CATHEDRAL PROVINCIAL PARK
BIOTERRAIN AND ECOSYSTEM INVENTORY

DRAFT

I. LEGEND TO ECOSYSTEM DESCRIPTIONS

Legend and Maps for:

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TABLE OF CONTENTS

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

1.0 INTRODUCTION

In 1994 a two year project was initiated to complete a biophysical inventory of Cathedral Provincial Park and to include the surrounding 1:20 000 map sheets. ***JMJ Holdings Inc.*** was awarded the contract and work beagn in the 1994 fiscal year. Sampling was completed over two field seasons. High elevation forested sites, alpine tundra, and parkland were sampled in the the summer of 1994. Lower and mid-slope areas wer sampled in the summer of 1995. Data analysis and mapping were completed in March 1996.

1.1 STUDY AREA

The study area incorporates all of 1:20 000 TRIM map sheets 92H.010, 92H.009, 92H.019, 92H.020 and the area totals 50 400 ha.. This includes the Ashnola river drainage from Border lake east to Ewart creek and from Crater mountain south to the Canada/ U.S.A border. The study area includes all of Cathedral Provincial Park.

1.2 BIOPHYSICAL SETTING

Demarchi (1995) classify the study area as occuring in the Southern Interior Ecoprovince, Okanagan Ranges (OKR) ecosection.

1.3 BIOGEOCLIMATIC SETTING

Lloyd et. al. (1990) classify the study area as occuring in the Interior Douglas-fir (IDF), Montane Spruce (MS), Englemann Spruce - Subalpine fir (ESSF), and Alpine Tundra (AT) biogeoclimatic zones.

1.31 IDF Interior Douglas-fir Zone

The IDF is divided into three biogeoclimatic subzone variants and three phases. The **IDFxh1** - Okanagan Very Dry Hot IDF variant, continues from 400 - 1250 meters. This incorporates the lower slopes of the Ashnola River. Within the IDFxh1 occurs the **IDFxh1a** (Okanagan Very Dry Hot IDF variant, Grassland phase). This occurs on edaphic climax grasslands. The **IDFdk1** (Thompson Dry Cool IDF variant) occurs above the IDFxh1 (when present) up to approximately 1460 meters (as high as 1700 m around Crater Mountain). The IDFdk1b (Thompson Dry Cool IDF variant, south exposure phase) occurs on the slopes north (south facing) of the Ashnola River. Units in the IDFdk1b are identical to the IDFdk1. Within the IDFdk1 occurs the **IDFdk1a** (Thompson Dry Cool IDF variant, Grassland phase). This occurs on edaphic climax grasslands. The **IDFdk2** (Cascade Dry Cool IDF variant) occurs above the IDFdk1 (when present) up to approximately 1300 meters. This unit is in the upper drainage of the Ashnola River.

1.32 MS Montane Spruce Zone

The MS is divided into two subzones. The **MSxk** (Very Dry Cool MS subzone) occurs above the IDF to approximately 1650 meters. This subzone occurs in all the major drainages within the study area. The **MSdm2** (Thompson Plateau Dry Mild MS Variant) occurs in the upper Ashnola River above the IDFdk2 up to approximately 1530 meters (as high as 1600 m on warm aspects.

1.33 ESSF Englemann Spruce - Subalpine Fir Zone

The ESSF is divided into two subzones. The **ESSFxc** (Very Dry Cold ESSF subzone) dominates all the the high elevation forests in the study area. It occurs above the MS up to approximately 2100 meters. The **ESSFxcp** (Very Dry Cold ESSF parkland)
occurs above the ESSFxc up to approximately 2300 meters.

1.34 AT Alpine Tundra Zone

The AT occurs above the ESSFxcp. It includes high elevation, non-vegetated rock and talus as well as extiensive alpine grasslands.

2.0 OBJECTIVES

The objectives of this project are as follows:

Using regular consultation with the appropriate technical expert:

1. **to pre-stratify the bioterrain of the study area** on 1:15 000 colour air photos using the methods of The Resource Inventory Committee (1995)

2. **to photograph and collect site, vegetation and soil data** using the methods of Luttmerding et al. (1990) at least 20% of the polygons within the study area that adequately describes important habitats, serality and variability within each subzone variant

3. **to produce a working legend, an abbreviated map legend, an expanded legend** describing the nature of terrain, soils, humus form, directional exposure and seral stages of the ecosystem units within the subzone variants in a format standard suggested by the Resource Inventory Committee (1995)

4. **to map ecosystem polygons** that are contiguous with bioterrain polygons on mylar registered to 1:20 000 T.R.I.M. maps

5. **to enter by polygon number**, within an EXCEL data base, bioterrain and ecosystem data

specified by the Resource Inventory Committee (1995)

6. **to produce red and blue listed wildlife** habitat use tables by subzone variant, ecosystem and structural stage that rates the seasonal use of that ecosystem unit using standards provided by the Wildlife Branch.

7. **to produce a reliability map** showing the numbered plot loactions.

8. **to photgraph each sample plot** using 35 mm Fujichrome slides and colour panorama prints as geo-referenced photograghs documenting various landscapes within the park for transfer to CD.

3.0 METHODS

3.1 PRE-STRATIFICATION OF BIOTERRAIN

The first step was to map terrain according to *Terrain Classification System for British Columbia* (Howes and Kenk, 1988). These surficial units were subdivided by features such as directional exposure, depth to water table, vegetated rock and very thin rubble surfaces, talus, cliffs and significant changes in bedrock. The features considered important for this study area were agreed upon during the pre-work meeting of technical experts and the consultants' team.

These units of bioterrain are mapped as solid lines in ink on air photos using a number 2 size pen. These have been approved by the appropriate technical expert (Larry Lacelle, Wildlife Branch) .

3.2 SAMPLING

Ecosystem data was collected to the standards set forth in Luttmerding et al. (1990). Sample plots were chosen to best represent the distribution of ecosystems within each biogeoclimatic unit.

All trees, shrubs, mosses and lichens were tallied by layer and given a percentage rating for cover, distribution, and vigour.

3.3 TERRAIN UNIT MAPPING

Terrain units were mapped following the standards of Howes and Kenk (1988) and Resource Inventory Committee (1995). Symbology follows the system of Howes and Kenk (1988). Complex polygons can have up to three terrain units within a single polygon. Percentage distribution of

terrain units was represented by deciles from 1 to 9 (1=10%, 9=90% and 0=100%).

EXAMPLE TERRAIN POLYGON NOTATION

6 6srCbv - 4Mbj
Rs m
w

This polygon label would be read as:

60% sandy, rubbly Colluvial blanket-veneer, overlying steep rock; well drained and
40% Morainal blanket, gently sloping moderately well drained

BIOTERRAIN UNIT LETTER NOTATION (from Howes and Kenk, 1988)

TEXTURE	SURFICIAL MATERIAL	SURFACE EXPRESSION	GEOLOGICAL PROCESS
a=blocks	C=colluvial	b=blanket v=veneer	A=avalanches B=braided channel
b=boulders	D=weathered bedrock	c=cone t=terrace	C=cryoturbation D=deflation
k=cobbles	E=eolian	f=fan	E=channelled F=slow mass movement
s=sand	F=fluvial	h=hummocky u=undulating	H=kettled I=irregular channel
$=silt	F^G=fluvial glacial	j=gentle slope	J=anastamosing channel K=karst processes
c=clay	L=lacustrine	k=moderately steep	M=meandering channel N=nivation
d=mixed fragments	L^G=glaciolacustrine	m=rolling	P=piping R=rapid mass movement
g=gravel	M=morainal	p=plain	S=solifluction U=inundation
a=angular fragments	O=organic	r=ridged	V=gully erosion W=washing
r=rubble	R=bedrock AQ=aquatic	s=steep	^{A} = active process ^{I} = inactive process

SOIL DRAINAGE NOTATION
r= rapid w=well m= moderately well i=imperfectly p= poor vp=very poor

3.4 ECOSYSTEM UNIT MAPPING

Ecosystem units were mapped according to the standards set forth in Terrestrial Ecosystem Mapping Methodologies (Resource Inventory Committee 1995). Ecosystem units were mapped within the boundaries of the bioterrain polygon. These polygons were split when logging or cultivation resulted in two strongly contrasting seral stages. Bioterrain polygons were subdivided by biogeoclimatic subzone lines, consequently there are more ecosystem polygons indicated on the mylar than bioterrain polygons inked on the air photos.

Sample plots were keyed out to site series using the keys in the Kamloops Forest Region, MOF

Ecosystem guide (Lloyd et. al. 1990). Ecosystems were identified for each polygon based on the terrain unit, sample plots that occurred within the polygon, and age class information from forest cover maps. Up to three ecosystems or structural stages were noted for each polygon.

Site modifying codes were used with each ecosystem designation to help improve the accuracy of ecosystem descriptions. When specific features of the site altered the nature of the floristics of an ecosystem unit, that unit received a separate description in the expanded legend.

Grassland plots were sorted into existing Ministry of Forests site series. This classification is based on species comlexes of climax undisturbed grasslands. Historical grazing on many of these sites has resulted in some very degraded sites. The classification of these seral complexes is beyond the scope of this inventory.

Percentage distribution of habitat units was represented by deciles from 1 to 10 (1=10% 9=90% and 0=100%). Two letter codes are followed by structural stage designations 1-7 (non-vegetated-Old forest). In addition, up to two site modifiers may be present (in lower case) that represent different site conditions than the typical defined for the site series. Potential site modifiers used were:

a - active floodplain
c - coarse textured soils (LS,S)
d - deep soil (>100cm)
f - fine textured soils (HC,SiC,SCL)
g - gullied
j - gently sloping
k - cool, northerly or easterly aspect (>25% slope, 285 - 135 degrees)
n - fluvial fan
p - peaty material surface on surface
r - ridged
s - shallow soil (50 - 100cm deep)
w - warm,southerly or westerly aspect (>25% slope, 135 - 285 degrees)
t - terraced
v - very shallow soil
y - wetter than average

EXAMPLE ECOSYSTEM POLYGON NOTATION

6FC5-4LJw6

This polygon label would read as:

60% Bl - Grouseberry - Cladonia; typic ecosystem unit; young forest
40% Pl - Juniper - Lupine; warm aspect ecosystem unit; mature forest

3.41 STRUCTURAL STAGES

1 - Non-Vegetated/Sparsely Vegetated (< 20 yrs)[1]
2 - Grass-Forb (< 20 yrs)[1]
3 - Shrub/Herb (< 20 yrs)[1]
3a - Low Shrub (< 20 yrs)[1]
3b - Tall Shrub (< 20 yrs)[1]
3 - Shrub/Herb (< 20 yrs)
4 - Pole/Sapling (20-40 yrs)
5 - Young Forest (40-80 yrs)
6 - Mature Forest (80-240 yrs)
7 - Old Forest (> 140 yrs)

[1] Age only applies to units going to trees

3.5 WORKING LEGEND AND EXPANDED LEGEND DEVELOPMENT

While in the field a working legend was developed to insure that we sample most of the variability found and that we do not oversample certain ecosystem units.

Sample plots were used to develop the expanded biophysical ecosystem legend. Structural stages were extrapolated based on plot information to describe seral stages not sampled. Site series descriptions in Lloyd et. al. (1990) were used to describe unsampled ecosystems that occured in the study area

3.6 DATA ANALYSIS

Each plot was allocated to an existing ecosystem by using the keys provided in Lloyd et. al. (1990).

An EXCEL data base was produced that describes features of biogeoclimatic subzone variant, site, soil and vegetation for each sample plot. This was used to sort plots into groupings with similar physical attributes. Once plots were classified into an ecosystem, this was added to the data base together with the ecosystem modifiers, structural stages and the polygon in which it occurs. Plots were then sorted by ecosystem classification and physical information was compared between plots to give an impression of the range of terrain units that an ecosystem was found on.

4.0 DATABASES

4.1 PLOT DATABASE

A data base describing the attribute of each sample plot was developed in EXCEL. This can be found in Appendix I. Attributes entered for each plot were as follows:

plot number
biogeoclimatic subzone and variant
polygon #
elevation
aspect
slope %
terrain code
soil moisture regime
soil nutrient regime
ecosystem code
site series number
notes

4.2 BIOTERRAIN AND ECOSYSTEM DATABASE

An EXCEL spread sheet was used to develop data bases for bioterrain and ecosystem attributes for each polygon. Each row describes a polygon number with up to three differing terrain and ecosystem attributes whose deciles must add up to 10. The content of each column follows the format suggested by the technical coordinator. Bioterrain and ecosystem databases are found in Appendix II and III.

5.0 RESULTS

5.1 SURVEY INTENSITY

Out of a total of 3900 polygons, 151 received field visits (26%). A sampling intensity level 5 was achieved in this study (Resource Inventory Committee 1995)

5.2 CORRELATION TO MOF SITE SERIES UNITS

Appendix I lists the ecosystem units and corresponding site series that were mapped in the Cathedral study area. Only the upper case two-letter code is used in this table, sites that have modifiers belong to the same site series (ie. FCw and FCk both are 'FC' units and belong to the

'05' site series).

5.3 BIOPHYSICAL ECOSYSTEM UNITS

IDFxh1

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
DFgk	FdPy - Spirea - Feathermoss; gullied, cool aspect ecosystem unit	IDFxh1/06
DFgw	FdPy - Spirea - Feathermoss; gullied, warm aspect ecosystem unit	
Typical situation is on deep medium-textured soils in moisture receiving sites. DFgk occurs in mid slope gullies on cool aspects. DFgw occurs in mid slope gullies on warm aspects.		

Map Symbol	DFgk2 DFgw2	DFgk3a DFgw3a	DFgk3b DFgw3b	DFgk4 DFgw4	DFgk5 DFgw5	DFgk6 DFgw6	DFgk7 DFgw7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	none	common snowberry	Douglas-fir common snowberry	Douglas-fir	Douglas-fir	Douglas-fir	Douglas-fir
Associates	thimbleberry birch-leaved spirea pinegrass	Douglas-fir saskatoon thimbleberry birch-leaved spirea pinegrass red-stemmed feathermoss	Ponderosa pine saskatoon birch-leaved spirea pinegrass red-stemmed feathermoss	Ponderosa pine common snowberry saskatoon birch-leaved spirea pinegrass red-stemmed feathermoss	Ponderosa pine common snowberry saskatoon birch-leaved spirea pinegrass red-stemmed feathermoss	Ponderosa pine common snowberry saskatoon birch-leaved spirea pinegrass red-stemmed feathermoss	Ponderosa pine common snowberry saskatoon birch-leaved spirea pinegrass red-stemmed feathermoss
Potential Forage for Wild Ungulates - Dominants							
Associates		saskatoon	saskatoon	saskatoon	saskatoon	saskatoon	saskatoon
Plots							

Map Unit	Description	BEC
DPct	FdPy - Snowberry - Spirea; coarse textured, terraced ecosystem unit	IDFxh1/01
Typical situation is gentle to moderate slopes with deep medium textured soils. DPct occurs on fluvial parent materials on terraces above floodplains with mesic soil moisture regimes. Moder humus forms occur frequently with thicknesses of up to 2.0 cm. These sites are old floodplains of the river and can often consist of coarse textured soils.		

Map Symbol	DPct2	DPct3a	DPct3b	DPct4	DPct5	DPct6	DPct7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	fireweed cheatgrass	paper birch cheatgrass	Douglas-fir paper birch	Douglas-fir paper birch	Douglas-fir	Douglas-fir	Douglas-fir
Associates	paper birch	Douglas-fir common juniper tall-Oregon grape rosy pussytoes wild strawberry nodding onion fireweed	common juniper tall-Oregon grape rosy pussytoes wild strawberry cheatgrass nodding onion Juniper haircap moss	common juniper tall-Oregon grape rosy pussytoes wild strawberry cheatgrass nodding onion Juniper haircap moss *Peltigera* spp.	paper birch common juniper tall-Oregon grape rosy pussytoes wild strawberry cheatgrass nodding onion Juniper haircap moss *Peltigera* spp.	common juniper tall-Oregon grape pinegrass rosy pussytoes wild strawberry cheatgrass nodding onion Juniper haircap moss *Peltigera* spp.	common juniper tall-Oregon grape rosy pussytoes pinegrass wild strawberry cheatgrass nodding onion Juniper haircap moss *Peltigera* spp.
Potential Forage for Wild Ungulates - Dominants	fireweed						
Associates		fireweed nodding onion	nodding onion	nodding onion	nodding onion	nodding onion	nodding onion
Plots						R95-45	

Map Unit	Description	BEC
SDa	SxwFd - Douglas Maple - Dogwood; floodplain ecosystem unit	IDFxh1/08
Typical situation is on gentle to flat sites moist subhygric, medium textured soils. SDa occurs on fluvial parent materials on active floodplains with subhygric soil moisture regimes. Moder humus forms occur frequently with thicknesses of up to 2.0 cm. These sites can have complex layers of sorted sands and silts due to flooding history.		

