

Organic Depressions, Eutrophic Fens (131B_506)

Ecoregion Classification

Section: Yukon-Kuskokwim Bottomlands (131B)

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

Physiographic Features

Elevation (meters): RV 197 Range 168 to 289

Slope Gradient (percent): 0 0 to 0

Aspect (clockwise direction): non-influencing

Landform: depressions on plains

	<i>Frequency</i>	<i>Duration</i>	<i>Beginning Month</i>	<i>Ending Month</i>	<i>Depth (cm)</i>
Flooding:	Occasional	Long	May	Sep	
Ponding:	Frequent	Very long	May	Sep	0 to 20

Climatic Features

Annual Precipitation (millimeters): RV 392 Range 336 to 565

Annual Air Temperature (°C): -2.7 -3.0 to -2.5

Frost Free Days: 100 80 to 110

Soil Features

Parent Materials: grassy organic material over sandy and silty alluvium over sandy and gravelly alluvium

Rooting Depth (cm): RV: 57 Range: 37 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)
54	mucky peat	moderately rapid	.34	6.9		80
3	stratified fine sand to silt	moderately rapid	.14	6.9		20

Restrictive Features: strongly contrasting textural stratification at 130 cm

Water Table (May to September): 0 cm

Drainage Class: very poorly drained

Vegetation Features

Common Vegetation Types:

Vegetation Type	Ecological Status
Tufted bulrush meadow	Climax plant community
Shrubby cinquefoil-sweetgale scrub	Climax plant community on drier microsites

Ecological Status-Transition Description:

Two plant communities are identified within this site based on relative wetness including a potential community with tufted bulrush wet meadow and a drier community with shrubby cinquefoil-sweetgale scrub along fen margins and

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.	
Tufted bulrush meadow	55	22	31	36	3
Shrubby cinquefoil-sweetgale scrub	65	17	27	40	5

Notable Plants:

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

Vegetation Type

Tufted bulrush meadow

Symbol

CASTS Calamagrostis stricta ssp. stricta
 CACH5 Carex chordorrhiza
 CAIN11 Carex interior
 CAOEV Carex oederi ssp. viridula
 ELQU2 Eleocharis quinqueflora
 PEMA Pedicularis macrodonta
 SACA4 Salix candida
 TOGLB Tofieldia glutinosa ssp. brevistyla
 CASTS Calamagrostis stricta ssp. stricta
 SACA4 Salix candida
 TYLA Typha latifolia

Shrubby cinquefoil-sweetgale scrub

Characteristics of Tufted bulrush meadow

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 = 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.		
SL-SM	PEFL15	Pentaphylloides floribunda	3.0	9	20	100	30
SL	MYGA	Myrica gale	2.0	6	15	100	24
SD	ANPO	Andromeda polifolia	1.0	5	10	100	22
GM	TRCE3	Trichophorum cespitosum	4.0	31	60	100	56
GM	CAL17	Carex limosa	15.0	18	20	67	35
GM	CAAQ	Carex aquatilis	4.0	11	25	100	33
GM	CALI	Carex livida	1.0	6	10	100	24
GM	CAMAI2	Carex magellanica ssp. irrigua	5.0	8	10	67	23
GM	ERAN6	Eriophorum angustifolium	5.0	5	5	33	13
FD	UTIN2	Utricularia intermedia	1.0	8	15	67	23
FD	METR3	Menyanthes trifoliata	1.0	5	10	100	22
L	LICHEN	total lichens	0.0	0	0	100	0
M	MOSS	total bryophytes-mosses and liverworts	35.0	47	70	100	69
M1	ZZMOSS	unknown-mosses	10.0	27	40	100	52
M1	DRRE99	Drepanocladus revolvens	30.0	30	30	33	31
M1	DREPA3	Drepanocladus	25.0	25	25	33	29
M2	ZZLIV	unknown-liverworts	25.0	25	25	33	29
B	WATER	water	25.0	55	80	100	74
B	LITTER	litter-herbaceous, mulch, and woody debris <2.5 cm	35.0	42	50	100	65
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			Units	Number of Records
		Min.	Avg.	Max.		
Trees	TT, TM, TS	2.0	2.0	2.0	m	1
Tree regeneration	TR	0.1	0.1	0.1	m	1
Medium shrubs	SM	1.2	1.3	1.5	m	3
Low shrubs	SL	20.0	65.0	80.0	cm	4
Dwarf shrubs	SD	5.0	6.0	7.0	cm	2
Tall and medium grasses and grass-like	GT, GM	15.0	26.2	50.0	cm	4
Tall and medium forbs	FT, FM	30.0	30.0	30.0	cm	1
Dwarf herbs, lichens, and bryophytes	GD, FD, L, M	1.0	4.2	10.0	cm	5

