

# USDA, Natural Resources Conservation Service Ecological Site Characterization Report

Ecological Classification Type Name: NRCS forestland site

Ecological Classification Name: *Picea glauca*-*Populus tremuloides*/*Shepherdia canadensis*-*Rosa acicularis*/*Mertensia paniculata*-*Geocaulon lividum*

Ecological Classification ID: F231XY110AK

Major Land Resource Area: 231—Interior Alaska Highlands

## Physiographic Features

Landform: Drainageways on escarpments, escarpments, hills, mountains

Slope (percent): Min    Max  
                          40     85

Elevation (feet): Min    Max  
                          850   2,963

Range of Aspect Direction: Northeast to southwest (clockwise), northeast to west (clockwise)

Water Table Depth (cm): None recorded

Flooding: Frequency    Duration  
                          None            None

Ponding: Frequency    Duration  
                          None            None

Runoff: High

Frost-Free Days: Min    Max  
                          20     110

Mean Annual Precipitation (inches): Low    High  
  10     25

Mean Annual Air Temperature (°F): Low    High  
  23     28

Monthly Data:

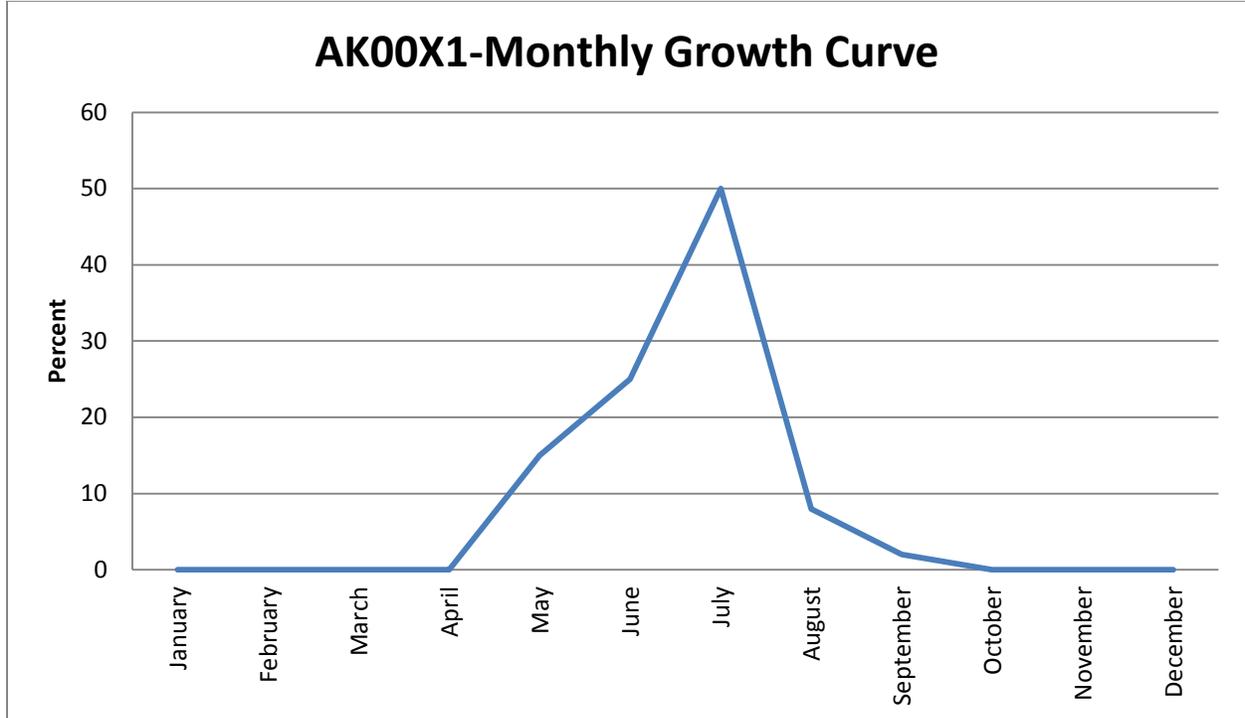
<u>Month</u>	<u>Precipitation (in)</u>		<u>Temperature (°F)</u>	
	<u>Min</u>	<u>Max</u>	<u>Low</u>	<u>High</u>
January	0	2	-31	10
February	0	1	-31	18
March	0	1	-22	30
April	0	1	1	52
May	0	2	23	63
June	1	5	32	72
July	1	7	36	75
August	1	7	32	70
September	1	4	21	57
October	0	3	3	34
November	0	3	-17	16
December	0	2	-29	18

## Plant Growth Curve

Growth Curve Number: AK00X1

Growth Curve Name: Interior

Growth Curve Description: 30 to 120 days



## Representative Soil Features

MLRA Map Unit Symbols and Components (Soil Names):

- D31BH1—D31-Boreal forest rocky sedimentary colluvial slopes
- D31BH2—D31-Boreal forest rocky colluvial escarpments
- D31BH2—D31-Boreal forest rocky sedimentary colluvial slopes
- D31BH7—D31-Boreal forest rocky sedimentary colluvial slopes
- D31LB1—D31-Boreal forest rocky sedimentary colluvial slopes
- D31LB2—D31-Boreal forest rocky sedimentary colluvial slopes
- D31OF1—D31-Boreal forest rocky sedimentary colluvial slopes

## Characteristics of Representative Soil Components

Soil Classification: Loamy-skeletal, mixed, superactive Typic Haplocrypts; loamy-skeletal, mixed, superactive Ustic Haplocrypts