Map Symbol	SDa2	SDa3a	SDa3b	SDa4	SDa5	SDa6	SD7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	stiff needlegrass bluejoint fireweed	Douglas maple paper birch mountain alder	Douglas maple paper birch mountain alder	Douglas-fir paper birch	Douglas-fir paper birch	Douglas-fir	Douglas-fir hybrid white spruce
Associates	paper birch red-osier dogwood tall-Oregon grape thimbleberry	Douglas-fir black cottonwood red-osier dogwood tall-Oregon grape thimble berry stiff needlegrass bluejoint fireweed	Douglas-fir hybrid white spruce black cottonwood red-osier dogwood tall-Oregon grape stiff needlegrass	hybrid white spruce black cottonwood Douglas maple red-osier dogwood mountain alder tall-Oregon grape	hybrid white spruce black cottonwood Douglas maple red-osier dogwood mountain alder tall-Oregon grape	hybrid white spruce black cottonwood paper birch Douglas maple red-osier dogwood mountain alder tall-Oregon grape	black cottonwood paper birch Douglas maple red-osier dogwood mountain alder tall-Oregon grape
Potential Forage for Wild Ungulates - Dominants	bluejoint fireweed	Douglas maple	Douglas maple				
Associates	red-osier dogwood	red-osier dogwood bluejoint fireweed	red-osier dogwood	Douglas maple red-osier dogwood	Douglas maple red-osier dogwood	Douglas maple red-osier dogwood	
Plots						95-23340, R95-43	

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
SPct	FdPy - Snowbrush - Pinegrass; coarse textured , terraced ecosystem unit	IDFxh1/04
SPt	FdPy - Snowbrush - Pinegrass; terraced ecosystem unit	

SP typically occurs on gentle to moderate slopes with deep medium textured soils.
SPct occurs on glaciofluvial terraces with coarse textured soils and subxeric to submesic soil moisture regimes. Moder humus forms are common with thicknesses of less than 2.0 cm.
SPt occurs on medium textured terraces (generally glaciolacustrine)

Map Symbol	SPct2, SPt2	SPct3a, SPt3a	SPct3b, SPt3b	SPct4, SPt4	SPct5, SPt5	SPct6, SPt6	SPct7, SPt7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	spreading needlegrass fireweed	snowbrush saskatoon	Douglas-fir snowbrush saskatoon	Douglas-fir spreading needlegrass	Douglas-fir spreading needlegrass	Douglas-fir spreading needlegrass	Douglas-fir ponderosa pine spreading needlegrass
Associates	pinegrass	Douglas-fir ponderosa pine common juniper kinnikinnick rosy pussytoes birch-leaved spirea pinegrass spreading needlegrass fireweed	ponderosa pine common juniper kinnikinnick rosy pussytoes birch-leaved spirea pinegrass spreading needlegrass	ponderosa pine snowbrush saskatoon common juniper kinnikinnick rosy pussytoes birch-leaved spirea pinegrass	ponderosa pine snowbrush saskatoon common juniper kinnikinnick rosy pussytoes birch-leaved spirea pinegrass	ponderosa pine snowbrush saskatoon common juniper kinnikinnick rosy pussytoes birch-leaved spirea pinegrass	snowbrush saskatoon common juniper kinnikinnick rosy pussytoes birch-leaved spirea pinegrass
Potential Forage for Wild Ungulates - Dominants	fireweed	snowbrush saskatoon	snowbrush				
Associates		fireweed	saskatoon	snowbrush saskatoon	snowbrush saskatoon	snowbrush saskatoon	snowbrush saskatoon
Plots						R31	

Map Unit	Description	BEC
DW	FdPy - Bluebunch wheatgrass - Pinegrass; typic ecosystem unit	IDFxh1/03
DWj	FdPy - Bluebunch wheatgrass - Pinegrass; gently sloping ecosystem unit	
DWs	FdPy - Bluebunch wheatgrass - Pinegrass; gently sloping ecosystem unit	
DW typically occurs on morainal, and colluvial parent materials with deep medium-textured soils and warm aspects. Moder (mor) humus forms occur often with thicknesses of less than 2.0 cm. DWj occurs on similar terrain with gentle slopes. DWs occurs on warm aspects with shallow soils.		

Map Symbol	DW2, DWj2, DWs2	DW3a,DWj3a DWs3a	DW3b,DWj3b DWs3b	DW4,DWj4 DWs4	DW5,DWj5 DWs5	DW6,DWj6 DWs6	DW7,DWj7 DWs7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	bluebunch wheatgrass	bluebunch wheatgrass	snowbrush bluebunch wheatgrass	Douglas-fir bluebunch wheatgrass	Douglas-fir bluebunch wheatgrass	Douglas-fir bluebunch wheatgrass	Douglas-fir bluebunch wheatgrass
Associates	kinnikinnick[1] rosy pussytoes spreading needlegrass pinegrass	kinnikinnick[1] shrubby penstemon[1] snowbrush great mullein rosy pussytoes spreading needlegrass Idaho fescue pinegrass	kinnikinnick[1] shrubby penstemon[1] snowbrush great mullein rosy pussytoes spreading needlegrass Idaho fescue pinegrass	ponderosa pine[1] kinnikinnick[1] shrubby penstemon[1] rosy pussytoes spreading needlegrass pinegrass compact selaginella *Cladonia* spp. *Peltigera* spp.	ponderosa pine[1] kinnikinnick[1] shrubby penstemon[1] rosy pussytoes spreading needlegrass pinegrass compact selaginella *Cladonia* spp. *Peltigera* spp.	ponderosa pine[1] kinnikinnick[1] shrubby penstemon[1] rosy pussytoes spreading needlegrass pinegrass compact selaginella *Cladonia* spp. *Peltigera* spp.	ponderosa pine[1] kinnikinnick[1] shrubby penstemon[1] rosy pussytoes spreading needlegrass pinegrass compact selaginella *Cladonia* spp. *Peltigera* spp.

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Potential Forage for Wild Ungulates - Dominants	bluebunch wheatgrass	bluebunch wheatgrass	bluebunch wheatgrass	bluebunch wheatgrass	bluebunch wheatgrass	bluebunch wheatgrass	bluebunch wheatgrass
Associates		snowbrush Idaho fescue	snowbrush Idaho fescue				
Plots			R37		94-581	95-23339, 94-585, R36, R35	

[1] These species dominate on steep warm aspects

Map Unit	Description	BEC
DWk	FdPy - Bluebunch wheatgrass - Pinegrass; cool aspect ecosystem unit	IDFxh1/03
Typical situation is steep warm aspects with deep medium textured soils Occurs on morainal, colluvial, and glaciofluvial parent materials in westerly and easterly aspects with deep medium-textured soils. These sites often have moder (mor) humus forms with thicknesses of about 3.0cm are common.		

Map Symbol	DWk2	DWk3a	DWk3b	DWk4	DWk5	DWk6	DWk7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	bluebunch wheatgrass	paper birch bluebunch wheatgrass	paper birch bluebunch wheatgrass	Douglas-fir bluebunch wheatgrass red-stemmed feathermoss	Douglas-fir bluebunch wheatgrass red-stemmed feathermoss	Douglas-fir bluebunch wheatgrass red-stemmed feathermoss	Douglas-fir bluebunch wheatgrass red-stemmed feathermoss
Associates	common juniper rosy pussytoes nodding onion junegrass	Douglas-fir common juniper rosy pussytoes nodding onion round-leaved alumroot junegrass	Douglas-fir common juniper rosy pussytoes nodding onion round-leaved alumroot junegrass red-stemmed feathermoss	paper birch common juniper rosy pussytoes nodding onion round-leaved alumroot junegrass *Peltigera* spp.	common juniper rosy pussytoes nodding onion round-leaved alumroot junegrass *Peltigera* spp.	common juniper rosy pussytoes nodding onion round-leaved alumroot junegrass *Peltigera* spp.	common juniper rosy pussytoes nodding onion round-leaved alumroot junegrass *Peltigera* spp.
Potential Forage for Wild Ungulates - Dominants	bluebunch wheatgrass	bluebunch wheatgrass	bluebunch wheatgrass	bluebunch wheatgrass	bluebunch wheatgrass	bluebunch wheatgrass	bluebunch wheatgrass
Associates	nodding onion junegrass	nodding onion junegrass	nodding onion junegrass	nodding onion junegrass	nodding onion junegrass	nodding onion junegrass	nodding onion junegrass
Plots						95-23341	

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
PB	FdPy - Bluebunch wheatgrass - Balsamroot; typic ecosystem unit	IDFxh1/02
PBk	FdPy - Bluebunch wheatgrass - Balsamroot; cool aspect ecosystem unit	
PB typically occurs on steep warm aspects with shallow soil. These sites generally have xeric to subxeric soil moisture regimes. Humus forms usually thin and discontinuous. PBk occurs on similar sites with cool aspects (slopes facing east to southeast)		

Map Symbol	PB2, PBk2	PB3a, PBk3a	PB3b, PBk3b	PB4, PBk4	PB5, PBk5	PB6, PBk6	PB7, PBk7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants		saskatoon	Douglas-fir	open stands of: Douglas-fir	open stands of: Douglas-fir	open stands of: Douglas-fir	open stands of: Douglas-fir
Associates	juniper saskatoon bluebunch wheatgrass arrow-leaved balsamroot	Douglas-fir big sage[1] juniper bluebunch wheatgrass arrow-leaved balsamroot	juniper big sage[1] saskatoon bluebunch wheatgrass arrow-leaved balsamroot	juniper saskatoon bluebunch wheatgrass arrow-leaved balsamroot	juniper saskatoon bluebunch wheatgrass arrow-leaved balsamroot	juniper saskatoon bluebunch wheatgrass arrow-leaved balsamroot	juniper saskatoon bluebunch wheatgrass arrow-leaved balsamroot
Potential Forage for Wild Ungulates - Dominants		saskatoon					
Associates	saskatoon bluebunch wheatgrass	bluebunch wheatgrass	saskatoon bluebunch wheatgrass	saskatoon bluebunch wheatgrass	saskatoon bluebunch wheatgrass	saskatoon bluebunch wheatgrass	saskatoon bluebunch wheatgrass
Plots							

[1] big sage may not always be present

IDFxh1a

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
BN	Kentucky bluegrass - Stiff needlegrass; typic ecosystem unit	IDFxh1a/96
Typically occurs on morainal and colluvial parent materials on gentle to moderate slopes with deep medium textured soils. Soil moisture regimes are generally submesic to mesic. Rhizomull humus forms are common. Most of these sites have intensive use of cattle; therefore, floristics of these sites will reflect current grazing pressure.		

Map Symbol	BN2
Plant species	Grass-forb
Dominants	Stiff needlegrass
Associates	rabbitbrush bluebunch wheatgrass junegrass Kentucky bluegrass red fescue cheatgrass[1] brittle cactus[1] *Rhacomitrium* spp.
Potential Forage for Wild Ungulates - Dominants	
Associates	bluebunch wheatgrass junegrass Kentucky bluegrass red fescue *Rhacomitrium* spp.
Plots	95-23070, 95-23336

[1] These species will increase in cover on more heavily grazed sites

Map Unit	Description	BEC
SFk	Big Sage - Bluebunch wheatgrass - Idaho fescue; cool aspect ecosystem unit	IDFxh1a/94
SFks	Big Sage - Bluebunch wheatgrass - Idaho fescue; cool aspect; shallow soil ecosystem unit	

SF typically occurs on gentle to moderate slopes with deep medium textured soils.
SFk occurs on morainal and colluvial parent materials on moderate to steep slopes with deep medium textured soils and cool aspects. Soil moisture regimes are generally submesic to mesic. Rhizomull humus forms are common. Most of these sites have intensive use of cattle; therefore, floristics of these sites will reflect current grazing pressure.
SFk occurs on similar sites with shallow soils.

Map Symbol	SFk2
Plant species	Grass-forb
Dominants	big sage Idaho fescue
Associates	junegrass bluebunch wheatgrass stiff needlegrass[1] old man's whiskers round-leaved alumroot compact selaginella *Peltigera* spp.
Potential Forage for Wild Ungulates - Dominants	Idaho fescue
Associates	junegrass
Plots	95-23337

[1]These species will increase on more heavily grazed sites

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
WA	Big sage - bluebunch wheatgrass - Balsamroot; typic ecosystem unit[1]	IDFxh1a/92
WAs	Big sage - bluebunch wheatgrass - Balsamroot; shallow soil ecosystem unit[1]	
Typically occurs on morainal and colluvial parent materials on moderate to steep slopes with deep medium textured soils and warm aspects. Soil moisture regimes are generally subxeric to submesic. Rhizomull humus forms are common. Cattle grazing will not be as intensive on steeper slopes. WAs occurs on sites with shallow soils.		

Map Symbol	WA2, WAs2
Plant species	Grass-forb
Dominants	bluebunch wheatgrass
Associates	rabbitbush sumac pasture sage great mellein cheatgrass[2] compact selaginella
Potential Forage for Wild Ungulates - Dominants	bluebunch wheatgrass
Associates	
Plots	95-23338

[1] big sage was not common on these sites within the study area
[2]These species will increase on more heavily grazed sites

Map Unit	Description	BEC
WBk	Bluebunch wheatgrass - Balsamroot; cool aspect ecosystem unit	IDFxh1a/94
WB typically occurs on steep warm aspects with deep medium textured soils. WBk occurs on all parent materials with cool, easterly aspects.Subxeric to xeric soil moisture regimes are common. Most of these sites have intensive use of cattle; therefore, floristics of these sites will reflect current grazing pressure.		

Map Symbol	WBk2
Plant species	Grass-forb
Dominants	bluebunch wheatgrass arrow-leaved balsamroot
Associates	cheatgrass parsnip-flowered buckwheat junegrass silky lupine
Potential Forage for Wild Ungulates - Dominants	bluebunch wheatgrass
Associates	junegrass
Plots	

IDFdk1

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
DJct	Fd - Juniper - Pinegrass; coarse textured, terraced ecosystem unit	IDFdk1/03
DJdw	Fd - Juniper - Pinegrass; deep soil warm aspect ecosystem unit	

Typical situation is gentle to moderate slopes with shallow soils
DJct occurs on glaciofluvial terraces with deep, coarse textured soils. These sites generally have submesic soil moisture regimes and thin mor (moder) humus forms.
DJdw occurs on morainal and colluvial perent materials with deep medium (coarse) textured soils and warm aspects. These sites have subxeric to submesic soil moisure regimes and thin moder humus forms. This unit occurs under a mixed FdPl canopy.

Map Symbol	DJct2 DJdw2	DJct3a DJdw3a	DJct3b DJdw3b	DJct4 DJdw4	DJct5 DJdw5	DJct6 DJdw6	DJct7 DJdw7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	fireweed pinegrass	paper birch kinnikinnick pinegrass	paper birch kinnikinnick pinegrass	lodgepole pine kinnikinnick pinegrass	lodgepole pine kinnikinnick pinegrass	Douglas-fir kinnikinnick pinegrass	Douglas-fir kinnikinnick pinegrass
Associates	paper birch	lodgepole pine soopolallie grouseberry birch-leaved spirea fireweed	lodgepole pine Douglas-fir mountain alder soopolallie grouseberry birch-leaved spirea	Douglas-fir paper birch soopolallie grouseberry birch-leaved spirea *Peltigera* spp. *Cladonia* spp.	Douglas-fir soopolallie grouseberry birch-leaved spirea *Peltigera* spp. *Cladonia* spp.	lodgepole pine soopolallie grouseberry birch-leaved spirea *Peltigera* spp. *Cladonia* spp.	lodgepole pine soopolallie birch-leaved spirea grouseberry *Peltigera* spp.
Potential Forage for Wild Ungulates - Dominants							
Associates	fireweed	soopolallie	soopolallie	soopolallie	soopolallie	soopolallie	soopolallie
Plots				R95-34	95-23311, 94-588		95-23283

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
DW	Fd - Snowberry - Bluebunch wheatgrass; typic ecosystem unit	IDFdk1/02
DWck	Fd - Snowberry - Bluebunch wheatgrass; coarse-textured, cool aspect ecosystem unit	
DWk	Fd - Snowberry - Bluebunch wheatgrass; cool aspect ecosystem unit	
DWks	Fd - Snowberry - Bluebunch wheatgrass; cool aspect, shallow soils ecosystem unit	
DWv	Fd - Snowberry - Bluebunch wheatgrass; very shallow soil, ecosystem unit	
DWs	Fd - Snowberry - Bluebunch wheatgrass; ecosystem unit	

DW typically occurs on morainal and colluvial parent materials with deep medium textured soils on warm aspects. These sites generally have thin moder humus forms and subxeric soil moisture regimes.
DWck occurs on coarse textured soils with cool (easterly) aspects
DWk occurs on cool (easterly) aspects
DWks occurs on cool (easterly)aspects with shallow soils
DWv occurs on morainal and colluvial parent materials with very shallow soils and warm aspects.
DWs occurs on morainal and colluvial parent materials with shallow soils and warm aspects.
All of these ecosystem units occur under an open Fd(Py) canopy.

Map Symbol	DW2,DWck2, DWv2, DWs2 DWk2, DWks2	DW3a,DWck3a DWv3a,DWsa DWk3a, DWks3a	DW3b,DWck3b DWv3b,DWs3b DWk3b, DWks3b	DW4,DWck4 DWv4,DWs4 DWk4, DWks4	DW5,DWck5 DWv5,DWs5 DWk5, DWks5	DW6,DWck6 DWv6,DWs6 DWk6, DWks6	DW7,DWck7 DWv7,DWs7 DWk7, DWks7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	bluebunch wheatgrass pinegrass	bluebunch wheatgrass pinegrass	bluebunch wheatgrass pinegrass	open stands of: Douglas-fir pinegrass	open stands of: Douglas-fir bluebunch wheatgrass pinegrass	open stands of: Douglas-fir bluebunch wheatgrass pinegrass	open stands of: Douglas-fir bluebunch wheatgrass pinegrass
Associates	showy fleabane timber milk-vetch rosy pussytoes	lodgepole pine Douglas-fir ponderosa pine big sage[1] soopolallie showy fleabane timber milk-vetch	lodgepole pine Douglas-fir ponderosa pine big sage[1] soopolallie showy fleabane timber milk-vetch	ponderosa pine Rocky Mountain juniper bluebunch wheatgrass showy fleabane timber milk-vetch	ponderosa pine Rocky Mountain juniper showy fleabane timber milk-vetch rosy pussytoes *Peltigera* spp.	ponderosa pine Rocky Mountain juniper showy fleabane timber milk-vetch rosy pussytoes *Peltigera* spp.	ponderosa pine Rocky Mountain juniper showy fleabane timber milk-vetch rosy pussytoes *Peltigera* spp.

