ECOSYSTEM UNITS OF THE SAHTANEH AREA

Prepared for: Slocan Forest Products
Fort Nelson, B.C.

Prepared by: Chris Clement, R.P.F., R.P.Bio.
and Rod Dalziel
Shearwater Mapping Ltd.
Victoria, B.C.

March 2004

TABLE OF CONTENTS

1. INTRODUCTION

1.1 Introduction

In January of 2003, Shearwater Mapping Ltd. was retained by Slocan Forest Products to prepare Terrestrial Ecosystem Maps at a scale of 1:20 000 for the Sahtaneh Study Area. The area covered included BCGS map sheets 94O.005 - .009, .015 - .020, .025 - .030, .035 - .040, .045 - .050 and .055 - .060 (35 map sheets of which .008, .009, .020, .030 and .040 are partial map sheets). The total area within the study area is 431,088 ha.

Following the Standard for Terrestrial Ecosystem Mapping in British Columbia (Resources Inventory Committee 1998) 148 ground inspections were located and sampled; in addition, 1061 visual records were obtained. All samples were located in the Fort Nelson Moist Warm Boreal White and Black Spruce Variant (BWBSmw2).

1.2 Study Area

The study area is depicted in Figure 1 (page 2). The area is divided between the Fort Nelson Lowland (FNL), Etsho Plateau (ETP) and Maxhamish Upland (MAU) Ecosections, with the Fort Nelson Lowland occupying approximately 75% of the entire area. Elevations range from 275m to 730m (900 to 2447 ft), with the lowest elevations found on the Fort Nelson River floodplain, rising to higher elevations in the northeast. The Fort Nelson River extends from the southeast corner of the study area to the confluence of the Kiwigana River. Other major drainages include Stanolind Creek, Tsimei Creek, Etsho Creek, Klenteh Creek, Delkpey Creek, and Gote Creek. Named lakes include Tsinhea Lake, Two Island Lake, Trail Lake, Tightfit Lake, and Tsea Lakes.

Typical vegetation on mesic sites is composed of predominantly seral forests of trembling aspen and white spruce, with prickly rose, soopolallie and highbush-cranberry dominating the continuous, robust shrub layer. Bunchberry is the only consistently occurring herb, although fireweed, twinflower and trailing raspberry also frequently occur. Mature climax forests of white spruce have less shrub cover and a thick carpet of *Hylocomium splendens*, *Pleurozium schreberi* and *Ptilium crista-castrensis*. All sites have clayey, silty morainal or lacustrine blanket parent material (fine-textured soil site modifier). Typic sites with medium-textured moraine do not occur. Common soils are Gleyed Gray Luvisol and Orthic Gray Luvisol.

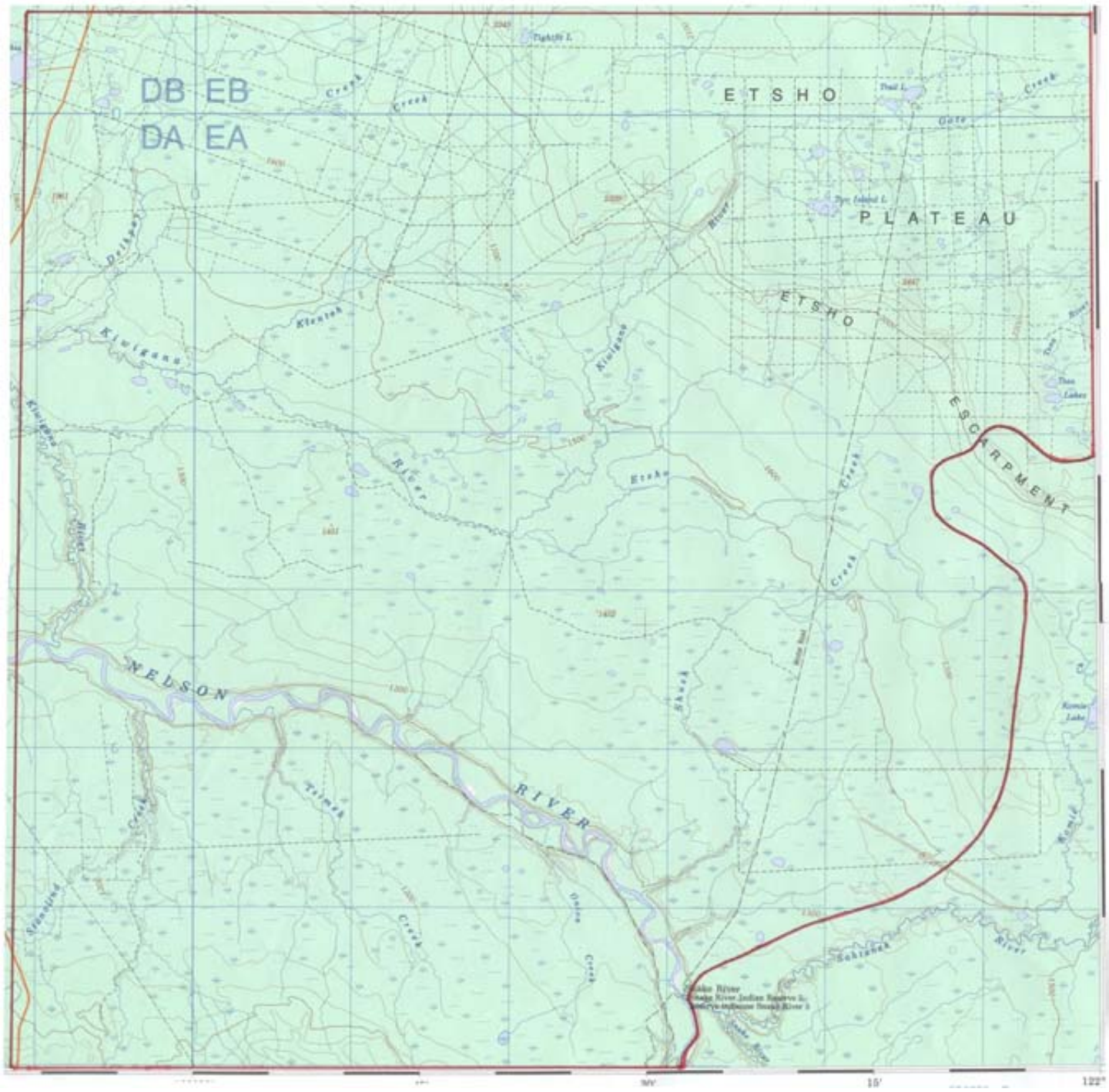

Figure 1. Study Area

Sandy eolian ridges (which occur rarely) are dominated by very open forests of lodgepole pine, with patchy prickly rose, saskatoon and choke cherry in the shrub layer. Dominant herbs are kinnikinnick and lingonberry. A well-developed layer of ground lichens is usually present. Typical soil development is Orthic Dystric Brunisol.

On medium to coarse-textured moraine and level eolian deposits, open mixed forests of lodgepole pine and trembling aspen develop. Prickly rose, soopolallie, fuzzy-spiked wildrye and lingonberry are common understory plant species. Soils are typically Eluviated Dystric Brunisols.

Floodplains of the Fort Nelson and Kiwigana rivers, which are deeply incised into the surrounding till and lacustrine plain, develop productive forests of white spruce and balsam poplar. The vigorous shrub layer is characterized by willow, mountain alder, highbush-cranberry and red-osier dogwood. Common herbs include horsetails, bluejoint, bunchberry and twinflower. Soils, which are highly variable include Cumulic Regosol, Orthic Dystric Brunisol, Cumulic Humic Regosol, Rego Gleysol and Orthic Gleysol.

Wet forested sites have a mixture of white and black spruce, with occasional tamarack occurring. Common shrubs include willows, mountain alder and Labrador tea; common herbs are horsetails, lingonberry, and bunchberry. Characteristic mosses include *Sphagnum* spp., *Hylocomium splendens*, *Pleurozium schreberi*, *Tomenthypnum nitens* and *Ptilium crista-castrensis*. Parent materials include clayey, silty morainal and lacustrine blanket and organic veneer over moraine. Typical soil developments are Orthic Gleysol, Rego Humic Gleysol, Gleyed Gray Luvisol, Terric Fibrisol, and Terric Humic Fibrisol. Frozen soils (Humic Organic Cryosol) occur occasionally.

Bogs, dominated by scrubby black spruce, Labrador tea, leatherleaf, bog-rosemary, lingonberry, and cloudberry are a prominent feature, often occurring as continuous landscapes. A thick spongy, mat of *Sphagnum* spp. is typical and a well-developed cover of *Cladina* spp. is often present. Typical soil developments are Typic Fibrisol and Typic Mesisol.

Other wetlands including Bebb's willow - Mountain alder - Bluejoint swamps, Tamarack - Buckbean swamps, riparian marshes, and sedge fens occur throughout the study area. Primary parent materials are various depths of organic material over clayey, silty moraine. Soil developments include Typic Fibrisol, Typic Mesisol, Mesic Humisol, Terric Humisol, Orthic Humic Gleysol and Rego Gleysol.

2. METHODOLOGY

Prior to field work being implemented, all mapping of terrain and ecosystem units was done on the applicable aerial photos. Utilizing the information obtained in the TEM for the Snake/Sahtaneh study area, which adjoins this area along its eastern boundary, a detailed working legend was compiled. The working legend, which offers a correlation table of terrain types to site series (ecosystem units), was used as the template for mapping both terrain and ecosystems. Following completion of the typing of aerial photos, a monorestitution process was utilized to digitally capture mapping linework. A polygonal database for both terrain and ecosystems was constructed and linked to the GIS polygons.

A total of 148 ground inspections were located and sampled, as well as 1061 visual records, with field work being carried out in June, 2003. Ground inspections were selected to characterize the range of ecosystems and structural stages occurring on the various surficial materials. Visual records were primarily done from a helicopter, with a few completed on the ground. The existing site series classification (DeLong *et al*. 1990) was utilized, except for non-forested units which were named according to RIC standards.

At each ground inspection location, ground inspections forms were completed according to Luttmerding *et al*. (1990). A complete list of vascular plants was made and percent cover estimates were recorded for each species entry. Dominant mosses, lichens and liverworts were also recorded. Soils were described in terms of texture, coarse fragment content and humus form (order). Surficial geology terminology is after Howes and Kenk (1997). Nomenclature of vascular plants follows Meidinger (1987); mosses after Crum *et al*. (1973) and lichens according to Hale and Culberson (1970).

For ground visual records the following parameters were recorded: surveyors, date, map sheet, aerial photo number, elevation, slope, aspect, slope position, soil moisture regime, soil nutrient regime, soil drainage, soil texture, terrain unit, site series, structural stage, site modifier, and Ecosection. Quick visual records consisted only of date, surveyors, map sheet, terrain unit and site series (observations were usually made from helicopter).

During field sampling the variation in structural stages was sampled. Structural stages sampled, and also mapped, are:

1 Sparse/bryoid
    1a Sparse (Less than 10% vegetation cover)
    1b Bryoid (Bryophyte and lichen-dominated communities)

2 Herb (wetlands or recently logged)
    2a Forb-dominated
    2b Graminoid-dominated

3 Shrub/Herb (early successional stage or disclimax/climax communities dominated by shrubby vegetation <10m tall; <20 years for normal forest succession, up to 100+ years for disclimax/climax communities)

- 3a Low Shrub (early successional stage or disclimax/climax communities dominated by shrubby vegetation <2m tall).
- 3b Tall Shrub (early successional stage or disclimax/climax communities dominated by shrubby vegetation >2m tall and 10m).

4 Pole/Sapling (trees greater than 10m tall, <20 years for normal succession or up to 100 years for stagnant stands)

5 Young Forest (40 to 80 years)

6 Mature Forest (80 to 140 years)

7 Old Forest (>140 years)

Site series are subdivided, based on site conditions such as depth of soil, aspect, soil texture and landform. These "site modifiers", which are linked to the site series symbols on the maps, are as follows:

a - active floodplain
: the site series occurs on an active fluvial floodplain (level or very gently sloping surface bordering a river that has been formed by river erosion and deposition), where evidence of active sedimentation and deposition is present.

c - coarse-textured soils
: the site series occurs on soils with a coarse texture, including sand and loamy sand, and also sandy loam, loam and sandy clay loam with greater than 70% coarse fragment volume.

d - deep soils
: the site series occurs on soils greater than 100 cm to bedrock.

f - fine-textured soils
: the site series occurs on soils with a fine texture including silt and silt loam with less than 20% coarse fragment volume; and clay, silty clay, silty clay loam, clay loam, sandy clay and heavy clay with less than 35% coarse fragment volume.

g – gullying
: the site series occurs within a gully, or the site series has gullying throughout the delineated area.

j - gentle slope
: the site series occurs on gently sloping topography (less than 25%).

k - cool aspect
: the site series occurs on cool, northerly or easterly aspects (285-135 degrees) on moderate (>25%) to very steep slopes.

m - medium-textured soils
: the site series occurs on soils with a medium texture, including sandy loam, loam and sandy clay loam with less than 70% coarse fragment volume; silt loam and silt with less than 20% coarse fragment volume; and clay, silty clay, silty clay loam, clay loam, sandy clay and heavy clay with more than 35% coarse fragment volume.

n - fan
: the site series occurs on a fluvial fan (most common) or on a colluvial fan or cone.

p - peaty material
: the site series occurs on deep organic soils or a peaty surface (15-60cm) over mineral soils.

r - ridge
: the site series occurs throughout an area of ridged terrain, or it occurs on a ridge crest.

t - terrace
: the site series occurs on a fluvial or glaciofluvial terrace, lacustrine terrace, or rock cut terrace.

w - warm aspect
: the site series occurs on warm, southerly or westerly aspects (135-285 degrees) on moderate (>25%) to very steep slopes.

Map symbols consist of a site series, site modifier (if applicable) and structural stage. For example:

AMf5

AMf5 = SwAt - Step moss site series, fine-textured soils, young forest. Up to two site modifiers can be attached to a site series. Complex (2 or 3 part) map symbols are utilized where landscape, site or vegetation conditions are diverse. For example:

8AMf5 - 2BWp5

8AMf5 – 2BWp5 = Eighty percent SwAt - Step moss site series, fine-textured, young forest with twenty percent Sb - Willow site series, peaty material, young forest. Note that for complex map symbols, deciles are placed before the site series symbols, and deciles must always total 10 (10 = 100%).

3. BIOGEOCLIMATIC UNITS

The entire study area lies within the Fort Nelson Moist Warm Boreal White and Black Spruce Variant (BWBSmw2). Typical climax forests are dominated by white spruce, with a patchy shrub cover of prickly rose, and occasional highbush-cranberry. Common herbs include bunchberry and twinflower, with frequent occurrences of lingonberry, common mitrewort and one-sided wintergreen. A continuous carpet of *Hylocomium splendens*, *Pleurozium schreberi* and *Ptilium crista-castrensis* is always present. Characteristic soils are Gleyed Gray Luvisols, Orthic Gray Luvisols, and Brunisolic Gray Luvisols. Humus forms are predominantly Hemimors and Hemihumimors.

4. ECOSYSTEM UNITS

An ecosystem unit incorporates site series, site modifiers and structural stages. Forested site series are named according to dominant trees and a shrub, herb, moss, lichen or liverwort. Two letter site series symbols are now standardized for all biogeoclimatic units in the province (Resources Inventory Committee 1998). A summary of all mapped ecosystem units is provided in Table 1. Note that "typic" denotes that the site series occurs on deep, medium-textured soils with gentle slopes.