Dominant Parent Material: Organic material over gravelly colluvium

Representative Surface Texture: Slightly decomposed plant material

Subsurface Texture Group: Loamy-skeletal

Saturated Hydraulic Conductivity: Moderately high to high

AWC Total (cm): Low   RV   High  
5   10.5   18

pH: Low RV High

3.4 6.7 9

Effective CEC (me/100g): Low High

14.2 40

CEC (me/100g): Min RV Max

4 19.3 62

Organic Matter (percent): Low RV High

2 22.5 80

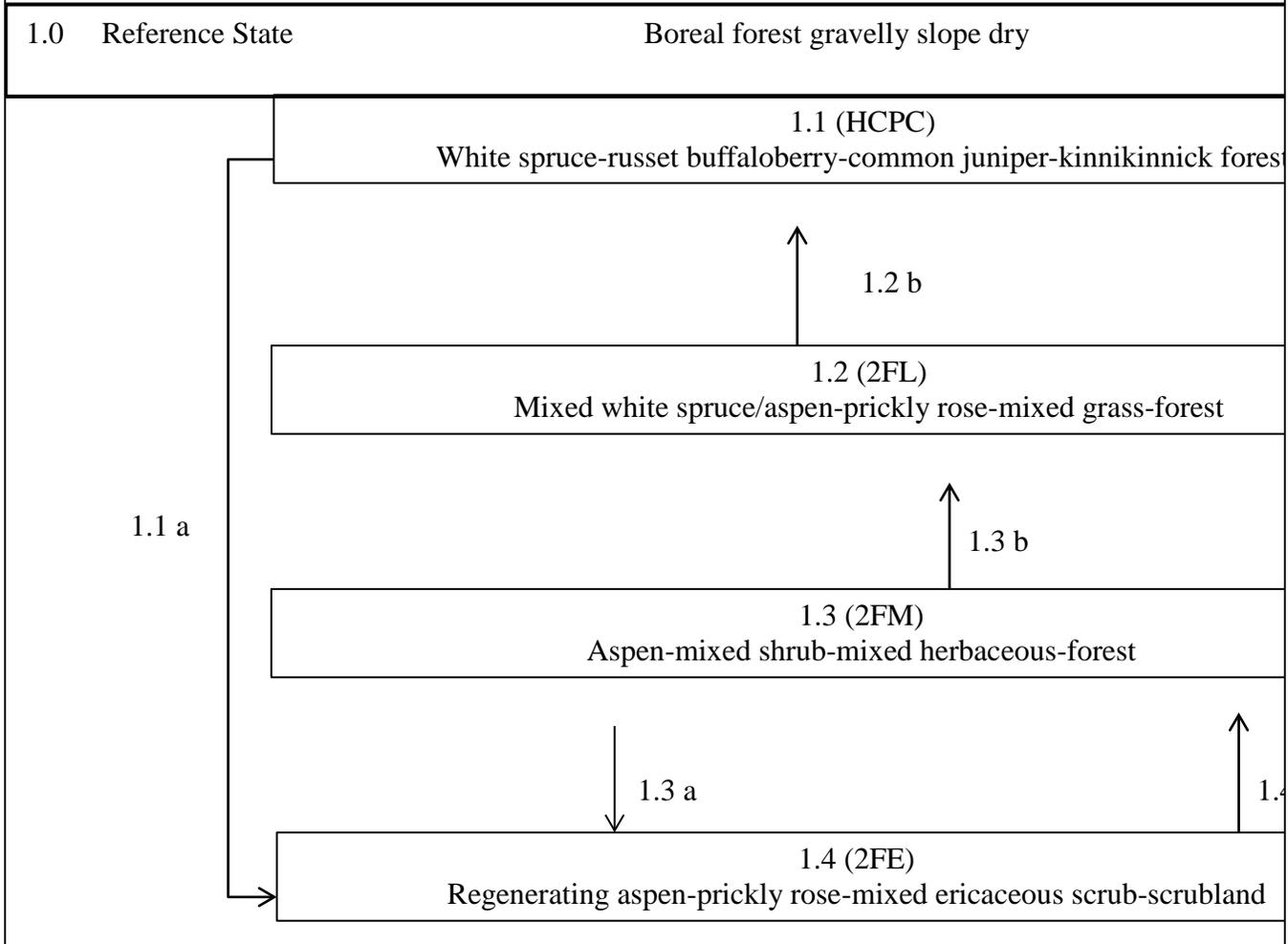
Bulk Density (1/3-Bar): Min RV Max

0.2 0.9 1.28

### *Plant Community Phases*

Ecological Site Description ID:	F231XY110AK
Ecological Dynamics of the Site:	
<p>This boreal ecological site is on steep, south-facing escarpment slopes (slopes average 65 percent). The soils have mixed lithology, are well drained, and are considered more stable than those of ecological site R231XY109AK. Ecological site F231XY181AK is similar, but site F231XY110AK does not have a thick organic mat or abundant moss ground cover. These differences are attributed to the warmer, drier landscape position. The soils in community phase 1.1 are classified as Haplocryepts and are composed of organic matter over gravelly colluvium.</p> <p>Fire resulted in four documented phases. It is a natural and typically unmanaged disturbance regime. The typical fire return interval for coniferous forests of interior Alaska is about 100 years.</p>	

