

# Loamy Flood Plains, High Elevation (135A\_150)

## Ecoregion Classification

**Section:** Cook Inlet Lowlands (135A)

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

### 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: 22 Range: 10 to 45

### 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)
2	slightly decomposed plant material	moderately rapid	.34	5.0 to 5.2	30	
7 to 13	stratified sand to silt	moderate	.15	4.6 to 6.9	6	10 to 16

**Restrictive Features:** strongly contrasting textural stratification at 41 cm

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

**Drainage Class:** well drained

### Vegetation Features

#### Common Vegetation Types:

Vegetation Type	Ecological Status
Sitka alder-mixed willow scrub	Climax plant community

#### Ecological Status-Transition Description:

A single plant community with Sitka alder-mixed 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
		Min.	Avg.	Max.	
Sitka alder-mixed willow scrub	89	21	30	40	5

#### 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-mixed willow scrub	WISE2	Viola selkirkii

### Characteristics of Sitka alder-mixed 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 = 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.		
TT	POBA2	Populus balsamifera	7.0	7	7	20	12
SM-ST	SABA3	Salix barclayi	15.0	38	50	80	55
ST	ALSI3	Alnus sinuata	0.1	24	60	80	44
SM-ST	SAAL	Salix alaxensis	4.0	14	35	80	33
SM-ST	SAPU15	Salix pulchra	5.0	25	45	40	32
SM-ST	SACO2	Salix commutata	2.0	24	45	40	31
ST	SAAR3	Salix arbusculoides	10.0	10	10	20	14
SM	SAGL	Salix glauca	5.0	5	5	20	10
SL	SHCA	Shepherdia canadensis	45.0	45	45	20	30

Stratum	Symbol	Scientific Name	Percent Canopy Cover			Percent Constancy	Importance Value
			Min.	Avg.	Max.		
SD	SARE2	Salix reticulata	5.0	5	5	20	10
GT	CACA4	Calamagrostis canadensis	20.0	29	35	80	48
GM	FEAL	Festuca altaica	5.0	5	5	20	10
FM-FT	EPAN2	Epilobium angustifolium	0.1	6	10	80	22
FM-FT	MEPA	Mertensia paniculata	1.0	6	10	40	15
FM	GYDR	Gymnocarpium dryopteris	25.0	35	45	40	37
FD	VIEPR	Viola epipsila ssp. repens	10.0	12	15	40	22
FD	ANRI	Anemone richardsonii	2.0	6	10	60	19
FD	RUAR	Rubus arcticus	5.0	8	10	40	18
FD	RUST6	Rubus stellatus	1.0	8	15	40	18
L	LICHEN	total lichens	0.1	0	0	100	0
M	MOSS	total bryophytes-mosses and liverworts	10.0	22	40	100	47
M1	ZZMOSS	unknown-mosses	10.0	19	35	80	39
B	LITTER	litter-herbaceous, mulch, and woody debris <2.5 cm	60.0	76	90	100	87
B	LITTER2	litter-woody debris >2.5 cm	2.0	11	25	100	33
B	SOIL	mineral-bare soil	0.1	2	5	100	14
B	ROCK	mineral-surface rock fragments	0.0	0	2	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	18.0	18.0	18.0	m	1
Tree regeneration	TR	2.5	2.8	3.0	m	2
Tall shrubs	ST	3.0	3.4	3.7	m	5
Medium shrubs	SM	1.2	2.0	2.5	m	4
Low shrubs	SL	30.0	63.3	100.0	cm	3
Dwarf shrubs	SD	3.0	3.0	3.0	cm	1
Tall and medium grasses and grass-likes	GT, GM	50.0	102.5	120.0	cm	4
Tall and medium forbs	FT, FM	25.0	64.6	110.0	cm	5
Dwarf herbs, lichens, and bryophytes	GD, FD, L, M	0.5	3.8	8.0	cm	9

### Mapunit Components

#### Common Name (Soils Name):

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

Subalpine-riparian scrub loamy diorite flood plains (Typic Cryofluvents, coarse-loamy over sandy-skeletal)

#### Soil Map Units

This landtype is a minor component in the map units listed. It does not occur as a major component in any map units.

#### Symbol: Common Name (Soils Name):

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)
9V12	Alpine Fans and Flood Plains, High Elevation (Typic Eutrocrypts, sandy-skeletal-Riverwash-Typic Eutrogelepts, sandy-skeletal Complex, 0 to 30 percent slopes)

### Geographically Associated Landtypes

#### 135A\_152—Loamy Wet Flood Plains, High Elevation:

This site occurs on poorly drained channels. The climax plant community is "Barclay willow-diamondleaf willow wet

#### 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."

### ***Similar Landtypes***

***135A\_200—Gravelly Low Flood Plains:***

This site lacks a thick loamy surface mantle. The climax plant community is "Sitka alder-Barclay willow-Sitka willow

***135A\_500—Loamy Wet Flood Plains:***

This site has drier soils. 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."