Table 1. Ecosystem Units of the Sahtaneh Study Area

BWBSmw2	01	AM	SwAt - Step moss, typic
		AMc	SwAt - Step moss, coarse-textured soils
		AMf	SwAt - Step moss, fine-textured soils
		AMr	SwAt - Step moss, ridge
	02	LL	Pl – Lingonberry, typic
	04	BL	Sb - Lingonberry - Coltsfoot, typic
		BLc	Sb - Lingonberry - Coltsfoot, coarse-textured soils
		BLck	Sb - Lingonberry - Coltsfoot, coarse-textured soils, cool aspect
		BLcr	Sb - Lingonberry - Coltsfoot, coarse-textured soils, ridge
		BLcw	Sb - Lingonberry - Coltsfoot, coarse-textured soils, warm aspect
		BLfk	Sb - Lingonberry - Coltsfoot, fine-textured soils, cool aspect
		BLfw	Sb - Lingonberry - Coltsfoot, fine-textured soils, warm aspect
		BLfr	Sb - Lingonberry - Coltsfoot, fine-textured soils, ridge
		BLk	Sb - Lingonberry - Coltsfoot, cool aspect
		BLks	Sb - Lingonberry - Coltsfoot, cool aspect, shallow soils
		BLr	Sb - Lingonberry - Coltsfoot, ridge
		BLsw	Sb - Lingonberry - Coltsfoot, shallow soils, warm aspect
		BLt	Sb - Lingonberry - Coltsfoot, terrace
		BLvw	Sb - Lingonberry - Coltsfoot, very shallow soils, warm aspect
		BLw	Sb - Lingonberry - Coltsfoot, warm aspect
	05	SHa	Sw - Currant - Horsetail, active floodplain
		SHt	Sw - Currant - Horsetail, terrace
	06	BB	Sb - Feathermoss - Bluebells, typic
		BBa	Sb - Feathermoss - Bluebells, active floodplain
		BBc	Sb - Feathermoss - Bluebells, coarse-textured soils
		BBcg	Sb - Feathermoss - Bluebells, coarse-textured soils, gullied
		BBf	Sb - Feathermoss - Bluebells, fine-textured soils
		BBfg	Sb - Feathermoss - Bluebells, fine-textured soils, gullied
		BBg	Sb - Feathermoss - Bluebells, gullied
		BBgk	Sb - Feathermoss - Bluebells, gullied, cool aspect
		BBgw	Sb - Feathermoss - Bluebells, gullied, warm aspect
		BBn	Sb - Feathermoss - Bluebells, fan
		BBp	Sb - Feathermoss - Bluebells, peaty material
	07	THp	Lt - Horsetail, peaty material
	08	BS	Sb - Cloudberry - Sphagnum, typic

09	BW	Sb - Willow, typic
	BWc	Sb - Willow, coarse-textured soils
	BWck	Sb - Willow, coarse-textured soils, cool aspect
	BWf	Sb - Willow, fine-textured soils
	BWp	Sb - Willow, peaty material
	BWt	Sb - Willow, terrace
	BWw	Sb - Willow, warm aspect
10	TB	Lt - Buckbean, typic
00	AB	Bebb's willow - Mountain alder - Bluejoint swamp, typic
	ABc	Bebb's willow - Mountain alder - Bluejoint swamp, coarse-textured soils
	ABp	Bebb's willow - Mountain alder - Bluejoint swamp, peaty material
	ABw	Bebb's willow - Mountain alder - Bluejoint swamp, warm aspect
00	LR	Leatherleaf - Bog-rosemary - Sphagnum, typic
00	SB	Sw - Currant - Bluebell, typic
	SBc	Sw - Currant - Bluebell, coarse-textured soils
	SBct	Sw - Currant - Bluebell, coarse-textured soils,terrace
	SBf	Sw - Currant - Bluebell, fine-textured soils
	SBfk	Sw - Currant - Bluebell, fine-textured soils, cool aspect
	SBfw	Sw - Currant - Bluebell, fine-textured soils, warm aspect
	SBw	Sw - Currant - Bluebell, warm aspect
00	SS	Scrub birch - Willow - Water sedge fen, typic
	SSp	Scrub birch - Willow - Water sedge fen, peaty material
00	WB	Drummond's willow - Bluejoint low bench/swamp, typic
	WBp	Drummond's willow - Bluejoint lowb ench/swamp, peaty material

In the following descriptive tables, each ecosystem is described in terms of dominant and associated plant species for each vegetation layer (trees, shrubs, herbs and mosses/lichens/liverworts). Dominant species have a frequency of 75% or greater, combined with a mean cover of at least 5%. Associated species have a frequency of less than 75% (with any mean cover value) or frequency of 75% or greater combined with mean cover of less than 5%. Frequency (or presence) is the number of plots (within the sample group) that a species occurs in, expressed as a percentage. Mean cover is the mean of all percent cover ratings for a specific plant within an ecosystem unit.

A number of map units that are not true site series are recognized, including:

ES	Exposed soil
GB	Gravel bar
GP	Gravel pit
LA	Lake
OW	Open water
PD	Pond
RI	River
RZ	Road surface

No descriptions are provided for these units.

See Glossary for definition of technical terms.

Photo R1-20; Plot RG042

SITE DESCRIPTION

	Mean	Range
Elevation	443	339 - 706
Slope	3.8	0 - 14

Aspect	Slope Position	Drainage
all	all	moderate - well

Soil Texture	Coarse Fragment Content
sandy loam – silty clay	<35%

Moisture Regime	Nutrient Regime
mesic	submesotrophic - permesotrophic

Terrain

silty clayey, clayey silty glaciolacustrine blanket (gentle slope); clayey silty morainal blanket ridge; clayey silty morainal blanket (gentle slope); sandy silty morainal blanket

Biogeoclimatic Ecosystem Classification

BWBSmw2
01

Map Unit(s) - Symbol and Name

AM SwAt – Step moss, typic
AMc SwAt – Step moss, coarse-textured soils
AMf SwAt – Step moss, fine-textured soils
AMr SwAt – Step moss, ridge

Comments

The AM ecosystem is common on fine-textured level to rolling uplands (medium and coarse-textured occur rarely). Warm and cool aspects are not present. The vegetation of the AM ecosystem exhibits dramatic changes over succession. Robust bluejoint, bunchberry, trembling aspen, prickly rose and dwarf red raspberry dominate herb and shrub stages. In the pole sapling stage bluejoint disappears, replaced by white spruce, bunchberry and twinflower. Young and mature forests are dominated by continuous cover of trembling aspen (with advanced white spruce regeneration) and a robust layer of prickly rose, highbush-cranberry and soopolallie. In old forests, of continuous white spruce, most shrubs have disappeared, with a continuous moss carpet characteristic. Most sites within the study area are structural stage 4 and 5.

VENUS 4.2 *1*

VEGETATION MAPPING REPORT

Prj: Sahtaneh, Zn: BWBS, SZ: mw2, SSe: 01

BGC Unit / Site Series	Site Series Symbol Code	Site Series Symbol Description	Structural Stage Code	Structural Stage Description	Number of Plots
BWBSmw2/01	AM	SwAt - Step moss	3	Shrub / Herb (SH)	3
Dominants:					
bluejoint		highbush-cranberry	bunchberry	fireweed	
prickly rose		trembling aspen	dwarf red raspberry		
Associates:					
white spruce		creamy peavine	twinflower	tall bluebells	
northern bedstraw		step moss	red-stemmed feathermoss	red raspberry	
sweet coltsfoot		(Mertensia sp.)	common mitrewort		
			4	Pole / Sapling (PS)	5
Dominants:					
white spruce		step moss	bunchberry	prickly rose	
highbush-cranberry		willow	red-stemmed feathermoss	soopolallie	
Associates:					
common horsetail		lodgepole pine	paper birch	(Vaccinium vitis-idaea)	
black spruce		Labrador tea	blue wildrye	fireweed	
twinflower		freckle pelt	northern bedstraw	mountain alder	
dwarf red raspberry		trembling aspen	(Ptilium crista-castrensis)		
			5	Young Forest (YF)	7
Dominants:					
bunchberry		prickly rose	white spruce	step moss	
Associates:					
twinflower		trembling aspen	highbush-cranberry	(Vaccinium vitis-idaea)	
fireweed		willow	soopolallie	(Ptilium crista-castrensis)	
paper birch		dwarf red raspberry	red-stemmed feathermoss	tall bluebells	
balsam poplar		black spruce	creamy peavine		
			6	Mature Forest (MF)	6
Dominants:					
white spruce		bunchberry	prickly rose	step moss	
highbush-cranberry		twinflower			
Associates:					
(Vaccinium vitis-idaea)		trembling aspen	red-stemmed feathermoss	Sitka alder	
(Ptilium crista-castrensis)		balsam poplar	willow	soopolallie	
common mitrewort		dwarf red raspberry			
			7	Old Forest (OF)	1
Dominants:					
bunchberry		(Alnus viridis)	highbush-cranberry	step moss	
prickly rose		white spruce	trembling aspen	red-stemmed feathermoss	
wild sarsaparilla		dwarf red raspberry	twinflower	bastard toad-flax	
Associates:					
wild lily-of-the-valley		(Vaccinium vitis-idaea)	(Brachythecium sp.)	sweet-scented bedstraw	

Report Summary

Minimum Presence for Dominant Species: 75 %
Minimum Mean Cover for Dominant Species: 5 %
Minimum Presence for Associate Species: 20 %
Minimum Mean Cover for Associate Species: 1 %

Number of plots based on criteria: 51
Number of plots not included due to incomplete group header info (i.e. where Region, Zone, SubZone, SiteSeries, SiteSeriesSymbol, or StructuralStage is Null) or lack of vegetation data: 29
Total number of plots reported on: 22

End of Report.

December 4, 2003

Photo R1-22; Plot RG045

SITE DESCRIPTION

	Mean	Range
Elevation	351	351
Slope	3	3

Aspect	Slope Position	Drainage
025	crest	rapid

Soil Texture	Coarse Fragment Content
sandy	<20%

Moisture Regime	Nutrient Regime
xeric	oligotrophic

Terrain

sandy eolian blanket ridge

Biogeoclimatic Ecosystem Classification

BWBSmw2
02

Map Unit(s) - Symbol and Name

LL Pl – Lingonberry – Velvet-leaved blueberry, typic

Comments

This site has a limited occurrence within the study area. Sites are always coarse-textured, sandy, eolian ridges and dunes. With increasing age, lodgepole pine stands become more open (canopy cover is less than 20%). A continuous cover of kinnikinnick and lichens is characteristic of structural stages 5, 6 and 7.

VENUS 4.2 *1*

VEGETATION MAPPING REPORT

Prj: Sahtaneh, Zn: BWBS, SZ: mw2, SSe: 02

BGC Unit / Site Series	Site Series Symbol Code	Site Series Symbol Description	Structural Stage Code	Structural Stage Description	Number of Plots
BWBSmw2/02	LL	Pl - Lingonberry - Velvet-leaved blueberry	4	Pole / Sapling (PS)	1

Dominants:
lodgepole pine
prickly rose
red-stemmed feathermoss
pelt lichens
lesser green reindeer
(Vaccinium vitis-idaea)

Associates:
bluejoint
twinflower
saskatoon
green wintergreen
clad lichens
wild lily-of-the-valley

Report Summary

Minimum Presence for Dominant Species: 75 %
Minimum Mean Cover for Dominant Species: 5 %
Minimum Presence for Associate Species: 20 %
Minimum Mean Cover for Associate Species: 1 %

Number of plots based on criteria: 1
Number of plots not included due to incomplete group header info (i.e. where Region, Zone, SubZone, SiteSeries, SiteSeriesSymbol, or StructuralStage is Null) or lack of vegetation data: 0
Total number of plots reported on: 1

End of Report.

December 4, 2003

Photo R1-21; Plot RG044

SITE DESCRIPTION

	Mean	Range
Elevation	465	288-699
Slope	16	0 - 55

Aspect	Slope Position	Drainage
all	all	moderate - well

Soil Texture	Coarse Fragment Content
sandy loam – clay loam	0 – 35%

Moisture Regime	Nutrient Regime
submesic - mesic	submesotrophic - mesotrophic

Terrain

sandy silty, clayey silty, mixed fragment clayey silty morainal blanket ridges, silty sandy morainal blanket terrace, silty sandy eolian blanket, silty sandy glaciofluvial blanket terrace, sandy glaciofluvial veneer, silty sandy glaciofluvial terrace hummocked, silty sandy glaciolacustrine moderately steep/moderate slope, mixed fragment clayey silty colluvial blanket hummocked moderately steep slope slow mass movement soil creep and debris slide, silty sandy colluvial blanket slow mass movement soil creep

Biogeoclimatic Ecosystem Classification

BWBSmw2
04

Map Unit(s) - Symbol and Name

BL Sb – Lingonberry – Coltsfoot, typic
BLck Sb – Lingonberry – Coltsfoot, coarse-textured cool aspect
BLcw Sb – Lingonberry – Coltsfoot, coarse-textured warm aspect
BLfr Sb – Lingonberry – Coltsfoot, fine-textured ridge
BLk Sb – Lingonberry – Coltsfoot, cool aspect
BLr Sb – Lingonberry – Coltsfoot, ridge
BLt Sb – Lingonberry – Coltsfoot, terrace
BLw Sb – Lingonberry – Coltsfoot, warm aspect
BLc Sb – Lingonberry – Coltsfoot, coarse-textured
BLcr Sb – Lingonberry – Coltsfoot, coarse-textured ridge
BLfk Sb – Lingonberry – Coltsfoot, fine-textured cool aspect
BLfw Sb – Lingonberry – Coltsfoot, fine-textured warm aspect
BLks Sb – Lingonberry – Coltsfoot, cool aspect shallow soil
BLsw Sb – Lingonberry – Coltsfoot, shallow soil warm aspect
BLvw Sb – Lingonberry – Coltsfoot, very shallow soil warm aspect

Comments

Typic sites are morainal blankets, which can have cool (k) and warm (w) aspects; sites with coarse-textured soils (BLc) are usually glaciofluvial veneer over morainal blanket (these sites can also have cool and warm aspects). Some colluvial slopes occur occasionally as well. Although parent materials are generally fine-textured, surface soil layers are relatively coarse, ranging from sandy loam to clay loam. Mixed stands of lodgepole pine, trembling aspen, white spruce and black spruce are common in structural stages 4, 5 and 6. Shrub and herb layers exhibit low diversity and generally low cover values, although prickly rose, highbush-cranberry and twinflower can attain higher cover values. Bunchberry is always present on forested sites and a continuous cover of mosses is characteristic in older forests.

VENUS 4.2 *1*

VEGETATION MAPPING REPORT

Prj: Sahtaneh, Zn: BWBS, SZ: mw2, SSe: 04

BGC Unit / Site Series	Site Series Symbol Code	Site Series Symbol Description	Structural Stage Code	Structural Stage Description	Number of Plots
BWBSmw2/04	BL	Sb - Lingonberry - Coltsfoot	3	Shrub / Herb (SH)	1
Dominants:					
trembling aspen		red raspberry	prickly rose	bunchberry	
fireweed		dwarf red raspberry	highbush-cranberry	twinflower	
bluejoint					
Associates:					
wild sarsaparilla		white spruce	common horsetail		
			4	Pole / Sapling (PS)	1
Dominants:					
lodgepole pine		black spruce	step moss	red-stemmed feathermoss	
Associates:					
clad lichens		bunchberry	pelt lichens	lesser green reindeer	
Labrador tea		(Vaccinium vitis-idaea)	willow	Sitka alder	
			5	Young Forest (YF)	7
Dominants:					
bunchberry		prickly rose			
Associates:					
step moss		red-stemmed feathermoss	trembling aspen	(Ptilium crista-castrensis)	
twinflower		lodgepole pine	black spruce	white spruce	
Sitka alder		highbush-cranberry	willow	paper birch	
common mitrewort		soopolallie	tall bluebells		
			6	Mature Forest (MF)	1
Dominants:					
trembling aspen		white spruce	red-osier dogwood	highbush-cranberry	
prickly rose		twinflower	soopolallie	balsam poplar	
red-stemmed feathermoss		Sitka alder	step moss	willow	
Associates:					
bluejoint		wild strawberry	paper birch	saskatoon	
wintergreen		tall bluebells	wild sarsaparilla	northern bedstraw	
Lindley's aster					
			7	Old Forest (OF)	3
Dominants:					
step moss		red-stemmed feathermoss	prickly rose	bunchberry	
Associates:					
white spruce		Sitka alder	trembling aspen	highbush-cranberry	
paper birch		(Ptilium crista-castrensis)	dwarf red raspberry	twinflower	
common mitrewort		bluejoint	Lindley's aster	lodgepole pine	
black spruce		bastard toad-flax	willow	(Vaccinium vitis-idaea)	
red-osier dogwood					

Report Summary

Minimum Presence for Dominant Species: 75 %
Minimum Mean Cover for Dominant Species: 5 %
Minimum Presence for Associate Species: 20 %
Minimum Mean Cover for Associate Species: 1 %

Number of plots based on criteria: 29
Number of plots not included due to incomplete group header info (i.e. where Region, Zone, SubZone, SiteSeries, SiteSeriesSymbol, or StructuralStage is Null) or lack of vegetation data: 16
Total number of plots reported on: 13

End of Report.

December 4, 2003

Photo R1-13; Plot RG036

SITE DESCRIPTION

	Mean	Range
Elevation	344	270 - 500
Slope	0.6	0 - 6

Aspect	Slope Position	Drainage
999, 90-220	level	moderate - rapid

Soil Texture	Coarse Fragment Content
sand – silt loam	0 – 35%

Moisture Regime	Nutrient Regime
submesic - subhygric	mesotrophic - eutrophic

Terrain

silty sandy, sandy silty fluvial active terrace; sandy silty fluvial active plain terrace; silty sandy fluvial active plain; sandy silty fluvial active blanket terrace meandering channel; sandy fluvial active blanket rolling terrace; sandy, sandy silty, silty sandy, gravelly sandy fluvial blanket terrace meandering channel; sandy silty, silty sandy fluvial blanket terrace; sandy silty fluvial veneer terrace meandering channel; sandy silty fluvial terrace

Biogeoclimatic Ecosystem Classification

BWBSmw2
05

Map Unit(s) - Symbol and Name

SH Sw – Currant – Horsetail, typic
SHa Sw – Currant – Horsetail, active
SHt Sw – Currant – Horsetail, terrace

Comments

The Sw – Currant - Horsetail ecosystem unit occurs on, fluvial plains (SHa) and adjacent fluvial terraces (SHt). The fluvial plains are typically active and deeply incised into the surrounding morainal and lacustrine landscape. Most sites are level although scarp slopes of fluvial terraces, do occasionally occur. Herb and shrub stages usually occupy sand and gravel bars, which are periodically inundated. Balsam poplar is frequently a long-lasting seral species; white spruce dominates pole/sapling and older forests. Red-osier dogwood, horsetails and highbush-cranberry are characteristic species of forested sites.