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Symbol	DW2,DWck2, DWv2, DWs2 DWk2, DWks2	DW3a,DWck3a DWv3a,DWsa DWk3a, DWks3a	DW3b,DWck3b DWv3b,DWs3b DWk3b, DWks3b	DW4,DWck4 DWv4,DWs4 DWk4, DWks4	DW5,DWck5 DWv5,DWs5 DWk5, DWks5	DW6,DWck6 DWv6,DWs6 DWk6, DWks6	DW7,DWck7 DWv7,DWs7 DWk7, DWks7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
		rosy pussytoes	rosy pussytoes	rosy pussytoes *Peltigera* spp.			

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Potential Forage for Wild Ungulates - Dominants	bluebunch wheatgrass	bluebunch wheatgrass	bluebunch wheatgrass		bluebunch wheatgrass	bluebunch wheatgrass	bluebunch wheatgrass
Associates				bluebunch wheatgrass			
Plots						95-23322	

[1] big sage may not always be present

Map Unit	Description	BEC
DYk	Fd - Pinegrass - Yarrow; cool aspect ecosystem unit	IDFdk1/04
DYks	Fd - Pinegrass - Yarrow; cool aspect, shallow soil ecosystem unit	

DY typically occurs on gentle to moderate slopes with deep medium-textured soils.
DYk occurs on morainal and colluvial parent materials with deep medium textured soils and cool aspects. These sites generally have mesic (submesic) soil moisture regimes and moder humus forms (humus depths vary).
DYks occurs on cool aspects with shallow soils.

Map Symbol	DYk2	DYk3a	DYk3b	DYk4	DYk5	DYk6	DYk7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	firweed *Festuca* spp. pinegrass	trembling aspen mountain alder pinegrass	trembling aspen mountain alder pinegrass	lodgepole pine trembling aspen pinegrass red-stemmed feathermoss	Douglas-fir pinegrass red-stemmed feathermoss	Douglas-fir pinegrass red-stemmed feathermoss	Douglas-fir pinegrass red-stemmed feathermoss
Associates	trembling aspen	yarrow round-leaved alumroot *Festuca* spp. fireweed	lodgepole pine yarrow round-leaved alumroot *Festuca* spp. red-stemmed feathermoss	Douglas-fir mountain alder yarrow round-leaved alumroot *Festuca* spp. *Peltigera* spp.	lodgepole pine trembling aspen yarrow round-leaved alumroot *Festuca* spp. *Peltigera* spp.	yarrow round-leaved alumroot *Festuca* spp. *Peltigera* spp.	yarrow round-leaved alumroot *Festuca* spp. *Peltigera* spp.
Potential Forage for Wild Ungulates - Dominants	firweed *Festuca* spp.						
Associates		*Festuca* spp.	*Festuca* spp.	*Festuca* spp.	*Festuca* spp.	*Festuca* spp.	*Festuca* spp.
Plots					94-593	94-601	

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
LP	Fd - Pinegrass - Feathermoss; typic ecosystem unit	IDFdk1/01
LPc	Fd - Pinegrass - Feathermoss; coarse-textured ecosystem unit	
LP typically occurs on gently sloping morainal parent materials with deep medium textured soils. These sites generally have mesic soil moisture regimes and moder (mor) humus forms. LPc occurs on similar sites with coarse-textured soils.		

Map Symbol	LP2	LP3a	LP3b	LP4	LP5	LP6	LP7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	*Lupinus* spp pinegrass junegrass timber milk-vetch	trembling aspen pinegrass	trembling aspen pinegrass	trembling aspen pinegrass red-stemmed feathermoss	Douglas-fir pinegrass red-stemmed feathermoss	Douglas-fir pinegrass red-stemmed feathermoss	Douglas-fir pinegrass red-stemmed feathermoss
Associates	fringed aster showy aster stiff needlegrass	soopolallie skunk currant fringed aster showy aster wild strawberry *Lupinus* spp junegrass stiff needlegrass timber milk-vetch	Douglas-fir soopolallie skunk currant fringed aster showy aster wild strawberry *Lupinus* spp junegrass stiff needlegrass timber milk-vetch	Douglas-fir soopolallie skunk currant fringed aster showy aster wild strawberry *Lupinus* spp junegrass stiff needlegrass timber milk-vetch	trembling aspen soopolallie skunk currant fringed aster showy aster wild strawberry *Lupinus* spp junegrass stiff needlegrass timber milk-vetch	soopolallie skunk currant fringed aster showy aster wild strawberry *Lupinus* spp. junegrass stiff needlegrass timber milk-vetch	soopolallie skunk currant fringed aster showy aster wild strawberry *Lupinus* spp. junegrass stiff needlegrass timber milk-vetch
Potential Forage for Wild Ungulates - Dominants	*Lupinus* spp junegrass						
Associates		*Lupinus* spp junegrass	*Lupinus* spp junegrass	*Lupinus* spp junegrass	*Lupinus* spp junegrass	*Lupinus* spp junegrass	*Lupinus* spp junegrass
Plots					95-23073	95-23072	

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
SGgk	SxwFd - Gooseberry - Feathermoss; gullied, cool aspect ecosystem unit	IDFdk1/05
SGgw	SxwFd - Gooseberry - Feathermoss; gullied, warm aspect ecosystem unit	
SGn	SxwFd - Gooseberry - Feathermoss; fluvial fan ecosystem unit	

SG typically occurs on gentle to moderately sloping moisture receiving sites with deep medium-textured soils.
SGgk occurs on gentle to moderately sloping fluvial parent materials in gullies on cool aspects. These sites have subhygric soil moisture regimes and regosolic soils.
SGgw occurs on similar sites with warm aspects.
SGn occurs gentle sloping fluvial fans

Map Symbol	SGgk2 SGgw2 SGn2	SGgk3a SGgw3a SGn3a	SGgk3b SGgw3b SGn3b	SGgk4 SGgw4 SGn4	SGgk5 SGgw5 SGn5	SGgk6 SGgw6 SGn6	SGgk7 SGgw7 SGn7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	fireweed bluejoint	mountain alder willow	mountain alder willow	Douglas-fir step moss	Douglas-fir step moss	Douglas-fir step moss	Englemann spruce step moss
Associates	mountain alder	Douglas-fir black gooseberry elderberry twinflower one-sided wintergreen bluejoint fireweed	Douglas-fir black gooseberry elderberry twinflower one-sided wintergreen step moss	Englemann spruce black gooseberry willow mountain alder elderberry twinflower one-sided wintergreen	Englemann spruce black gooseberry willow mountain alder elderberry twinflower one-sided wintergreen	Englemann spruce black gooseberry willow elderberry twinflower one-sided wintergreen	Douglas-fir black gooseberry willow elderberry twinflower one-sided wintergreen

Potential Forage for Wild Ungulates - Dominants	fireweed bluejoint	willow	willow				
Associates		elderberry buejoint fireweed	elderberry	willow elderberry	willow elderberry	willow elderberry	willow elderberry
Plots						R29	

Map Unit	Description	BEC
SHac	Sxw - Horsetail; floodplain ecosystem unit	IDFdk1/06
Typical situation is on flat sites, receiving moisture with deep medium textured soils. SHac occurs on fluvial parent materials on active floodplains with deep, coarse textured soils. Regosolic soils occur frequently with subhygric soil moisture regimes. Moder humus forms are common with thicknesses of 2-3 cm.		

Map Symbol	SHac2	SHac3a	SHac3b	SHac4	SHac5	SHac6	SHac7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	bluejoint fireweed	mountain alder balsam poplar	mountain alder balsam poplar	balsam poplar hybrid white spruce	balsam poplar hybrid white spruce	hybrid white spruce	hybrid white spruce
Associates	thimbleberry common horsetail	black gooseberry thimbleberry sweet secented bedstraw bluejoint fireweed common horsetail	hybrid white spruce black gooseberry thimbleberry sweet secented bedstraw common horsetail *Bracythecium* spp.	mountain alder black gooseberry sweet secented bedstraw common horsetail *Bracythecium* spp.	mountain alder black gooseberry sweet secented bedstraw common horsetail *Bracythecium* spp.	balsam poplar mountain alder black gooseberry sweet secented bedstraw common horsetail *Bracythecium* spp.	balsam poplar mountain alder black gooseberry sweet secented bedstraw common horsetail *Bracythecium* spp.
Potential Forage for Wild Ungulates - Dominants	bluejoint fireweed	balsam poplar[1] mountain alder	balsam poplar[1] mountain alder	balsam poplar[1]	balsam poplar[1]		
Associates	common horsetail	common horsetail bluejoint fireweed	common horsetail	mountain alder common horsetail	mountain alder common horsetail	balsam poplar[1] mountain alder common horsetail	balsam poplar[1] mountain alder common horsetail
Plots					94-586		

[1] potential forage when in low shrub stage

IDFdk1a

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
AS	At - Snowberry - Kentucky bluegrass; typic ecosystem unit	IDFdk1a/94
AS typically occurs in moist gullies or depressions. This unit is also found on gently sloping morainal blankets . Rich soils and mesic to subhygric soil moisture regimes are common.		

Map Symbol	AS3, AS4, AS5, AS6, AS7[1]
Plant species	mixed
Dominants	closed canopies of: trembling aspen kentucky bluegrass
Associates	Notka rose clovers American vetch
Potential Forage for Wild Ungulates - Dominants	kentucky bluegrass
Associates	clovers
Plots	

[1] Seres commonly have the same species composition and are only differentiated by the reletive height of the tree canopy

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
SN	Spreading needlegrass; typic ecosystem unit	IDFdk1a/93
SNg	Spreading needlegrass; gullied ecosystem unit	
SN typically occurs on all parent material with deep medium textured soils and gentle slopes. These sites generally have subxeric to submesic soil moisture regime. Rhizomull humus forms are most common. This unit often occurs in swales which have a slightly wetter moisture regime. SNg occurs in gullies.		

Map Symbol	SN2
Plant species	Grass-forb
Dominants	spreading needegrass
Associates	bluebunch wehatgrass Kentucky bluegrass junegrass
Potential Forage for Wild Ungulates - Dominants	
Associates	bluebunch wehatgrass Kentucky bluegrass
Plots	

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
WJ	Bluebunch wheatgrass - Junegrass; typic ecosystem unit	IDFdk1a/92
WJk	Bluebunch wheatgrass - Junegrass; cool aspect ecosystem unit	
WJ typically occurs on morainal and colluvial parent material with deep medium textured soils and gentle slopes. These sites generally have subxeric to submesic soil moisture regime. Rhizomull humus forms are most common. Most of these sites have regular use of cattle; therefore, floristics will reflect current grazing pressure. WJk occurs cool (easterly) aspects.		

Map Symbol	WJ2
Plant species	Grass-forb
Dominants	Kentucky bluegrass
Associates	bluebunch wheatgrass *Festuca* spp. spiked trisetum spreading needlegrass slender wheatgrass pasture sage
Potential Forage for Wild Ungulates - Dominants	Kentucky bluegrass
Associates	bluebunch wheatgrass *Festuca* spp. spiked trisetum spreading needlegrass slender wheatgrass
Plots	94-594, R95-1

Map Unit	Description	BEC
WJw	Bluebunch wheatgrass - Junegrass; warm aspect ecosystem unit	IDFdk1a/92
Typically occurs on morainal and colluvial parent material with deep medium textured soils and warm aspects. These sites generally have subxeric to submesic soil moisture regime. Rhizomull humus forms are most common. Most of these sites have regular use of cattle; therefore, floristics will reflect current grazing pressure. Cattle use will not be as intensive on steeper slopes.		

Map Symbol	WJw2
Plant species	Grass-forb
Dominants	bluebunch wheatgrass[1] arrow-leaved balsamroot[1] stiff needlegrass rosy pussytoes
Associates	junegrass kentucky bluegrass arctic lupine timber oatgrass[1] red fescue
Potential Forage for Wild Ungulates - Dominants	bluebunch wheatgrass[1]
Associates	junegrass kentucky bluegrass arctic lupine timber oatgrass[1] red fescue
Plots	95-23074,23074

[1] These species do not dominate on west aspects

IDFdk2

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
DP	FdPy - Pinegrass; typic ecosystem unit	IDFdk2/03
DPct	FdPy - Pinegrass; coarse textured, terraced ecosystem unit	
DP typically occurs on steep slopes with warm aspects and deep medium-textured soils. DPct occurs on coarse-textured glaciofluvial terraces. These sites have subxeric to submesic soil moisture regimes and thin humus forms.		

Map Symbol	DPct2	DPct3a	DPct3b	DPct4	DPct5	DPct6	DPct7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	fireweed	lodgepole pine fireweed pinegrass	lodgepole pine pinegrass	lodgepole pine pinegrass	Douglas-fir lodgepole pine pinegrass	Douglas-fir pinegrass	Douglas-fir pinegrass
Associates	soopolallie kinnikinnick	common juniper soopolalle saskatoon tall Oregon-grape birch-leaved spirea kinnikinnick	common juniper soopolalle saskatoon tall Oregon-grape birch-leaved spirea kinnikinnick	Douglas-fir common juniper soopolalle saskatoon tall Oregon-grape birch-leaved spirea kinnikinnick	common juniper soopolalle saskatoon tall Oregon-grape birch-leaved spirea kinnikinnick	lodgepole pine common juniper soopolalle saskatoon tall Oregon-grape birch-leaved spirea kinnikinnick	common juniper soopolalle saskatoon tall Oregon-grape birch-leaved spirea kinnikinnick
Potential Forage for Wild Ungulates - Dominants							
Associates		saskatoon	saskatoon	saskatoon	saskatoon	saskatoon	saskatoon
Plots							

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
DWdw	FdPy - Bluebunch wheatgrass - Pinegrass; deep soil, warm aspect ecosystem unit	IDFdk2/02
DWk	FdPy - Bluebunch wheatgrass - Pinegrass; cool aspect ecosystem unit	
DWw	FdPy - Bluebunch wheatgrass - Pinegrass; warm aspect ecosystem unit	
DWvw	FdPy - Bluebunch wheatgrass - Pinegrass; very shallow soil, warm aspect ecosystem unit	

DW typically occurs on gently sloping crests with shallow soils
DWdw occurs on morainal and colluvial parent materials with deep medium textured soils and warm aspects. These sites have subxeric to submesic soil moisture regimes and very thin, discontinuous humus forms. This ecosystem unit occurs on sites with open FdPy canopies (~ 20% canopy closure).
DWk occurs on similar sites with cool (easterly) aspects
DWw occurs on sites with warm aspects (and typic shallow soils)
DWvw occurs on similar sites with very shallow soils and warm aspects

Map Symbol	DWdw2 DWk2 DWw2 DWvw2	DWdw3a DWk3a DWw3a DWvw3a	DWdw3b DWk3b2 DWw3b2 DWvw3b	DWdw4 DWk4 DWw4 DWvw4	DWdw5 DWk5 DWw5 DWvw5	DWdw6 DWk6 DWw6 DWvw6	DWdw7 DWk7 DWw7 DWvw7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants		common snowberry	trembling aspen	Douglas-fir bluebunch wheatgrass	Douglas-fir bluebunch wheatgrass	Douglas-fir bluebunch wheatgrass	Douglas-fir bluebunch wheatgrass
Associates	dogbane birch-leaved spirea bluebunch wheatgrass kinnikinnick	trembling aspen saskatoon soopolallie dogbane birch-leaved spirea bluebunch wheatgrass kinnikinnick	saskatoon soopolallie common snowberry dogbane birch-leaved spirea bluebunch wheatgrass kinnikinnick	trembing aspen saskatoon dogbane birch-leaved spirea dogbane kinnikinnick	common juniper saskatoon birch-leaved spirea kinnikinnick	common juniper saskatoon birch-leaved spirea kinnikinnick	common juniper saskatoon birch-leaved spirea kinnikinnick
Potential Forage for Wild Ungulates -				bluebunch wheatgrass	bluebunch wheatgrass	bluebunch wheatgrass	bluebunch wheatgrass

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Symbol	DWdw2 DWk2 DWw2 DWvw2	DWdw3a DWk3a DWw3a DWvw3a	DWdw3b DWk3b2 DWw3b2 DWvw3b	DWdw4 DWk4 DWw4 DWvw4	DWdw5 DWk5 DWw5 DWvw5	DWdw6 DWk6 DWw6 DWvw6	DWdw7 DWk7 DWw7 DWvw7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants							
Associates	saskatoon bluebunch wheatgrass	saskatoon bluebunch wheatgrass	saskatoon bluebunch wheatgrass	saskatoon	saskatoon	saskatoon	saskatoon
Plots							

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
LP	FdPl - Pinegrass - Feathermoss; typic ecosystem unit	IDFdk2/01
LPn	FdPl - Pinegrass - Feathermoss; fluvial fan ecosystem unit	
LPs	FdPl - Pinegrass - Feathermoss; shallow soil ecosystem unit	
LP typically occurs on gentle to moderate sloping morainal parent materials with deep medium textured soils. These sites have mesic soil moisture regimes and thin (2 cm) moder humus forms. LPn occurs on fluvial fans with similar soil moisture regimes and humus forms. LPs occurs on sites with shallow soils.		

