

Loamy Wet Flood Plains, High Elevation (135A_152)

Ecoregion Classification

Section: Cook Inlet Lowlands (135A)

Subsection(s): Lowland Flood Plains & Terraces & Fans (135A.V1)

Physiographic Features

Elevation (meters): *RV* 551 *Range* 329 to 849

Slope Gradient (percent): 1 0 to 2

Aspect (clockwise direction): non-influencing

Landform: channels on flood plains

	<i>Frequency</i>	<i>Duration</i>	<i>Beginning Month</i>	<i>Ending Month</i>	<i>Depth (cm)</i>
Flooding:	Occasional	Brief	May	Sep	
Ponding:	Occasional	Long	May	Jun	to

Climatic Features

Annual Precipitation (millimeters): *RV* 822 *Range* 678 to 989

Annual Air Temperature (°C): -0.1 -1.5 to 1.0

Frost Free Days: 80 70 to 100

Soil Features

Parent Materials: sandy and silty alluvium over sandy and gravelly alluvium
sandy and silty alluvium over sandy and gravelly alluvium derived from diorite

Rooting Depth (cm): *RV*: 32 *Range*: 10 to 82

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)
4 to 9	moderately decomposed plant material	moderately rapid	.34	6.2 to 6.4		80
3 to 12	stratified fine sand to silt	moderate	.15	6.2 to 6.8		16 to 20
16 to 20	stratified sand to silt	moderate	.15	6.3 to 6.4		10 to 16

Restrictive Features: strongly contrasting textural stratification at 36 to 56 cm

Water Table (May to September): 0 to 10 cm

Drainage Class: very poorly drained

Vegetation Features

Common Vegetation Types:

Vegetation Type	Ecological Status
Barclay willow-diamondleaf willow wet scrub	Climax plant community
Beaver dam Sitka willow wet scrub	Beaver impacted site and vegetation

Ecological Status-Transition Description:

Two plant communities are identified within this flood prone site including a potential community with Barclay willow-diamondleaf willow wet scrub and a community associated with beaver activity with Sitka willow scrub, beaver dam in which the site conditions have been significantly altered and are now wetter due to beaver dam construction. Flooding and beaver activity are considered transitional pathways between community types.

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.	
Barclay willow-diamondleaf willow wet scrub	26	26	26	26	1
Beaver dam Sitka willow wet scrub	54	19	21	22	4

Notable Plants:

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

Vegetation Type	Symbol	Scientific Name
Barclay willow-diamondleaf willow wet scrub	CAEN2	Carex enanderi
Beaver dam Sitka willow wet scrub	CAEL4	Carex eleusinoides

Characteristics of Barclay willow-diamondleaf willow wet 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 = 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.		
SM	SABA3	Salix barclayi	45.0	45	45	100	67
SM	SAPU15	Salix pulchra	45.0	45	45	100	67
GT	CACA4	Calamagrostis canadensis	5.0	5	5	100	22
FM	EQAR	Equisetum arvense	30.0	30	30	100	55
FM	RHIN11	Rhodiola integrifolia	10.0	10	10	100	32
FM	SAST11	Sanguisorba stipulata	10.0	10	10	100	32
FD	VIEPR	Viola epipsila ssp. repens	10.0	10	10	100	32
FD	ANRI	Anemone richardsonii	5.0	5	5	100	22
FD	ORSE	Orthilia secunda	5.0	5	5	100	22
FD	PYMI	Pyrola minor	5.0	5	5	100	22
FD	RUAR	Rubus arcticus	5.0	5	5	100	22
FD	RUST6	Rubus stellatus	5.0	5	5	100	22
FD	TREU	Trientalis europaea	5.0	5	5	100	22
L	LICHEN	total lichens	0.1	0	0	100	0
M	MOSS	total bryophytes-mosses and liverworts	20.0	20	20	100	45
M1	ZZMOSS	unknown-mosses	15.0	15	15	100	39
M1	CLDE70	Climacium dendroides	5.0	5	5	100	22
B	LITTER	litter-herbaceous, mulch, and woody debris <2.5 cm	75.0	75	75	100	87
B	SOIL	mineral-bare soil	20.0	20	20	100	45
B	LITTER2	litter-woody debris >2.5 cm	5.0	5	5	100	22
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.		
Medium shrubs	SM	2.7	2.7	2.7	m	1
Tall and medium grasses and grass-like	GT, GM	100.0	100.0	100.0	cm	1
Tall and medium forbs	FT, FM	25.0	25.0	25.0	cm	1
Dwarf herbs, lichens, and bryophytes	GD, FD, L, M	2.0	2.0	2.0	cm	1