VENUS 4.2 *1*

VEGETATION MAPPING REPORT

Prj: Sahtaneh, Zn: BWBS, SZ: mw2, SSe: 05

BGC Unit / Site Series	Site Series Symbol Code	Site Series Symbol Description	Structural Stage Code	Structural Stage Description	Number of Plots
BWBSmw2/05	SH	Sw - Currant - Horsetail	3	Shrub / Herb (SH)	3
Dominants:					
willow		common horsetail	red raspberry		
Associates:					
red-osier dogwood		prickly rose	mountain alder	bluejoint	
fireweed		northern bedstraw	brome	small-flowered bulrush	
trembling aspen		western meadowrue	large-leaved avens	American vetch	
sedge		dwarf red raspberry	balsam poplar	tall bluebells	
			3a	Low Shrub (LS)	1
Dominants:					
mountain alder		common horsetail	balsam poplar	willow	
Associates:					
(none)					
			4	Pole / Sapling (PS)	3
Dominants:					
balsam poplar		mountain alder	common horsetail		
Associates:					
scouring-rush		white spruce	swamp horsetail	dwarf red raspberry	
Lindley's aster		American vetch			
			5	Young Forest (YF)	8
Dominants:					
common horsetail		white spruce	bunchberry	prickly rose	
mountain alder		step moss	willow		
Associates:					
highbush-cranberry		twinflower	dwarf red raspberry	tall bluebells	
red-stemmed feathermoss		(Ptilium crista-castrensis)	red-osier dogwood	Lindley's aster	
wild strawberry		common mitrewort	bluejoint	balsam poplar	
trembling aspen		paper birch	Sitka alder		
			6	Mature Forest (MF)	5
Dominants:					
common horsetail		highbush-cranberry	white spruce	mountain alder	
prickly rose		red-osier dogwood			
Associates:					
balsam poplar		red-stemmed feathermoss	bunchberry	common mitrewort	
dwarf red raspberry		wild sarsaparilla	northern bedstraw	(Ptilium crista-castrensis)	
step moss		scouring-rush	willow	trembling aspen	
bluejoint					
			7	Old Forest (OF)	1
Dominants:					
white spruce		red-stemmed feathermoss	step moss	mountain alder	
twinflower		bunchberry	common horsetail	(Ptilium crista-castrensis)	
highbush-cranberry		prickly rose	soopolallie		
Associates:					
northern bedstraw		common mitrewort	bluejoint	pink wintergreen	
dwarf red raspberry		red-osier dogwood	bastard toad-flax	(Vaccinium vitis-idaea)	
paper birch		wild lily-of-the-valley			

Report Summary

Minimum Presence for Dominant Species: 75 %
Minimum Mean Cover for Dominant Species: 5 %
Minimum Presence for Associate Species: 20 %
Minimum Mean Cover for Associate Species: 1 %

Number of plots based on criteria: 29
Number of plots not included due to incomplete group header info (i.e. where Region, Zone, SubZone, SiteSeries, SiteSeriesSymbol, or StructuralStage is Null) or lack of vegetation data: 8
Total number of plots reported on: 21

End of Report.

December 4, 2003

Photo R1-10; Plot RG034

SITE DESCRIPTION

	Mean	Range
Elevation	415	384 - 465
Slope	2.5	0 - 4

Aspect	Slope Position	Drainage
999, 260-340	level - lower	poor - moderate

Soil Texture	Coarse Fragment Content
sand – clay loam	0 – 70%

Moisture Regime	Nutrient Regime
subhygric - hygric	submesotrophic - permesotrophic

Terrain

mesic organic veneer over sandy pebbly glaciofluvial blanket; humic organic thin veneer/veneer over clayey silty morainal blanket; humic organic veneer over clayey glaciolacustrine blanket; silty clayey glaciolacustrine blanket

Biogeoclimatic Ecosystem Classification

BWBSmw2
06

Map Unit(s) - Symbol and Name

BB Sb – Feathermoss – Bluebells, typic
BBa Sb – Feathermoss – Bluebells, active floodplain
BBc Sb – Feathermoss – Bluebells, coarse-textured
BBcg Sb – Feathermoss – Bluebells, coarse-textured gully
BBf Sb – Feathermoss – Bluebells, fine-textured
BBfg Sb – Feathermoss – Bluebells, fine-textured gully
BBg Sb – Feathermoss – Bluebells, gully
BBgk Sb – Feathermoss – Bluebells, gully cool aspect
BBgw Sb – Feathermoss – Bluebells, gully warm aspect
BBn Sb – Feathermoss – Bluebells, fan or cone
BBp Sb – Feathermoss – Bluebells, peaty material

Comments

The BB ecosystem typically occurs on fine-textured moraine and glaciolacustrine, with moderate to poor soil drainage. Humus layers are relatively deep and mushy. Sites are always level or very gently sloping. In mature and old forests, mixed stands of white and black spruce are typical. The understory is varied with low cover values but prickly rose, horsetails and common mitrewort occur most frequently. A continuous, thick moss cover is characteristic of young to old forests.

VENUS 4.2 *1*

VEGETATION MAPPING REPORT

Prj: Sahtaneh, Zn: BWBS, SZ: mw2, SSe: 06

BGC Unit / Site Series	Site Series Symbol Code	Site Series Symbol Description	Structural Stage Code	Structural Stage Description	Number of Plots
BWBSmw2/06	BB	Sb - Feathermoss - Bluebells	5	Young Forest (YF)	2
Dominants:					
white spruce		step moss	common horsetail	common mitrewort	
willow		Labrador tea	prickly rose	(Rhizomnium sp.)	
black spruce		mountain alder	golden fuzzy fen moss	wood horsetail	
glow moss		paper birch	(Ptilium crista-castrensis)	red-stemmed feathermoss	
dwarf red raspberry		tamarack	skunk currant	(Vaccinium vitis-idaea)	
bunchberry		red-osier dogwood	dwarf scouring-rush	clad lichens	
Associates:					
violet		sweet coltsfoot	soft-leaved sedge	tall bluebells	
			7	Old Forest (OF)	2
Dominants:					
step moss		red-stemmed feathermoss	mountain alder	common horsetail	
bunchberry		paper birch	prickly rose	dwarf scouring-rush	
white spruce		black spruce	(Ptilium crista-castrensis)	red-osier dogwood	
common mitrewort		Labrador tea	glow moss	wild strawberry	
(Sphagnum sp.)		twinflower	willow	sedge	
bastard toad-flax		(Vaccinium vitis-idaea)	(Rhizomnium sp.)	highbush-cranberry	
Associates:					
northern bedstraw		pelt lichens	bluejoint		

Report Summary

Minimum Presence for Dominant Species: 40 %
Minimum Mean Cover for Dominant Species: 1 %
Minimum Presence for Associate Species: 20 %
Minimum Mean Cover for Associate Species: 0.5 %

Number of plots based on criteria: 9
Number of plots not included due to incomplete group header info (i.e. where Region, Zone, SubZone, SiteSeries, SiteSeriesSymbol, or StructuralStage is Null) or lack of vegetation data: 5
Total number of plots reported on: 4

End of Report.

December 9, 2003

Photo R2-17; Plot RG067

SITE DESCRIPTION

	Mean	Range
Elevation	442	364 - 638
Slope	0	0

Aspect	Slope Position	Drainage
999	level	very poor - imperfect

Soil Texture	Coarse Fragment Content
fibric – humic; silty clay loam – clay loam	0 – 35%

Moisture Regime	Nutrient Regime
hygric - hydric	submesotrophic - permesotrophic

Terrain

humic organic veneer over clayey silty morainal blanket; humic organic thin veneer/veneer over clayey silty morainal blanket; humic organic veneer over silty clayey glaciolacustrine blanket; humic organic blanket over clayey silty morainal blanket; fibric mesic organic blanket permafrost over morainal blanket; humic organic veneer/blanket; humic, fibric mesic, organic blanket; clayey silty morainal blanket

Biogeoclimatic Ecosystem Classification

BWBSmw2
07

Map Unit(s) - Symbol and Name

THp Lt – Horsetail, peaty material

Comments

The TH unit occurs only on organic veneer and blanket material. Sites are usually quite wet, with water at or near the soil surface for most of the growing season. Vegetation on these sites is dominated by a variety of moisture tolerant shrubs including tamarack, mountain alder, willow and Labrador tea. Lingonberry is always present in small amounts; characteristic herbs are sedges and horsetails.

VENUS 4.2 *1*

VEGETATION MAPPING REPORT

Prj: Sahtaneh, Zn: BWBS, SZ: mw2, SSe: 07

BGC Unit / Site Series	Site Series Symbol Code	Site Series Symbol Description	Structural Stage Code	Structural Stage Description	Number of Plots
BWBSmw2/07	TH	Lt - Horsetail	3a	Low Shrub (LS)	3
Dominants:					
(Sphagnum sp.)		black spruce	glow moss	sedge	
red-stemmed feathermoss		tamarack	willow	(Vaccinium vitis-idaea)	
Labrador tea					
Associates:					
scrub birch		bog cranberry	step moss	leatherleaf	
mountain alder		cloudberry	clad lichens	golden fuzzy fen moss	
sweet gale					
			3b	Tall Shrub (TS)	1
Dominants:					
(Sphagnum sp.)		tamarack	water sedge	glow moss	
mountain alder		bluejoint	willow	leatherleaf	
hairlike sedge		black spruce			
Associates:					
(POTEPAL)		(Vaccinium vitis-idaea)	Labrador tea	bog cranberry	
bunchberry					
			5	Young Forest (YF)	4
Dominants:					
black spruce		willow	tamarack	step moss	
Associates:					
Labrador tea		glow moss	(Sphagnum sp.)	sedge	
paper birch		(Vaccinium vitis-idaea)	white spruce	lesser green reindeer	
twinflower		bunchberry	clad lichens	leatherleaf	
alpine bearberry		red-stemmed feathermoss	golden fuzzy fen moss	prickly rose	
(Ptilium crista-castrensis)		wild strawberry	balsam poplar	freckle pelt	
			6	Mature Forest (MF)	1
Dominants:					
black spruce		(Sphagnum sp.)	soft-leaved sedge	glow moss	
mountain alder		step moss	common horsetail	Labrador tea	
(Vaccinium vitis-idaea)					
Associates:					
freckle pelt		weak false-manna	bunchberry		
			7	Old Forest (OF)	1
Dominants:					
mountain alder		common horsetail	white spruce	skunk currant	
enchanter's-nightshade		weak false-manna	(Rhizomnium sp.)	tamarack	
dwarf red raspberry					
Associates:					
paper birch		common mitrewort	arrow-leaved coltsfoot	bunchberry	
(Vaccinium vitis-idaea)		glow moss	orchid	red-osier dogwood	

Report Summary

Minimum Presence for Dominant Species: 75 %
Minimum Mean Cover for Dominant Species: 5 %
Minimum Presence for Associate Species: 20 %
Minimum Mean Cover for Associate Species: 1 %

Number of plots based on criteria: 14
Number of plots not included due to incomplete group header info (i.e. where Region, Zone, SubZone, SiteSeries, SiteSeriesSymbol, or StructuralStage is Null) or lack of vegetation data: 4
Total number of plots reported on: 10

End of Report.

December 4, 2003

Photo R1-03; Plot RG029

SITE DESCRIPTION

	Mean	Range
Elevation	519	360 - 692
Slope	1.2	0 - 5

Aspect	Slope Position	Drainage
999, 320-040	level, crest	very poor - poor

Soil Texture	Coarse Fragment Content
fibric – humic	<20%

Moisture Regime	Nutrient Regime
hygric - hydric	oligotrophic

Terrain

fibric, fibric mesic organic blanket permafrost; fibric, fibric mesic organic blanket plain; fibric, fibric mesic, mesic humic organic blanket; fibric organic veneer blanket; fibric, fibric mesic organic veneer blanket permafrost; fibric organic veneer

Biogeoclimatic Ecosystem Classification

BWBSmw2
08

Map Unit(s) - Symbol and Name

BS Sb – Cloudberry – Sphagnum, typic

Comments

The BS ecosystem unit is a characteristic feature of the BWBSmw2, occurring on the extensive organic landscape of the area. The degree of organic decomposition is somewhat variable, although fibric is most common. Discontinuous permafrost occurs sporadically. The majority of sites occur in structural stages 3 and 4. 3 was used for open, low-shrubby sites with less black spruce cover; 4 was used for sites with near continuous, tall black spruce cover (up to 60%). The herb stage occurs briefly on recently burnt sites. Low diversity and occasionally high cover values for ground lichens (up to 70%) are characteristic.

VENUS 4.2 *1*

VEGETATION MAPPING REPORT

Prj: Sahtaneh, Zn: BWBS, SZ: mw2, SSe: 08

BGC Unit / Site Series	Site Series Symbol Code	Site Series Symbol Description	Structural Stage Code	Structural Stage Description	Number of Plots
BWBSmw2/08	BS	Sb - Cloudberry - Sphagnum	3	Shrub / Herb (SH)	7
Dominants:					
(Sphagnum sp.)		Labrador tea	black spruce	cloudberry	
(Vaccinium vitis-idaea)		leatherleaf	lesser green reindeer	tamarack	
bog cranberry		scrub birch			
Associates:					
three-leaved false Solomon's-seal		clad lichens			
			4	Pole / Sapling (PS)	8
Dominants:					
(Sphagnum sp.)		black spruce	Labrador tea	lesser green reindeer	
(Vaccinium vitis-idaea)		cloudberry	leatherleaf	tamarack	
bog cranberry		clad lichens	scrub birch		
Associates:					
three-leaved false Solomon's-seal		(Dicranum sp.)	step moss	red-stemmed feathermoss	
sedge					

Report Summary

Minimum Presence for Dominant Species: 40 %
Minimum Mean Cover for Dominant Species: 1 %
Minimum Presence for Associate Species: 20 %
Minimum Mean Cover for Associate Species: 0.5 %

Number of plots based on criteria: 42
Number of plots not included due to incomplete group header info (i.e. where Region, Zone, SubZone, SiteSeries, SiteSeriesSymbol, or StructuralStage is Null) or lack of vegetation data: 27
Total number of plots reported on: 15

End of Report.

December 9, 2003

Photo R1-18; Plot RG040

SITE DESCRIPTION

	Mean	Range
Elevation	500	352 - 708
Slope	1.1	0 - 10

Aspect	Slope Position	Drainage
999, 045	level, midslope	poor - imperfect

Soil Texture	Coarse Fragment Content
fibric – humic, silt clay loam	0 – 35%

Moisture Regime	Nutrient Regime
hygric - subhydric	oligotrophic - mesotrophic

Terrain

humic organic thin veneer/veneer over sandy silty morainal blanket; humic organic thin veneer/veneer over clayey silty morainal blanket; fibric mesic organic veneer blanket permafrost over silty clayey glaciolacustrine blanket; fibric humic organic veneer; humic organic veneer blanket; humic organic veneer blanket permafrost; humic, fibric humic organic veneer over clayey silty morainal blanket; fibric organic blanket; clayey silty morainal blanket

Biogeoclimatic Ecosystem Classification

BWBSmw2
09

Map Unit(s) - Symbol and Name

BW Sb – Willow, typic
BWck Sb – Willow, coarse-textured cool aspect
BWp Sb – Willow, peaty material
BWw Sb – Willow, warm aspect
BWc Sb – Willow, coarse-textured
BWf Sb – Willow, fine-textured
BWt Sb – Willow, terrace

Comments

Typic units on medium-textured morainal blanket material do not occur. Most sites occur on organic veneer over fine-textured moraine (BWp). Sites without organic veneer, on fine-textured moraine (BWf) are also found. Drainage is usually poor, and discontinuous permafrost occurs occasionally. The BW unit typically occurs in combination with BB (06) and BS (08) ecosystem units. Willows, Labrador tea, lingonberry, red-stemmed feathermoss and step moss are characteristic plant species.