Map Symbol	LP2 LPn2 LPs2	LP3a LPn3a LPs3a	LP3b LPn3b LPs3b	LP4 LPn4 LPs4	LP5 LPn5 LPs5	LP6 LPn6 LPs5	LP7 LPn7 LPs7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	fireweed pinegrass	trembling aspen soopolallie kinnikinnick pinegrass	trembling aspen soopolallie kinnikinnick pinegrass	lodgepole pine kinnikinnick pinegrass	lodgepole pine kinnikinnick pinegrass	Douglas-fir lodgepole pine kinnikinnick pinegrass	Douglas-fir kinnikinnick pinegrass
Associates	thimbleberry	lodgepole pine thimbleberry birch-leaved spirea falsebox grouseberry twinflower fireweed	Douglas-fir lodgepole pine thimbleberry birch-leaved spirea falsebox grouseberry twinflower fireweed	Douglas-fir trembling aspen soopolallie birch-leaved spirea falsebox grouseberry twinflower red-stemmed feathermoss	Douglas-fir soopolallie birch-leaved spirea falsebox grouseberry twinflower red-stemmed feathermoss	soopolallie birch-leaved spirea falsebox grouseberry twinflower red-stemmed feathermoss	lodgepole pine soopolallie birch-leaved spirea falsebox grouseberry twinflower red-stemmed feathermoss
Potential Forage for Wild Ungulates - Dominants	fireweed	soopolallie	soopolallie				
Associates				soopolallie	soopolallie	soopolallie	soopolallie

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Symbol	LP2 LPn2 LPs2	LP3a LPn3a LPs3a	LP3b LPn3b LPs3b	LP4 LPn4 LPs4	LP5 LPn5 LPs5	LP6 LPn6 LPs5	LP7 LPn7 LPs7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Plots				95-23077	95-23077 R95-2, R95-41		

Map Unit	Description	BEC
SDct	SxwFd - Dogwood - Gooseberry; coarse textured, terraced ecosystem unit	IDFdk2/05

Typical situation is on gentle lower slope receiving sites with deep medium textured soils.
Occurs on high bench fluvial terraces with deep, coarse textured soils. .These sites have subhygric moisture regimes and thick (10 cm) mor humus forms.

Map Symbol	SDct2	SDct3a	SDct3b	SDct4	SDct5	SDct6	SDct7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	fireweed bluejoint	thimbleberry	Douglas maple mountain alder Sitka mountain ash Scouler's willow	lodgepole pine balsam poplar twinflower	balsam poplar twinflower	Englemann spruce twinflower	Englemann spruce twinflower
Associates	thimbleberry showy aster twinflower	Douglas maple mountain alder Sitka mountain ash Scouler's willow balsam poplar one-sided wintergreen showy aster twinflower	lodgepole pine balsam poplar Englemann spruce one-sided wintergreen showy aster twinflower	Englemann spruce Douglas maple mountain alder Sitka mountain ash Scouler's willow one-sided wintergreen showy aster	Englemann spruce lodgepole pine Douglas maple mountain alder Sitka mountain ash Scouler's willow one-sided wintergreen showy aster	balsam poplar lodgepole pine Douglas maple mountain alder Sitka mountain ash Scouler's willow one-sided wintergreen showy aster	balsam poplar Douglas maple mountain alder Sitka mountain ash Scouler's willow one-sided wintergreen showy aster
Potential Forage for Wild Ungulates - Dominants		balsam poplar[1]	balsam poplar[1]	balsam poplar[1]	balsam poplar[1]	balsam poplar[1]	balsam poplar[1]
Associates		Scouler's willow	Scouler's willow	Scouler's willow	Scouler's willow	Scouler's willow	Scouler's willow

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Symbol	SDct2	SDct3a	SDct3b	SDct4	SDct5	SDct6	SDct7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Plots					95-23332		

[1] potential forage when in low shrub stage

Map Unit	Description	BEC
SDgk	SxwFd - Dogwood - Gooseberry; cool aspect gully ecosystem unit	IDFdk2/05
SDgw	SxwFd - Dogwood - Gooseberry; warm aspect gully ecosystem unit	
SD typically occurs on gentle lower slope, moisture receiving sites SDgk occurs on all parent materials in mid-slope gullies on cool aspects. These sites generally have subhygric soil moisture regimes. SDgw occurs on similar sites on warm aspects.		

Map Symbol	SDgk2 SDgw2	SDgk3a SDgw3a	SDgk3b SDgw3b	SDgk4 SDgw4	SDgk5 SDgw5	SDgk6 SDgw6	SDgk7 SDgw7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	fireweed false Solomon's Seal	red-osier dogwood	Douglas maple red-osier dogwood	hybrid white spruce red-osier dogwood	hybrid white spruce red-osier dogwood	hybrid white spruce red-osier dogwood	hybrid white spruce red-osier dogwood
Associates	bunchberry	Douglas maple black gooseberry bunchberry false Solomon's Seal	hybrid white spruce Douglas-fir black gooseberry bunchberry false Solomon's Seal	Douglas-fir lodgpole pine Douglas maple black gooseberry bunchberry false Solomon's Seal	Douglas-fir lodgepole pine Douglas maple black gooseberry bunchberry false Solomon's Seal	Douglas-fir Douglas maple black gooseberry bunchberry false Solomon's Seal	Douglas-fir Douglas maple black gooseberry bunchberry false Solomon's Seal
Potential Forage for Wild Ungulates - Dominants		red-osier dogwood	red-osier dogwood	red-osier dogwood	red-osier dogwood	red-osier dogwood	red-osier dogwood
Associates							
Plots							

Map Unit	Description	BEC
SHac	Sxw - Horsetail; floodplain ecosystem unit	IDFdk2/06
Typical situation is on flat moisture receiving deep medium textured soils. SHac occurs on fluvial parent materials on active floodplains with deep, coarse textured soils. Regosolic soils occur frequently with subhygric soil moisture regimes. Moder humus forms are common with thicknesses of 2-3 cm.		

Map Symbol	SHa2	SHa3a	SHa3b	SHa4	SHa5	SHa6	SHa7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	bluejoint fireweed	thimbleberry trembling aspen pinegrass	mountain alder trembling aspen pinegrass	lodgepole pine trembling aspen pinegrass	lodgepole pine trembling aspen pinegrass	Englemann spruce trembling aspen pinegrass	Englemann spruce pinegrass
Associates	thimbleberry Horsetails	balsam poplar[1] Englemann spruce red-osier dogwood mountain alder star-flowered false Solomon's-seal Horsetails	balsam poplar[1] Englemann spruce red-osier dogwood thimbleberry star-flowered false Solomon's-seal Horsetails	Englemann spruce black cottonwood[1] mountain alder red-osier dogwood bunchberry star-flowered false Solomon's-seal Horsetails	Englemann spruce black cottonwood[1] mountain alder red-osier dogwood bunchberry star-flowered false Solomon's-seal Horsetails	lodgepole pine black cottonwood mountain alder red-osier dogwood bunchberry star-flowered false Solomon's-seal Horsetails red-stemmed feathermoss	black cottonwood mountain alder red-osier dogwood bunchberry star-flowered false Solomon's-seal Horsetails red-stemmed feathermoss
Potential Forage for Wild Ungulates - Dominants	bluejoint fireweed						
Associates	Horsetail	balsam poplar[1]	balsam poplar[1]	black cottonwood[1] red-osier dogwood star-flowered false Solomon's-seal	black cottonwood[1] red-osier dogwood star-flowered false Solomon's-seal	black cottonwood[1] red-osier dogwood star-flowered false Solomon's-seal	black cottonwood[1] red-osier dogwood star-flowered false Solomon's-seal
Plots						95-23079	

[1] potential forage when in low shrub stage

MSxk

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
DA	FdPl - Pinegrass - Arnica; typic ecosystem unit	MSxk/05
DAc	FdPl - Pinegrass - Arnica; coarse textured ecosystem unit	
DAs	FdPl - Pinegrass - Arnica; shallow soil ecosystem unit	

DA typically occurs morainal and colluvial parent materials with deep medium textured soils and warm aspects. These sites generally have submesic soil moisture regimes and mor (moder) humus forms.
DAc occurs on similar terrain with coarse textured soils
DAs occurs on similar sites with shallow soils

Map Symbol	DA2,DAc2 DAs2	DA3a, DAc3a DAs3a	DA3b, DAc3b DAs3b	DA4, DAc4 DAs4	DA5, DAc5 DAs5	DA6, DAc6 DAs6	DA7, DAc7 DAs7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	fireweed	trembling aspen paper birch pinegrass	trembling aspen paper birch pinegrass	lodgepole pine pinegrass	Douglas-fir pinegrass	Douglas-fir pinegrass	Douglas-fir pinegrass
Associates	trembling aspen wild strawberry thimbleberry	lodgepole pine common juniper thimbleberry grouseberry wild strawberry kinnikinnick twinflower fireweed	lodgepole pine common juniper thimbleberry grouseberry wild strawberry kinnikinnick twinflower fireweed *Peltigera* spp.	Douglas-fir trembling aspen paper birch common juniper grouseberry wild strawberry kinnikinnick twinflower fireweed *Peltigera* spp.	lodgepole pine subalpine fir common juniper grouseberry wild strawberry kinnikinnick twinflower red-stemmed feathermoss *Peltigera* spp.	subalpine fir common juniper grouseberry wild strawberry kinnikinnick twinflower red-stemmed feathermoss *Peltigera* spp.	subalpine fir common juniper grouseberry wild strawberry kinnikinnick twinflower red-stemmed feathermoss *Peltigera* spp.
Potential Forage for Wild Ungulates - Dominants	fireweed						
Associates		fireweed	fireweed	fireweed			
Plots					95-23091,94-590	94-591	

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
DJ	Fd - Juniper - Grouseberry; typic ecosystem unit	MSxk/02
DJcd	Fd - Juniper - Grouseberry; coarse textured, deep soil ecosystem unit	
DJv	Fd - Juniper - Grouseberry; coarse textured, deep soil ecosystem unit	
DJ typically occurs on all parent materials with steep warm aspects and shallow, medium-textured soils.These sites have xeric (subxeric) soil moisture regimes and fragile, discontinuous moder and mull humus forms. DJcd occurs on glaciofluvial parent materials with steep warm aspects and deep, coarse textured soils. DJv occurs on all parent materials with very shallow soils and warm aspects.		

Map Symbol	DJ2, DJcd2 DJv2	DJ3a, DJcd3a DJv3a	DJ3b, DJcd3b DJv3b	DJ4, DJcd4 DJv4	DJ5, DJcd5 DJv5	DJ6, DJcd6 DJv6	DJ7, DJcd7 DJv7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	stiff needlegrass kinnikinnick	soopolallie kinnikinnick	soopolallie kinnikinnick	lodgepole pine kinnikinnick	lodgepole pine kinnikinnick	lodgepole pine kinnikinnick	Douglas-fir kinnikinnick
Associates	soopolallie	lodgepole pine common juniper grouseberry twinflower stiff needlegrass	lodgepole pine Douglas-fir common juniper pinegrass grouseberry twinflower stiff needlegrass *Peltigera* spp.	Douglas-fir soopolallie common juniper pinegrass grouseberry twinflower stiff needlegrass *Peltigera* spp.	Douglas-fir soopolallie common juniper pinegrass grouseberry twinflower stiff needlegrass *Peltigera* spp.	Douglas-fir soopolallie common juniper pinegrass grouseberry twinflower stiff needlegrass *Peltigera* spp.	lodgepole pine soopolallie common juniper grouseberry twinflower stiff needlegrass *Peltigera* spp.
Potential Forage for Wild Ungulates - Dominants							
Associates							
Plots						95-23321, R95-32	

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
LFck	Pl - Falsebox - Lupine; coarse textured, cool aspect ecosystem unit	MSxk/06
LFk	Pl - Falsebox - Lupine; cool aspect ecosystem unit	
LFks	Pl - Falsebox - Lupine; cool aspect, shallow soil ecosystem unit	

Typical situation is on gentle to moderate slopes with deep medium textured soils.
LFck occurs on coarse textured glaciofluvial, morainal and colluvial parent materials with cool aspects. These sites have mesic (submesic) soil moisture regimes and moderately thick (4 cm) mor humus forms.
LFk occurs on morainal and colluvial parent materials and deep medium textured soils and cool aspects.
LFks occurs on cool aspects with shallow, medium-textured soils.

Map Symbol	LFk2 LFck2 LFks2	LFk3a LFck3a LFks3a	LFk3b LFck3b LFks3b	LFk4 LFck4 LFks4	LFk5 LFck5 LFks5	LFk6 LFck6 LFks6	LFk7 LFck7 LFks7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	fireweed	thimbleberry grouseberry	sitka alder grouseberry	lodgepole pine grouseberry	lodgepole pine red-stemmed feathermoss	hybrid white spruce subalpine fir red-stemmed feathermoss	hybrid white spruce subalpine fir red-stemmed feathermoss
Associates	thimbleberry arctic lupine	lodgepole pine sitka alder falsebox twinflower grouseberry arctic lupine fireweed	lodgepole pine thimbleberry falsebox twinflower grouseberry arctic lupine fireweed red-stemmed feathermoss	subalpine fir sitka alder falsebox twinflower grouseberry arctic lupine red-stemmed feathermoss	hybrid white spruce subalpine fir sitka alder falsebox twinflower grouseberry arctic lupine	lodgepole pine falsebox twinflower grouseberry arctic lupine	falsebox twinflower grouseberry arctic lupine

Potential Forage for Wild Ungulates - Dominants	fireweed						
Associates		fireweed	fireweed				
Plots					95-23092, 23281, 23310, R16		

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
LL	Pl - Pinegrass - Lupine; typic ecosystem unit	MSxk/01
LLc	Pl - Pinegrass - Lupine; coarse textured ecosystem unit	
LLct	Pl - Pinegrass - Lupine; coarse textured, terraced ecosystem unit	

LL typicallyoccurs on gently sloping morainal and colluvial parent materials with deep medium textured soils. These sites have mesic soil moisture regimes and mor (moder) humus forms are common.
LLc occurs on similar terrain with coarse textured soils.
LLct ocuurs on coarse textured glaciofluvial perent materials.

Map Symbol	LL2, LLc2 LLct2	LL3a, LLc3a LLct3a	LL3b, LLc3b LLct3b	LL4, LLc4 LLct4	LL5, LLc5 LLct5	LL6, LLc6 LLct6	LL7, LLc7 LLct7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	fireweed	paper birch thimbleberry pinegrass	paper birch pinegrass	lodgepole pine pinegrass	lodgepole pine pinegrass	lodgepole pine pinegrass	lodgepole pine pinegrass
Associates	thimbleberry arctic lupine	lodgepole pine grouseberry twinflower kinnikinnick arctic lupine fireweed	lodgepole pine Englemann spruce Douglas maple grouseberry twinflower kinnikinnick arctic lupine red-stemmed feathermoss	Englemann spruce paper birch grouseberry twinflower kinnikinnick arctic lupine red-stemmed feathermoss	Englemann spruce paper birch grouseberry twinflower kinnikinnick arctic lupine red-stemmed feathermoss	Englemann spruce grouseberry twinflower kinnikinnick arctic lupine red-stemmed feathermoss	Englemann spruce grouseberry twinflower kinnikinnick arctic lupine red-stemmed feathermoss
Potential Forage for Wild Ungulates - Dominants	fireweed						
Associates	arctic lupine	arctic lupine fireweed	arctic lupine	arctic lupine	arctic lupine	arctic lupine	arctic lupine
Plots					95-23076,	94-592	

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Symbol	LL2, LLc2 LLct2	LL3a, LLc3a LLct3a	LL3b, LLc3b LLct3b	LL4, LLc4 LLct4	LL5, LLc5 LLct5	LL6, LLc6 LLct6	LL7, LLc7 LLct7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
					23320,23318,94-598, R17,R16		

Map Unit	Description	BEC
SGac	Sxw - Gooseberry - Grouseberry; floodplain ecosystem unit	MSxk/08

Typical situation is on gentle lower slope receiving sites with deep medium textured soils.
SGac occurs on fluvial parent materials on active floodplains with deep, coarse textured soils. Regosolic soils occur frequently with subhygric soil moisture regimes. Moder humus forms are common with thicknesses of 2-3 cm.

Map Symbol	SGac2	SGac3a	SGac3b	SGac4	SGac5	SGac6	SGac7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	bluejoint fireweed	thimbleberry black gooseberry	red-osier dogwood Scouler's willow mountain alder	lodgepole pine balsam poplar	lodgepole pine balsam poplar	Englemann spruce subalpine fir	Englemann spruce subalpine fir
Associates	lodgepole pine thimbleberry	lodgepole pine balsam poplar Englemann spruce Douglas-fir red-osier dogwood Scouler's willow mountain alder one-sided wintergreen twinflower bluejoint fireweed	lodgepole pine balsam poplar Englemann spruce Douglas-fir thimbleberry black gooseberry one-sided wintergreen twinflower grouseberry	Englemann spruce subalpine fir Douglas-fir red-osier dogwood Scouler's willow mountain alder black gooseberry one-sided wintergreen twinflower grouseberry	Englemann spruce subalpine fir Douglas-fir red-osier dogwood Scouler's willow black gooseberry one-sided wintergreen twinflower grouseberry red-stemmed feathermoss	Douglas-fir lodgepole pine balsam poplar red-osier dogwood Scouler's willow black gooseberry one-sided wintergreen twinflower grouseberry red-stemmed feathermoss	Douglas-fir red-osier dogwood Scouler's willow black gooseberry one-sided wintergreen twinflower grouseberry red-stemmed feathermoss
Potential Forage for Wild Ungulates - Dominants			red-osier dogwood Scouler's willow				

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Symbol	SGac2	SGac3a	SGac3b	SGac4	SGac5	SGac6	SGac7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Associates		red-osier dogwood Scouler's willow bluejoint fireweed		red-osier dogwood Scouler's willow	red-osier dogwood Scouler's willow	red-osier dogwood Scouler's willow	red-osier dogwood Scouler's willow
Plots							95-23284,23323

Map Unit	Description	BEC
ST	Sxw - Trapper's tea - Grouseberry; typic ecosystem unit	MSxk/07
STgk	Sxw - Trapper's tea - Grouseberry; gullied cool aspect ecosystem unit	
STgw	Sxw - Trapper's tea - Grouseberry; gullied warm aspect ecosystem unit	
ST typically occurs on all parent materials in toe slope positions that recieve soil moisture. These sites have subhygric moisture regimes and mor (moder) humus forms. STgk occurs in gullies on cool aspects. STgw occurs in gullies on warms aspects.		

