

Gravelly Low Flood Plains (135A_200)

Ecoregion Classification

Section: Cook Inlet Lowlands (135A)

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

Physiographic Features

Elevation (meters): *RV* 415 *Range* 91 to 882

Slope Gradient (percent): 1 *Range* 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>
Flooding:	Frequent	Long	May	Sep

Ponding: None

Climatic Features

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

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

Frost Free Days: 80 *Range* 70 to 100

Soil Features

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

Rooting Depth (cm): *RV:* 36 *Range:* 9 to 92

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
<i>(cm)</i>			<i>(cm/cm)</i>		<i>(me/100g)</i>	<i>(me/100g)</i>
15 to 21	extremely cobbly coarse sand	rapid	.06	5.1 to 6.3	2	2

Water Table (May to September): 50 cm

Drainage Class: somewhat poorly drained

Vegetation Features

Common Vegetation Types:

Vegetation Type

Sitka alder-Barclay willow-Sitka willow scrub

Ecological Status

Climax plant community

Ecological Status-Transition Description:

A single plant community with Sitka alder-Barclay willow-Sitka willow 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.

Vegetation Type	Total	Per Stand			Number of Stands
		<i>Min.</i>	<i>Avg.</i>	<i>Max.</i>	
Sitka alder-Barclay willow-Sitka willow scrub	92	12	22	33	10

Alien Plants:

Alien plants include plants on Alaska Exotic Plant Information Clearinghouse Weed List, 2002.

Vegetation Type	Symbol	Scientific Name
Sitka alder-Barclay willow-Sitka willow scrub	POPA2	Poa palustris
	POPR	Poa pratensis
	POPRP	Poa pratensis ssp. pratensis

Notable Plants:

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

Vegetation Type	Symbol	Scientific Name
Sitka alder-Barclay willow-Sitka willow scrub	OSDE	Osmorhiza depauperata
	POMA2	Poa macrocalyx
	VESE	Veronica serpyllifolia
	WISE2	Viola selkirkii

Characteristics of Sitka alder-Barclay willow-Sitka willow 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 = 10. 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.		
TR	POBA2	Populus balsamifera	3.0	9	15	40	19
SM-ST	ALS13	Alnus sinuata	7.0	32	60	90	54
SM-ST	SAS12	Salix sitchensis	5.0	28	85	60	41
SM-ST	SABA3	Salix barclayi	2.0	26	45	60	39
SM-ST	ALTE2	Alnus tenuifolia	10.0	23	35	30	26
SM-ST	SAAL	Salix alaxensis	0.1	7	25	80	24
SL-SM	RITR	Ribes triste	0.1	7	10	30	14
SM	SACO2	Salix commutata	1.0	8	15	20	13
SL-SM	VIED	Viburnum edule	2.0	6	15	30	13
FM-FT	DRD12	Dryopteris dilatata	0.1	10	20	20	14
FD	RUAR	Rubus arcticus	0.1	5	15	50	16
FD	GYDR	Gymnocarpium dryopteris	2.0	8	15	20	13
L	LICHEN	total lichens	0.0	7	50	100	26
L1	STERE2	Stereocaulon	0.1	7	15	40	17
L1	CLADI3	Cladina	0.1	5	10	20	10
M	MOSS	total bryophytes-mosses and liverworts	2.0	20	40	100	45
M1	ZZMOSS	unknown-mosses	7.0	16	30	80	36
M1	RACOM	Racomitrium	1.0	8	20	40	18
B	LITTER	litter-herbaceous, mulch, and woody debris <2.5 cm	5.0	66	95	100	81
B	ROCK	mineral-surface rock fragments	0.0	9	35	100	30
B	LITTER2	litter-woody debris >2.5 cm	0.0	6	10	100	24
B	SOIL	mineral-bare soil	0.0	6	30	100	24
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	5.0	5.0	5.0	m	1
Tree regeneration	TR	1.5	2.4	4.0	m	4
Tall shrubs	ST	3.0	3.5	4.5	m	6
Medium shrubs	SM	1.5	2.2	3.0	m	8
Low shrubs	SL	80.0	80.0	80.0	cm	1
Tall and medium grasses and grass-like	GT, GM	80.0	112.0	130.0	cm	5
Tall and medium forbs	FT, FM	30.0	68.3	110.0	cm	6
Dwarf herbs, lichens, and bryophytes	GD, FD, L, M	0.5	2.6	10.0	cm	13

Mapunit Components

Common Name (Soils Name):

Boreal-riparian scrub gravelly flood plains, moderately wet and warm (Oxyaquic Cryorthents, sandy-skeletal)
Subalpine-riparian scrub gravelly diorite flood plains, moderately wet (Oxyaquic Cryorthents, 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)
13FP Boreal Flood Plains
(Typic Cryorthents-Oxyaquic Cryorthents, sandy-skeletal-Riverwash Complex)
13FP2 Boreal Flood Plains, Dry
(Typic Cryorthents, sandy-skeletal-Riverwash-Oxyaquic Cryorthents, sandy-skeletal Complex)

Geographically Associated Landtypes

135A_100—Loamy Flood Plains:

This site occurs on higher flood plains and alluvial fans adjacent to flood plain with a thick loam surface layer. The climax plant community is "Poplar/alder forest."

135A_201—Gravelly Flood Plains:

This site occurs on higher positions with somewhat excessively drained soil. The climax plant community is "Poplar/soapberry forest."

135A_500—Loamy Wet Flood Plains:

This site occurs on wetter soils with a thicker loamy surface mantle. The climax plant community is "Thinleaf alder-mixed willow scrub."

Riverwash—Alluvium, Nonvegetated:

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

Similar Landtypes

135A_150—Loamy Flood Plains, High Elevation:

This site has a thick loamy surface mantle. The climax plant community is "Sitka alder-mixed willow scrub."

135A_500—Loamy Wet Flood Plains:

This site has a thick loamy surface mantle and soils are poorly drained. The climax plant community is "Thinleaf alder-mixed willow scrub."

135A_803—Moraines, Ice Cored:

This site has well drained soils on recent, unstable moraines. The climax plant community is "Moraine poplar/alder woodland."