VENUS 4.2 1

VEGETATION MAPPING REPORT

Prj: Sahtaneh, Zn: BWBS, SZ: mw2, SSe: 09

BGC Unit / Site Series	Site Series Symbol Code	Site Series Symbol Description	Structural Stage Code	Structural Stage Description	Number of Plots
BWBSmw2/09	BW	Sb - Willow - Glow moss	3	Shrub / Herb (SH)	2
Dominants:					
black spruce		lesser green reindeer	Labrador tea	step moss	
(Vaccinium vitis-idaea)		red-stemmed feathermoss	scrub birch	willow	
(Sphagnum sp.)		cloudberry	golden fuzzy fen moss	alpine bearberry	
Associates:					
sedge					
			3a	Low Shrub (LS)	2
Dominants:					
black spruce		step moss	red-stemmed feathermoss	willow	
Labrador tea		(Dicranum sp.)	scrub birch	mountain alder	
common horsetail		clad lichens	golden fuzzy fen moss	alpine bearberry	
lodgepole pine		(POTEFRU)	bunchberry	glow moss	
lesser green reindeer					
Associates:					
pelt lichens		prickly rose	(Vaccinium vitis-idaea)	sedge	
grey reindeer					
			4	Pole / Sapling (PS)	2
Dominants:					
black spruce		step moss	red-stemmed feathermoss	(Vaccinium vitis-idaea)	
willow		Labrador tea	white spruce	glow moss	
tamarack		twinflower	paper birch	grey reindeer	
arctic wintergreen					
Associates:					
prickly rose		sweet coltsfoot	tall bluebells	freckle pelt	
fireweed		clad lichens	bunchberry	bluejoint	
			5	Young Forest (YF)	5
Dominants:					
black spruce		step moss	red-stemmed feathermoss	Labrador tea	
(Vaccinium vitis-idaea)		willow	grey reindeer	glow moss	
lesser green reindeer		scrub birch	crowberry	alpine bearberry	
Associates:					
prickly rose		pelt lichens	mountain alder	tamarack	
freckle pelt		twinflower			
			6	Mature Forest (MF)	1
Dominants:					
Labrador tea		step moss	red-stemmed feathermoss	black spruce	
(Vaccinium vitis-idaea)		cloudberry	(Sphagnum sp.)	lesser green reindeer	
bunchberry		wood horsetail	willow	prickly rose	
paper birch					
Associates:					
(none)					
			7	Old Forest (OF)	1
Dominants:					
red-stemmed feathermoss		black spruce	step moss	(Sphagnum sp.)	
wood horsetail		Labrador tea	(Vaccinium vitis-idaea)	freckle pelt	
mountain alder		bastard toad-flax	cloudberry	bunchberry	
willow		prickly rose	paper birch		
Associates:					
(none)					

Report Summary

Minimum Presence for Dominant Species: 40 %
Minimum Mean Cover for Dominant Species: 1 %
Minimum Presence for Associate Species: 20 %
Minimum Mean Cover for Associate Species: 0.5 %

Number of plots based on criteria: 30
Number of plots not included due to incomplete group header info (i.e. where Region, Zone, SubZone, SiteSeries, SiteSericsSymbol, or StructuralStage is Null) or lack of vegetation data: 17
Total number of plots reported on: 13

End of Report.

December 9, 2003

Photo R1-25; Plot RG049

SITE DESCRIPTION

	Mean	Range
Elevation	524	340 - 678
Slope	0	0

Aspect	Slope Position	Drainage
999	level - depression	very poor

Soil Texture	Coarse Fragment Content
fibric - humic	0

Moisture Regime	Nutrient Regime
subhydric - hydric	oligotrophic - permesotrophic

Terrain

fibric organic veneer over clayey silty morainal blanket; fibric, mesic, fibric mesic, fibric humic, mesic humic organic blanket; fibric mesic organic blanket plain; fibric organic plain

Biogeoclimatic Ecosystem Classification

BWBSmw2
10

Map Unit(s) - Symbol and Name

TB Lt – Buckbean, typic

Comments

The Lt - Buckbean ecosystem is found on saturated organic landscapes typically with standing water. Sites exhibit considerable variation in soil moisture status, with many sites having a raised water table. Concomitantly some plant species show very high cover values related to water depth. These species include scrub birch, leatherleaf, sweet gale and sedges.

VENUS 4.2 *1*

VEGETATION MAPPING REPORT

Prj: Sahtaneh, Zn: BWBS, SZ: mw2, SSe: 10

BGC Unit / Site Series	Site Series Symbol Code	Site Series Symbol Description	Structural Stage Code	Structural Stage Description	Number of Plots
BWBSmw2/10	TB	L4 - Buckbean	3	Shrub / Herb (SH)	7
Dominants:					
scrub birch		(Sphagnum sp.)	leatherleaf		
Associates:					
tamarack		black spruce	sweet gale	Sitka sedge	
willow		three-leaved false Solomon's-seal	water sedge	glow moss	
Labrador tea					
			3a	Low Shrub (LS)	3
Dominants:					
scrub birch		sweet gale	tamarack		
Associates:					
(Sphagnum sp.)		willow	black spruce	sedge	
water sedge		three-leaved false Solomon's-seal	Sitka sedge	(Calliergon sp.)	
hairlike sedge		golden fuzzy fen moss	buckbean	narrow-leaved cotton-grass	
bog-rosemary		tufted clubrush	glow moss	bog cranberry	
great sundew		leatherleaf	(Utricularia sp.)		
			3b	Tall Shrub (TS)	2
Dominants:					
scrub birch		(Sphagnum sp.)	sweet gale		
Associates:					
willow		water sedge	hairlike sedge	beaked sedge	
bluejoint		glow moss	tamarack	Labrador tea	
red-stemmed feathermoss		black spruce	Chamisso's cotton-grass	leatherleaf	
bog cranberry		(Vaccinium vitis-idaea)			
			5	Young Forest (YF)	1
Dominants:					
water sedge		scrub birch	black spruce	(Sphagnum sp.)	
tamarack		glow moss	willow	sedge	
paper birch		three-leaved false Solomon's-seal			
Associates:					
mountain alder		leatherleaf	Labrador tea	(POTEPAL)	
horsetail					

Report Summary

Minimum Presence for Dominant Species: 75 %
Minimum Mean Cover for Dominant Species: 5 %
Minimum Presence for Associate Species: 20 %
Minimum Mean Cover for Associate Species: 1 %

Number of plots based on criteria: 20
Number of plots not included due to incomplete group header info (i.e. where Region, Zone, SubZone, SiteSeries, SiteSeriesSymbol, or StructuralStage is Null) or lack of vegetation data: 7
Total number of plots reported on: 13

End of Report.

December 5, 2003

Photo R2-22; Plot RG072

SITE DESCRIPTION

	Mean	Range
Elevation	436	344 - 615
Slope	1.3	0 - 5

Aspect	Slope Position	Drainage
999, 160	level, lower slope	poor – moderately well

Soil Texture	Coarse Fragment Content
silt clay loam	<20%

Moisture Regime	Nutrient Regime
mesic - hygric	mesotrophic - permesotrophic

Terrain

humic organic thin veneer/veneer over clayey silty glaciolacustrine blanket; humic organic veneer over clayey silty morainal blanket; clayey silty morainal blanket

Biogeoclimatic Ecosystem Classification

BWBSmw2
00

Map Unit(s) - Symbol and Name

AB Bebb's willow – Mountain alder – Bluejoint swamp, typic
ABc Bebb's willow – Mountain alder – Bluejoint swamp, coarse-textured
ABp Bebb's willow – Mountain alder – Bluejoint swamp, peaty material
ABw Bebb's willow – Mountain alder – Bluejoint swamp, warm aspect

Comments

The typic AB unit develops on poorly drained clayey, silty morainal blanket material. It is found occasionally on thin organic veneer over clayey, silty morainal blanket (ABp). The unit is characterized by continuous, robust shrub cover of willows, mountain alder and highbush-cranberry. Willows may attain heights of more than 10m on these sites. Bluejoint is always present, often with relatively high cover values.

VENUS 4.2 *1*

VEGETATION MAPPING REPORT

Prj: Sahtaneh, Zn: BWBS, SZ: mw2, SSe: 00

BGC Unit / Site Series	Site Series Symbol Code	Site Series Symbol Description	Structural Stage Code	Structural Stage Description	Number of Plots
BWBSmw2/00	AB	B. willow - M. alder - Bluejoint swamp	3a	Low Shrub (LS)	1
Dominants:					
mountain alder	willow		bluejoint	spiny wood fern	
(Plagiomnium sp.)	enchanter's-nightshade		wood horsetail	balsam poplar	
(Calliergon sp.)					
Associates:					
paper birch	northern bedstraw		white spruce	common mitrewort	
red raspberry	tall bluebells		black gooseberry		
			3b	Tall Shrub (TS)	3
Dominants:					
willow	mountain alder		highbush-cranberry	bluejoint	
Associates:					
common mitrewort	dwarf red raspberry		twinflower	bunchberry	
common horsetail	paper birch		tall bluebells	northern blackcurrant	
prickly rose	white spruce		black gooseberry	sweet-scented bedstraw	
Sitka alder	black spruce		(Rhizomnium sp.)	wood horsetail	
step moss	(Plagiomnium sp.)		red-osier dogwood	pink wintergreen	
western meadowrue	red-stemmed feathermoss		wild lily-of-the-valley	balsam poplar	
trembling aspen	sedge		baneberry	red raspberry	
(Ptilium crista-castrensis)					
	LR	Leatherleaf - Bog rosemary - Sphagnum	3a	Low Shrub (LS)	5
Dominants:					
(Sphagnum sp.)	leatherleaf				
Associates:					
black spruce	cotton-grass		Labrador tea	three-leaved false Solomon's-seal	
cloudberry	bog cranberry		bog-rosemary	water sedge	
Chamisso's cotton-grass					
			3b	Tall Shrub (TS)	2
Dominants:					
(Sphagnum sp.)	Labrador tea		leatherleaf	black spruce	
Associates:					
cloudberry	bog-rosemary		three-leaved false Solomon's-seal	water sedge	
sedge	glow moss		(Vaccinium vitis-idaea)	(Polytrichum sp.)	
willow	paper birch		bog cranberry		
	SB	Sw - Currant - Bluebell	3	Shrub / Herb (SH)	5
Dominants:					
mountain alder	prickly rose		dwarf red raspberry	bluejoint	
common horsetail	bunchberry		white spruce	willow	
paper birch					
Associates:					
fireweed	northern blackcurrant		glow moss	highbush-cranberry	
wood horsetail	trembling aspen		large-leaved avens	violet	
red raspberry	tall bluebells		sweet-scented bedstraw	(Polytrichum sp.)	
common mitrewort	bluegrass		American vetch	creamy peavine	
balsam poplar	(Rhizomnium sp.)				
			4	Pole / Sapling (PS)	2
Dominants:					
white spruce	bunchberry		step moss	prickly rose	
willow	highbush-cranberry				
Associates:					
northern bedstraw	trembling aspen		paper birch	twinflower	
red-stemmed feathermoss	tall bluebells		(Ptilium crista-castrensis)	common horsetail	
(Vaccinium vitis-idaea)	soopolallie		bluejoint		
			5	Young Forest (YF)	1
Dominants:					
white spruce	common horsetail		step moss	wood horsetail	

Friday, February 13, 2004

VENUS 4.2 2

VEGETATION MAPPING REPORT

Prj: Sahtaneh, Zn: BWBS, SZ: mw2, SSe: 00

BGC Unit / Site Series	Site Series Symbol Code	Site Series Symbol Description	Structural Stage Code	Structural Stage Description	Number of Plots
BWBSmw2/00	SB		5		(con't)
Dominants (con't): prickly rose (Rhizomnium sp.)		sedge wild sarsaparilla	sweet coltsfoot	common mitrewort	
Associates: violet					
			6	Mature Forest (MF)	4
Dominants: white spruce dwarf red raspberry (Ptilium crista-castrensis) (Rhizomnium sp.) step moss willow		highbush-cranberry prickly rose red-osier dogwood twinflower red-stemmed feathermoss tall bluebells	bunchberry trembling aspen common mitrewort wild sarsaparilla common horsetail sweet coltsfoot	mountain alder paper birch Sitka alder violet bluejoint	
Associates: oak fern balsam poplar sweet-scented bedstraw		wood horsetail spiny wood fern	baneberry stiff clubmoss	soopolallie skunk currant	
			7	Old Forest (OF)	1
Dominants: step moss bunchberry stiff clubmoss paper birch Labrador tea		white spruce common horsetail (Vaccinium vitis-idaea) common mitrewort fireweed	red-stemmed feathermoss (Ptilium crista-castrensis) dwarf red raspberry mountain alder willow	prickly rose highbush-cranberry twinflower one-sided wintergreen	
Associates: (none)					
	SS		2b	Graminoid-dominated (GR)	5
Dominants: water sedge willow		bluejoint sedge	scrub birch (POTEPAL)	(Calliergon sp.)	
Associates: Sitka sedge leatherleaf narrow-leaved cotton-grass		(Sphagnum sp.) grey sedge three-leaved false Solomon's-seal	glow moss (Plagiomnium sp.) (Drepanocladus sp.)	beaked sedge black spruce bog cranberry	
	WB		2b	Graminoid-dominated (GR)	4
Dominants: bluejoint		willow	sedge	mountain alder	
Associates: Sitka sedge tall larkspur		tall bluebells red raspberry	beaked sedge	large-leaved avens	
			3a	Low Shrub (LS)	2
Dominants: willow common horsetail (Potentilla sp.)		water sedge glow moss (Artemisia sp.)	mountain alder beaked sedge	bluejoint (Sphagnum sp.)	
Associates: yarrow bog-rosemary		white spruce	tamarack	prickly rose	
			3b	Tall Shrub (TS)	1
Dominants: sedge mountain alder		willow (POTEPAL)	glow moss tamarack	scrub birch	
Associates: black spruce					

Report Summary

Minimum Presence for Dominant Species: 40 %
Minimum Mean Cover for Dominant Species: 1 %
Minimum Presence for Associate Species: 20 %

December 9, 2003

Photo R2-09; Plot RG058

SITE DESCRIPTION

	Mean	Range
Elevation	430	368 - 538
Slope	0	0

Aspect	Slope Position	Drainage
999	level	very poor - poor

Soil Texture	Coarse Fragment Content
fibric - mesic	0

Moisture Regime	Nutrient Regime
hygric - hydric	oligotrophic

Terrain

fibric mesic organic blanket/veneer; fibric organic blanket/plain; fibric organic plain; fibric mesic organic veneer/blanket over clayey silty morainal blanket

Biogeoclimatic Ecosystem Classification

BWBSmw2
00

Map Unit(s) - Symbol and Name

LR Leatherleaf – Bog-rosemary - Sphagnum typic

Comments

The Leatherleaf – Bog-rosemary - Sphagnum unit always occurs on poor, wet, deep organic soil. It most often occurs within a matrix of the BS unit. Sites are dominated by the shrubs of leatherleaf, low black spruce and Labrador tea. Herbs are patchy, with low cover values; a thick Sphagnum moss layer is always present.

Photo R2-01; Plot RG052

SITE DESCRIPTION

	Mean	Range
Elevation	399	306 - 470
Slope	2.1	0 - 12

Aspect	Slope Position	Drainage
999, 45 - 280	level to midslope	poor – well

Soil Texture	Coarse Fragment Content
sand – silt clay	0 – 35%

Moisture Regime	Nutrient Regime
mesic - hygric	submesotrophic - permesotrophic

Terrain

silty clayey glaciolacustrine blanket; sandy fluvial veneer over silty sandy fluvial terrace; silty sandy fluvial blanket terrace; clayey silty morainal blanket; clayey silty morainal blanket rolling; humic organic veneer over clayey silty morainal blanket; humic organic veneer

Biogeoclimatic Ecosystem Classification

BWBSmw2
00

Map Unit(s) - Symbol and Name

SB Sw – Currant – Bluebell, typic
SBc Sw – Currant – Bluebell, coarse-textured soil
SBct Sw – Currant – Bluebell, coarse-textured soil terrace
SBf Sw – Currant – Bluebell, fine-textured soil
SBfk Sw – Currant – Bluebell, fine-textured soil cool aspect
SBfw Sw – Currant – Bluebell, fine-textured soil warm aspect
SBw Sw – Currant – Bluebell, warm aspect

Comments

The Sw – Currant – Bluebell site series occurs on sites moister than mesic, but not wet enough to be true horsetail sites (BB). Productivity of white spruce and trembling aspen is relatively high on these sites; shrubs and herbs are similar to those on mesic sites, with the added occurrence of common mitrewort, tall bluebells and wood horsetail.

Photo R2-10; Plot RG060

SITE DESCRIPTION

	Mean	Range
Elevation	511	402 - 665
Slope	1.6	0 - 6

Aspect	Slope Position	Drainage
999, 130-230	level	very poor – moderately well

Soil Texture	Coarse Fragment Content
mesic – humic, silt clay loam	<20%

Moisture Regime	Nutrient Regime
subhygric - hydric	submesotrophic - permesotrophic

Terrain

humic, fibric mesic organic blanket; humic organic veneer over clayey silty lacustrine blanket; clayey silty fluvial blanket fan

Biogeoclimatic Ecosystem Classification

BWBSmw2
00

Map Unit(s) - Symbol and Name

SS Scrub birch – Willow – Water sedge fen, typic
SSp Scrub birch – Willow – Water sedge fen, peaty material

Comments

These fen units are usually small wetlands with some standing water. Typic units occur on fine-textured moraine; organic veneers and blankets are also common (SSp). The fen unit is dominated by continuous cover of sedges and / or bluejoint. Shrubs usually are present with less than 10% cover.