Map Symbol	ST2 STgk2 STgw2	ST3a STgk3a STgw3a	ST3b STgk3b STgw3b	ST4 STgk4 STgw4	ST5 STgk5 STgw5	ST6 STgk6 STgw6	ST7 STgk7 STgw7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	fireweed	mountain alder soopolallie pinegrass	mountain alder pinegrass	lodgepole pine pinegrass grouseberry	lodgepole pine pinegrass grouseberry	hybrid white spruce pinegrass grouseberry	hybrid white spruce pinegrass grouseberry
Associates	mountain alder pinegrass heart-leaved arnica	lodgepole pine grouseberry dwarf scouring-rush heart-leaved arnica fireweed	lodgepole pine soopolallie grouseberry dwarf scouring-rush heart-leaved arnica fireweed	mountain alder trapper's tea soopolallie dwarf scouring-rush heart-leaved arnica fireweed red-stemmed feathermoss	subalpine fir hybrid white spruce trapper's tea soopolallie dwarf scouring-rush heart-leaved arnica red-stemmed feathermoss	subalpine fir lodgepole pine trapper's tea soopolallie dwarf scouring-rush heart-leaved arnica red-stemmed feathermoss	subalpine fir lodgepole pine trapper's tea soopolallie dwarf scouring-rush heart-leaved arnica red-stemmed feathermoss
Potential Forage for Wild Ungulates - Dominants	fireweed						
Associates		dwarf scouring-rush fireweed	dwarf scouring-rush fireweed	dwarf scouring-rush	dwarf scouring-rush	dwarf scouring-rush	dwarf scouring-rush
Plots				95-23282	94-589		

Map Unit	Description	BEC

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Symbol	ST2 STgk2 STgw2	ST3a STgk3a STgw3a	ST3b STgk3b STgw3b	ST4 STgk4 STgw4	ST5 STgk5 STgw5	ST6 STgk6 STgw6	ST7 STgk7 STgw7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest

VPw	Vasey's Big Sage - Pinegrass; warm aspect ecosystem unit[1]	MSxk/04

Typical situation is on gentle to moderate slopes with deep medium textured soils.
VPw Occurs on all parent materials on deep coarse textured soils with warm aspects. This unit occurs on subxeric sites with thin, discontinuous mull or moder humus forms.

Map Symbol	VPw2
Plant species	Grass-forb
Dominants	Vasey's big sage bluebunch wheatgrass
Associates	saskatoon kinnikinnick junegrass rosy pussytoes Kentucky bluegrass *Festuca* spp.
Potential Forage for Wild Ungulates - Dominants	bluebunch wheatgrass
Associates	saskatoon junegrass Kentucky bluegrass *Festuca* spp.
Plots	95-23319

[1] bluebunch wheatgrass can also dominate on this site

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
WJdw	Wheatgrass - Junegrass; warm aspect ecosystem unit	MSxk/03
WJk	Wheatgrass - Junegrass; cool aspect ecosystem unit	
WJw	Wheatgrass - Junegrass; shallow soil, warm aspect ecosystem unit	
WJ typically occurs on gentle to moderate sloping sites in crest positions with shallow soils. WJdw occurs on morainal and colluvial parent materials with deep medium textured soils and warm aspects. These sites typically have mull humus forms. Subxeric (submesic) soil moisture regimes and rich nutrient regimes are common. These sites are associated with dark brown chernozemic soils. WJk occurs on cool (easterly) aspects. WJw occurs on similar sites with warm aspects (and typic shallow soils)		

Map Symbol	WJdw2, WJw2, WJk2
Plant species	Grass-forb
Dominants	(bluebunch wheatgrass)[1] junegrass
Associates	kinnikinnick arctic lupine pale agoseris field locoweed yarrow
Potential Forage for Wild Ungulates - Dominants	(bluebunch wheatgrass)[1] junegrass
Associates	arctic lupine pale agoseris
Plots	95-23090

[1] Disturbances by cattle grazing will vary the cover of bluebunch wheatgrass in this unit.

Map Unit	Description	BEC
WS	Willow - Sedge; typic ecosystem unit	MSxk/00
WS occurs on glaciolacustrine or fluvial parent materials in depression landscapes that have subhydric soil moisture regimes. Hydro (Histo-) moder humus forms occur frequently on these saturated soils with prominant mottling and/or gleying.		

Map Symbol	WS3
Plant species	Shrub-Herb
Dominants	willow bog birch trapper's tea sedges
Associates	bluejoint
Potential Forage for Wild Ungulates - Dominants	willow bog birch sedges
Associates	bluejoint
Plots	

MSdm2

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
JWk	Juniper - Bluebunch wheatgrass; cool aspect ecosystem unit	MSdm2/02
JWw	Juniper - Bluebunch wheatgrass; warm aspect ecosystem unit	

JW typically occurs on gentle to moderately sloping with shallow soils in crest positions.
JWk occurs on moderately sloping morainal and colluvial parent materials with cool (easterly) aspects. These sites generally have very xeric to xeric soil moisture regimes.
JWw occurs on similar sites with warm aspects.

Map Symbol	JWk2 JWw2	JWk3a JWw3a	JWk3b JWw3b	JWk4 JWw4	JWk5 JWw5	JWk6 JWw6	JWk7 JWw7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	grasslands of: Bluebunch wheatgrass common juniper kinnikinnick	open sites of: Bluebunch wheatgrass common juniper kinnikinnick	open sites of: Bluebunch wheatgrass common juniper kinnikinnick	open forests of: Bluebunch wheatgrass common juniper kinnikinnick	open forests of: Bluebunch wheatgrass common juniper kinnikinnick	open forests of: Bluebunch wheatgrass common juniper kinnikinnick	open forests of: Bluebunch wheatgrass common juniper kinnikinnick
Associates	pinegrass thread-leaved sandwort	Douglas-fir pinegrass thread-leaved sandwort	Douglas-fir pinegrass thread-leaved sandwort	Douglas-fir pinegrass thread-leaved sandwort	Douglas-fir pinegrass thread-leaved sandwort	Douglas-fir pinegrass thread-leaved sandwort	Douglas-fir pinegrass thread-leaved sandwort
Potential Forage for Wild Ungulates - Dominants	bluebunch wheatgrass	bluebunch wheatgrass	bluebunch wheatgrass	bluebunch wheatgrass	bluebunch wheatgrass	bluebunch wheatgrass	bluebunch wheatgrass
Associates							
Plots							

Map Unit	Description	BEC
LGc	Pl - Grouseberry - Pinegrass; coarse textured, terraced ecosystem unit	MSdm2/04
Typical situation is on gentle to moderate slopes with deep medium textured soils LGc ccurs on fluvial parent materials with deep, coarse textured soils. These sites usually have submesic (mesic) soil moisture regimes and mor and moder humus forms.		

Map Symbol	LGc2	LGc3a	LGc3b	LGc4	LGc5	LGc6	LGc7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	fireweed pinegrass	thimbleberry pinegrass	trembling aspen paper birch pinegrass	lodgepole pine pinegrass	lodgepole pine pinegrass	Englemann spruce lodgepole pine pinegrass	Englemann spruce pinegrass
Associates	thimbleberry	trembling aspen paper birch lodgepole pine kinnikinnick twinflower grouseberry fireweed juniper haircap moss	lodgepole pine Englemann spruce thimbleberry kinnikinnick twinflower grouseberry juniper haircap moss	Englemann spruce paper birch trembling aspen kinnikinnick twinflower grouseberry juniper haircap moss *Peltigera* spp.	Englemann spruce paper birch trembling aspen kinnikinnick twinflower grouseberry juniper haircap moss *Peltigera* spp.	trembling aspen kinnikinnick twinflower grouseberry juniper haircap moss *Peltigera* spp.	trembling aspen kinnikinnick twinflower grouseberry juniper haircap moss *Peltigera* spp.
Potential Forage for Wild Ungulates - Dominants	fireweed		trembling aspen				
Associates		trembling aspen fireweed		trembling aspen	trembling aspen	trembling aspen	trembling aspen
Plots					95-23334		

Map Unit	Description	BEC
LJct	Pl - Juniper - Grouseberry; coarse textured, terraced ecosystem unit	MSdm2/03
Typical situation is on gentle to moderate slopes with deep medium textured soils. LJct occurs on glaciofluvial terraces with deep coarse textured soils. These sites have submesic to subxeric soil moisture regimes. Thin moder (mull) humus forms occur frequently.		

Map Symbol	LJct2	LJct3a	LJct3b	LJct4	LJct5	LJct5	LJct7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	fireweed	thimbleberry pinegrass	paper birch mountain alder pinegrass	lodgepole pine pinegrass	lodgepole pine pinegrass	lodgepole pine pinegrass	lodgepole pine pinegrass
Associates	thimbleberry arctic lupine pinegrass	paper birch mountain alder lodgepole pine grouseberry falsebox twinflower arctic lupine fireweed	lodgepole pine thimbleberry grouseberry falsebox twinflower arctic lupine *Bryoria* spp.	paper birch mountain alder grouseberry falsebox twinflower arctic lupine *Bryoria* spp.	hybrid white spruce grouseberry falsebox twinflower arctic lupine *Bryoria* spp.	hybrid white spruce grouseberry falsebox twinflower arctic lupine *Bryoria* spp.	hybrid white spruce grouseberry falsebox twinflower arctic lupine *Bryoria* spp.
Potential Forage for Wild Ungulates - Dominants	fireweed						
Associates		arctic lupine fireweed	arctic lupine	arctic lupine	arctic lupine	arctic lupine	arctic lupine
Plots						95-23088, 23080,23084	

Map Unit	Description	BEC
LJck	Pl - Juniper - Grouseberry; coarse-textured, cool aspect ecosystem unit	MSdm2/03
LJw	Pl - Juniper - Grouseberry; warm aspect ecosystem unit	
LJsw	Pl - Juniper - Grouseberry; shallow soil, warm aspect ecosystem unit	
LJvw	Pl - Juniper - Grouseberry; very shallow soil, warm aspect ecosystem unit	

LJ typically occurs on gentle to moderate slopes with deep medium-textured soils.
These units all occur on morainal, colluvial and glaciofluvial parent materials on steep slopes. Soil moisture regimes are typically subxeric to submesic.
LJw occurs on sites with warm aspects
LJck occurs on coarse-textured soils on cool (easterly) aspects
LJsw occurs on shallow soils with warm aspects
LJvw occurs on very shallow soils with warm aspects

Map Symbol	LJw2, LJck2 LJsw2, LJvw2	LJw3a, LJck3a LJsw3a, LJvw3a	LJw3b, LJck3b LJsw3b, LJvw3b	LJw4, LJck4 LJsw4, LJvw4	LJw5, LJck5 LJsw5, LJvw5	LJw6, LJck6 LJsw6, LJvw6	LJw7, LJck7 LJsw7, LJvw7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	fireweed	thimbleberry pinegrass	paper birch mountain alder pinegrass	lodgepole pine pinegrass	lodgepole pine pinegrass	lodgepole pine pinegrass	Douglas-fir lodgepole pine pinegrass
Associates	thimbleberry kinnikinnick arctic lupine pinegrass	paper birch mountain alder lodgepole pine common juniper grouseberry falsebox twinflower kinnikinnick arctic lupine fireweed	lodgepole pine common juniper thimbleberry grouseberry falsebox twinflower kinnininnick arctic lupine	paper birch mountain alder common juniper grouseberry falsebox twinflower kinnikinnick arctic lupine	Douglas-fir hybrid white spruce common juniper grouseberry falsebox twinflower kinnikinnick arctic lupine	Douglas-fir hybrid white spruce common juniper grouseberry falsebox twinflower kinnikinnick arctic lupine	hybrid white spruce common juniper grouseberry falsebox twinflower kinnikinnick arctic lupine
Potential Forage for Wild Ungulates -	fireweed						

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Symbol	LJw2, LJck2 LJsw2, LJvw2	LJw3a, LJck3a LJsw3a, LJvw3a	LJw3b, LJck3b LJsw3b, LJvw3b	LJw4, LJck4 LJsw4, LJvw4	LJw5, LJck5 LJsw5, LJvw5	LJw6, LJck6 LJsw6, LJvw6	LJw7, LJck7 LJsw7, LJvw7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants							
Associates		arctic lupine fireweed	arctic lupine	arctic lupine	arctic lupine	arctic lupine	arctic lupine
Plots						95-23088, 23080,23084	

Map Unit	Description	BEC
SDn	Sxw - Gooseberry - Devil's club; fluvial fan ecosystem unit	MSdm2/06
SD typically occurs on gentle to flat receiving sites with medium textured soils. SDn occurs on gently sloping fluvial fans on lower slopes and valley bottoms. These sites generally have subhygric soil moisture regimes. Other portions of the fan are often drier plant associations.		

Map Symbol	SDn2	SDn3a	SDn3b	SDn4	SDn5	SDn6	SDn7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	fireweed bracken	black gooseberry black twinberry Utah honeysuckle	black gooseberry black twinberry Utah honeysuckle	hybrid white spruce subalpine fir	hybrid white spruce subalpine fir	hybrid white spruce subalpine fir	hybrid white spruce subalpine fir
Associates	black twinberry oak fern clasping twistedstalk	hybrid white spruce subalpine fir Douglas-fir oak fern clasping twistedstalk	hybrid white spruce subalpine fir Douglas-fir oak fern clasping twistedstalk	Douglas-fir black gooseberry black twinberry Utah honeysuckle devil's club oak fern clasping twistedstalk	Douglas-fir black gooseberry black twinberry Utah honeysuckle devil's club oak fern clasping twistedstalk	Douglas-fir black gooseberry black twinberry Utah honeysuckle devil's club oak fern clasping twistedstalk	Douglas-fir black gooseberry black twinberry Utah honeysuckle devil's club oak fern clasping twistedstalk
Potential Forage for Wild Ungulates - Dominants							
Associates							
Plots							

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
SF	Sxw - Falsebox - Feathermoss; typic ecosystem unit	MSdm2/01
SFc	Sxw - Falsebox - Feathermoss; coarse-textured ecosystem unit	
SFk	Sxw - Falsebox - Feathermoss; cool aspect ecosystem unit	
SFck	Sxw - Falsebox - Feathermoss; coarse textured, cool aspect ecosystem unit	

SF typically occurs on gently sloping morainal blankets with deep medium textured soils. These sites generally have mesic soil moisture regimes with mor (moder) humus forms.
SFc occurs on similar sites with coarse textured soils.
SFk occurs on steep slopes with cool aspects.
SFck occurs on cool aspects with coarse-textured soils

Map Symbol	SF2, SFc2 SFk2, SFck2	SF3a, SFc3a SFk3a, SFck3a	SF3b, SFc3b SFk3b, SFck3b	SF4, SFc4 SFk4, SFck4	SF5, SFc5 SFk5, SFck5	SF6, SFc6 SFk6, SFck6	SF7, SFc7 SFk7, SFck7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	fireweed bluejoint pinegrass	trapper's tea trailing raspberry pinegrass	lodgepole pine pinegrass	lodgepole pine red-stemmed feathermoss	lodgepole pine red-stemmed feathermoss	subalpine fir hybrid white spruce red-stemmed feathermoss	subalpine fir hybrid white spruce red-stemmed feathermoss
Associates	trailing raspberry bunchberry	lodgepole pine willow black gooseberry falsebox bunchberry fireweed bluejoint wild strawberry	willow black gooseberry trapper's tea trailing raspberry falsebox bunchberry fireweed bluejoint wild strawberry	subalpine fir hybrid white spruce willow trapper's tea falsebox grouseberry pinegrass one-sided wintergreen bunchberry	subalpine fir hybrid white spruce trapper's tea falsebox grouseberry pinegrass one-sided wintergreen bunchberry	lodgepole pine trapper's tea falsebox grouseberry pinegrass one-sided wintergreen bunchberry	lodgepole pine trapper's tea falsebox grouseberry pinegrass one-sided wintergreen bunchberry
Potential forage for Wild Ungulates -	fireweed bluejoint						

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Symbol	SF2, SFc2 SFk2, SFck2	SF3a, SFc3a SFk3a, SFck3a	SF3b, SFc3b SFk3b, SFck3b	SF4, SFc4 SFk4, SFck4	SF5, SFc5 SFk5, SFck5	SF6, SFc6 SFk6, SFck6	SF7, SFc7 SFk7, SFck7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants							
Associates		willow fireweed bluejoint	willow fireweed bluejoint				
Plots					95-23333,23331	95-23081	

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
SG	Sxw - Gooseberry - Grouseberry; typic ecosystem unit	MSdm2/05
SGac	Sxw - Gooseberry - Grouseberry; coarse-textured floodplain ecosystem unit	
SG typically occurs on gentle, lower slope receiving sites with deep medium textured soils. This unit occurs on all parent materials. SGac occurs on fluvial parent materials on active floodplains with deep, coarse textured soils. Regosolic soils occur frequently with subhygric soil moisture regimes. Moder humus forms are common with thicknesses of 2-3 cm.		