Characteristics of Shrubby cinquefoil-sweetgale scrub

Ecological Status: Climax plant community on drier microsites

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 >=5% and constancy >=15% are listed.

Stratum	Symbol	Scientific Name	Percent Canopy Cover			Percent Constancy	Importance Value
			Min.	Avg.	Max.		
SL-SM	PEFL15	Pentaphylloides floribunda	15.0	28	40	100	53
SL-SM	MYGA	Myrica gale	15.0	24	35	100	49
SM	B EGL	Betula glandulosa	10.0	18	25	100	42
SM	SAPS	Salix pseudomonticola	5.0	5	5	20	10
SL	VAUL	Vaccinium uliginosum	5.0	11	25	80	30
SL	CHCA2	Chamaedaphne calyculata	5.0	9	15	80	27
SL	SAFU	Salix fuscescens	5.0	5	5	20	10
SD	EMNI	Empetrum nigrum	5.0	5	5	20	10
GM-GT	CAAQ	Carex aquatilis	0.1	15	40	100	39
GM	CALE10	Carex leptalea	1.0	13	35	80	32
FM-FT	EQFL	Equisetum fluviatile	1.0	10	20	40	20
FD-FM	COPA28	Comarum palustre	3.0	10	20	80	28
L	LICHEN	total lichens	0.1	0	0	100	0
M	MOSS	total bryophytes-mosses and liverworts	10.0	35	80	100	59
M1	ZZMOSS	unknown-mosses	7.0	29	70	60	42
M1	POCO38	Polytrichum commune	5.0	5	5	20	10
B	LITTER	litter-herbaceous, mulch, and woody debris <2.5 cm	30.0	67	95	100	82
B	WATER	water	0.1	13	30	100	36
B	LITTER2	litter-woody debris >2.5 cm	0.0	1	4	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

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	6.6	10.0	m	5
Tree regeneration	TR	1.8	1.8	1.8	m	1
Tall shrubs	ST	3.0	4.0	5.0	m	3
Medium shrubs	SM	1.0	1.4	2.0	m	8
Low shrubs	SL	50.0	80.0	100.0	cm	4
Dwarf shrubs	SD	5.0	7.0	9.0	cm	2
Tall and medium grasses and grass-likes	GT, GM	10.0	59.0	130.0	cm	10
Tall and medium forbs	FT, FM	20.0	50.0	80.0	cm	5
Dwarf herbs, lichens, and bryophytes	GD, FD, L, M	0.5	2.1	7.0	cm	6

Mapunit Components

Common Name (Soils Name):

Boreal-riparian fen organic depressions (Terric Cryohemists, loamy)

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):

1STW2 Boreal Groundwater Discharge Plains with Discontinuous Permafrost
(Histic Cryaquepts, coarse-loamy-Terric Cryohemists, loamy Association)

Geographically Associated Landtypes

131B_104 — Loamy Frozen Terraces:

This site occurs on terraces that are not flooded. The climax plant community is "Black spruce-tamarack/Labrador tea woodland."

131B_503 — Silty Drainages, Very Wet:

This site occurs on wetter soils. The climax plant community is "Leatherleaf-sweetgale/sedge scrub."

131B_505 — Loamy Channels:

This site occurs on channels with wetter soils that are moderately deep over permafrost. The climax plant community is "Tamarack-black spruce/leatherleaf woodland."

Similar Landtypes

131B_501 — Organic Depressions, Fens:

This site occurs on soils in less nutrient rich fens with thicker organic mats. The climax plant community is "Sedge wet meadow."

131B_530 — Depressions, Bogs:

This site occurs on soils in acid bogs. The climax plant community is "Sedge/sphagnum moss bog."