	unknown-mosses	10.0	10	10	100	32
M1	PLSC70	Pleurozium schreberi	20.0	20	20	33	26
M1	POLYT5	Polytrichum	5.0	10	15	67	26
B	LITTER	litter-herbaceous, mulch, and woody debris <2.5 cm	10.0	32	70	100	57
B	LITTER2	litter-woody debris >2.5 cm	5.0	9	15	100	30
B	SOIL	mineral-bare soil	0.1	0	0	100	0
B	ROCK	mineral-surface rock fragments	0.0	0	0	100	0
B	WATER	water	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			Units	Number of Records
		Min.	Avg.	Max.		
Trees	TT, TM, TS	4.0	5.0	6.0	m	4
Tree regeneration	TR	0.7	1.1	1.5	m	3
Medium shrubs	SM	1.1	1.3	1.5	m	3
Low shrubs	SL	30.0	33.3	40.0	cm	3
Dwarf shrubs	SD	3.0	9.3	20.0	cm	3
Tall and medium grasses and grass-likes	GT, GM	40.0	40.0	40.0	cm	1
Dwarf herbs, lichens, and bryophytes	GD, FD, L, M	2.0	3.9	8.0	cm	8

**Site Tree Measurements:**

Only dominant, codominant, and open grown trees were measured. Height of Measurements = height above ground at which age and diameter was measured. G = ground level, B = breast height (ca 1.5 m).

Tree Species	Age (years)	Diameter (cm)	Height (m)		Number of Trees	Height of Measurements
Picea mariana	18	4.6	3.0	Min.	1	G
	18	4.6	3.0	Avg.		
	18	4.6	3.0	Max.		

## **Mapunit Components**

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

Boreal-taiga peat plateaus, frozen (Glacic Folistels, dysic)

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

2FG	Boreal Terraces with Continuous Permafrost, Very Wet (Typic Histoturbels, coarse-silty-Glacic Folistels, dysic Association)
3FG3	Boreal Loess Plains and Peat Plateaus with Continuous Permafrost (Typic Historthels, coarse-silty-Typic Histoturbels, coarse-silty-Glacic Folistels, dysic Association, 0 to 14 percent slopes)
3FU2	Boreal Peat Plateaus and Loess Plains with Continuous Permafrost (Glacic Folistels, dysic-Typic Histoturbels, coarse-silty-Typic Historthels, coarse-silty Association, 0 to 10 percent slopes)

### **Geographically Associated Landtypes**

#### **131B\_105—Loamy Frozen Terraces, Wet:**

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

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

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

#### **131B\_530—Depressions, Bogs:**

This site occurs on bogs with very deep, wetter soils. The climax plant community is "Sedge/sphagnum moss bog."

### **Similar Landtypes**

#### **131B\_185—Sandy Hills:**

This site occurs on very deep soils that are somewhat excessively drained. The climax plant community is "Black spruce/lingonberry/lichen woodland."