Photo R1-15; Plot RG037

SITE DESCRIPTION

	Mean	Range
Elevation	433	368 - 480
Slope	0	0

Aspect	Slope Position	Drainage
999	level	very poor - imperfect

Soil Texture	Coarse Fragment Content
silt loam – clay loam	<20%

Moisture Regime	Nutrient Regime
hygric - subhydric	mesic - permesotrophic

Terrain

sandy silty fluvial active terrace; sandy silty fluvial active plain; clayey silty fluvial active blanket/plain; silty clayey glaciolacustrine blanket/plain; humic organic veneer over clayey silty morainal blanket; mesic organic veneer terrace over sandy silty fluvial blanket meandering channel

Biogeoclimatic Ecosystem Classification

BWBSmw2
00

Map Unit(s) - Symbol and Name

WB Drummond's willow – Bluejoint low bench / swamp, typic
WBp Drummond's willow – Bluejoint low bench / swamp, peaty material

Comments

These low bench / swamp units are typical of old beaver dammed areas, throughout the study area. Typic sites are on sandy, silty fluvial deposits, while peaty units occur on humic and mesic organic veneers. Drainage is always poor. Vegetation on these sites is highly variable in response to water depth and position in the upland to standing water gradient.

5. GLOSSARY

bog	a wetland dominated by acid-loving plants and peat moss where the main source of water is from precipitation.
blanket	a mantle of unconsolidated materials thick enough to mask minor irregularities of the surface, but still conforming to underlying topography; greater than 1 metre thick.
Brunisolic Gray Luvisol	a luvisolic soil (clay enriched B horizon) that has a weak mineral soil horizon (Bm) on the surface.
Cumulic Regosol	a soil lacking development, which forms through periodic repeated inundation as evidenced by buried thin humus layers.
eolian	material transported and deposited by wind.
Eluviated Dystric Brunisol	an acidic soil, lacking a well-developed mineral-organic surface horizon, having a strongly leached A horizon.
fan	a relatively smooth segment of a cone with a slope gradient of up to 26%.
fen	a wetland dominated by sedges and grasses where the main source of water is through-flowing (groundwater).
Fibric Humisol	a humic (well decomposed) organic soil with a subdominant fibric (poorly decomposed) layer.
Fibric Organic Cryosol	A cryosolic soil (discontinuous or continuous permafrost) with a predominantly fibric organic layer.
fluvial	materials transported and deposited by streams and rivers.
glaciofluvial	materials that exhibit clear evidence of having been deposited by glacial meltwater streams.
Gleyed Gray Luvisol	a luvisolic soil with gleying as evidenced by mottling in the B and C horizons.
Humic Gleysol	gleyed soils (subject to fluctuating water tables as evidenced by strong mottling in the soil profile) with humus enriched A horizon.

Humic Organic Cryosol	a cryosolic soil (discontinuous or continuous permafrost) with a predominantly humic organic layer.
lacustrine	sediments that have settled from suspension, in bodies of standing fresh water.
Mesic Fibrisol	a fibric (poorly decomposed) organic soil with a subdominant mesic layer (moderately decomposed) layer.
Mesic Humisol	a humic (well decomposed) organic soil with a subdominant mesic layer (moderately decomposed).
Mesic Organic Cryosol	a cryosolic soil (discontinuous or continuous permafrost) with a predominantly mesic organic makeup.
Moder	humus form having F and H (humus horizons which have been fragmented through faunal activity).
Mor	humus form having the least level of decomposition dominated by a F horizon (fermented).
morainal	material deposited directly by glacier ice without modification by any other agent of transportation.
organic	sediments composed largely of organic materials resulting from the accumulation of vegetative matter.
Orthic Dystric Brunisol	acidic soils lacking a well-developed mineral organic surface horizon.
Orthic Gray Luvisol	a soil usually derived from fine-textured parent material, with a clay-enriched B horizon.
Orthic Regosol	a soil lacking development, with no horizon differentiation in the soil profile.
plain	a level or very gentle sloping, unidirectional surface.
Rego Gleysol	a gleysolic soil lacking a B horizon at least 10cm thick.
terrace	a single or assemblage of step-like form(s) where each step-like form consists of a scarp face and a horizontal or gently inclined surface above it.

Terric Fibrisol	a fibric organic soil with at least 60cm of organic material over mineral soil.
Terric Humic Fibrisol	a fibric organic soil having at least 60cm of organic matter (of which at least 12cm is humic) over mineral soil.
Terric Mesisol	a moderately well decomposed organic soil with mineral soil contact within 40 cm of the soil surface.
Typic Humisol	organic soils having the most advanced stage of decomposition.
Typic Fibrisol	organic soils having the least level of decomposition.
Typic Mesisol	organic soils having a moderate level of decomposition.
veneer	a mantle of unconsolidated materials too thin to mask minor irregularities of the surface of the underlying material; thickness ranges form 10 cm to 1 metre.

6. REFERENCES

Agriculture Canada Expert Committee on Soil Survey. 1987. Canadian system of soil classification. 2nd edition. Agriculture Canada Publication 1646. 164 p.

Crum, A.H., W.C. Steer, and L.E. Anderson. 1973. A new list of mosses for North America north of Mexico. Bryologist 76:83-130.

Delong, C., A. MacKinnon, and J. Lang. 1990. A Field Guide for Site Identification and Interpretation of Ecosystems of the Northeast Portion of the Prince George Forest Region. Land Management Handbook 22, B.C. Ministry of Forest, Victoria, B.C.

Environment Canada. 1970 Temperature and precipitation, 1941-1970, British Columbia. Atmospheric Environment Service. Downsview, Ontario, Canada.

Hale, M.E., and W.L. Culberson. 1970. A second checklist of the lichens of the continental United States and Canada. Bryologist 63:137-172.

Holland, S.S. 1976. Landforms of British Columbia. A physiographic outline. Bulletin 48. British Columbia. Department of Mines and Mineral Resources, Victoria. 138 p.

Howes, D.E., and E. Kenk. 1997. Terrain classification system for British Columbia (revised edition). MOE Manual 10. Recreational Fisheries Branch, Ministry of Environment, and Surveys and Resource Mapping Branch, Ministry of Crown Lands, Province of British Columbia, Victoria, B.C. 90 p.

Klinka, K., R.N. Green, R.L. Trowbridge, and L.E. Lowe. 1981. Taxonomic classification of humus forms in ecosystems of British Columbia. First Approximation. Land Management Report 8. British Columbia Ministry of Forests, Victoria. 54p.

Luttmerding, H.A., D.A. Demarchi, E.C. Lea, D.V. Meidinger and T. Vold (editors). 1990. Describing ecosystems in the field (2nd edition). MOE Manual II. Ministry of Environment, Lands and Parks, in cooperation with Ministry of Forests, Victoria, B.C. 213 pp.

Meidinger, D. 1987. Recommended vernacular names for common plants of British Columbia. B.C. Ministry of Forests and Lands, Research Report RR8702-HQ. Victoria. 64 p.

Resources Inventory Committee. 1998. Standard for terrestrial ecosystem mapping in British Columbia. Ministry of Environment, Lands and Parks. Victoria, B.C.

APPENDIX A

Plant Species List

Tree layer

Latin Name	Common Name
Abies lasiocarpa	subalpine fir
Betula papyrifera	paper birch
Larix laricina	tamarack
Picea glauca	white spruce
Picea mariana	black spruce
Pinus contorta	lodgepole pine
Populus balsamifera	balsam poplar
Populus tremuloides	trembling aspen
Salix sp.	willow

Shrub layer

Latin Name	Common Name
Abies lasiocarpa	subalpine fir
Abies sp.	fir
Alnus incana	mountain alder
Alnus incana ssp. tenuifolia	mountain alder
Alnus viridis ssp. sinuata	Sitka alder
Amelanchier alnifolia	saskatoon
Betula nana	scrub birch
Betula papyrifera	paper birch
Chamaedaphne calyculata	leatherleaf
Cornus stolonifera	red-osier dogwood
Juniperus communis	common juniper
Larix laricina	tamarack
Ledum groenlandicum	Labrador tea
Lonicera ciliosa	western trumpet honeysuckle
Lonicera dioica	glaucous-leaved honeysuckle
Myrica gale	sweet gale
Picea engelmannii x glauca	hybrid white spruce
Picea glauca	white spruce
Picea mariana	black spruce
Pinus contorta	lodgepole pine
Populus balsamifera	balsam poplar
Populus tremuloides	trembling aspen
Potentilla fruticosa	shrubby cinquefoil
Ribes glandulosum	skunk currant
Ribes hudsonianum	northern blackcurrant
Ribes lacustre	black gooseberry
Ribes oxyacanthoides	northern gooseberry
Ribes sp.	currant or gooseberry
Ribes triste	red swamp currant
Rosa acicularis	prickly rose
Rubus idaeus	red raspberry
Rubus parviflorus	thimbleberry
Salix sp.	willow
Shepherdia canadensis	soopolallie
Viburnum edule	highbush-cranberry

Herb Layer

Latin Name	Common Name
Achillea millefolium	yarrow
Actaea rubra	baneberry
Andromeda polifolia	bog-rosemary
Aralia nudicaulis	wild sarsaparilla
Arctostaphylos alpina var. rubra	red bearberry
Arctostaphylos uva-ursi	kinnikinnick
Artemisia sp.	artemisia
Aster ciliolatus	Lindley's aster
Aster sp.	aster
Bromus sp.	brome
Calamagrostis canadensis	bluejoint
Carex aquatilis	water sedge
Carex canescens	grey sedge
Carex capillaris	hairlike sedge
Carex disperma	soft-leaved sedge
Carex sitchensis	Sitka sedge
Carex utriculata	beaked sedge
Carex sp.	sedge
Circaea alpina	enchanter's-nightshade
Cornus canadensis	bunchberry
Delphinium glaucum	tall larkspur
Drosera anglica	great sundew
Drosera rotundifolia	round-leaved sundew
Dryopteris expansa	spiny wood fern
Elymus glaucus	blue wildrye
Empetrum nigrum	crowberry
Epilobium angustifolium	fireweed
Epilobium sp.	willowherb
Equisetum arvense	common horsetail
Equisetum fluviatile	swamp horsetail
Equisetum hyemale	scouring-rush
Equisetum scirpoides	dwarf scouring-rush
Equisetum sp.	horsetail
Equisetum sylvaticum	wood horsetail
Erigeron philadelphicus	Philadelphia fleabane
Eriophorum angustifolium	narrow-leaved cotton-grass
Eriophorum chamissonis	Chamisso's cotton-grass
Eriophorum sp.	cotton-grass
Fragaria vesca	wood strawberry
Fragaria virginiana	wild strawberry
Fragaria virginiana ssp. glauca	wild strawberry

Galium boreale	northern bedstraw
Galium triflorum	sweet-scented bedstraw
Geocaulon lividum	bastard toad-flax
Geum macrophyllum	large-leaved avens
Gymnocarpium dryopteris	oak fern
Lathyrus ochroleucus	creamy peavine
Linnaea borealis	twinflower
Listera cordata	heart-leaved twayblade
Lycopodium annotinum	stiff clubmoss
Lycopodium complanatum	ground-cedar
Maianthemum canadense	wild lily-of-the-valley
Maianthemum dilatatum	false lily-of-the-valley
Menyanthes trifoliata	buckbean
Mertensia sp.	bluebells
Mertensia paniculata	tall bluebells
Mitella sp.	mitrewort
Mitella nuda	common mitrewort
Moneses uniflora	single delight
Orthilia secunda	one-sided wintergreen
Oryzopsis pungens	short-awned ricegrass
Oxycoccus oxycoccos	bog cranberry
Pedicularis sp.	lousewort
Pedicularis groenlandica	elephant's-head lousewort
Pedicularis labradorica	Labrador lousewort
Penstemon fruticosus	shrubby penstemon
Petasites frigidus var. palmatus	palmate-leaved coltsfoot
Petasites sagittatus	arrow-leaved coltsfoot
Platanthera sp.	orchid
Platanthera orbiculata	large round-leaved rein orchid
Poa sp.	bluegrass
Polygonum sp.	polygonum
Potentilla norvegica	Norwegian cinquefoil
Potentilla palustris	marsh cinquefoil
Potentilla sp.	cinquefoil
Pyrola asarifolia	pink wintergreen
Pyrola chlorantha	green wintergreen
Pyrola grandiflora	arctic wintergreen
Pyrola sp.	wintergreen
Ranunculus gmelinii	small yellow water-buttercup
Rubus chamaemorus	cloudberry
Rubus pubescens	trailing raspberry
Scirpus microcarpus	small-flowered bulrush
Smilacina trifolia	three-leaved false Solomon's-seal
Taraxacum officinale	common dandelion

Thalictrum sp.	meadowrue
Thalictrum occidentale	western meadowrue
Torreyochloa pauciflora	weak false-manna
Trichophorum cespitosum	tufted clubrush
Trientalis europaea ssp. arctica	northern starflower
Urtica dioica	stinging nettle
Vaccinium caespitosum	dwarf blueberry
Vaccinium vitis-idaea	lingonberry
Vicia sp.	vetch
Vicia americana	American vetch
Viola sp.	violet

Bryophyte layer

Latin Name	Common Name
Aulacomnium palustre	glow moss
Brachythecium sp.	ragged moss
Calliergon sp.	calliergon
Cetraria sp.	icelandmoss lichens
Cladina mitis	green reindeer lichen
Cladonia multiformis	slotted pixie-cup
Cladonia sp.	cladonia
Cladina rangiferina	grey reindeer lichen
Dicranum sp.	dicranum
Dicranum scoparium	broom moss
Drepanocladus sp.	drepanocladus
Hylocomium splendens	step moss
Peltigera aphthosa	freckle pelt
Peltigera sp.	pelt lichens
Plagiomnium sp.	leafy moss
Pleurozium schreberi	red-stemmed feathermoss
Polytrichum sp.	haircap moss
Ptilium crista-castrensis	knight's plume
Rhizomnium sp.	leafy moss
Sphagnum sp.	sphagnum moss
Stereocaulon sp.	stereocaulon
Tomentypnum nitens	golden fuzzy fen moss

Tree layer

Common Name	Latin Name
balsam poplar	*Populus balsamifera*
black spruce	*Picea mariana*
lodgepole pine	*Pinus contorta*
paper birch	*Betula papyrifera*
subalpine fir	*Abies lasiocarpa*
tamarack	*Larix laricina*
trembling aspen	*Populus tremuloides*
white spruce	*Picea glauca*
willow	*Salix sp.*

Shrub layer

Common Name	Latin Name
balsam poplar	*Populus balsamifera*
black gooseberry	*Ribes lacustre*
black spruce	*Picea mariana*
common juniper	*Juniperus communis*
currant or gooseberry	*Ribes sp.*
fir	*Abies sp.*
glaucous-leaved honeysuckle	*Lonicera dioica*
highbush-cranberry	*Viburnum edule*
hybrid white spruce	*Picea engelmannii x glauca*
Labrador tea	*Ledum groenlandicum*
leatherleaf	*Chamaedaphne calyculata*
lodgepole pine	*Pinus contorta*
mountain alder	*Alnus incana*
mountain alder	*Alnus incana ssp. tenuifolia*
northern blackcurrant	*Ribes hudsonianum*
northern gooseberry	*Ribes oxyacanthoides*
paper birch	*Betula papyrifera*
prickly rose	*Rosa acicularis*
red raspberry	*Rubus idaeus*
red swamp currant	*Ribes triste*
red-osier dogwood	*Cornus stolonifera*
saskatoon	*Amelanchier alnifolia*
scrub birch	*Betula nana*
shrubby cinquefoil	*Potentilla fruticosa*
Sitka alder	*Alnus viridis ssp. sinuata*
skunk currant	*Ribes glandulosum*
soopolallie	*Shepherdia canadensis*
subalpine fir	*Abies lasiocarpa*
sweet gale	*Myrica gale*
tamarack	*Larix laricina*
thimbleberry	*Rubus parviflorus*
trembling aspen	*Populus tremuloides*
western trumpet honeysuckle	*Lonicera ciliosa*
white spruce	*Picea glauca*
willow	*Salix sp.*