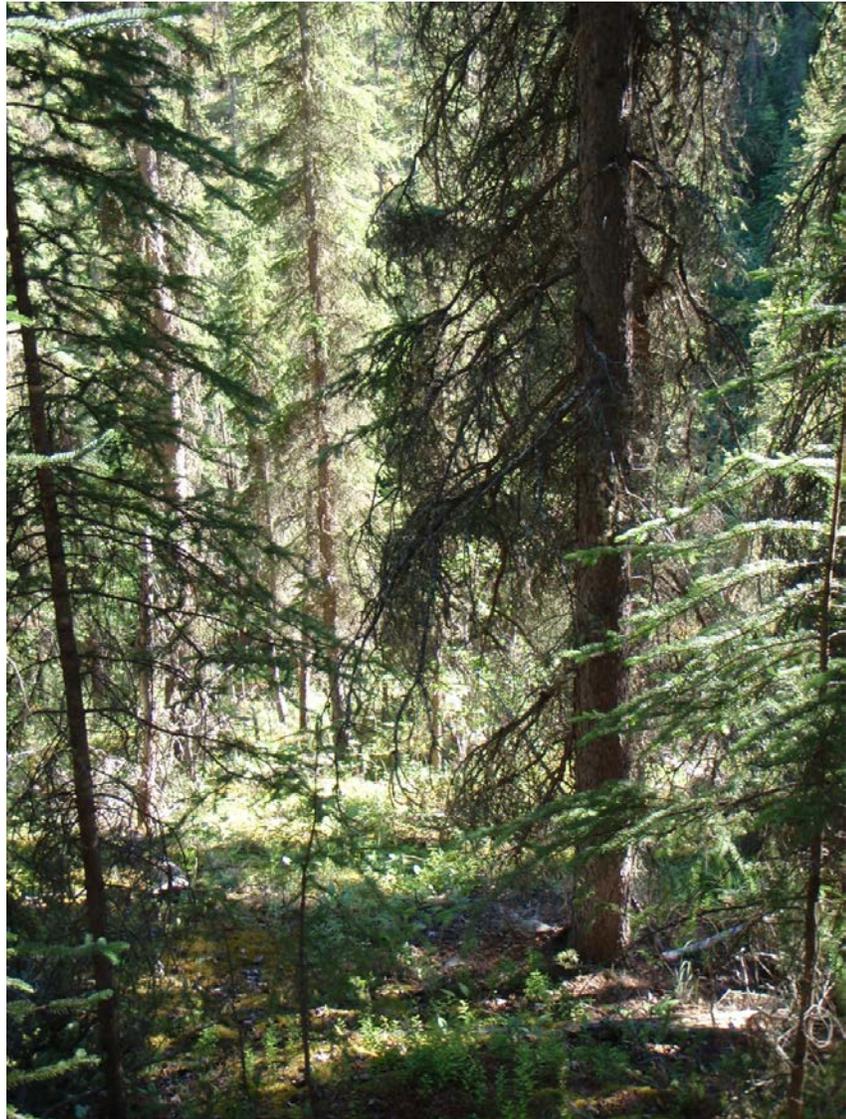
State and Transition Diagram:



State and Transition Diagram:	1	State Name:	Reference
State Narrative:	<p>Phases in the reference state were grouped on the basis of structure and dominance of deciduous and coniferous trees, which are believed to be directly related to the time since the last fire event.</p> <p>Because of the steepness of slope and dominance of white spruce forest, a high-severity fire regime is considered to be typical for this ecological site. During a high-severity fire, a large proportion of the organic mat is consumed and mineral soil material typically is exposed. While many pre-fire species likely will regenerate after a fire, conditions are suitable for the establishment and growth of species from windblown seed (e.g., paper birch, fireweed, and willow).</p> <p>The fire return interval has a major effect on the structure of the forest. Longer fire return intervals favor development of community phase 1.1, and shorter fire return intervals favor development of community phases 1.2 and 1.3.</p> <p>The height of tall trees is defined as more than 40 feet, medium trees as 15 to 40 feet, and stunted and regenerative trees as less than 15 feet. The height of tall shrubs is defined as more than 10 feet, medium shrubs as 3 to 10 feet, low shrubs as 8 inches to</p>		

3 feet, and dwarf shrubs as less than 8 inches.

Phase 1.1



Community Phase Number:	1.1	Community Phase Name:	White spruce-russet buffaloberry-common juniper-kinnikinnick forest
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Community Phase Narrative:

The dominant vegetation is a mixture of tall and medium *Picea glauca*, a mixture of shrubs, and a mixture of forbs. *Picea glauca* is the most common tree species (~55% cover) in the stands, and *Populus tremuloides* is a minor component. The shrubs consist of a similar abundance of tall, medium, short, and dwarf strata (combined ~40% cover). The most common tall shrub is *Salix sp.*, the most common medium shrub is *Shepherdia canadensis*, the most common low shrub is *Juniperus communis*, and the most common dwarf shrub is *Arctostaphylos uva-ursi*. Common forbs include *Geocaulon lividum*, *Equisetum scirpoides*, and *Mertensia paniculata*. Graminoids and lichen typically are minor components. Feathermoss is an abundant ground cover in some areas. One observation of this phase was conducted.

Community Pathways	
Pathway Number:	Pathway Name & Description:
1.1a	Fire. From field observations, the communities resemble those associated with high-intensity fires. White spruce is the dominant tree species. This phase likely has the longest fire return interval.

