

# Loamy Wet Flood Plains, High Elevation (M135A\_152)

## Ecoregion Classification

**Section:** Alaska Mountains (M135A)

**Subsection(s):** Alpine Flood Plains & Terraces & Fans (M135A.V1)

## Physiographic Features

**Elevation (meters):** *RV* 824 *Range* 729 to 955

**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>
<b>Flooding:</b>	Frequent	Long	May	Sep	
<b>Ponding:</b>	Frequent	Long	May	Sep	to

## Climatic Features

**Annual Precipitation (millimeters):** *RV* 783 *Range* 497 to 1,229

**Annual Air Temperature (°C):** -4.3 -8.3 to -2.5

**Frost Free Days:** 60 50 to 70

## 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  
sandy and silty alluvium over sandy and gravelly alluvium derived from schist

**Rooting Depth (cm):** *RV:* 35 *Range:* 19 to 53

## 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.

<b>Thickness (cm)</b>	<b>Texture</b>	<b>Permeability</b>	<b>AWC (cm/cm)</b>	<b>pH</b>	<b>Effective CEC (me/100g)</b>	<b>CEC (me/100g)</b>
9	slightly decomposed plant material	moderately rapid	.34	5.5 to 6.2	30	80
3 to 16	stratified highly decomposed plant material to sand to silt; stratified fine sand to silt; mucky silt loam	moderate	.15 to .20	5.9 to 6.2		16 to 20
10 to 23	stratified sand to silt	moderate	.15 to .18	5.9 to 6.3		10 to 16

**Restrictive Features:** strongly contrasting textural stratification at 36 to 66 cm

**Water Table (May to September):** 0 to 70 cm

**Drainage Class:** very poorly drained

## Vegetation Features

### Common Vegetation Types:

#### Vegetation Type

Diamondleaf willow/horsetail-fragile sedge scrub

Beaver dam feltleaf willow wet scrub

#### Ecological Status

Climax plant community

Beaver impacted site and vegetation

### Ecological Status-Transition Description:

Two plant communities are identified within this flood prone site including a potential community with diamondleaf willow/horsetail-fragile sedge scrub and a community associated with beaver activity with feltleaf willow scrub 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.	
Diamondleaf willow/horsetail-fragile sedge scrub	87	29	47	58	3
Beaver dam feltleaf willow wet scrub	55	28	32	37	2

### Characteristics of Diamondleaf willow/horsetail-fragile sedge 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 = 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.		
SL-SM	SAPU15	Salix pulchra	20.0	38	70	100	62
SL	PEFL15	Pentaphylloides floribunda	5.0	15	25	50	27
SD-SL	VAUL	Vaccinium uliginosum	1.0	10	20	75	27
SL	SABA3	Salix barclayi	10.0	10	10	25	16
SD	SARE2	Salix reticulata	1.0	18	35	100	42
SD	SAPO	Salix polaris	10.0	10	10	25	16
GM	CAME4	Carex membranacea	5.0	16	35	75	35
GM	CAPO	Carex podocarpa	0.1	5	15	75	19
GM	CAREX	Carex	5.0	5	5	25	11
FM	EQAR	Equisetum arvense	15.0	42	75	75	56
FD	EQVA	Equisetum variegatum	10.0	10	10	25	16
L	LICHEN	total lichens	0.0	0	0	100	0
M	MOSS	total bryophytes-mosses and liverworts	5.0	60	85	100	77
M1	ZZMOSS	unknown-mosses	10.0	30	50	75	47
M1	PLSC70	Pleurozium schreberi	10.0	35	60	50	42
M1	SPHAG2	Sphagnum	0.1	12	35	75	30
M1	PASQ70	Paludella squarrosa	10.0	10	10	25	16
M1	AUTU70	Aulacomnium turgidum	5.0	5	5	25	11
M1	HYSP70	Hylocomium splendens	5.0	5	5	25	11
M1	RHTR70	Rhytidiadelphus triquetrus	5.0	5	5	25	11
M1	TONI70	Tomentypnum nitens	5.0	5	5	25	11
B	LITTER	litter-herbaceous, mulch, and woody debris <2.5 cm	7.0	33	80	100	57
B	ROCK	mineral-surface rock fragments	0.1	4	7	100	20
B	WATER	water	1.0	4	7	100	20
B	LITTER2	litter-woody debris >2.5 cm	0.1	2	5	100	14
B	SOIL	mineral-bare soil	0.1	2	7	100	14