Herb Layer

Common Name	Latin Name
American vetch	*Vicia americana*
arctic wintergreen	*Pyrola grandiflora*
arrow-leaved coltsfoot	*Petasites sagittatus*
artemisia	*Artemisia sp.*
aster	*Aster sp.*
baneberry	*Actaea rubra*
bastard toad-flax	*Geocaulon lividum*
beaked sedge	*Carex utriculata*
blue wildrye	*Elymus glaucus*
bluebells	*Mertensia sp.*
bluegrass	*Poa sp.*
bluejoint	*Calamagrostis canadensis*
bog cranberry	*Oxycoccus oxycoccos*
bog-rosemary	*Andromeda polifolia*
brome	*Bromus sp.*
buckbean	*Menyanthes trifoliata*
bunchberry	*Cornus canadensis*
Chamisso's cotton-grass	*Eriophorum chamissonis*
cinquefoil	*Potentilla sp.*
cloudberry	*Rubus chamaemorus*
common dandelion	*Taraxacum officinale*
common horsetail	*Equisetum arvense*
common mitrewort	*Mitella nuda*
cotton-grass	*Eriophorum sp.*
creamy peavine	*Lathyrus ochroleucus*
crowberry	*Empetrum nigrum*
dwarf blueberry	*Vaccinium caespitosum*
dwarf scouring-rush	*Equisetum scirpoides*
elephant's-head lousewort	*Pedicularis groenlandica*
enchanter's-nightshade	*Circaea alpina*
false lily-of-the-valley	*Maianthemum dilatatum*
fireweed	*Epilobium angustifolium*
great sundew	*Drosera anglica*
green wintergreen	*Pyrola chlorantha*
grey sedge	*Carex canescens*
ground-cedar	*Lycopodium complanatum*
hairlike sedge	*Carex capillaris*
heart-leaved twayblade	*Listera cordata*
horsetail	*Equisetum sp.*
kinnikinnick	*Arctostaphylos uva-ursi*
Labrador lousewort	*Pedicularis labradorica*
large round-leaved rein orchid	*Platanthera orbiculata*

large-leaved avens	*Geum macrophyllum*
Lindley's aster	*Aster ciliolatus*
lingonberry	*Vaccinium vitis-idaea*
lousewort	*Pedicularis sp.*
marsh cinquefoil	*Potentilla palustris*
meadowrue	*Thalictrum sp.*
mitrewort	*Mitella sp.*
narrow-leaved cotton-grass	*Eriophorum angustifolium*
northern bedstraw	*Galium boreale*
northern starflower	*Trientalis europaea ssp. arctica*
Norwegian cinquefoil	*Potentilla norvegica*
oak fern	*Gymnocarpium dryopteris*
one-sided wintergreen	*Orthilia secunda*
orchid	*Platanthera sp.*
palmate-leaved coltsfoot	*Petasites frigidus var. palmatus*
Philadelphia fleabane	*Erigeron philadelphicus*
pink wintergreen	*Pyrola asarifolia*
polygonum	*Polygonum sp.*
red bearberry	*Arctostaphylos alpina var. rubra*
round-leaved sundew	*Drosera rotundifolia*
scouring-rush	*Equisetum hyemale*
sedge	*Carex sp.*
short-awned ricegrass	*Oryzopsis pungens*
shrubby penstemon	*Penstemon fruticosus*
single delight	*Moneses uniflora*
Sitka sedge	*Carex sitchensis*
small yellow water-buttercup	*Ranunculus gmelinii*
small-flowered bulrush	*Scirpus microcarpus*
soft-leaved sedge	*Carex disperma*
spiny wood fern	*Dryopteris expansa*
stiff clubmoss	*Lycopodium annotinum*
stinging nettle	*Urtica dioica*
swamp horsetail	*Equisetum fluviatile*
sweet-scented bedstraw	*Galium triflorum*
tall bluebells	*Mertensia paniculata*
tall larkspur	*Delphinium glaucum*
three-leaved false Solomon's-seal	*Smilacina trifolia*
trailing raspberry	*Rubus pubescens*
tufted clubrush	*Trichophorum cespitosum*
twinflower	*Linnaea borealis*
vetch	*Vicia sp.*
violet	*Viola sp.*
water sedge	*Carex aquatilis*
weak false-manna	*Torreyochloa pauciflora*

western meadowrue	*Thalictrum occidentale*
wild lily-of-the-valley	*Maianthemum canadense*
wild sarsaparilla	*Aralia nudicaulis*
wild strawberry	*Fragaria virginiana*
wild strawberry	*Fragaria virginiana ssp. glauca*
willowherb	*Epilobium sp.*
wintergreen	*Pyrola sp.*
wood horsetail	*Equisetum sylvaticum*
wood strawberry	*Fragaria vesca*
yarrow	*Achillea millefolium*

Bryophyte layer

Common Name	Latin Name
broom moss	*Dicranum scoparium*
calliergon	*Calliergon sp.*
cladonia	*Cladonia sp.*
dicranum	*Dicranum sp.*
drepanocladus	*Drepanocladus sp.*
freckle pelt	*Peltigera aphthosa*
glow moss	*Aulacomnium palustre*
golden fuzzy fen moss	*Tomentypnum nitens*
green reindeer lichen	*Cladina mitis*
grey reindeer lichen	*Cladina rangiferina*
haircap moss	*Polytrichum sp.*
icelandmoss lichens	*Cetraria sp.*
knight's plume	*Ptilium crista-castrensis*
leafy moss	*Plagiomnium sp.*
leafy moss	*Rhizomnium sp.*
pelt lichens	*Peltigera sp.*
ragged moss	*Brachythecium sp.*
red-stemmed feathermoss	*Pleurozium schreberi*
slotted pixie-cup	*Cladonia multiformis*
sphagnum moss	*Sphagnum sp.*
step moss	*Hylocomium splendens*
stereocaulon	*Stereocaulon sp.*

APPENDIX B

Vegetation Data Synthesis Tables (Appendix Formatting is not Preserved from Original Excel Format)

BWBSmw2
01 AM
SwAt - Step moss
22 Plots

Plot Number and Structural Stage

Layer	Latin Name	Presence	Mean Cover	CG05 3	CG06 3	CG36 3	CG41 4	CG55 4	CG57 4	CG76 4	RG005 4	CG30 5	CG18 5	CG11 5	CG52 5	RG039 5	RG041 5	RG054 5
A	Abies lasiocarpa	5	0.1											3				
A	Betula papyrifera	23	2.2					15			5			25			1	
A	Larix laricina	5	0.1					3										
A	Picea glauca	73	24.5				30	30	20	5	60	50		20	10		60	
A	Picea mariana	9	1.8						5									
A	Pinus contorta	18	5.1					2	15	35								60
A	Populus balsamifera	23	0.8											3	5	1		
A	Populus tremuloides	45	9.9									5	50	2	55	65		
A	**Layer Total**	**100**	**5.6**	**0**	**0**	**0**	**30**	**45**	**35**	**35**	**60**	**50**	**50**	**45**	**60**	**65**	**60**	**60**
B	Abies lasiocarpa	5	0.1											3				
B	Abies sp.	5	0.0														0.5	
B	Alnus incana ssp. tenuifolia	9	0.5								10			2				
B	Alnus viridis	9	2.7										25					
B	Alnus viridis ssp. crispa	5	0.1		2													
B	Alnus viridis ssp. sinuata	18	1.7														0.5	
B	Amelanchier alnifolia	5	0.0													1		
B	Betula papyrifera	23	0.7					5		3	5							0.5
B	Ledum groenlandicum	32	0.6				1		5	5					0.2	1		0.5
B	Lonicera dioica	5	0.1		2													
B	Picea glauca	91	11.5		10	3	35	15	15	20	25	15	2	15	12	5	20	
B	Picea mariana	27	3.0				10		5	5					2			25
B	Pinus contorta	5	0.2															5
B	Populus balsamifera	14	0.5							2								
B	Populus tremuloides	41	3.0	5	5	25			10							10		
B	Ribes oxyacanthoides	5	0.0		1													
B	Ribes triste	9	0.1					1										
B	Rosa acicularis	100	9.9	5	15	15	5	15	5	10	2	20	20	10	10	7	1	5
B	Rubus idaeus	5	0.1		3													
B	Salix sp.	59	2.4	2			5	10	5	2	1		10			1	4	3
B	Shepherdia canadensis	45	5.5	2			1	30	10	3					25	30		3
B	Viburnum edule	86	7.1	7	5	30	5	2	10	2	3		10	5	5		1	10
B	**Layer Total**	**100**	**2.3**	**19**	**35**	**65**	**25**	**65**	**60**	**40**	**40**	**35**	**60**	**30**	**50**	**50**	**25**	**45**
C	Achillea millefolium	9	0.1	1				0.1										
C	Aralia nudicaulis	9	0.5															
C	Arctostaphylos uva-ursi	5	0.0			1												
C	Aster ciliolatus	23	0.2								1							0.5
C	Calamagrostis canadensis	27	2.6	2	45	5												3
C	Cornus canadensis	100	19.3	5	10	25	20	20	15	65	3	25	15	10	30	12	4	17
C	Elymus glaucus	18	0.4				1		2	5					1			
C	Epilobium angustifolium	64	2.2	5	15	15	3	1		2		2	3		1	1	0.01	
C	Epilobium sp.	5	0.0															
C	Equisetum arvense	45	0.5	2				1	2	2	0.001	1						2
C	Equisetum sylvaticum	5	0.0														0.1	
C	Fragaria virginiana	5	0.0															1
C	Galium boreale	27	0.5	2		2		3		3								2
C	Galium triflorum	5	0.0															
C	Geocaulon lividum	14	0.2															
C	Lathyrus ochroleucus	27	0.9	5		2				1			10			0.5		
C	Linnaea borealis	73	3.8	3		2		5	10			2		3	10	3	3	8
C	Lycopodium annotinum	9	0.1											2			1	
C	Lycopodium complanatum	23	0.1				1										0.1	
C	Maianthemum canadense	9	0.2															
C	Mertensia paniculata	36	1.0	1	3							3		10				1
C	Mertensia sp.	5	0.1		3													
C	Mitella nuda	27	0.7	3										2	2		0.5	
C	Moneses uniflora	5	0.0															
C	Orthilia secunda	9	0.0								0.5				0.1			
C	Pedicularis sp.	5	0.0													0.1		
C	Petasites frigidus var. palmatus	36	0.7			3		2			2	2	2	2				0.5
C	Platanthera orbiculata	5	0.0															
C	Pyrola asarifolia	18	0.2										2		2		0.1	
C	Pyrola sp.	9	0.0															
C	Rubus pubescens	45	3.5	10	5	10		10					10	15				1
C	Vaccinium vitis-idaea	64	3.0				2		15	20		3			3	3	0.1	1
C	Viola sp.	18	0.2									1			0.1			
C	**Layer Total**	**100**	**1.2**	**35**	**70**	**60**	**25**	**37**	**40**	**85**	**6**	**35**	**35**	**40**	**45**	**19**	**7**	**36**
D	Brachythecium sp.	5	0.1															
D	Cladina mitis	9	0.1													0.1		
D	Cladina rangiferina	5	0.0															
D	Cladonia sp.	5	0.0															
D	Dicranum sp.	14	0.2											2			1	
D	Hylocomium splendens	73	24.2	15			65	20	45	70	30	65		10	10	12	60	20
D	Peltigera aphthosa	14	0.4						5	2		2						
D	Peltigera sp.	9	0.2														1	
D	Pleurozium schreberi	55	11.5	10			25	10	35	10						5	10	7

Plot Number and Structural Stage

Layer	Latin Name	Presence	Mean Cover	CG05 3	CG06 3	CG36 3	CG41 4	CG55 4	CG57 4	CG76 4	RG005 4	CG30 5	CG18 5	CG11 5	CG52 5	RG039 5	RG041 5	RG054 5
D	Polytrichum sp.	5	0.0															
D	Ptilium crista-castrensis	32	3.2							5		20	5				20	
D	**Layer Total**	**100**	**3.6**	**25**	**0**	**0**	**75**	**30**	**75**	**80**	**30**	**80**	**5**	**12**	**10**	**17**	**92**	**27**

BWBSmw2
01 AM
SwAt - Step moss
22 Plots

Layer	Latin Name	CG58 6	RG023 6	RG024 6	RG042 6	RG061 6	RG071 6	CG19 7
A	Abies lasiocarpa							
A	Betula papyrifera						3	
A	Larix laricina							
A	Picea glauca	45	40	45	50	20	35	20
A	Picea mariana					35		
A	Pinus contorta							
A	Populus balsamifera		7	2				
A	Populus tremuloides		7		12	5	7	10
A	**Layer Total**	**45**	**50**	**45**	**55**	**55**	**40**	**30**
B	Abies lasiocarpa							
B	Abies sp.							
B	Alnus incana ssp. tenuifolia							
B	Alnus viridis							35
B	Alnus viridis ssp. crispa							
B	Alnus viridis ssp. sinuata		20	5			12	
B	Amelanchier alnifolia							
B	Betula papyrifera					2		
B	Ledum groenlandicum					0.5		
B	Lonicera dioica							
B	Picea glauca	10	7	15	5	8	12	5
B	Picea mariana					20		
B	Pinus contorta							
B	Populus balsamifera			5			5	
B	Populus tremuloides				5	3	1	2
B	Ribes oxyacanthoides							
B	Ribes triste		1					
B	Rosa acicularis	15	7	7	7	1	10	25
B	Rubus idaeus							
B	Salix sp.	3		5			1	
B	Shepherdia canadensis	15					1	
B	Viburnum edule	5	5	12	3		7	30
B	**Layer Total**	**40**	**35**	**45**	**17**	**30**	**45**	**75**
C	Achillea millefolium							
C	Aralia nudicaulis						0.01	10
C	Arctostaphylos uva-ursi							
C	Aster ciliolatus		0.5	2			0.5	
C	Calamagrostis canadensis				0.5		2	
C	Cornus canadensis	20	30	17	17	7	17	40
C	Elymus glaucus							
C	Epilobium angustifolium			0.1	0.1		0.01	
C	Epilobium sp.					0.001		
C	Equisetum arvense	0.5			0.1	0.5		
C	Equisetum sylvaticum							
C	Fragaria virginiana							
C	Galium boreale						0.001	
C	Galium triflorum							1
C	Geocaulon lividum			0.01		0.01		5
C	Lathyrus ochroleucus	1						
C	Linnaea borealis	5	3	7	5		10	5
C	Lycopodium annotinum							
C	Lycopodium complanatum				0.5	0.001	0.1	
C	Maianthemum canadense						1	3
C	Mertensia paniculata	2	1	1				
C	Mertensia sp.							
C	Mitella nuda			0.5			7	
C	Moneses uniflora			0.01				
C	Orthilia secunda							
C	Pedicularis sp.							
C	Petasites frigidus var. palmatus		2					
C	Platanthera orbiculata					0.001		
C	Pyrola asarifolia		1					
C	Pyrola sp.			0.001			0.001	
C	Rubus pubescens			1			7	7
C	Vaccinium vitis-idaea	10		1	3	2	0.5	2
C	Viola sp.		2				0.5	
C	**Layer Total**	**35**	**38**	**28**	**25**	**9**	**40**	**60**
D	Brachythecium sp.							2
D	Cladina mitis					1		
D	Cladina rangiferina					0.5		
D	Cladonia sp.					0.5		
D	Dicranum sp.					1		
D	Hylocomium splendens	30	25	25			30	
D	Peltigera aphthosa							
D	Peltigera sp.					3		
D	Pleurozium schreberi	40				40	50	10

Layer	Latin Name	CG58 6	RG023 6	RG024 6	RG042 6	RG061 6	RG071 6	CG19 7
D	Polytrichum sp.					1		
D	Ptilium crista-castrensis		5			5	10	
D	**Layer Total**	**65**	**30**	**25**	**85**	**86**	**90**	**35**

BWBSmw2
02 LL
Pl - Lignonberry - Velvet-leaved blueberry
1 Plot

Layer	Latin Name	Presence	Mean Cover	RG045
A	Pinus contorta	100	5.0	5
A	**Layer Total**	**100**	**5.0**	**5**
B	Amelanchier alnifolia	100	2.0	2
B	Ledum groenlandicum	100	0.5	0.5
B	Pinus contorta	100	50.0	50
B	Rosa acicularis	100	7.0	7
B	**Layer Total**	**100**	**14.9**	**55**
C	Calamagrostis canadensis	100	3.0	3
C	Linnaea borealis	100	1.0	1
C	Maianthemum canadense	100	1.0	1
C	Oryzopsis pungens	100	0.5	0.5
C	Pyrola chlorantha	100	1.0	1
C	Vaccinium vitis-idaea	100	12.0	12
C	**Layer Total**	**100**	**3.1**	**18**
D	Cladina mitis	100	15.0	15
D	Cladonia sp.	100	2.0	2
D	Peltigera sp.	100	5.0	5
D	Pleurozium schreberi	100	15.0	15
D	Polytrichum sp.	100	0.5	0.5
D	**Layer Total**	**100**	**7.5**	**37**