Map Symbol	SG2 SGac2	SG3a SGac3a	SG3b SGac3b	SG4 SGac4	SG5 SGac5	SG6 SGac6	SG7 SGac7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	bluejoint fireweed	trapper's tea black gooseberry	balsam poplar mountain alder willow	Douglas-fir lodgepole pine	Douglas-fir lodgepole pine	Englemann spruce subalpine fir	Englemann spruce subalpine fir
Associates	lodgepole pine black gooseberry	lodgepole pine balsam poplar mountain alder willow one-sided wintergreen five-leaved bramble grouseberry bluejoint fireweed	Englemann spruce Douglas-fir lodgepole pine trapper's tea black gooseberry one-sided wintergreen five-leaved bramble grouseberry	Englemann spruce subalpine fir balsam poplar mountain alder willow trapper's tea black gooseberry one-sided wintergreen five-leaved bramble grouseberry	Englemann spruce subalpine fir balsam poplar mountain alder willow trapper's tea black gooseberry one-sided wintergreen five-leaved bramble grouseberry	Douglas-fir lodgepole pine balsam poplar mountain alder willow trapper's tea black gooseberry one-sided wintergreen five-leaved bramble grouseberry red-stemmed feathermoss	Douglas-fir lodgepole pine balsam poplar mountain alder willow trapper's tea black gooseberry one-sided wintergreen five-leaved bramble grouseberry red-stemmed feathermoss

Potential Forage for Wild Ungulates - Dominants	bluejoint fireweed		balsam poplar[1] willow				
Associates		balsam poplar[1] willow bluejoint fireweed		balsam poplar[1] willow	balsam poplar[1] willow	balsam poplar[1] willow	balsam poplar[1] willow
Plots						95-23086	

[1] only browsed in shrub form

Map Unit	Description	BEC
SGgk	Sxw - Gooseberry - Grouseberry; cool aspect gully ecosystem unit	MSdm2/05
SGgw	Sxw - Gooseberry - Grouseberry; warm aspect gully ecosystem unit	
SG typically occurs on gentle, lower slope receiving sites with deep medium textured soils. SGgk occurs on mid slope gullies on cool aspects SGgw occurs on mid slope gullies on warm aspects		

Map Symbol	SGgk2 SGgw2	SGgk3a SGgw3a	SGgk3b SGgw3b	SGgk4 SGgw4	SGgk5 SGgw5	SGgk6 SGgw6	SGgk7 SGgw7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	bluejoint fireweed	trapper's tea black gooseberry	mountain alder willow	Douglas-fir lodgepole pine	Douglas-fir lodgepole pine	Englemann spruce subalpine fir	Englemann spruce subalpine fir
Associates	lodgepole pine black gooseberry	mountain alder willow grouseberry bluejoint fireweed	Englemann spruce Douglas-fir trapper's tea black gooseberry grouseberry	Englemann spruce subalpine fir mountain alder willow trapper's tea black gooseberry grouseberry	Englemann spruce subalpine fir mountain alder willow trapper's tea black gooseberry grouseberry	mountain alder willow trapper's tea black gooseberry grouseberry red-stemmed feathermoss	mountain alder willow trapper's tea black gooseberry grouseberry red-stemmed feathermoss
Potential Forage for Wild Ungulates - Dominants	bluejoint fireweed		willow				
Associates		willow bluejoint fireweed		balsam poplar[1] willow	willow	willow	willow
Plots						95-23086	

ESSFxc

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
BS	Bluejoint - Sedge; typic ecosystem unit	ESSFxc/09
Typically occurs on organic soils that develop in depression landscapes. These sites can have shallow organic veneers that develop over glaciolacustrine parent materials or deep organic blankets (>1m)		

Map Symbol	BS2
Plant species	Grass-forb
Dominants	bluejoint sedge *Carex* spp.
Associates	glowmoss *Sphagnum* spp.
Potential Forage for Wild Ungulates - Dominants	bluejoint sedge *Carex* spp.
Associates	
Plots	94-570,560,23324,233083,R11

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
FC	Bl - Grouseberry - *Cladonia* ; typic ecosystem unit	ESSFxc/05
FCc	Bl - Grouseberry - *Cladonia* ; coarse textured ecosystem unit	
FCct	Bl - Grouseberry - *Cladonia* ; coarse textured, terraced ecosystem unit	
FCs	Bl - Grouseberry - *Cladonia* ; shallow soil ecosystem unit	

FC typically occurs on gentle to moderately sloping well drained morainal and colluvial blankets with deep medium textured soils. These sites have submesic (mesic) soil moisture regimes and mor (moder) humus forms.
FCc occurs on similar terrain types with deep coarse textured soils.
FCct occurs on coarse textured glaciofluvial terrain
FCs occurs on gently sloping shallow soils

Map Symbol	FC2, FCc2 FCct2, FCs2	FC3a, FCc3a FCct3a, FCs3a	FC3b, FCc3b FCct3b, FCs3b	FC4, FCc4 FCct4, FCs4	FC5, FCc5 FCct5, FCs5	FC6, FCc6 FCct6, FCs6	FC7, FCc7 FCct7, FCs7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	fireweed pearly everlasting	black huckleberry grouseberry	black huckleberry grouseberry	lodgepole pine grouseberry	lodgepole pine grouseberry	subalpine fir grouseberry	subalpine fir grouseberry
Associates	black huckleberry grouseberry	lodgepole pine trapper's tea mountain arnica five-leaved bramble fireweed pearly everlasting curly heron's-bill moss moss	lodgepole pine trapper's tea mountain arnica five-leaved bramble curly heron's-bill moss *Cladonia* spp.[1]	subalpine fir Englemann spruce trapper's tea black huckleberry mountain arnica five-leaved bramble curly heron's-bill moss *Cladonia* spp.[1]	subalpine fir Englemann spruce trapper's tea black huckleberry mountain arnica five-leaved bramble curly heron's-bill moss *Cladonia* spp.[1]	lodgepole pine Englemann spruce trapper's tea black huckleberry mountain arnica five-leaved bramble curly heron's-bill moss *Cladonia* spp.[1]	Englemann spruce black huckleberry mountain arnica five-leaved bramble curly heron's-bill moss *Cladonia* spp.[1]

Potential Forage for Wild Ungulates - Dominants	fireweed						
Associates		black huckleberry mountain arnica fireweed	black huckleberry mountain arnica	black huckleberry mountain arnica	black huckleberry mountain arnica	black huckleberry mountain arnica	black huckleberry mountain arnica
Plots					94-558,554,559, 94-575 95-23312,23316, 23325,R10,R12	R18	

[1]not a dominant understory species on gently sloping sites within this part of the Kamloops Forest Region

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
FCk	Bl - Grouseberry - *Cladonia* ; cool aspect ecosystem unit[1]	ESSFxc/05
FCks	Bl - Grouseberry -*Cladonia* ; cool aspect, shallow soil ecosystem unit[1]	
FCkv	Bl - Grouseberry -*Cladonia* ; cool aspect, very shallow soil ecosystem unit[1]	

Typical situation is on gentle to moderate slopes with deep medium textured soils
FCk occurs on morainal parent materials on deep medium textured soils with cool aspects. These sites have mesic to subhygric soil moisture regimes and mor humus forms.
FCks occurs on similar terrain with shallow soils
FCkv occurs on similar terrain with very shallow soils.

Map Symbol	FCk2 FCks2 FCkv2	FCk3a FCks3a FCkv3a	FCk3b FCks3b FCkv3b	FCk4 FCks4 FCkv4	FCk5 FCks5 FCkv5	FCk6 FCks6 FCkv6	FCk7 FCks7 FCkv7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	fireweed	mountain alder thimbleberry grouseberry	mountain alder grouseberry	lodgepole pine grouseberry	lodgepole pine grouseberry	Englemann spruce grouseberry	Englemann spruce grouseberry
Associates	thimbleberry	lodgepole pine sitka valerian one-sided wintergreen heart -leaved arnica fireweed	lodgepole pine thimbleberry sitka valerian one-sided wintergreen heart -leaved arnica fireweed common leafy liverwort *Bracythecium* spp.	subalpine fir Englemann spruce mountain alder sitka valerian one-sided wintergreen heart -leaved arnica common leafy liverwort *Bracythecium* spp.	subalpine fir Englemann spruce sitka valerian one-sided wintergreen heart -leaved arnica common leafy liverwort *Bracythecium* spp.	subalpine fir lodgepole pine sitka valerian one-sided wintergreen heart -leaved arnica common leafy liverwort *Bracythecium* spp.	subalpine fir sitka valerian one-sided wintergreen heart -leaved arnica common leafy liverwort *Bracytecium* spp.
Forage for Wild Ungulates - Dominants	fireweed						
Associates		fireweed	fireweed				
Plots							94-551

[1]*Cladonia* is not a common species in this site series on cool aspects

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
FCw	Bl - Grouseberry - *Cladonia* ; warm aspect ecosystem unit	ESSFxc/05
FCcw	Bl - Grouseberry - *Cladonia* ; coarse textured, warm aspect ecosystem unit	

Typical situation is on gentle to moderate slopes with deep medium textured soils
FCw occurs on moderate to steeply sloping morainal and colluvial blankets with deep medium textured soils and warm aspects. These sites have submesic soil moisture regimes and mor (moder) humus forms.
FCcw occurs on colluvial parent materials with deep coarse textured soils. These sites will have slightly drier soil moisture regimes.

Map Symbol	FCw2,FCcw2	FCw3a, FCcw3a	FCw3b,FCcw3b	FCw4, FCcw4	FCw5, FCcw5	FCw6, FCcw6	FCw7, FCcw7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	fireweed pearly everlasting	black huckleberry tapper's tea[1] grouseberry	black huckleberry trapper's tea[1] grouseberry	lodgepole pine trapper's tea[1] grouseberry	lodgepole pine trapper's tea[1] grouseberry	subalpine fir trapper's tea[1] grouseberry	subalpine fir grouseberry
Associates	black huckleberry common juniper grouseberry	lodgepole pine common juniper mountain arnica five-leaved bramble fireweed pearly everlasting curly heron's-bill moss	lodgepole pine common juniper mountain arnica five-leaved bramble curly heron's-bill moss *Cladonia* spp.	subalpine fir Englemann spruce common juniper black huckleberry mountain arnica five-leaved bramble curly heron's-bill moss *Cladonia* spp.	subalpine fir Englemann spruce common juniper black huckleberry mountain arnica five-leaved bramble curly heron's-bill moss *Cladonia* spp.	lodgepole pine Englemann spruce common juniper black huckleberry mountain arnica five-leaved bramble curly heron's-bill moss *Cladonia* spp.	lodgepole pine Englemann spruce common juniper black huckleberry mountain arnica five-leaved bramble curly heron's-bill moss *Cladonia* spp.
Potential Forage for Wild Ungulates - Dominants	fireweed						
Associates		black huckleberry mountain arnica fireweed	black huckleberry mountain arnica	black huckleberry mountain arnica	black huckleberry mountain arnica	black huckleberry mountain arnica	black huckleberry mountain arnica
Plots					94-563		

[1]dominates on cool aspects only

Map Unit	Description	BEC
FF	Bl - Gooseberry - Foamflower; typic ecosystem unit	ESSFxc/07
FFp	Bl - Gooseberry - Foamflower; peaty ecosystem unit	

FF typically occurs on all parent materials in toe slope positions that recieve significant soil moisture from upslope. These sites will have mor (moder) humus forms and subhygric soil moisture regimes.
FFp occurs in similar slope positions that have thin organic veneers. These sites are usually adjacent to wetlands.

Map Symbol	FF2 FFp2	FF3a FFp3a	FF3b FFp3b	FF4 FFp4	FF5 FFp5	FF6 FFp6	FF7 FFp7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	fireweed	thimbleberry black gooseberry	mountain alder black gooseberry	lodgepole pine	lodgepole pine	subalpine fir Englemann spruce	subalpine fir Englemann spruce
Associates	thimbleberry black gooseberry	mountain alder lodgepole pine sitka valerian mountain arnica five-leaved bramble one-leaved foamflower globefower fireweed	lodgepole pine thimbleberry sitka valerian mountain arnica five-leaved bramble one-leaved foamflower globefower fireweed *Bracythecium* spp.	subalpine fir Englemann spruce mountain alder black gooseberry sitka valerian mountain arnica five-leaved bramble one-leaved foamflower globefower *Bracythecium* spp.	subalpine fir Englemann spruce black gooseberry sitka valerian mountain arnica five-leaved bramble one-leaved foamflower globefower *Bracythecium* spp.	lodgepole pine black gooseberry sitka valerian mountain arnica five-leaved bramble one-leaved foamflower globefower *Bracythecium* spp.	lodgepole pine black gooseberry sitka valerian mountain arnica five-leaved bramble one-leaved foamflower globefower *Bracythecium* spp.
Potential Forage for Wild Ungulates - Dominants							
Associates		sitka valerian mountain arnica	sitka valerian mountain arnica	sitka valerian mountain arnica	sitka valerian mountain arnica	sitka valerian mountain arnica	sitka valerian mountain arnica
Plots							

Map Unit	Description	BEC
FFgk	Bl - Gooseberry - Foamflower; cool aspect gully ecosystem unit	ESSFxc/07
FFgw	Bl - Gooseberry - Foamflower; warm aspect gully ecosystem unit	
Typically situationis on all parent materials in toe slope positions that receive soil moisture from upslope. FFgk occurs on mid slope gullies with cool aspects FFgw occurs on mid slope gullies with warm aspects		

Map Symbol	FFgk2 FFgw2	FFgk3a FFgw3a	FFgk3b FFgw3b	FFgk4 FFgw4	FFgk5 FFgw5	FFgk6 FFgw6	FFgk7 FFgw7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	fireweed	thimbleberry black gooseberry	mountain alder black gooseberry	lodgepole pine	lodgepole pine	subalpine fir Englemann spruce	subalpine fir Englemann spruce
Associates	thimbleberry black gooseberry	mountain alder lodgepole pine sitka valerian mountain arnica five-leaved bramble one-leaved foamflower globefower fireweed	lodgepole pine thimbleberry sitka valerian mountain arnica five-leaved bramble one-leaved foamflower globefower fireweed *Bracythecium* spp.	subalpine fir Englemann spruce mountain alder black gooseberry sitka valerian mountain arnica five-leaved bramble one-leaved foamflower globefower *Bracythecium* spp.	subalpine fir Englemann spruce black gooseberry sitka valerian mountain arnica five-leaved bramble one-leaved foamflower globefower *Bracythecium* spp.	lodgepole pine black gooseberry sitka valerian mountain arnica five-leaved bramble one-leaved foamflower globefower *Bracythecium* spp.	lodgepole pine black gooseberry sitka valerian mountain arnica five-leaved bramble one-leaved foamflower globefower *Bracythecium* spp.
Potential Forage for Wild Ungulates - Dominants							
Associates		sitka valerian mountain arnica	sitka valerian mountain arnica	sitka valerian mountain arnica	sitka valerian mountain arnica	sitka valerian mountain arnica	sitka valerian mountain arnica
Plots							

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
FG	Bl - Grouseberry - Valerian; typic ecosystem unit	ESSFxc/01
FGc	Bl - Grouseberry - Valerian; coarse textured ecosystem unit	
FGn	Bl - Grouseberry - Valerian; fluvial fan ecosystem unit	
FG occurs on gentle to moderately sloping sites on all parent materials with deep medium textured soils. These sites have mesic to subhygric soil moisture regimes and mor (moder) humus forms. FGc occurs on coarse textured fluvial parent materials adjacent to active floodplains. FGn occurs on fluvial fans with subhygric soil moisture regimes and similar humus forms		

Map Symbol	FG2 FGc2 FGn2	FG3a FGc3a FGn3a	FG3b FGc3b FGn3b	FG4 FGc4 FGn4	FG5 FGc5 FGn5	FG6 FGc6 FGn6	FG7 FGc7 FGn7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	fireweed subalpine daisy	thimbleberry willow grouseberry	willow grouseberry	lodgepole pine grouseberry	lodgepole pine grouseberry	subalpine fir grouseberry	subalpine fir grouseberry
Associates	thimbleberry willow *Carex* spp.[1]	lodgepole pine sitka valerian arctic lupine subalpine daisy fireweed *Carex* spp.[1] glow moss *Bracythecium* spp.	lodgepole pine thimbleberry sitka valerian arctic lupine subalpine daisy fireweed *Carex* spp.[1] glow moss *Bracythecium* spp.	subalpine fir Englemann spruce willow sitka valerian arctic lupine subalpine daisy fireweed *Carex* spp.[1] glow moss *Bracythecium* spp.	subalpine fir Englemann spruce sitka valerian arctic lupine subalpine daisy fireweed *Carex* spp.[1] glow moss *Bracythecium* spp.	lodgepole pine Englemann spruce sitka valerian arctic lupine subalpine daisy *Carex* spp.[1] glow moss *Bracythecium* spp.	Englemann spruce arctic lupine sitka valerian globeflower *Carex* spp.[1] glow moss *Bracythecium* spp.

