Depressions, Bogs (131B_530)

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

	RV	Range
Elevation (meters):	252	232 to 266
Slope Gradient (percent):	0	0 to 0

Aspect (clockwise direction): non-influencing

Landform: bogs on hills; bogs on peat plateaus; bogs on plains; bogs on outwash plains

	Frequency	Duration	Beginning Month	Ending Month	Depth (cm)
Flooding:	None				
Ponding:	Frequent	Very 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
Frost Free Days:	100	80 to 110

Soil Features

Parent Materials: mossy organic material and/or grassy organic material

Rooting Depth (cm): *RV:* 110 *Range:* 45 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)
63	peat	moderately rapid	.34	4.2	30	

Restrictive Features: strongly contrasting textural stratification at 150 cm or more

Water Table (May to September): 0 cm

Drainage Class: very poorly drained

Vegetation Features

Common Vegetation Types:

Vegetation Type	Ecological Status
Sedge/sphagnum moss bog	Climax plant community
Sedge/bog rosemary bog	Post climax plant community
Sphagnum moss bog	Early stage of pond/fen/bog succession

Ecological Status-Transition Description:

Three plant communities are identified on this site based on relative position and wetness within the site as defined. An early pond succession community of sphagnum moss bog is described in wetter areas often associated with the narrow fringe of vegetation adjacent to open water. A potential community of sedge/sphagnum bog is described for the most extensive condition observed within the site. A post successional community is described near the upland fringe where site conditions are slightly drier and the organic surface layer thinner. Pond succession 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 Min.	Per Stand Avg.	Per Stand Max.	Number of Stands
Sedge/sphagnum moss bog	50	10	15	26	19
Sedge/bog rosemary bog	38	10	16	31	5
Sphagnum moss bog	4	4	4	4	1

Notable Plants:

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

Vegetation Type	Symbol	Scientific Name
Sedge/sphagnum moss bog	CACH5	Carex chordorrhiza
	HAPA11	Hammarbya paludosa
	JUSTA	Juncus stygius ssp. americanus
	PEMA	Pedicularis macrodonta
Sedge/bog rosemary bog	CACH5	Carex chordorrhiza
	POEP2	Potamogeton epihydrus
	UTMI	Utricularia minor

Characteristics of Sedge/sphagnum moss bog

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 = 21. 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
GM-GT	CARO6	Carex rostrata	2.0	21	40	57	35
GM-GT	CAAQ	Carex aquatilis	2.0	27	60	33	30
GM	CARO7	Carex rotundata	5.0	31	80	67	46
GM	CALI7	Carex limosa	5.0	16	40	67	33
GM	CAMAI2	Carex magellanica ssp. irrigua	0.1	6	35	62	19
GM	ERRU2	Eriophorum russeolum	2.0	7	20	43	17
GM	ERSC2	Eriophorum scheuchzeri	0.1	8	20	38	17
GM	TRCE3	Trichophorum cespitosum	0.1	7	30	24	13
FD	UTIN2	Utricularia intermedia	0.1	5	15	19	10
L	LICHEN	total lichens	0.0	0	0	100	0
M	MOSS	total bryophytes-mosses and liverworts	50.0	80	95	100	89
M1	SPHAG2	Sphagnum	35.0	71	95	95	82
M1	ZZMOSS	unknown-mosses	0.1	9	20	86	28
B	WATER	water	0.0	25	100	100	50
B	LITTER	litter-herbaceous, mulch, and woody debris <2.5 cm	0.0	23	70	100	48
B	SOIL	mineral-bare soil	0.0	1	30	100	10
B	LITTER2	litter-woody debris >2.5 cm	0.0	0	3	100	0
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.	Units	Number of Records
Trees	TT, TM, TS	2.0	2.0	2.0	m	1
Tree regeneration	TR	0.1	1.2	3.0	m	5
Medium shrubs	SM	1.1	1.2	1.3	m	2
Low shrubs	SL	23.0	54.6	100.0	cm	17
Dwarf shrubs	SD	0.5	6.9	20.0	cm	12
Tall and medium grasses and grass-likes	GT, GM	20.0	60.6	110.0	cm	24
Tall and medium forbs	FT, FM	15.0	39.2	110.0	cm	6
Dwarf herbs, lichens, and bryophytes	GD, FD, L, M	2.0	4.3	10.0	cm	19