BWBSmw2
04 BL
Sb - Lignonberry - Coltsfoot
13 Plots

				Plot Number and Structural Stage							
Layer	Latin Name	Presence	Mean Cover	CG44 3	RG022 4	CG14 5	CG47 5	CG59 5	RG011 5	RG015 5	RG028 5
A	Betula papyrifera	38	4.4				35	10			
A	Picea glauca	46	13.6				20	30			
A	Picea mariana	38	2.8		2				10	10	7
A	Pinus contorta	46	11.5		10	15			30	20	50
A	Populus balsamifera	23	1.6				15				
A	Populus tremuloides	62	8.8			30		10	15		7
A	**Layer Total**	**100**	**7.1**	**0**	**12**	**45**	**60**	**45**	**50**	**27**	**60**
B	Alnus incana ssp. tenuifolia	8	0.3								
B	Alnus viridis ssp. sinuata	69	13.1		1	45		15		5	7
B	Amelanchier alnifolia	8	0.2								
B	Betula papyrifera	31	1.5					5			
B	Cornus stolonifera	38	2.3				3	0.5			
B	Ledum groenlandicum	23	0.3		2				1		
B	Picea glauca	62	5.9	2		2	5	15			
B	Picea mariana	46	11.6		30	1			20	40	45
B	Pinus contorta	31	4.6		30					20	7
B	Populus balsamifera	8	0.2								
B	Populus tremuloides	46	3.6	20		10					3
B	Ribes lacustre	8	0.0								
B	Ribes triste	8	0.0					0.5			
B	Rosa acicularis	92	8.2	15		7	25	1	4	3	2
B	Rubus idaeus	8	1.2	15							
B	Salix sp.	54	2.2		1			5	5	2	
B	Shepherdia canadensis	31	1.9					2	10		
B	Viburnum edule	62	5.2	7			15			4	1
B	**Layer Total**	**100**	**3.5**	**55**	**60**	**60**	**40**	**40**	**40**	**65**	**55**
C	Aralia nudicaulis	23	0.3	2							
C	Arctostaphylos uva-ursi	8	0.5						7		
C	Aster ciliolatus	31	0.4							1	
C	Calamagrostis canadensis	31	1.3	5							
C	Cornus canadensis	92	6.0	12	3	3	25	2	5	5	3
C	Empetrum nigrum	15	0.1		0.5						
C	Epilobium angustifolium	15	0.9	10		2					
C	Equisetum arvense	23	0.2	1							
C	Equisetum scirpoides	8	0.0								
C	Equisetum sylvaticum	8	0.0		0.1						
C	Fragaria virginiana	8	0.2								
C	Galium boreale	23	0.2								
C	Geocaulon lividum	8	0.5								
C	Lathyrus ochroleucus	8	0.0								
C	Linnaea borealis	69	5.0	5			10	10	2	5	
C	Lycopodium complanatum	8	0.1						1		
C	Maianthemum canadense	8	0.0								
C	Mertensia paniculata	46	0.8				3	2		2	
C	Mitella nuda	38	1.8				10	3			
C	Orthilia secunda	15	0.0			0.5			0.1		
C	Petasites frigidus var. palmatus	8	0.1			1					
C	Pyrola asarifolia	8	0.1			1					
C	Pyrola sp.	15	0.1								
C	Rubus pubescens	31	1.8	10				2			
C	Vaccinium vitis-idaea	23	0.9		2					5	
C	Viola sp.	8	0.1								
C	**Layer Total**	**100**	**0.8**	**35**	**5**	**7**	**45**	**19**	**15**	**18**	**3**

				Plot Number and Structural Stage							
Layer	Latin Name	Presence	Mean Cover	CG44 3	RG022 4	CG14 5	CG47 5	CG59 5	RG011 5	RG015 5	RG028 5
D	Brachythecium sp.	15	0.3			2	2				
D	Cladina mitis	15	0.2		2						
D	Cladina rangiferina	15	0.2						2	1	
D	Cladonia sp.	23	0.5		3				1	2	
D	Dicranum sp.	8	0.4							5	
D	Hylocomium splendens	77	16.5		15			15	30	30	15
D	Peltigera sp.	31	0.5		2				1	3	
D	Pleurozium schreberi	77	14.5		5			40	15	30	10
D	Ptilium crista-castrensis	54	4.2					10	10	12	3
D	Stereocaulon sp.	8	0.1							1	
D	**Layer Total**	**100**	**3.7**	**0**	**27**	**2**	**2**	**60**	**55**	**84**	**28**

BWBSmw2
04 BL
Sb - Lignonberry - Coltsfoot
13 Plots

Layer	Latin Name	RG056 5	RG065 6	RG031 7	RG044 7	RG069 7
A	Betula papyrifera	5			2	5
A	Picea glauca	17	10		50	50
A	Picea mariana			7		
A	Pinus contorta			25		
A	Populus balsamifera		5		1	
A	Populus tremuloides	10	25	2		15
A	**Layer Total**	**22**	**35**	**30**	**50**	**65**
B	Alnus incana ssp. tenuifolia	4				
B	Alnus viridis ssp. sinuata	50	5		25	17
B	Amelanchier alnifolia		2			
B	Betula papyrifera		3		10	2
B	Cornus stolonifera	2	20			4
B	Ledum groenlandicum			1		
B	Picea glauca	17	17		7	12
B	Picea mariana			15		
B	Pinus contorta			3		
B	Populus balsamifera		3			
B	Populus tremuloides		7	3		4
B	Ribes lacustre	0.1				
B	Ribes triste					
B	Rosa acicularis	2	15	3	17	12
B	Rubus idaeus					
B	Salix sp.	5	5	5		
B	Shepherdia canadensis	1	12			
B	Viburnum edule	7	15		12	7
B	**Layer Total**	**13**	**85**	**27**	**60**	**55**
C	Aralia nudicaulis	0.5	1			
C	Arctostaphylos uva-ursi					
C	Aster ciliolatus		1		1	2
C	Calamagrostis canadensis		4		7	1
C	Cornus canadensis	5		3	5	7
C	Empetrum nigrum			1		
C	Epilobium angustifolium					
C	Equisetum arvense				1	0.5
C	Equisetum scirpoides				0.5	
C	Equisetum sylvaticum					
C	Fragaria virginiana		3			
C	Galium boreale		1		1	0.1
C	Geocaulon lividum			7		
C	Lathyrus ochroleucus		0.5			
C	Linnaea borealis	7	15		4	7
C	Lycopodium complanatum					
C	Maianthemum canadense					0.1
C	Mertensia paniculata		1		1	1
C	Mitella nuda	1			3	7
C	Orthilia secunda					
C	Petasites frigidus var. palmatus					
C	Pyrola asarifolia					
C	Pyrola sp.		1			0.1
C	Rubus pubescens				7	5
C	Vaccinium vitis-idaea			5		
C	Viola sp.					1
C	**Layer Total**	**75**	**25**	**16**	**30**	**31**

Layer	Latin Name	RG0565	RG0656	RG0317	RG0447	RG0697
D	Brachythecium sp.					
D	Cladina mitis			1		
D	Cladina rangiferina					
D	Cladonia sp.					
D	Dicranum sp.					
D	Hylocomium splendens	15	5	15	35	40
D	Peltigera sp.			1		
D	Pleurozium schreberi	5	7	7	40	30
D	Ptilium crista-castrensis	2			10	7
D	Stereocaulon sp.					
D	**Layer Total**	**27**	**12**	**24**	**85**	**77**

BWBSmw2
05 SH
Sw - Currant - Horsetail
21 Plots

Plot Number and Structural Stage

Layer	Latin Name	Presence	Mean Cover	CG28 3	CG60 3	CG71 3	RG048 3a	CG01 4	RG047 4	RG057 4	CG20 5	CG61 5	RG002 5	RG016 5	RG025 5	RG027 5	RG033 5
A	Betula papyrifera	14	0.7											10	2		
A	Picea glauca	52	22.6								45		55	50	40		45
A	Populus balsamifera	43	18.4				5	60	60	75		65					2
A	Populus tremuloides	14	2.5													35	7
A	**Layer Total**	**100**	**11.0**	**0**	**0**	**0**	**5**	**60**	**60**	**75**	**45**	**65**	**55**	**55**	**40**	**35**	**50**
B	Alnus incana	5	1.2					25									
B	Alnus incana ssp. tenuifolia	76	14.0	15	20		50		8	12	5	55	3	10	8		
B	Alnus viridis ssp. sinuata	10	0.6														12
B	Amelanchier alnifolia	10	0.1					1							1		
B	Betula papyrifera	19	0.4											3	3		
B	Cornus stolonifera	62	6.3	60		5				2		10	2			5	3
B	Lonicera ciliosa	5	0.1														
B	Lonicera dioica	5	0.0														
B	Picea glauca	67	7.3					7		7	10		7	30	30	4	15
B	Populus balsamifera	29	2.4			5	20	5	10	5		5					
B	Populus tremuloides	10	0.7			10										5	
B	Ribes lacustre	14	0.3								3			2	0.5		
B	Ribes sp.	5	0.1										2				
B	Rosa acicularis	71	6.5	30		15		2			2		5	3	5	20	5
B	Rubus idaeus	19	1.4	10	2	15				2							
B	Rubus parviflorus	5	0.0													1	
B	Salix sp.	62	7.3	50	35	2	15		0.5	1	2			5	7	12	10
B	Shepherdia canadensis	10	0.2														
B	Viburnum edule	62	3.5					2			5		3		3	5	1
B	**Layer Total**	**100**	**2.8**	**95**	**55**	**40**	**75**	**35**	**15**	**25**	**20**	**65**	**20**	**45**	**55**	**40**	**45**
C	Achillea millefolium	10	0.1										0.1	1			
C	Aralia nudicaulis	14	0.7														
C	Artemisia sp.	5	0.0					0.5									
C	Aster ciliolatus	29	1.1					5					2	4	5	5	3
C	Aster sp.	5	0.1			2											
C	Bromus sp.	5	3.3			70											
C	Calamagrostis canadensis	43	2.0	15	10				0.001		2				2	2	2
C	Carex sp.	5	0.2		5												
C	Cornus canadensis	52	4.0								20		2	12	3	5	7
C	Elymus glaucus	5	0.1					2									
C	Epilobium angustifolium	29	0.7	2		10									0.1	2	
C	Equisetum arvense	100	13.4	2	5	25	30	1	20	10	30	20	0.1	7	3	17	3
C	Equisetum fluviatile	5	0.5					10									
C	Equisetum hyemale	19	2.1						2	25		5					
C	Equisetum scirpoides	14	0.1											0.5			
C	Erigeron philadelphicus	10	0.1			1						1					
C	Fragaria vesca	10	0.0														
C	Fragaria virginiana	5	0.0														
C	Fragaria virginiana var. glauca	29	0.8		1			2					2	3	2		7
C	Galium boreale	67	1.0	3		3		2	0.1	0.1			3	1	0.1		0.5
C	Galium triflorum	5	0.0					1									
C	Geocaulon lividum	5	0.1														
C	Geum macrophyllum	5	0.5		10												
C	Lathyrus ochroleucus	10	0.1													2	1
C	Linnaea borealis	43	1.9								3		1	0.5	7		5
C	Lycopodium annotinum	5	0.0														
C	Maianthemum dilatatum	10	0.1										1				
C	Mertensia paniculata	38	0.7	3									2	1	1	2	2
C	Mertensia sp.	5	0.1														
C	Mitella nuda	43	1.5							0.5	5			1	4		
C	Mitella sp.	5	0.0										0.5				
C	Orthilia secunda	5	0.0										0.5				
C	Petasites frigidus var. palmatus	10	0.1										1	2			
C	Pyrola asarifolia	29	0.3											1		0.1	0.1
C	Rubus pubescens	57	2.5	5				7			7	3	1	3			1
C	Scirpus microcarpus	5	1.4		30												
C	Taraxacum officinale	5	0.1			2											
C	Thalictrum occidentale	5	0.5	10													
C	Vaccinium vitis-idaea	10	0.2														
C	Vicia americana	10	0.5			7			4								
C	Vicia sp.	5	0.1														
C	Viola sp.	5	0.0														
C	**Layer Total**	**100**	**1.0**	**30**	**55**	**85**	**30**	**25**	**24**	**40**	**60**	**28**	**15**	**36**	**27**	**36**	**30**
D	Hylocomium splendens	43	7.1								5		10		40	3	7

Plot Number and Structural Stage

Layer	Latin Name	Presence	Mean Cover	CG28 3	CG60 3	CG71 3	RG048 3a	CG01 4	RG047 4	RG057 4	CG20 5	CG61 5	RG002 5	RG016 5	RG025 5	RG027 5	RG033 5
D	Peltigera sp.	5	0.0														1
D	Pleurozium schreberi	43	11.0								10		20		15		10
D	Ptilium crista-castrensis	38	4.8								20		7		5	2	
D	**Layer Total**	**5**	**0.1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**30**	**0**	**37**	**33**	**60**	**5**	**18**

BWBSmw2
05 SH
Sw - Currant - Horsetail
21 Plots

Layer	Latin Name	RG046 5	CG02 6	CG27 6	CG45 6	CG46 6	RG036 6	RG053 7
A	Betula papyrifera		2					
A	Picea glauca	50	45	30		5	55	55
A	Populus balsamifera			10	50	60		
A	Populus tremuloides			10				
A	**Layer Total**	**50**	**45**	**50**	**50**	**60**	**55**	**55**
B	Alnus incana							
B	Alnus incana ssp. tenuifolia	10	5		35	35	10	12
B	Alnus viridis ssp. sinuata	1						
B	Amelanchier alnifolia							
B	Betula papyrifera			1				1
B	Cornus stolonifera	3	5		7	15	5	10
B	Lonicera ciliosa		2					
B	Lonicera dioica						1	
B	Picea glauca	17	2	2		3	12	7
B	Populus balsamifera							
B	Populus tremuloides							
B	Ribes lacustre							
B	Ribes sp.							
B	Rosa acicularis	5	10	10		10	10	5
B	Rubus idaeus							
B	Rubus parviflorus							
B	Salix sp.	3					10	
B	Shepherdia canadensis	0.1						5
B	Viburnum edule	7	10	15	2	3	10	7
B	**Layer Total**	**40**	**27**	**25**	**40**	**55**	**55**	**40**
C	Achillea millefolium							
C	Aralia nudicaulis		10	5		0.5		
C	Artemisia sp.							
C	Aster ciliolatus							
C	Aster sp.							
C	Bromus sp.							
C	Calamagrostis canadensis						5	3
C	Carex sp.							
C	Cornus canadensis	7	5	7			7	10
C	Elymus glaucus							
C	Epilobium angustifolium						0.5	0.01
C	Equisetum arvense	7	5	5	25	10	50	7
C	Equisetum fluviatile							
C	Equisetum hyemale					12		
C	Equisetum scirpoides		1					0.01
C	Erigeron philadelphicus							
C	Fragaria vesca	0.5						0.001
C	Fragaria virginiana	1						
C	Fragaria virginiana var. glauca							
C	Galium boreale	0.01	3	1			1	4
C	Galium triflorum							
C	Geocaulon lividum							2
C	Geum macrophyllum							
C	Lathyrus ochroleucus							
C	Linnaea borealis	7		3			1	12
C	Lycopodium annotinum							0.1
C	Maianthemum dilatatum							1
C	Mertensia paniculata	1		3				
C	Mertensia sp.		3					
C	Mitella nuda	2	7	5			5	3
C	Mitella sp.							
C	Orthilia secunda							
C	Petasites frigidus var. palmatus							
C	Pyrola asarifolia	0.5	2					2
C	Rubus pubescens	7	5	10			1	2
C	Scirpus microcarpus							
C	Taraxacum officinale							
C	Thalictrum occidentale							
C	Vaccinium vitis-idaea			2				2
C	Vicia americana							
C	Vicia sp.					3		
C	Viola sp.	0.1						
C	**Layer Total**	**32**	**30**	**35**	**25**	**25**	**70**	**48**
D	Hylocomium splendens	30		15			10	30

Layer	Latin Name	RG0465	CG026	CG276	CG456	CG466	RG0366	RG0537
D	Peltigera sp.							
D	Pleurozium schreberi	30	50	30			5	60
D	Ptilium crista-castrensis	25	15	20				7
D	**Layer Total**	**85**	**60**	**60**	**0**	**0**	**15**	**97**

BWBSmw2
06 BB
Sb - Feathermoss - Bluebells
4 Plots

Plot Number and Structural Stage

Layer	Latin Name	Presence	Mean Cover	CG10 5	CG49 5	RG034 7	RG050 7
A	Betula papyrifera	50	1.4	5		0.5	
A	Larix laricina	25	1.3	5			
A	Picea glauca	75	37.5	50	40	60	
A	Picea mariana	50	15.0		25		35
A	**Layer Total**	**100**	**13.8**	**55**	**60**	**60**	**35**
B	Alnus incana ssp. tenuifolia	75	15.0		25	20	15
B	Betula papyrifera	50	3.0	5			7
B	Cornus stolonifera	50	2.3		2	7	
B	Larix laricina	25	0.0				0.1
B	Ledum groenlandicum	75	3.5	7	2		5
B	Picea glauca	50	10.5	25		17	
B	Picea mariana	25	1.8				7
B	Ribes glandulosum	25	0.8	3			
B	Ribes lacustre	25	0.1		0.5		
B	Rosa acicularis	100	3.0	5	1	3	3
B	Salix sp.	50	3.0	10			2
B	Viburnum edule	25	0.5			2	
B	**Layer Total**	**100**	**3.6**	**50**	**27**	**40**	**35**
C	Achillea millefolium	25	0.0			0.01	
C	Calamagrostis canadensis	25	0.3				1
C	Carex disperma	25	0.3		1		
C	Carex sp.	25	0.5				2
C	Circaea alpina	25	0.0		0.1		
C	Cornus canadensis	75	3.3		3	7	3
C	Equisetum arvense	100	15.5	10	25	12	15
C	Equisetum scirpoides	75	1.3		2	2	1
C	Equisetum sylvaticum	25	3.8		15		
C	Fragaria virginiana var. glauca	25	1.3			5	
C	Galium boreale	25	0.3			1	
C	Galium triflorum	25	0.0		0.1		
C	Geocaulon lividum	25	0.5				2
C	Linnaea borealis	25	0.8			3	
C	Listera cordata	25	0.0			0.1	
C	Mertensia paniculata	25	0.3	1			
C	Mitella nuda	75	5.0	3	10	7	
C	Petasites frigidus var. palmatus	25	0.3	1			
C	Rubus pubescens	50	1.4		5	0.5	
C	Salix sp.	25	0.5		2		
C	Smilacina trifolia	25	0.1			0.5	
C	Vaccinium vitis-idaea	50	1.3		3		2
C	Viola sp.	25	0.3		1		
C	**Layer Total**	**100**	**1.6**	**15**	**55**	**37**	**24**
D	Aulacomnium palustre	50	5.0		15		5
D	Cladonia sp.	25	0.5	2			
D	Hylocomium splendens	100	41.3	65	5	70	25
D	Peltigera sp.	25	0.3				1
D	Pleurozium schreberi	75	18.8	10		20	45
D	Ptilium crista-castrensis	50	5.0		10		10
D	Rhizomnium sp.	50	6.8		25	2	
D	Sphagnum sp.	25	1.0				4
D	Tomentypnum nitens	25	5.0		20		
D	**Layer Total**	**100**	**9.3**	**70**	**70**	**92**	**90**