Phase 1.2			
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Community Phase Number:	1.2	Community Phase Name:	Mixed white spruce/aspens-prickly rose-mixed grass-forest
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Community Phase Narrative:

The dominant vegetation is a mixture of tall and medium trees. *Populus tremuloides* and *Picea glauca* are the dominant tree species (combined ~35% cover), and *Betula neoalaskana* is a minor component. The shrubs (combined ~40% cover) primarily are in the low shrub stratum, and the most common species is *Rosa acicularis*. Graminoids and forbs are abundant (combined ~30% cover). Common graminoids are *Calamagrostis canadensis* and *Calamagrostis purpurascens*. The diversity of the forbs is high, but none of the species is abundant. Feathermoss is a common ground cover. Seven observations of this phase were conducted.

Community Pathways	
Pathway Number:	Pathway Name & Description:
1.2a	Fire.
1.2b	Normal time and growth without fire. Aspen eventually is replaced by white spruce, resulting in community phase 1.1. Aspen commonly occurs as standing dead trees, which is presumed to indicate that the community is transitioning into a phase that is dominantly white spruce. Phase 1.2 is thought to have a shorter fire return interval than phase 1.1 and a longer fire return interval than phase 1.3.

Phase 1.3			
Community Phase Number:	1.3	Community Phase Name:	Aspen-mixed shrub-mixed herbaceous-forest

Community Phase Narrative:	
<p>The dominant vegetation is a mixture of tall, medium, and regenerating <i>Populus tremuloides</i> (totaling ~40% cover). <i>Picea glauca</i> and <i>Betula neoalaskana</i> are also present but are not considered dominant components in the stands. Medium, low, and dwarf shrubs are abundant (totaling ~40% cover). Common medium and low shrubs are <i>Rosa acicularis</i> and <i>Shepherdia canadensis</i>, and common dwarf shrubs are <i>Arctostaphylos uva-ursi</i> and <i>Vaccinium vitis-idaea</i>. Graminoids and forbs are evenly distributed (totaling ~35% cover). A common graminoid is <i>Calamagrostis canadensis</i>, and a common forb is <i>Chamerion angustifolium</i>. Moss and lichen cover is minimal. Ten observations of this phase were conducted.</p>	
Community Pathways	
Pathway Number:	Pathway Name & Description:
1.3a	Fire. Aspen stands are less likely to burn and fire is less likely to spread on these stands than on stands that are dominantly spruce. Burned stands of paper birch and/or aspen are in the study area. If community phase 1.3 is burned, the resulting community resembles community phase 1.4.
1.3b	Normal time and growth without fire. White spruce becomes codominant with aspen, resulting in a community resembling that of phase 1.2. Phase 1.3 is thought to have a shorter fire return interval than phase 1.2 and a longer fire return interval than phase 1.4.

Phase 1.4



Community Phase Number:

1.4

Community Phase Name:

Regenerating aspen-prickly rose-mixed ericaceous scrub-scrubland

Community Phase Narrative:

The dominant vegetation is regenerating *Populus tremuloides* (totaling ~35% cover), but *Picea glauca* and *Betula neoalaskana* are also present. The majority of the shrub cover is in the low and dwarf strata (totaling ~40% cover). Common species include *Rosa acicularis*, *Arctostaphylos uva-ursi*, and *Vaccinium vitis-idaea*. Graminoids and forbs make up ~30% of the cover. This community phase is highly diverse, but no graminoid or forb species are dominant. Lichen and moss cover is evenly distributed and covers ~30% of the ground surface. Eight observations of this phase were conducted.

Community Pathways	
Pathway Number:	Pathway Name & Description:
1.4a	Normal time and growth without fire. The aspen on the sampled sites is expected to mature, and the community is expected to resemble phase 1.3. If this phase burns, the resulting community would likely resemble that of phase 1.4.

*Dynamic Soil Properties within Representative Rooting Depth*  
*Community Phase 2FE*



Rooting Depth (cm): Min    RV    Max  
                                  61    82.8    105

Restrictive Features: None recorded

Drainage Class: Excessively drained, somewhat excessively drained

Surface Layer

Thickness (cm): Min    RV    Max  
                                  0    2.5    8

Texture: Channery silt loam, gravelly sandy loam, sandy loam, silt loam, slightly decomposed plant material

AWC (cm/cm): Min    RV    Max  
                                  0.12    0.21    0.35

pH: Min    RV    Max  
                  3.7    6.1    8.1

Subsurface Layer

Thickness (cm): Min RV Max  
61 80.2 97

Texture: Very gravelly sandy loam, channers, channery silt loam, silt loam, extremely channery silt loam, extremely channery sandy loam, sandy loam

AWC (cm/cm): Min RV Max  
0.07 0.16 0.25

pH: Min RV Max  
5 6.7 8.2

Influencing Water Features

NWI Code: None recorded

NWI Description: None recorded

Rosgen Classification: None recorded

Structure and Cover

Ground Cover (%):

<u>Lichen</u>	<u>Bryophytes</u>	<u>Herbaceous Litter and Mulch</u>	<u>Woody Litter and Debris &gt;1 inch</u>	<u>Bare Soil</u>	<u>Surface Rock Fragments</u>	<u>Surface Water</u>
0-40	5-30	10-60	2-20	0-10	1-25	0-5

Percent Canopy Cover by Height Class and Type (Min-Max):

<u>Stratum Code</u>	<u>Grasses/Grasslike</u>	<u>Forbs</u>	<u>Shrubs</u>	<u>Trees</u>
GM (4-24 inches)	5-5	---	---	---
GT (>24 inches)	5-5	---	---	---
FD (<4 inches)	---	0.01-0.01	---	---
FM (4-24 inches)	---	1-8	---	---
SD (<8 inches)	---	---	10-10	---
SL (8-36 inches)	---	---	1-7	---
TR (<15 feet)	---	---	---	1-65
TM (15-40 feet)	---	---	---	2-3