Characteristics of Sedge/bog rosemary bog

Ecological Status: Post 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 = 6. 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.*		
SD-SL	ANPO	Andromeda polifolia	20.0	32	50	100	57
SD	OXMI3	Oxycoccus microcarpos	0.1	6	15	100	24
GM-GT	CARO6	Carex rostrata	7.0	11	15	33	19
GT	CACA4	Calamagrostis canadensis	0.1	8	15	33	16
GM-GT	CAAQ	Carex aquatilis	0.1	5	10	33	13
GM	CARO7	Carex rotundata	5.0	26	65	83	46
GM	CALI7	Carex limosa	10.0	16	25	67	33
GM	CACH5	Carex chordorrhiza	30.0	30	30	17	23
GM	CAMAI2	Carex magellanica ssp. irrigua	0.1	10	25	50	22
GM	ERRU2	Eriophorum russeolum	0.1	7	20	50	19
GM	CAREX	Carex	20.0	20	20	17	18
GM	ERBR6	Eriophorum brachyantherum	0.1	10	20	33	18
GM	ERSC2	Eriophorum scheuchzeri	5.0	5	5	17	9
FD	METR3	Menyanthes trifoliata	0.1	13	25	50	25
L	LICHEN	total lichens	0.0	0	0	100	0
M	MOSS	total bryophytes-mosses and liverworts	80.0	89	100	100	94
M1	SPHAG2	Sphagnum	45.0	78	95	100	88
M1	ZZMOSS	unknown-mosses	0.1	10	20	67	26
M1	POLYT5	Polytrichum	25.0	25	25	17	21
B	LITTER	litter-herbaceous, mulch, and woody debris <2.5 cm	0.0	24	50	100	49
B	WATER	water	0.0	9	30	100	30
B	LITTER2	litter-woody debris >2.5 cm	0.0	0	1	100	0
B	SOIL	mineral-bare soil	0.0	0	0	100	0
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 of Records
		Min.	*Avg.*	*Max.*	*Units*	
Trees	TT, TM, TS	0.5	0.5	0.5	m	1
Medium shrubs	SM	1.1	1.1	1.1	m	1
Low shrubs	SL	20.0	28.0	40.0	cm	5
Dwarf shrubs	SD	1.5	9.9	15.0	cm	6
Tall and medium grasses and grass-likes	GT, GM	3.0	56.1	130.0	cm	7
Dwarf herbs, lichens, and bryophytes	GD, FD, L, M	3.0	4.9	10.0	cm	7

Characteristics of Sphagnum moss bog

Ecological Status: Early stage of pond/fen/bog succession

Plant Species Cover, Constancy, and Importance:

Cover, constancy, and importance are based on 1997-2002 field season data. Number of stands sampled = 1. 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.*		
GM	ERSC2	Eriophorum scheuchzeri	15.0	15	15	100	39
L	LICHEN	total lichens	0.0	0	0	100	0
M	MOSS	total bryophytes-mosses and liverworts	100.	100	100	100	100
M1	SPHAG2	Sphagnum	100.	100	100	100	100
B	LITTER	litter-herbaceous, mulch, and woody debris <2.5 cm	10.0	10	10	100	32
B	WATER	water	1.0	1	1	100	10
B	LITTER2	litter-woody debris >2.5 cm	0.1	0	0	100	0
B	SOIL	mineral-bare soil	0.0	0	0	100	0
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 of Records
		Min.	*Avg.*	*Max.*	*Units*	
Low shrubs	SL	40.0	40.0	40.0	cm	1
Dwarf shrubs	SD	0.5	0.5	0.5	cm	1
Tall and medium grasses and grass-likes	GT, GM	30.0	30.0	30.0	cm	1
Dwarf herbs, lichens, and bryophytes	GD, FD, L, M	3.0	3.0	3.0	cm	1

Mapunit Components

Common Name (Soils Name):

Boreal-bog organic depressions (Hydric Cryofibrists, 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):***

3BG Boreal Wet Meadows and Bogs
(Humic Cryaquepts, coarse-loamy-Hydric Cryofibrists, dysic Complex)

Geographically Associated Landtypes

131B_104 — Loamy Frozen Terraces:

This site occurs on terraces with loamy soils that have permafrost at moderate depths. The climax plant community is "Black spruce-tamarack/Labrador tea woodland."

131B_105 — Loamy Frozen Terraces, Wet:

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

131B_400 — Loamy Frozen Slopes:

This site occurs on loess plains and hills with poorly drained soils that are moderately deep over permafrost. The climax plant community is "Black spruce/Labrador tea woodland."

131B_402 — Loamy Frozen Slopes, Wet:

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

Similar Landtypes

131B_501 — Organic Depressions, Fens:

This site occurs on soils in more nutrient rich fens. The climax plant community is "Sedge wet meadow."

131B_506 — Organic Depressions, Eutrophic Fens:

This site occurs on soils in nutrient rich fens. The climax plant community is "Tulfted bulrush meadow."