Potential Forage for Wild Ungulates - Dominants		willow	willow				
Associates		sitka valerian arctic lupine	sitka valerian arctic lupine	willow sitka valerian arctic lupine	sitka valerian arctic lupine	sitka valerian arctic lupine	sitka valerian arctic lupine
Plots					94-599		94-552,R19

[1] dominates on fluvial fans only

Map Unit	Description	BEC
FGfy	Bl - Grouseberry - Valerian; fine textured, moist ecosystem unit	ESSFxc/01

Typical situation is on gentle to moderate slopes with deep medium textured soils
FGfy occurs on glaciolacustrine in gently sloping sites that recieve soil moisture. these site shave deep fine textured soils and mesic to subhygric soil moisture regimes. Rich Sombric Brunisol soils are common with mull humus forms.

Map Symbol	FGfy2	FGfy3a	FGfy3b	FGfy4	FGfy5	FGfy6	FGfy7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	fireweed globeflower	thimbleberry grouseberry	mountain alder willow grouseberry	lodgepole pine grouseberry	lodgepole pine grouseberry	subalpine fir Englemann spruce grouseberry	subalpine fir Englemann spruce grouseberry
Associates	thimbleberry willow	lodgepole pine mountain alder willow sitka valerian arctic lupine subalpine daisy fireweed globeflower mountain arnica glow moss elctrified cat' s-tail moss	lodgepole pine thimbleberry sitka valerian arctic lupine subalpine daisy fireweed globeflower mountain arnica glow moss elctrified cat' s-tail moss	subalpine fir Englemann spruce mountain alder willow sitka valerian arctic lupine subalpine daisy fireweed globeflower mountain arnica glow moss elctrified cat' s-tail moss	subalpine fir Englemann spruce sitka valerian arctic lupine subalpine daisy fireweed globeflower mountain arnica glow moss elctrified cat' s-tail moss	lodgepole pine sitka valerian arctic lupine subalpine daisy fireweed globeflower mountain arnica glow moss elctrified cat' s-tail moss	sitka valerian arctic lupine subalpine daisy fireweed globeflower mountain arnica glow moss elctrified cat' s-tail moss
Potential Forage for Wild Ungulates - Dominants	fireweed	willow	willow				
Associates		sitka valerian arctic lupine	sitka valerian arctic lupine	willow sitka valerian arctic lupine	sitka valerian arctic lupine	sitka valerian arctic lupine	sitka valerian arctic lupine
Plots					95-23326		

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
FH	Bl - Horsetail - Glowmoss; typic ecosystem unit	ESSFxc/08
FHac	Bl - Horsetail - Glowmoss; floodplain ecosystem unit	

FH typically occurs on gentle, lower slopes that receive soil moisture. These units occur on all parent materials..
FHac occurs on fluvial parent materials on active floodplains with deep medium to coarse textured soils. These sites have subhygric (hygric) soil moisture regimes.

Map Symbol	FH2 FHac2	FH3a FHac3a	FH3b FHac3b	FH4 FHac4	FH5 FHac5	FH6 FHac6	FH7 FHac7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	fireweed	trembling aspen thimbleberry	trembling aspen	trembling aspen subalpine fir Englemann spruce	subalpine fir Englemann spruce	subalpine fir Englemann spruce	subalpine fir Englemann spruce
Associates	thimbleberry common horsetail Sitka valerian globeflower arrow-leaved groundsel	black gooseberry common horsetail Sitka valerian globeflower arrow-leaved groundsel fireweed	subalpine fir Englemann spruce thimbleberry black gooseberry common horsetail Sitka valerian globeflower arrow-leaved groundsel	black gooseberry common horsetail Sitka valerian globeflower arrow-leaved groundsel leafy mosses glow moss	trembling aspen black gooseberry common horsetail Sitka valerian globeflower arrow-leaved groundsel leafy mosses glow moss	black gooseberry common horsetail Sitka valerian globeflower arrow-leaved groundsel leafy mosses glow moss	black gooseberry common horsetail Sitka valerian globeflower arrow-leaved groundsel leafy mosses glow moss
Potential Forage for Wild Ungulates - Dominants	fireweed						
Associates	common horsetail sitka valerian	common horsetail sitka valerian fireweed	common horsetail sitka valerian	common horsetail sitka valerian	common horsetail sitka valerian	common horsetail sitka valerian	common horsetail sitka valerian
Plots							

Map Unit	Description	BEC
FHkp	Bl - Horsetail - Glowmoss; cool aspect, peaty ecosystem unit	ESSFxc/08

Typical situation is on gentle lower slope receiving sites.
FHkp occurs very rarely in the study area. It is found on bedrock controlled sloping organic veneers. These sites develop enriched organic horizons over bedrock. Soil moisture regimes are subhygric to hygric.

Map Symbol	FHkp2	FHkp3a	FHkp3b	FHkp4	FHkp5	FHkp6	FHkp7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	bluejoint common horsetail dwarf scouring-rush	trappers's tea mountain alder willow common horsetail dwarf scouring-rush	mountain alder willow common horsetail dwarf scouring-rush red stemmed feathermoss	sitka spruce common horsetail dwarf scouring-rush red stemmed feathermoss	sitka spruce common horsetail dwarf scouring-rush red stemmed feathermoss	sitka spruce common horsetail dwarf scouring-rush red stemmed feathermoss	sitka spruce common horsetail dwarf scouring-rush red stemmed feathermoss
Associates	sedges	sitka spruce sub-alpine fir heart leaved arnica soft-leaved sedge grouseberry bluejoint	sitka spruce sub-alpine fir trappers's tea heart leaved arnica soft-leaved sedge grouseberry leafy mosses	sub-alpine fir trappers's tea mountain alder willow heart leaved arnica soft-leaved sedge grouseberry leafy mosses	sub-alpine fir trappers's tea heart leaved arnica soft-leaved sedge grouseberry leafy mosses	sub-alpine fir trappers's tea heart leaved arnica soft-leaved sedge grouseberry leafy mosses	sub-alpine fir trappers's tea heart leaved arnica soft-leaved sedge grouseberry leafy mosses
Potential Forage for Wild Ungulates - Dominants	bluejoint dwarf scouring rush	willow common horsetail dwarf scouring-rush	willow common horsetail dwarf scouring-rush	common horsetail dwarf scouring-rush	common horsetail dwarf scouring-rush	common horsetail dwarf scouring-rush	common horsetail dwarf scouring-rush
Associates		trappers's tea heart leaved arnica soft-leaved sedge	trappers's tea heart leaved arnica soft-leaved sedge	willow trappers's tea heart leaved arnica soft-leaved sedge	trappers's tea heart leaved arnica soft-leaved sedge	trappers's tea heart leaved arnica soft-leaved sedge	trappers's tea heart leaved arnica soft-leaved sedge
Plots						94-568	

Map Unit	Description	BEC
FR	Bl - Rhododendron - Grouseberry; typic ecosystem unit	ESSFxc/07
FR typically occurs on gentle to moderate sloping sites with deep medium textured soils and cool aspects. These sites have mesic to subhygric soil moisture regimes and mor humus forms.		

Map Symbol	FR2	FR3a	FR3b	FR4	FR5	FR6	FR7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	fireweed grouseberry	grouseberry thimbleberry	mountain alder grouseberry	lodgepole pine grouseberry	lodgepole pine grouseberry curly heron's-bill moss	lodgepole pine grouseberry curly heron's-bill moss	subalpine fir Englemann spruce grouseberry curly heron's-bill moss
Associates	white-flowered rhododendron thimbleberry arctic lupine	lodgepole pine mountain alder white-flowered rhododendron arctic lupine heart-leaved arnica twinflower fireweed	lodgepole pine white-flowered rhododendron thimbleberry arctic lupine heart-leaved arnica twinflower fireweed	subalpine fir Englemann spruce mountain alder white-flowered rhododendron arctic lupine heart-leaved arnica twinflower curly heron's-bill moss	subalpine fir Englemann spruce white-flowered rhododendron arctic lupine heart-leaved arnica twinflower	subalpine fir Englemann spruce white-flowered rhododendron arctic lupine heart-leaved arnica twinflower	white-flowered rhododendron arctic lupine heart-leaved arnica
Potential Forage for Wild Ungulates - Dominants	fireweed						
Associates		fireweed	fireweed				
Plots						94-561	

Map Unit	Description	BEC
LG	Lupine - Globeflower; typic ecosystem unit	ESSFxc
These units occur in the forested ESSF due to cold air drainage and ponding in gullies and basins adjacent to the parkland Typically occurs on morainal blankets in depressions and toe slopes with subhygric soil moisture regimes. These wet meadows are often in complex with the TL ecosystem unit.		

Map Symbol	BS2
Plant species	Grass-Forb
Dominants	arctic lupine globeflower
Associates	sedges sitka valerian arrow-leaved groundsel subalpine daisy
Potential Forage for Wild Ungulates - Dominants	
Associates	sedges
Plots	HR-8-3

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
LJw	Pl - Juniper - Lupine; shallow soil, warm aspect ecosystem unit	ESSFxc/02
LJr	Pl - Juniper - Lupine; ridge top ecosystem unit	
LJvw	Pl - Juniper - Lupine; very shallow soil, warm aspect ecosystem unit	
LJdw	Pl - Juniper - Lupine; warm aspect ecosystem unit	

LJ typically occurs on gentle to moderate slopes with shallow soils.
LJw occurs on morainal and colluvial parent materials with warm aspects (and typic shallow soils) .
LJr occurs on morainal and colluvial parent materials with gentle slopes on ridge tops. These sites have xeric to subxeric soil moisture regimes and thin, discontinuous moder humus forms.
LJdw occur on morainal, colluvial and glaciofluvial parent materials with steep warm aspects and deep soils.
LJvw occurs on similar terrain with very shallow soils

Map Symbol	LJw2, LJr2 LJvw2, LJdw2	LJw3a, LJr3a LJvw3a, LJdw3a	LJw3b, LJr3b LJvw3b, LJdw3b	LJw4, LJr4 LJvw4, LJdw4	LJw5, LJr5 LJvw5, LJdw5	LJw6, LJr6 LJvw6, LJdw6	LJw7, LJr7 LJvw7, LJdw7
Plant species	Grass-forb	Low shrub	Tall shrub	Pole sapling	Young forest	Mature forest	Old forest
Dominants	bluebunch wheatgrass	Vasey's big sage[1] bluebunch wheatgrass	Vasey's big sage[1] bluebunch wheatgrass	lodgepole pine[2] Vasey's big sage[1] bluebunch wheatgrass	lodgepole pine[2] Vasey's big sage[1] bluebunch wheatgrass	lodgepole pine[2] Vasey's big sage[1] bluebunch wheatgrass	lodgepole pine[2] Vasey's big sage[1] bluebunch wheatgrass
Associates	common juniper pasture sage junegrass lance-leaved stonecrop	common juniper pasture sage junegrass lance-leaved stonecrop	lodgepole pine common juniper pasture sage junegrass lance-leaved stonecrop	pasture sage junegrass lance-leaved stonecrop	pasture sage junegrass lance-leaved stonecrop	pasture sage junegrass lance-leaved stonecrop	pasture sage junegrass lance-leaved stonecrop

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Potential Forage for Wild Ungulates - Dominants	bluebunch wheatgrass	bluebunch wheatgrass	bluebunch wheatgrass	bluebunch wheatgrass	bluebunch wheatgrass	bluebunch wheatgrass	bluebunch wheatgrass
Associates	junegrass	junegrass	junegrass	junegrass	junegrass	junegrass	junegrass
Plots			94-596				

[1] big sage is not as common on ridgetops
[2] on the very shallow soil unit, tree cover does not exceed 25%

Map Unit	Description	BEC
LW	La - Woodrush ecosystem unit	ESSFxc/00
LWk	La - Woodrush; cool aspect ecosystem unit	
LWw	La - Woodrush; warm aspect ecosystem unit	
LW typically occurs on gently sloping morainal blankets in upper slope positions with deep medium textured soils. These sites are the larch dominated meadows that occur as the closed fir-spruce forests grade into the parkland meadows. LWk occurs on cool aspects LWw occurs on warm aspects		

Map Symbol	LW6 LWk6 LWw6
Plant species	Mature forest
Dominants	alpine larch
Associates	bog cranberry smooth woodrush black alpine sedge alpine speedwell *Barbilophozia* spp.
Potential Forage for Wild Ungulates - Dominants	
Associates	black alpine sedge alpine speedwell
Plots	94-553

Map Unit	Description	BEC
PMw	Pinegrass - Meadowrue; warm aspect ecosystem unit	ESSFxc/04

Typical situation is on gentle to moderate slopes with deep medium-textured soils.
PMw occurs on moderately sloping warm aspects in complex with forested and grassland ecosystem units. Soil moisture regimes are generally mesic to subhygric.

Map Symbol	PMw2
Plant species	grassland
Dominants	western meadowrue pinegrass
Associates	junegrass wild strawberry arctic lupine yarrow
Potential Forage for Wild Ungulates - Dominants	
Associates	junegrass
Plots	

Map Unit	Description	BEC
VW	Sitka Valerian - Small-flowered woodrush	ESSFxc/00
Occurs on colluvial parent materials on cool aspects subject to periodic snow avalanches. These sites develop edaphic low shrub - herb complexes. Soil moisture regimes are generally submesic. Runout zones are generally subhygric.		

Map Symbol	VW2
Plant species	Edaphic herb complex
Dominants	Sitka valerian spotted saxifrage
Associates	arrow-leaved groundsel small-flowered woodrush alpine speedwell *Bracythecium* spp.
Potential Forage for Wild Ungulates - Dominants	Sitka valerian
Associates	arrow-leaved groundsel
Plots	R20

Map Unit	Description	BEC
TL	Timothy - Lupine; typic ecosystem unit	ESSFxc
TLk	Timothy - Lupine; cool aspect ecosystem unit	
These units occur in the forested ESSF due to cold air drainage and ponding in gullies and basins adjacent to the parkland zone. TL typically occurs on gently sloping morainal parent materials with deep medium textured soils. These sites have mesic to submesic soil moisture regimes and mor (mull) humus forms TLk occurs on similar terrain with cool aspects.		

Map Symbol	TL2 TLk2
Plant species	Grass-Forb
Dominants	alpine timothy *Agosaurus* spp.
Associates	alpine larch Englemann spruce arctic lupine alpine bluegrass mountain hairgrass Villous cinquefoil yarrow subalpine daisy
Potential Forage for Wild Ungulates - Dominants	alpine timothy
Associates	arctic lupine alpine bluegrass mountain hairgrass Villous cinquefoil subalpine daisy
Plots	94-557, R2

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
WS	Willow - Sedge; typic ecosystem unit	ESSFxc/10
WSp	Willow - Sedge; peaty ecosystem unit	
WS typically occurs on glaciolacustrine or fluvial parent materials in depression landscapes that have subhydric soil moisture regimes. Hydro (Histo-) moder humus forms occur frequently on these saturated soils with prominant mottling and/or gleying. WSp occurs on similar parent materials with peaty (shallow organic) surface horizons.		

Map Symbol	WS3 WSp3
Plant species	Shrub-Herb
Dominants	bog willow bog birch trapper's tea Columbia sedge russet sedge
Associates	Englemann spruce[1] bluejoint globeflower sitka valerian arrow-leaved groundsel glow moss *Sphagnum* spp.[2]
Potential Forage for Wild Ungulates - Dominants	bog willow bog birch Columbia sedge russet sedge
Associates	bluejoint sitka valerian arrow-leaved groundsel
Plots	94-561, 576,564,R9,R14,R21, R22

[1]occurs as a stunted shrubby form

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

[2] not very common

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
WPd	Bluebunch wheatgrass - Pasqueflower; deep soil ecosystem unit	ESSFxc/03
WPdw	Bluebunch wheatgrass - Pasqueflower; deep soil, warm aspect ecosystem unit	
WPdk	Bluebunch wheatgrass - Pasqueflower; deep soil cool aspect ecosystem unit	

Typical situation is on gentle to moderate slopes with shallow soils
WPd occurs on gently sloping morainal blankets in mid to upper slope positions with deep soils. These sites have mesic soil moisture regimes. Chernozemic soils are most common. These sites may have intensive seasonal use of cattle; consequently, species lists may be more diverse than listed here. Increaser species will dominate on recently grazed sites.
WPdw occurs on deep soils with warm aspects.
WPdk occurs on cool (easterly) aspects

Map Symbol	WP2, WPdw2, WPdk2
Plant species	grasslands
Dominants	bluebunch wheatgrass western pasqueflower
Associates	nodding onion round-leaved alumroot junegrass
Potential Forage for Wild Ungulates - Dominants	bluebunch wheatgrass
Associates	junegrass
Plots	

ESSFxcp

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
AG	LaBl - Grouseberry; typic ecosystem unit	ESSFxcp
AGs	LaBl - Grouseberry; shallow soil ecosystem unit	
AG typically occurs on gently sloping colluvial parent materials with submesic to mesic soil moisture regimes. These site occurs under a sparse canopy of alpine larch. AGs occurs on sites with shallow soils.		