Plant Species Canopy Cover (%), Constancy (%), and Occurrence Index\*:

Stratum—GM (4-24 inches)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
CAPU	<i>Calamagrostis purpurascens</i>	15-15-15	13	13.7
POA	<i>Poa</i>	15-15-15	13	13.7
FEAL	<i>Festuca altaica</i>	10-10-10	13	11.2
POGL	<i>Poa glauca</i>	5-5-5	25	11.2
FESTU	<i>Festuca</i>	7-7-7	13	9.4
CALAM	<i>Calamagrostis</i>	7-7-7	13	9.4

Stratum—GT (>24 inches)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
CAPU	<i>Calamagrostis purpurascens</i>	5-18.3-25	38	26.2
AGROP2	<i>Agropyron</i>	15-15-15	13	13.7

Stratum—FM (4-24 inches)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
SATR5	<i>Saxifraga tricuspidata</i>	0.1-4.4-8	38	12.8
CHAN9	<i>Chamerion angustifolium</i>	0.1-3-10	50	12.3
GABO2	<i>Galium boreale</i>	0.1-2.2-5	63	11.8
ACMI2	<i>Achillea millefolium</i>	5-5-5	25	11.2
SOMU	<i>Solidago multiradiata</i>	0-1.8-5	63	10.7
ZIEL2	<i>Zigadenus elegans</i>	3-4-5	25	10.0
SILEN	<i>Silene</i>	3-4-5	25	10.0

Stratum—SD (<8 inches)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
ARUV	<i>Arctostaphylos uva-ursi</i>	5-30-70	38	33.5
VAVI	<i>Vaccinium vitis-idaea</i>	5-25-60	38	30.6
EMNI	<i>Empetrum nigrum</i>	20-20-20	13	15.8
ARFR4	<i>Artemisia frigida</i>	20-20-20	13	15.8

Stratum—SL (8-36 inches)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
ROAC	<i>Rosa acicularis</i>	1-12.2-40	63	27.6
VAUL	<i>Vaccinium uliginosum</i>	2-4.5-7	25	10.6
ARUV	<i>Arctostaphylos uva-ursi</i>	7-7-7	13	9.4
SHCA	<i>Shepherdia canadensis</i>	2-3.5-5	25	9.4

Stratum—TR (<15 feet)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
POTR5	<i>Populus tremuloides</i>	10-38.3-70	88	57.9
PIGL	<i>Picea glauca</i>	1-3-9	75	15.0
BENE4	<i>Betula neoalaskana</i>	1-5.5-10	25	11.7

Stratum—TS (<15 feet)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
POTR5	<i>Populus tremuloides</i>	70-70-70	13	29.6

Stratum—TM (15-40 feet)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
POTR5	<i>Populus tremuloides</i>	3-4-5	50	14.1
PIGL	<i>Picea glauca</i>	2-3.7-5	38	11.7

Site Tree Measurements:

<u>Tree Species</u>	<u>Age (years)</u>	<u>Diameter (in)</u>	<u>Height (feet)</u>	<u># of Trees</u>	<u>Measurement Height</u>
<i>Picea glauca</i>	46-58-70	3-5-7	12-18-23	2	B

Tree Basal Area:

<u>Min-Avg-Max</u>	<u>Number of Stands</u>
2-5-8	2

Management Use Per Observation Site:

<u>Use</u>	<u>Associated Plants</u>	<u>Associated Animals</u>	<u>Season</u>
No observed use			Not grazed/browsed
Unknown			Unknown

Notable Plants: None observed

Species Richness: Number of stops—8; plant species per stop (min-avg-max)—11-18.5-24

Community Phase 2FM



Rooting Depth (cm): Min RV Max  
44 68.4 105

Restrictive Features: None recorded

Drainage Class: Excessively drained, somewhat excessively drained

Surface Layer

Thickness (cm): Min RV Max  
0 4.2 12

Texture: Silt loam, slightly decomposed plant material, very flaggy slightly decomposed organic matter, very stony slightly decomposed plant material

AWC (cm/cm): Min RV Max  
0.18 0.3 0.35

pH: Min RV Max  
4.7 6.5 7.6

Subsurface Layer

Thickness (cm): Min RV Max  
4 64.2 93

Texture: Gravelly coarse sandy loam, gravelly silt loam, very gravelly coarse sandy loam, very gravelly sandy loam, extremely gravelly coarse sandy loam, channery silt loam, extremely gravelly sandy loam, loam, extremely channery loam, extremely channery silt loam, very flaggy coarse sandy loam, gravel

AWC (cm/cm): Min RV Max  
0.05 0.14 0.24

pH: Min RV Max  
4.9 6.2 7.9

Influencing Water Features

NWI Code: None recorded

NWI Description: None recorded

Rosgen Classification: None recorded

Structure and Cover

Ground Cover (%):

<u>Lichen</u>	<u>Bryophytes</u>	<u>Herbaceous Litter and Mulch</u>	<u>Woody Litter and Debris &gt;1 inch</u>	<u>Bare Soil</u>	<u>Surface Rock Fragments</u>	<u>Surface Water</u>
0-60	2-45	25-85	1-15	0-5	0-50	0-0

Percent Canopy Cover by Height Class and Type (Min-Max):