Characteristics of Beaver dam Sitka willow wet scrub

Ecological Status: Beaver impacted site and vegetation

Plant Species Cover, Constancy, and Importance:

Cover, constancy, and importance are based on 1997-2002 field season data. Number of stands sampled = 4. 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.		
TT	POBA2	Populus balsamifera	5.0	5	5	25	11
SM-ST	SABA3	Salix barclayi	10.0	41	55	100	64
SM-ST	SASI2	Salix sitchensis	10.0	28	40	75	46
SM-ST	ALSI3	Alnus sinuata	5.0	12	20	75	30
ST	ALTE2	Alnus tenuifolia	5.0	10	15	50	22
SM	VIED	Viburnum edule	20.0	20	20	25	22
SM	SACO2	Salix commutata	10.0	10	10	25	16
SL	VAUL	Vaccinium uliginosum	5.0	5	5	25	11
GT	CACA4	Calamagrostis canadensis	0.1	12	25	100	35
GM-GT	CAAQ	Carex aquatilis	0.1	13	25	50	25
GT	CASAL2	Carex saxatilis ssp. laxa	25.0	25	25	25	25
GM	JUFI	Juncus filiformis	5.0	5	5	25	11
FM	EQAR	Equisetum arvense	1.0	11	20	100	33
FM	COPA28	Comarum palustre	1.0	6	10	50	17
FM	GYDR	Gymnocarpium dryopteris	10.0	10	10	25	16
FM	SAST11	Sanguisorba stipulata	5.0	5	5	25	11
FD	VIEPR	Viola epipsila ssp. repens	10.0	10	10	50	22
L	LICHEN	total lichens	0.1	0	0	100	0
M	MOSS	total bryophytes-mosses and liverworts	10.0	49	90	100	70
M1	ZZMOSS	unknown-mosses	10.0	30	45	75	47
M1	SPHAG2	Sphagnum	10.0	10	10	25	16
B	LITTER	litter-herbaceous, mulch, and woody debris <2.5 cm	15.0	39	60	100	62
B	WATER	water	0.0	22	65	100	47
B	LITTER2	litter-woody debris >2.5 cm	0.1	9	20	100	30
B	SOIL	mineral-bare soil	0.0	6	10	100	24
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	15.0	15.0	15.0	m	1
Tall shrubs	ST	3.0	3.5	4.0	m	3
Medium shrubs	SM	1.5	1.6	1.6	m	2
Low shrubs	SL	20.0	20.0	20.0	cm	1
Tall and medium grasses and grass-like	GT, GM	140.0	160.0	180.0	cm	2
Tall and medium forbs	FT, FM	10.0	65.0	150.0	cm	6
Dwarf herbs, lichens, and bryophytes	GD, FD, L, M	0.5	2.9	5.0	cm	4

Mapunit Components

Common Name (Soils Name):

Alpine-riparian scrub loamy diorite low flood plains, wet (Typic Cryaquents, coarse-loamy over sandy-skeletal)

Alpine-riparian scrub loamy wet flood plains, warm (Typic Cryaquents, coarse-loamy over sandy-skeletal)

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):

13F21	Subalpine and Alpine Diorite Flood Plains (Oxyaquic Cryorthents, sandy-skeletal-Typic Cryaquents, coarse-loamy over sandy-skeletal-Terric Cryofibrists, euc Complex)
13F22	Alpine Diorite Flood Plains and Wet Mountain Toeslopes (Typic Cryorthents, sandy-skeletal-Riverwash-Typic Cryaquents, coarse-loamy over sandy-skeletal Complex, 0 to 6 percent slopes)

Geographically Associated Landtypes

135A_150—Loamy Flood Plains, High Elevation:

This site occurs on higher bar positions with well-drained soils. The climax plant community is "Sitka alder-mixed willow scrub."

135A_257—Gravelly Flood Plains, Cool:

This site occurs on lower flood plains. The climax plant community is "Feltleaf willow-Barclay willow-Sitka willow scrub."

Riverwash—Alluvium, Nonvegetated:

This site occurs on lower flood plains. The climax plant community is "Sparsely vegetated alluvium."