Map Symbol	AG3 AGs3
Plant species	Shrub-Herb
Dominants	alpine larch subalpine fir grouseberry
Associates	mountain heathers grouseberry globeflower small flowered woodrush Sitka valerian mountain arnica arctic lupine *Bracythecium* spp.
Potential Forage for Wild Ungulates - Dominants	
Associates	small flowered woodrush Sitka valerian mountain arnica arctic lupine
Plots	94-577,94-578,R26

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
BS	Bluejoint - Sedge; typic ecosystem unit	ESSFxcp
Typically occurs on organic fens that develop in deppression landscape positions. These sites usually have hygric soil moisture regimes		

Map Symbol	BS2
Plant species	Grass-Forb
Dominants	bluejoint *Carex* spp.
Associates	tea-leaved willow lesser panicled sedge
Potential Forage for Wild Ungulates - Dominants	bluejoint *Carex* spp.
Associates	tea-leaved willow lesser panicled sedge
Plots	HR8-1

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
FS	Fescue - Sedge; typic ecosystem unit[1]	ESSFxcp
FSk	Fescue - Sedge; cool aspect ecosystem unit[1]	
FSw	Fescue - Sedge; warm aspect ecosystem unit[1]	
This unit occurs in the parkland in the vicinity of Lakeview mountain, Red mountain and Crater mountain. FS typically occurs on gently sloping morainal and colluvial (often in the form of bedrock weathering in place) parent materials with deep medium textured soils. These sites have mesic soil moisture regimes and brunisolic soil development. FSk occurs on cool (easterly) aspects FSw occurs on warm aspects		

Map Symbol	FS2, FSk2, FSw2
Plant species	Grass-Forb
Dominants	Rocky Mountain fescue kinnikinnick
Associates	*Salix* spp. Pyrenean sedge single-spiked sedge shrubby cinquefoil spiked trisetum white mountain avens *Cetraria* spp.
Potential Forage for Wild Ungulates - Dominants	Rocky Mountain fescue
Associates	*Salix* spp. Pyrenean sedge single-spiked sedge spiked trisetum *Cetraria* spp.
Plots	94-573, 94-574,94-575

[1] Species lists in this ecosystem unit can be much more diverse than is listed here

Map Unit	Description	BEC
LG	Lupine - Globeflower; typic ecosystem unit	ESSFxcp
Typically occurs on morainal blankets in depressions and toe slopes with subhygric soil moisture regimes. These wet meadows are often in complex with the TL ecosystem unit.		

Map Symbol	BS2
Plant species	Grass-Forb
Dominants	arctic lupine globeflower
Associates	sedges sitka valerian arrow-leaved groundsel subalpine daisy
Potential Forage for Wild Ungulates - Dominants	
Associates	sedges
Plots	HR-8-3

Map Unit	Description	BEC
LW	La - Grouseberry - Woodrush; typic ecosystem unit	ESSFxcp
LWs	La - Grouseberry - Woodrush; shallow soils ecosystem unit	
LW typically occurs on morainal and colluvial parent materials with deep coarse textured soils and cool aspects. Rhizomull humus forms occur frequently. LWs occurs on similar sites with shallow soils.		

Map Symbol	LW3 LWs3
Plant species	Grass-Forb
Dominants	alpine larch grouseberry mountain heathers
Associates	small-flowered woodrush subalpine daisy small-flowered penstemon *Carex* spp. *Bracythecium* spp.
Potential Forage for Wild Ungulates - Dominants	
Associates	*Carex* spp.
Plots	R3,R7,R39

Map Unit	Description	BEC
MR	Mountain Avens - Rocky Mountain fescue; typic ecosystem unit	ESSFxcp
Typical situation is on gently sloping ridge tops with shallow soils. These sites have very rocky, coarse textured soils and xeric to subxeric soil moisture regimes.		

Map Symbol	MR2
Plant species	Grass-Forb
Dominants	mountain avens
Associates	common juniper Rocky mountain fescue kinnikinnick spiked trisetum
Potential Forage for Wild Ungulates - Dominants	
Associates	Rocky mountain fescue spiked trisetum
Plots	R95-39

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
TL	Timothy - Lupine; typic ecosystem unit	ESSFxc
TLk	Timothy - Lupine; cool aspect ecosystem unit	
TLs	Timothy - Lupine; shallow soil ecosystem unit	
TLw	Timothy - Lupine; warm aspect ecosystem unit	

TL typically occurs on gently sloping morainal parent materials with deep medium textured soils. These sites have mesic to submesic soil moisture regimes and mor (mull) humus forms
TLk occurs on similar terrain with cool aspects.
TLs occurs on gentle terrain with shallow soils
TLw occurs on steep slopes with warm aspects

Map Symbol	TL2. TLk2 TLs2,TLw2
Plant species	Grass-Forb
Dominants	alpine timothy *Agosaurus* spp.
Associates	alpine larch Englemann spruce arctic lupine alpine bluegrass mountain hairgrass Villous cinquefoil yarrow subalpine daisy
Potential Forage for Wild Ungulates - Dominants	alpine timothy
Associates	arctic lupine alpine bluegrass mountain hairgrass Villous cinquefoil subalpine daisy

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Symbol	TL2. TLk2 TLs2,TLw2
Plant species	Grass-Forb
Plots	94-557, R2

Map Unit	Description	BEC
WC	Willow - Shrubby Cinquefoil; typic ecosystem unit	ESSFxcp
Typically occurs on gentle to moderately sloping colluvial parent parent materials with deep coarse textured soils. This unit often occurs in complex with the other ecosystem unit		

Map Symbol	WC3
Plant species	Shrub-Herb
Dominants	willow shrubby cinquefoil
Associates	*Carex* spp. bluejoint
Potential Forage for Wild Ungulates - Dominants	willow
Associates	*Carex* spp. bluejoint
Plots	R25

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
WJ	PaPl - Juniper; typic ecosystem unit	ESSFxcp
WJs	PaPl - Juniper; shallow soil ecosystem unit	
WJ typically occurs on colluvial parent materials with deep coarse textured soils and warm aspects. These sites have xeric to subxeric soil moisture regimes and thin, discontinuous humus forms. WJs occurs on similar sites with shallow soils		

Map Symbol	WJ3 WJs3
Plant species	Shrub-Herb
Dominants	common juniper
Associates	whitebark pine lodgepole pine shrubby penstemon kinnikinnick
Potential Forage for Wild Ungulates - Dominants	
Associates	
Plots	94-583, 95-565

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
WS	Willow - Sedge; typic ecosystem unit	ESSFxcp
WSp	Willow - Sedge; peaty ecosystem unit	
WS typically occurs on (glacio-) lacustrine and (glacio-) fluvial parent materials in gently sloping lanscape positions. These sites generally have subhygric to hygric soil moisture regimes associated with receiving sites. WSp occurs on similar terrain with shallow organic surface horizons in the soil profile.		

Map Symbol	WS3 WSp3
Plant species	Shrub-Herb
Dominants	bog willow russet sedge Sitka valerian
Associates	globeflower arrow-leaved groundsel spiked trisetum Indian paintbrush subalpine daisy fringed aster glow moss
Potential Forage for Wild Ungulates - Dominants	bog willow russet sedge Sitka valerian
Associates	arrow-leaved groundsel spiked trisetum subalpine daisy fringed aster
Plots	94-576

AT
Alpine Tundra

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
AC	Avens - *Cetraria*; typic ecosystem unit	AT
AC typically occurs on all parent materials in crest slope positions with shallow, medium to coarse textured soils. These sites have xeric soil moisture regimes and no humus form development		

Map Symbol	AC2
Plant species	Grass-Forb
Dominants	white-mountain avens
Associates	spiked trisetum alpine pussytoes black alpine sedge *Cetraria* spp.
Potential Forage for Wild Ungulates - Dominants	
Associates	spiked trisetum alpine pussytoes black alpine sedge *Cetraria* spp.
Plots	94-579

[1] Species lists in this ecosystem unit can be much more diverse than is listed here

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
AR	Avens - *Rhacomitrium* ; typic ecosystem unit	AR
Typically occurs on colluvial materials of graniodiorite materials on steep cool aspects. Thes sites have subxeric to xeric soil moisture regimes and high percentages of coarse fragments.		

Map Symbol	AR2
Plant species	Grass-Forb
Dominants	white mountain avens *Rhacomitrium* moss
Associates	sedges alpine fescue
Potential Forage for Wild Ungulates - Dominants	
Associates	sedges alpine fescue
Plots	

[1] Species lists in this ecosystem unit can be much more diverse than is listed here

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
CA	*Carex pseudoscirpoidea* - Alpine fescue	AT
CAk	*Carex pseudoscirpoidea* - Alpine fescue; cool aspect	
CA typically occurs on rubbly, weathered volcanic parent materials around Haystack mountain, Twin Buttes, and Crater mountain. These materials create rich fine textured soils that support diverse plant species **CAk** occurs on similar materials with cool aspects.		

Map Symbol	CA2 CAk2
Plant species	Grass-Forb
Dominants	Cascade willow alpine fescue
Associates	white-mountain avens spiked trisetum spiked woodrush moss campion *Cetraria* spp.
Potential Forage for Wild Ungulates - Dominants	Cascade willow alpine fescue
Associates	spiked trisetum spiked woodrush *Cetraria* spp.
Plots	HR9-2

[1] Species lists in this ecosystem unit can be much more diverse than is listed here

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
FS	Fescue - Sedge; typic ecosystem unit[1]	AT
FSk	Fescue - Sedge; cool aspect ecosystem unit[1]	
FSw	Fescue - Sedge; warm aspect ecosystem unit[1]	
FS typically occurs on gently sloping morainal parent materials with deep medium textured soils. These sites have mesic soil moisture regimes and brunisolic soil development. FSk occurs on similar terrain with cool aspects FSw occurs similar terrain with warm aspects.		

Map Symbol	FS2 FSk2 FSw2
Plant species	Grass-Forb
Dominants	Rocky Mountain fescue kinnikinnick
Associates	*Salix* spp. Pyrenean sedge single-spiked sedge shrubby cinquefoil spiked trisetum white mountain avens *Cetraria* spp.
Potential Forage for Wild Ungulates - Dominants	Rocky Mountain fescue
Associates	*Salix* spp. Pyrenean sedge single-spiked sedge spiked trisetum *Cetraria* spp.
Plots	94-573, 94-574,94-575

[1] Species lists in this ecosystem unit can be much more diverse than is listed here

Map Unit	Description	BEC
WS	Willow - Sedge; typic ecosystem unit	AT
WS typically occurs on glaciolacustrine parent materials in deppression landscape positions. These sites generally develop gleysolic soils with hygric soil moisture regimes.		

Map Symbol	WS3
Plant species	Shrub-Herb
Dominants	*Salix* spp. *Carex* spp.
Associates	small-flowered woodrush large-leaved avens diverse-leaved cinquefoil alpine speedwell black-tipped groundsel glow moss
Potential Forage for Wild Ungulates - Dominants	*Salix* spp. *Carex* spp.
Associates	small-flowered woodrush black-tipped groundsel
Plots	R6

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

Map Unit	Description	BEC
WM	Cascade Willow - Mountain avens ecosystem unit	AT
WMw	Cascade Willow - Mountain avens; warm aspect ecosystem unit	
WM occurs on glaciolacustrine parent materials in depression landscape positions. These sites generally develop gleysolic soils with hygric soil moisture regimes. WMw occurs on similar terrain with warm aspects.		

Map Symbol	WM3, WMw3
Plant species	Shrub-Herb
Dominants	*Salix* spp. *Carex* spp.
Associates	small-flowered woodrush large-leaved avens diverse-leaved cinquefoil alpine speedwell black-tipped groundsel glow moss
Potential Forage for Wild Ungulates - Dominants	*Salix* spp. *Carex* spp.
Associates	small-flowered woodrush black-tipped groundsel
Plots	R6

NON-VEGETATED AND ANTHROPOGENIC SITES

Map Unit	Description	BEC
BF	Block Field	All subzones
Occurs primarly in alpine tundra. These sites are blocky fields that are the result of bedrock weathering in place. Often occur in comlex with high elevation grasslands (ie Fescue-Sedge ecosystem unit).		

Map Unit	Description	BEC
CLk	Cliff; cool aspect	All subzones
CLw	Cliff; warm aspect	
Vertical rock outcrops. These sites may have good habitat for bats. CLk are cliffs that face northerly between, 290^{o} and 135^{o} CLw are cliffs that face southerly, 135^{o} and 290^{o}		

Map Unit	Description	BEC
DL	Dry Lakebed	All subzones
Seasonal lakebeds that are dry for significant periods of the growing season. Often sparsely vegetated		

Map Unit	Description	BEC
ES	Exposed soil	All subzones
Exposed mineral soil. Often occurs on glaciolacustrine and glaciofluvial scarps.		

Map Unit	Description	BEC
GB	Gravel bar	All subzones
Gravel bars on active floodplains		

Map Unit	Description	BEC
LA	Lake	All subzones

Map Unit	Description	BEC
OW	Open Shallow Water	All subzones
ponds and seasonal lakes		

Map Unit	Description	BEC
RI	River	All subzones
Rivers and creeks		

Map Unit	Description	BEC
RP	Road Surface	All subzones
Gravel roads		

Map Unit	Description	BEC
ROw	Rock outcrop; warm aspect	All subzones
ROk	Rock outcrop; cool aspect	
Primarly non-vegetated sites with little or no soil development. Warm aspects tend to be lichen dominated and cool aspects tend to be bryophyte dominated		

Map Unit	Description	BEC
TAw	Talus; warm aspect	All subzones
TAk	Talus ; cool aspect	
Primarly non-vegetated sites on steep slopes beneath rock outcrops. Slow mass movement inhibits soil and climax vegetation formation. Warm aspects tend to be grass dominated end cool aspects tend to be shrub dominated		

Map Unit	Description	BEC
UR	Urban	All subzones
Sites of urban development		

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APPENDIX I. ECOSYSTEM UNIT CORRELATION TABLE

SUBZONE	ECO-UNIT	B.C. Ministry of Forests Site Series (Lloyd et. al. 1990)		South Okanagan Biophysical (Lea et. al. 1991)	
IDFxh1	DF	06	FdPy - Spirea - Feathermoss		
	DP	07	FdPy - Snowberry - Spirea	SP	Common Snowberry - Pinegrass
	SD	08	SxwFd - Douglas-Maple - Dogwood		
	SP	04	FdPy - Snowbrush - Pinegrass		
	DW	03	FdPy - Bluebunch wheatgrass - Pinegrass	DW	Fd - Bluebunch wheatgrass
	PB	02	FdPy - Bluebunch wheatgrass - Balsamroot	PS	Py - Selaginella
IDFxh1a	BN	96	Kentucky bluegrass - Stiff Needlegrass		
	SF	94	Big Sage - Bluebunch wheatgrass	WJ	Bluebunch wheatgrass - Junegrass
	WA	92	Big Sage - Bluebunch wheatgrass - Balsamroot	WA	Bluebunch wheatgrass- arrow-leaved balsamroot
	WB	93	Bluebunch wheatgrass- Balsamroot	FW	Idaho fescue - Bluebunch wheatgrass
IDFdk1	DJ	03	Fd - Juniper - Pinegrass		
	DW	02	Fd - Snowberry - Bluebunch wheatgrass		
	DY	04	Fd - Pinegrass- Yarrow	DY	Fd - Yarrow
	LP	01	FdPl - Pinegrass - Feathermoss	LP	Pl - Pinegrass
	SG	05	SxwFd - Gooseberry - Feathermoss		
	SH	06	Sxw - Horsetail		
IDFdk1a	AS	94	At - Snowberry - Kentucky bluegrass	AS	At - Common Snowberry
	SN	93	Spreading Needlegrass		
	WJ	92	Bluebunch wheatgrass - Junegrass		

CATHEDRAL PROVINCIAL PARK LEGEND - 26-03-96

IDFdk2	DP	03	FdPy - Pinegrass		
	DW	02	FdPy - Bluebunch wheatgrass		
	LP	01	FdPl - Pinegrass		
	SD	05	Sxw - Dogwood - Gooseberry		
	SH	06	Sxw - Horsetail		
MSxk	DA	05	FdPl - Pinegrass	DA	Fd - Heart-leaved Arnica
	DJ	02	Fd - Juniper - Grousberry		
	LF	06	Pl - Falsebox - Lupine		
	LL	01	Pl - Pinegrass - Lupine	LL	Pl - Arctic lupine
	SG	08	Sxw - Gooseberry - Grouseberry	SG	Spruce - Black Gooseberry
	ST	07	Sxw - Trapper's Tea - Grouseberry		
	VP	04	Big Sage - Pinegrass	VK	Vasey's big sagebrush - Kentucky bluegrass
	WJ	03	Bluebunch wheatgrass - Junegrass		
	WS	00	n/a		
MSdm2	JW	02	Juniper - Bluebunch wheatgrass		
	LG	04	Pl - Grouseberry - Pinegrass		
	LJ	03	Pl - Juniper - Grouseberry		
	SD	06	Sxw - Gooseberry- Devil's club		
	SF	01	Sxw - Falsebox - Feathermoss		
	SG	05	Sxw - Gooseberry - Grouseberry		
ESSFxc	BS	09	Bluejoint - Sedge		
	FC	05	Bl - Grouseberry - *Cladonia*		
	FF	07	Bl - Gooseberry - Foamflower		
	FG	01	Bl - Grouseberry - Valerian	FG	Bl - Grouseberry
	FH	08	Bl - Horsetail - Glowmoss		

	FR	06	Bl - Rhododendron - Grouseberry	
	LG	n/a		
	LJ	02	Pl - Juniper - Lupine	
	LW	n/a		
	PM	04	Pinegrass - Meadowrue	
	VW	n/a		
	TL	n/a		
	WS	10	Willow - Sedge	
	WP	03	Bluebunch wheatgrass - Pasqueflower	
ESSFxcp	AG	n/a		
	BS	n/a		
	FS	n/a		
	LG	n/a		
	LW	n/a		
	MR	n/a		
	TL	n/a		
	WC	n/a		
	WJ	n/a		
	WS	n/a		
AT	AC	n/a		
	CA	n/a		
	FS	n/a		
	WS	n/a		

APPENDIX II. WILDLIFE MATRICES