<u>Stratum Code</u>	<u>Grasses/Grasslike</u>	<u>Forbs</u>	<u>Shrubs</u>	<u>Trees</u>
GM (4-24 inches)	1-1	---	---	---
FD (<4 inches)	---	0.1-0.1	---	---
FM (4-24 inches)	---	0.1- 0.1	---	---
FT (>24 inches)	---	15-15	---	---
SD (<8 inches)	---	---	0.1-0.1	---
SL (8-36 inches)	---	---	1-5	---
SM (3-10 feet)	---	---	0.1-15	---
TS (<15 feet)	---	---	---	2-40
TM (15-40 feet)	---	---	---	4-4
TT (>40 feet)	---	---	---	2-2

Plant Species Canopy Cover (%), Constancy (%) and Occurrence Index\*:

Stratum—GM (4-24 inches)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
CACA4	<i>Calamagrostis canadensis</i>	1-12.4-35	50	24.9
POGL	<i>Poa glauca</i>	5-5-5	20	10.0

Stratum—GT (>24 inches)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
CACA4	<i>Calamagrostis canadensis</i>	6-17-35	30	22.6
CAPU	<i>Calamagrostis purpurascens</i>	10-12.5-15	20	15.8
LUARU	<i>Luzula arcuata</i> ssp. <i>unalaschcensis</i>	10-10-10	10	10.0

Stratum—FD (<4 inches)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
GELI2	<i>Geocaulon lividum</i>	1-4-8	30	11.0
EQSC	<i>Equisetum scirpoides</i>	2-6-10	20	11.0

Stratum—FM (4-24 inches)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
GABO2	<i>Galium boreale</i>	0.1-5.2-15	70	19.0
SATR5	<i>Saxifraga tricuspidata</i>	2-7.2-15	40	17.0
CHAN9	<i>Chamerion angustifolium</i>	0.1-4-10	50	14.2
PEDIC	<i>Pedicularis</i>	20-20-20	10	14.1
MEPA	<i>Mertensia paniculata</i>	0.1-3.8-10	50	13.8

Stratum—FT (>24 inches)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
COSE5	<i>Corydalis sempervirens</i>	15-15-15	10	12.2
CHAN9	<i>Chamerion angustifolium</i>	5-6-7	20	11.0

Stratum—SD (<8 inches)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
ARUV	<i>Arctostaphylos uva-ursi</i>	2-29.2-75	40	34.2
VAVI	<i>Vaccinium vitis-idaea</i>	6-10-20	50	22.4
LIBO3	<i>Linnaea borealis</i>	0-6.7-10	30	14.1
CHCA2	<i>Chamaedaphne calyculata</i>	15-15-15	10	12.2

Stratum—SL (8-36 inches)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
ROAC	<i>Rosa acicularis</i>	1-5.4-15	70	19.5
SHCA	<i>Shepherdia canadensis</i>	5-10-15	20	14.1
ARUV	<i>Arctostaphylos uva-ursi</i>	20-20-20	10	14.1
LEPAD	<i>Ledum palustre</i> ssp. <i>decumbens</i>	10-10-10	10	10.0
VIED	<i>Viburnum edule</i>	10-10-10	10	10.0

Stratum—SM (3-10 feet)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
ROAC	<i>Rosa acicularis</i>	5-13.3-30	30	20.0
SHCA	<i>Shepherdia canadensis</i>	1-8-15	30	15.5

Stratum—TR (<15 feet)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
POTR5	<i>Populus tremuloides</i>	2-24.1-60	90	46.6
PIGL	<i>Picea glauca</i>	2-5.6-15	90	22.4

Stratum —TS (<15 feet)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
POTR5	<i>Populus tremuloides</i>	40-40-40	10	20.0

Stratum—TM (15-40 feet)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
POTR5	<i>Populus tremuloides</i>	3-17.9-40	80	37.8
BENE4	<i>Betula neoalaskana</i>	1-8.5-20	40	18.4
PIGL	<i>Picea glauca</i>	1-4.3-10	70	17.3

Stratum—TT (>40 feet)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
POTR5	<i>Populus tremuloides</i>	5-10.7-20	30	17.9
PIGL	<i>Picea glauca</i>	2-4.7-8	30	11.8

Site Tree Measurements:

<u>Tree Species</u>	<u>Age (years)</u>	<u>Diameter (in)</u>	<u>Height (feet)</u>	<u># of Trees</u>	<u>Measurement Height</u>
<i>Betula neoalaskana</i>	---	3.1-4-4.5	23-24-25	2	B

Tree Basal Area:

<u>Min-Avg-Max</u>	<u>Number of Stands</u>
25-78.4-110	5

Management Use Per Observation Site:

<u>Use</u>	<u>Associated Plants</u>	<u>Associated Animals</u>	<u>Season</u>
No observed use Slight use	Tree regeneration	Moose	Not grazed/browsed Summer

Notable Plants: *Draba densifolia*

Species Richness: Number of stops—10; plant species per stop (min-avg-max): 16-24.1-33

Community Phase 2FL



Rooting Depth (cm): Min   RV   Max  
                                  34    58    84

Restrictive Features: None recorded

Drainage Class: Excessively drained, somewhat excessively drained

Surface Layer

Thickness (cm): Min   RV   Max  
                                  0     6    16

Texture: Gravelly very fine sandy loam, peat, silt loam, slightly decomposed plant material