### 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	1.2	1.5	2.0	m	5
Low shrubs	SL	75.0	80.0	90.0	cm	3
Dwarf shrubs	SD	3.0	8.7	20.0	cm	3
Tall and medium grasses and grass-likes	GT, GM	30.0	50.0	80.0	cm	3
Tall and medium forbs	FT, FM	35.0	35.0	35.0	cm	1
Dwarf herbs, lichens, and bryophytes	GD, FD, L, M	1.0	3.5	7.0	cm	4

### Characteristics of Beaver dam feltleaf 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 = 2. 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-ST	SAAL	Salix alaxensis	45.0	60	75	100	77
SM	SARI4	Salix richardsonii	35.0	35	35	50	42
SM	PEFL15	Pentaphylloides floribunda	15.0	15	15	50	27
SM	B EGL	Betula glandulosa	5.0	5	5	50	16
SM	SAGL	Salix glauca	5.0	5	5	50	16
SL	VAUL	Vaccinium uliginosum	35.0	35	35	50	42
SD	EMNI	Empetrum nigrum	10.0	10	10	50	22
GT	CACA4	Calamagrostis canadensis	5.0	25	45	100	50
GM	CAREX	Carex	5.0	5	5	50	16
FT	HELA4	Heracleum lanatum	5.0	5	5	50	16
FD-FM	EQAR	Equisetum arvense	10.0	22	35	100	47
FD	COCA13	Cornus canadensis	10.0	10	10	50	22
FD	RUAR	Rubus arcticus	7.0	7	7	50	19
L	LICHEN	total lichens	0.0	0	0	100	0
M	MOSS	total bryophytes-mosses and liverworts	35.0	48	60	100	69
M1	ZZMOSS	unknown-mosses	25.0	40	55	100	63
M1	PLSC70	Pleurozium schreberi	5.0	5	5	50	16
B	LITTER	litter-herbaceous, mulch, and woody debris <2.5 cm	25.0	48	70	100	69
B	LITTER2	litter-woody debris >2.5 cm	15.0	18	20	100	42
B	WATER	water	10.0	10	10	100	32
B	SOIL	mineral-bare soil	1.0	2	3	100	14
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.		
Tree regeneration	TR	2.0	2.0	2.0	m	1
Medium shrubs	SM	1.7	1.8	2.0	m	2
Low shrubs	SL	30.0	30.0	30.0	cm	1
Tall and medium grasses and grass-likes	GT, GM	150.0	150.0	150.0	cm	1
Tall and medium forbs	FT, FM	40.0	60.0	80.0	cm	2
Dwarf herbs, lichens, and bryophytes	GD, FD, L, M	2.0	4.3	8.0	cm	3

### Mapunit Components

#### Common Name (Soils Name):

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

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

Alpine-riparian scrub loamy wet diorite low flood plains, cool (Typic Gelaquents, 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):

8FP1 Alpine Schist Flood Plains and Terraces  
(Oxyaquic Gelorthents, sandy-skeletal-Typic Gelorthents, sandy-skeletal-Typic Gelaquents, coarse-loamy over sandy-skeletal Complex)

### ***Geographically Associated Landtypes***

***M135A\_150—Loamy Flood Plains, High Elevation:***

This site occurs on slightly higher positions with well drained soils. The climax plant community is "Riparian low diamondleaf willow-feltleaf willow scrub."

***M135A\_258—Gravelly Flood Plains, Cool:***

This site occurs on lower positions. The climax plant community is "Feltleaf willow-mixed shrub/herbaceous scrub."

***M135A\_352—Gravelly and Sandy Terraces, High Elevation:***

This site occurs on higher terrace positions. The climax plant community is "Shrub birch-bog blueberry/lichen scrub."

***Riverwash—Alluvium, Nonvegetated:***

This site occurs on barren alluvium. The climax plant community is "Sparsely vegetated alluvium."