AWC (cm/cm): Min   RV   Max  
                                  0.2   0.31   0.35

pH: Min   RV   Max  
          5.2    6.1    7.2

Subsurface Layer

Thickness (cm): Min   RV   Max  
                                  34    52    68

Texture: Gravelly silt loam, extremely cobbly silt loam, extremely gravelly coarse sandy loam, channery silt loam, very channery fine sandy loam, silt loam, extremely channery coarse sandy loam, gravel, very fine sandy loam

AWC (cm/cm): Min   RV   Max  
                                  0.02   0.14   0.24

pH: Min   RV   Max  
          4     6.2    7.7

Influencing Water Features

NWI Code: None recorded

NWI Description: None recorded

Rosgen Classification: None recorded

Structure and Cover

Ground Cover (%):

<u>Lichen</u>	<u>Bryophytes</u>	<u>Herbaceous Litter and Mulch</u>	<u>Woody Litter and Debris &gt;1 inch</u>	<u>Bare Soil</u>	<u>Surface Rock Fragments</u>	<u>Surface Water</u>
1-7	5-30	40-90	2-20	0-5	0-5	0-0

Percent Canopy Cover by Height Class and Type (Min-Max):

<u>Stratum Code</u>	<u>Grasses/Grasslike</u>	<u>Forbs</u>	<u>Shrubs</u>	<u>Trees</u>
GT (>24 inches)	15-5	---	---	---
FD (<4 inches)	---	18-18	---	---
FM (4-24 inches)	---	0.1-5	---	---
FT (>24 inches)	---	0.01-0.01	---	---
SL (8-36 inches)	---	---	2-5	---
SM (3-10 feet)	---	---	1-1	---
TR (<15 feet)	---	---	---	1-20
TM (15-40 feet)	---	---	---	1-5
TT (>40 feet)	---	---	---	10-2

Plant Species Canopy Cover (%), Constancy (%) and Occurrence Index\*:

Stratum—GM (4-24 inches)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
CACA4	<i>Calamagrostis canadensis</i>	5-10-15	29	16.9

Stratum—GT (>24 inches)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
CACA4	<i>Calamagrostis canadensis</i>	15-21.7-25	43	30.5
CAPU	<i>Calamagrostis purpurascens</i>	25-27.5-30	29	28.0

Stratum—FD (<4 inches)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
STELL	<i>Stellaria</i>	18-18-18	14	16.0
GELI2	<i>Geocaulon lividum</i>	10-10-10	14	12.0
LYCO3	<i>Lycopodium complanatum</i>	4-4.5-5	29	11.3

Stratum—FM (4-24 inches)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
MEPA	<i>Mertensia paniculata</i>	1-3.2-7	71	15.1
GELI2	<i>Geocaulon lividum</i>	1-4.3-10	43	13.6
GABO2	<i>Galium boreale</i>	1-3-5	43	11.3
CHAN9	<i>Chamerion angustifolium</i>	0.1-1.8-3	57	10.1

Stratum—FT (>24 inches)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
CHAN9	<i>Chamerion angustifolium</i>	2-3.5-5	29	10.0

Stratum—SD (<8 inches)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
ARUV	<i>Arctostaphylos uva-ursi</i>	3-5.2-10	57	17.3
LIBO3	<i>Linnaea borealis</i>	1-2.2-5	57	11.3
VAVI	<i>Vaccinium vitis-idaea</i>	2-4.5-7	29	11.3

Stratum—SL (8-36 inches)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
ROAC	<i>Rosa acicularis</i>	15-38.8-100	57	47.1
VIED	<i>Viburnum edule</i>	2-10.7-25	43	21.4
VAVI	<i>Vaccinium vitis-idaea</i>	10-15-20	29	20.7
SHCA	<i>Shepherdia canadensis</i>	5-12.5-20	29	18.9
JUCO6	<i>Juniperus communis</i>	5-6-7	29	13.1

Stratum—SM (3-10 feet)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
ROAC	<i>Rosa acicularis</i>	4-4.7-5	43	14.1
SABE2	<i>Salix bebbiana</i>	1-4-7	29	10.7

Stratum—ST (>10 feet)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
ALVIF	<i>Alnus viridis ssp. fruticosa</i>	10-10-10	14	12.0
ALINT	<i>Alnus incana ssp. tenuifolia</i>	10-10-10	14	12.0

Stratum—TR (<15 feet)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
PIGL	<i>Picea glauca</i>	2-6.7-10	100	25.9
POTR5	<i>Populus tremuloides</i>	1-9.2-20	71	25.6
BENE4	<i>Betula neoalaskana</i>	1-3.3-7	43	12.0

Stratum—TS (<15 feet)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
PIGL	<i>Picea glauca</i>	10-10-10	14	12.0

Stratum—TM (15-40 feet)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
POTR5	<i>Populus tremuloides</i>	5-15-20	86	35.9
PIGL	<i>Picea glauca</i>	5-12.5-20	86	32.7
BENE4	<i>Betula neoalaskana</i>	5-12.5-25	57	26.7

Stratum—TT (>40 feet)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
PIGL	<i>Picea glauca</i>	2-11.4-25	71	28.5
POTR5	<i>Populus tremuloides</i>	2-14.7-40	43	25.1

Site Tree Measurements:

<u>Tree Species</u>	<u>Age (years)</u>	<u>Diameter (in)</u>	<u>Height (feet)</u>	<u># of Trees</u>	<u>Measurement Height</u>
<i>Picea glauca</i>	21-49-92	1.4-7-15.5	6-40-73	20	B

Tree Basal Area:

<u>Min-Avg-Max</u>	<u>Number of Stands</u>
20-47.9-115	7

Management Use Per Observation Site:

<u>Use</u>	<u>Associated Plants</u>	<u>Associated Animals</u>	<u>Season</u>
Moderate use		Moose	Unknown
No observed use			Not grazed/browsed

Notable Plants: None observed

Species Richness: Number of stops—7; plant species per stop (min-avg-max)—18-24.4-40

Community Phase HCPC



Rooting Depth (cm): Min RV Max  
152 152 152

Restrictive Features: None recorded

Drainage Class: Excessively drained, somewhat excessively drained

Surface Layer

Thickness (cm): Min RV Max  
3 3 3

Texture: Slightly decomposed plant material

AWC (cm/cm): Min RV Max  
0.35 0.35 0.35

Subsurface Layer

Thickness (cm): Min RV Max  
149 149 149

Texture: Gravelly sandy loam, extremely gravelly loamy coarse sand

AWC (cm/cm): Min RV Max  
0.02 0.08 0.12

pH: Min RV Max  
7.9 8 8.1

Influencing Water Features

NWI Code: None recorded

NWI Description: None recorded

Rosgen Classification: None recorded

Structure and Cover

Ground Cover (%):

<u>Lichen</u>	<u>Bryophytes</u>	<u>Herbaceous Litter and Mulch</u>	<u>Woody Litter and Debris &gt;1 inch</u>	<u>Bare Soil</u>	<u>Surface Rock Fragments</u>	<u>Surface Water</u>
4-4	18-18	90-90	20-20	4-4	0-0	0-0

Percent Canopy Cover by Height Class and Type (Min-Max):

<u>Stratum Code</u>	<u>Grasses/Grasslike</u>	<u>Forbs</u>	<u>Shrubs</u>	<u>Trees</u>
FD (<4 inches)	---	2-6	---	---
FM (4-24 inches)	---	4-9	---	---
FT (>24 inches)	---	3-3	---	---
SD (<8 inches)	---	---	4-5	---
SL (8-36 inches)	---	---	7-7	---
SM (3-10 feet)	---	---	3-7	---
ST (>10 feet)	---	---	5-5	---
TR (<15 feet)	---	---	---	15-15
TM (15-40 feet)	---	---	---	10-25
TT (>40 feet)	---	---	---	30-30

Plant Species Canopy Cover (%), Constancy (%) and Occurrence Index\*:

Stratum—FD (<4 inches)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
GELI2	<i>Geocaulon lividum</i>	6-6-6	100	24.5
ORSE	<i>Orthilia secunda</i>	3-3-3	100	17.3
GORE2	<i>Goodyera repens</i>	2-2-2	100	14.1

Stratum—FM (4-24 inches)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
MEPA	<i>Mertensia paniculata</i>	9-9-9	100	30.0
EQSC	<i>Equisetum scirpoides</i>	5-5-5	100	22.4
GABO2	<i>Galium boreale</i>	4-4-4	100	20.0

Stratum—FT (>24 inches)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
LUAR2	<i>Lupinus arcticus</i>	3-3-3	100	17.3

Stratum—SD (<8 inches)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
ARUV	<i>Arctostaphylos uva-ursi</i>	5-5-5	100	22.4
VIED	<i>Viburnum edule</i>	4-4-4	100	20.0

Stratum Stratum—SL (8-36 inches)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
ROAC	<i>Rosa acicularis</i>	7-7-7	100	26.5
JUCO6	<i>Juniperus communis</i>	7-7-7	100	26.5

Stratum—SM (3-10 feet)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
SHCA	<i>Shepherdia canadensis</i>	7-7-7	100	26.5
COSES	<i>Cornus sericea ssp. sericea</i>	3-3-3	100	17.3

Stratum—ST (>10 feet)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
SALIX	<i>Salix</i>	5-5-5	100	22.4

Stratum—TR (<15 feet)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
PIGL	<i>Picea glauca</i>	15-15-15	100	38.7

Stratum—TM (15-40 feet)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
PIGL	<i>Picea glauca</i>	25-25-25	100	50.0
POTR5	<i>Populus tremuloides</i>	10-10-10	100	31.6

Stratum—TT (>40 feet)

<u>Plant Symbol</u>	<u>Scientific Name</u>	<u>% Cover (Min-Avg-Max)</u>	<u>Constancy</u>	<u>Occurrence Index</u>
PIGL	<i>Picea glauca</i>	30-30-30	100	54.8

Site Tree Measurements:

<u>Tree Species</u>	<u>Age (years)</u>	<u>Diameter (in)</u>	<u>Height (feet)</u>	<u># of Trees</u>	<u>Measurement Height</u>
<i>Picea glauca</i>	75-78-80	4.7-6-9.25	34-51-69	4	B

Tree Basal Area:

<u>Min-Avg-Max</u>	<u>Number of Stands</u>
103-103-103	1

Management Use Per Observation Site:

<u>Use</u>	<u>Associated Plants</u>	<u>Associated Animals</u>	<u>Season</u>
No observed use			Not grazed/browsed

Notable Plants: None observed

Species Richness: Number of stops—1; plant species per stop (min-avg-max)—22-22-22

\*Only taxa with an occurrence index of higher than 9 are included in this report, because it was not feasible to list all of the species on the sites. Species that are indicative of a site may be present in small proportions, but they were not included in the tabular data. Any species that are indicative of the ecological dynamics on a site are represented in the State and Transition Model (STM).