BWBSmw2
07 TH
Lt - Horsetail
10 Plots

				Plot Number and Structural Stage							
			Mean	RG017	RG026	RG032	RG067	CG13	CG64	RG013	RG035
Layer	Latin Name	Presence	Cover	3a	3a	3a	3b	5	5	5	5
A	Larix laricina	90	5.9	0.5	1	7	2	15	15	3	10
A	Picea glauca	10	1.5								
A	Picea mariana	40	15.0					55		15	30
A	**Layer Total**	**100**	**7.5**	**0.5**	**1**	**7**	**2**	**65**	**15**	**17**	**35**
B	Alnus incana ssp. tenuifolia	60	8.8	1		12	17			3	
B	Betula nana	40	1.5	7	3	2				3	
B	Betula papyrifera	40	2.6			0.5			20		2
B	Chamaedaphne calyculata	50	3.3	12		10	5		5		0.5
B	Cornus stolonifera	10	0.1								
B	Juniperus communis	10	0.1							1	
B	Larix laricina	60	6.0	7	7	10	25				10
B	Ledum groenlandicum	80	4.2	4	7	7	2	2	10		5
B	Myrica gale	10	0.5		5						
B	Picea glauca	30	1.4					2			10
B	Picea mariana	90	22.2	30	35	17	5	25	20	35	30
B	Populus balsamifera	10	0.5					5			
B	Populus tremuloides	10	0.3					3			
B	Potentilla fruticosa	10	0.3							3	
B	Ribes glandulosum	10	1.5								
B	Ribes lacustre	10	0.2					2			
B	Rosa acicularis	10	0.2							2	
B	Salix sp.	80	6.1	3	15	7	5	2	7	12	10
B	Shepherdia canadensis	10	0.1					1			
B	Viburnum edule	10	0.2							2	
B	**Layer Total**	**100**	**3.0**	**60**	**80**	**60**	**60**	**40**	**70**	**60**	**45**
C	Achillea millefolium	10	0.1							1	
C	Arctostaphylos alpina var. rubra	20	0.4					3		1	
C	Aster ciliolatus	10	0.1							1	
C	Calamagrostis canadensis	10	1.2				12				
C	Carex aquatilis	10	3.0				30				
C	Carex capillaris	10	0.5				5				
C	Carex disperma	10	3.0								
C	Carex sp.	60	5.3	15	15	10		1	2	10	
C	Circaea alpina	10	1.0								
C	Cornus canadensis	50	1.0				1	3		3	
C	Epilobium angustifolium	10	0.2							2	
C	Equisetum arvense	60	4.7		0.1	0.5				0.5	1
C	Equisetum scirpoides	10	0.2					2			
C	Fragaria virginiana var. glauca	10	0.5							5	
C	Galium boreale	10	0.1							1	
C	Geocaulon lividum	20	0.3	1				2			
C	Linnaea borealis	20	0.8					5		3	
C	Mertensia paniculata	20	0.1					1		0.1	
C	Mitella nuda	10	0.3								
C	Oxycoccus oxycoccos	40	0.7	2	2	1	2				
C	Petasites sagittatus	20	0.5						2		
C	Platanthera sp.	20	0.3						2		
C	Potentilla palustris	10	0.4				4				
C	Ranunculus gmelinii	10	0.1								
C	Rubus chamaemorus	20	0.9	4		5					
C	Rubus pubescens	10	0.5								
C	Smilacina trifolia	50	0.3	0.1	0.5	0.5				1	0.5
C	Torreyochloa pauciflora	20	1.1								
C	Vaccinium caespitosum	10	0.2	2							
C	Vaccinium vitis-idaea	80	4.6	12	5	3	3		15		1

				Plot Number and Structural Stage							
Layer	Latin Name	Presence	Mean Cover	RG017 3a	RG026 3a	RG032 3a	RG067 3b	CG13 5	CG64 5	RG013 5	RG035 5
C	**Layer Total**	**100**	**1.1**	**34**	**22**	**20**	**55**	**15**	**21**	**35**	**2.5**
D	Aulacomnium palustre	90	10.9	10	25	10	20	5	5		7
D	Cladina mitis	40	1.2	1	0.5			10			0.1
D	Cladonia sp.	40	0.9	1	2			5			0.5
D	Hylocomium splendens	60	14.5	25	5			15		35	55
D	Peltigera aphthosa	20	0.7					5			
D	Peltigera sp.	10	0.2								2
D	Pleurozium schreberi	40	7.2	7	20	10					35
D	Ptilium crista-castrensis	10	0.5							5	
D	Rhizomnium sp.	10	1.0								
D	Sphagnum sp.	80	27.0	35	45	75	65		5	7	3
D	Tomentypnum nitens	20	4.5	20						25	
D	**Layer Total**	**100**	**6.2**	**95**	**95**	**95**	**85**	**35**	**10**	**85**	**92**

BWBSmw2
07 TH
Lt - Horsetail
10 Plots

Layer	Latin Name	CG54 6	CG63 7
A	Larix laricina		5
A	Picea glauca		15
A	Picea mariana	50	
A	**Layer Total**	**50**	**20**
B	Alnus incana ssp. tenuifolia	15	40
B	Betula nana		
B	Betula papyrifera		3
B	Chamaedaphne calyculata		
B	Cornus stolonifera		1
B	Juniperus communis		
B	Larix laricina		1
B	Ledum groenlandicum	5	
B	Myrica gale		
B	Picea glauca		2
B	Picea mariana	25	
B	Populus balsamifera		
B	Populus tremuloides		
B	Potentilla fruticosa		
B	Ribes glandulosum		15
B	Ribes lacustre		
B	Rosa acicularis		
B	Salix sp.		
B	Shepherdia canadensis		
B	Viburnum edule		
B	**Layer Total**	**40**	**55**
C	Achillea millefolium		
C	Arctostaphylos alpina var. rubra		
C	Aster ciliolatus		
C	Calamagrostis canadensis		
C	Carex aquatilis		
C	Carex capillaris		
C	Carex disperma	30	
C	Carex sp.		
C	Circaea alpina		10
C	Cornus canadensis	1	2
C	Epilobium angustifolium		
C	Equisetum arvense	10	35
C	Equisetum scirpoides		
C	Fragaria virginiana var. glauca		
C	Galium boreale		
C	Geocaulon lividum		
C	Linnaea borealis		
C	Mertensia paniculata		
C	Mitella nuda		3
C	Oxycoccus oxycoccos		
C	Petasites sagittatus		3
C	Platanthera sp.		1
C	Potentilla palustris		
C	Ranunculus gmelinii	0.5	
C	Rubus chamaemorus		
C	Rubus pubescens		5
C	Smilacina trifolia		
C	Torreyochloa pauciflora	1	10
C	Vaccinium caespitosum		
C	Vaccinium vitis-idaea	5	2

Layer	Latin Name	CG546	CG637
C	**Layer Total**	**40**	**60**
D	Aulacomnium palustre	25	2
D	Cladina mitis		
D	Cladonia sp.		
D	Hylocomium splendens	10	
D	Peltigera aphthosa	2	
D	Peltigera sp.		
D	Pleurozium schreberi		
D	Ptilium crista-castrensis		
D	Rhizomnium sp.		10
D	Sphagnum sp.	35	
D	Tomentypnum nitens		
D	**Layer Total**	**65**	**12**

BWBSmw2
08 BS
Sb - Cloudberry - Sphagnum
15 Plots

Plot Number and Structural Stage

Layer	Latin Name	Presence	Mean Cover	CG15 3	CG25 3	CG38 3	RG001 3	RG008 3	RG038 3	RG055 3	CG09 4	CG32 4	RG004 4	RG007 4	RG021 4	RG029 4	RG030 4
A	Larix laricina	13	0.1										1	0.1			
A	Picea mariana	40	2.3				2	1				5		1			20
A	**Layer Total**	**100**	**1.2**	**0**	**0**	**0**	**2**	**1**	**0**	**0**	**0**	**5**	**1**	**1**	**0**	**0**	**20**
B	Betula nana	53	1.8		3	2	4		0.5			10		5			2
B	Chamaedaphne calyculata	80	7.2	15	10	1	20	3		5			10	3	15	10	15
B	Larix laricina	73	1.2		1	1	0.5	2	1	1		1		4	2		0.1
B	Ledum groenlandicum	100	32.3	30	40	30	50	25	25	35	45	30	30	15	25	30	35
B	Picea mariana	100	30.8	25	25	25	17	25	50	30	35	45	30	35	45	30	20
B	Pinus contorta	13	0.1			1							1				
B	Salix sp.	7	0.1									2					
B	**Layer Total**	**100**	**10.5**	**65**	**75**	**55**	**75**	**45**	**60**	**55**	**75**	**80**	**60**	**60**	**75**	**60**	**60**
C	Carex sp.	20	0.8				0.1							2	10		
C	Equisetum scirpoides	7	0.0										0.01				
C	Eriophorum chamissonis	7	0.1			1											
C	Eriophorum sp.	13	0.1	1	1												
C	Geocaulon lividum	7	0.0														
C	Oxycoccus oxycoccos	80	1.2	1	2		1	1	1	1		2	2	3	0.5	2	
C	Rubus chamaemorus	93	6.5	15	5	15	3	4	10	7		10	3	5	5	5	3
C	Smilacina trifolia	47	0.6	1				0.5	0.1	2			4		1		
C	Vaccinium vitis-idaea	93	5.6	3	5	10	5	3	3	10	10	5	2	7		10	0.5
C	**Layer Total**	**100**	**1.7**	**20**	**13**	**25**	**9**	**8**	**14**	**20**	**10**	**17**	**13**	**17**	**16**	**17**	**3**
D	Aulacomnium palustre	7	0.7									10					
D	Cetraria sp.	7	0.1						1								
D	Cladina mitis	87	12.1	30	5	25		12	20	5	60		7	2	2	2	2
D	Cladonia multiformis	7	0.1	2													
D	Cladonia sp.	53	1.5		2				2	2				1	7	1	4
D	Dicranum sp.	20	0.3												1	1	2
D	Hylocomium splendens	13	4.0									40					20
D	Peltigera sp.	7	0.1							2							
D	Pleurozium schreberi	20	4.0						5			15					40
D	Polytrichum sp.	7	0.1						1								
D	Sphagnum sp.	100	73.7	65	85	75	95	90	70	80	30	35	90	95	85	95	30
D	**Layer Total**	**100**	**8.8**	**95**	**90**	**95**	**95**	**95**	**98**	**89**	**90**	**95**	**95**	**95**	**95**	**99**	**95**

BWBSmw2
08 BS
Sb - Cloudberry - Sphagnum
15 Plots

Layer	Latin Name	RG051 4
A	Larix laricina	
A	Picea mariana	5
A	**Layer Total**	**5**
B	Betula nana	1
B	Chamaedaphne calyculata	1
B	Larix laricina	4
B	Ledum groenlandicum	40
B	Picea mariana	25
B	Pinus contorta	
B	Salix sp.	
B	**Layer Total**	**60**
C	Carex sp.	
C	Equisetum scirpoides	
C	Eriophorum chamissonis	
C	Eriophorum sp.	
C	Geocaulon lividum	0.01
C	Oxycoccus oxycoccos	2
C	Rubus chamaemorus	7
C	Smilacina trifolia	1
C	Vaccinium vitis-idaea	10
C	**Layer Total**	**20**
D	Aulacomnium palustre	
D	Cetraria sp.	
D	Cladina mitis	10
D	Cladonia multiformis	
D	Cladonia sp.	3
D	Dicranum sp.	
D	Hylocomium splendens	
D	Peltigera sp.	
D	Pleurozium schreberi	
D	Polytrichum sp.	
D	Sphagnum sp.	85
D	**Layer Total**	**95**

BWBSmw2
09 BW
Sb - Willow
13 Plots

Plot Number and Structural Stage

Layer	Latin Name	Presence	Mean Cover	RG012 3a	RG059 3a	CG42 3	CG43 3	CG51 4	CG74 4	CG17 5	CG23 5	CG53 5	RG040 5	RG043 5	CG04 6	CG35 7
A	Larix laricina	15	1.2					10			5					
A	Picea glauca	8	0.8					10								
A	Picea mariana	69	10.2	5				10		10	5	40	15	2	25	20
A	Pinus contorta	8	0.2	2												
A	**Layer Total**	**100**	**3.1**	**7**	**0**	**0**	**0**	**30**	**0**	**10**	**10**	**40**	**15**	**2**	**25**	**20**
B	Alnus incana ssp. tenuifolia	36	1.1	3	1								5			3
B	Betula nana	55	1.7	4	2	2	3			1			7			
B	Betula papyrifera	23	0.5						5						1	1
B	Cornus stolonifera	9	0.0					0.2								
B	Ledum groenlandicum	92	22.3	3	5	40	30		60	5	35	15	7	20	60	10
B	Picea glauca	9	2.7					30								
B	Picea mariana	100	44.2	55	90	50	60	40	70	60	25	30	25	45	10	15
B	Pinus contorta	9	0.3	3												
B	Potentilla fruticosa	9	0.3	3												
B	Ribes glandulosum	9	0.1							1						
B	Ribes triste	9	0.0					0.2								
B	Rosa acicularis	58	0.7	1				1			1	1	2		1	1
B	Salix sp.	92	5.8	12	5	3	1	10	1	2	2	2	35		1	1
B	**Layer Total**	**100**	**6.1**	**70**	**90**	**85**	**80**	**75**	**95**	**60**	**60**	**45**	**75**	**60**	**70**	**25**
C	Achillea millefolium	9	0.0										0.1			
C	Arctostaphylos alpina var. rubra	33	1.0	5		2					2		3			
C	Aster ciliolatus	9	0.0										0.5			
C	Calamagrostis canadensis	8	0.1						1							
C	Carex sp.	27	0.4	1		1							2			
C	Cornus canadensis	45	0.7		2			1		1					2	2
C	Empetrum nigrum	17	0.4							2	3					
C	Epilobium angustifolium	9	0.1					1								
C	Equisetum arvense	55	0.5	3	0.5			0.5		0.5		1	0.5			
C	Equisetum sylvaticum	18	1.5												1	15
C	Fragaria virginiana var. glauca	9	0.1										1			
C	Geocaulon lividum	33	0.4								1		0.1	0.1		3
C	Linnaea borealis	18	1.4					10					5			
C	Listera cordata	9	0.0	0.1												
C	Lycopodium annotinum	8	0.0						0.2							
C	Mertensia paniculata	18	0.1					1					0.5			
C	Mitella nuda	18	0.1					0.5					0.5			
C	Penstemon fruticosus	9	0.2										2			
C	Petasites frigidus var. palmatus	9	0.1					1								
C	Pyrola grandiflora	8	0.2						2							
C	Pyrola sp.	9	0.0		0.5											
C	Rubus chamaemorus	36	1.7			10								2	5	2
C	Salix sp.	9	0.2										2			
C	Smilacina trifolia	9	0.0		0.5											
C	Vaccinium vitis-idaea	92	7.7		1	25	10	2	10	2	15	10	5	3	7	10
C	**Layer Total**	**100**	**0.7**	**11**	**4**	**35**	**10**	**15**	**13**	**4**	**20**	**11**	**20**	**5**	**14**	**30**
D	Aulacomnium palustre	31	3.2	2					10		5		25			
D	Cladina mitis	50	10.2		2	40	50				20			7	3	
D	Cladina rangiferina	38	1.5	1					3		5	5		5		
D	Cladonia sp.	31	0.5	1	2				1					2		
D	Dicranum sp.	27	0.8	5	2									2		
D	Dicranum scoparium	8	0.2								2					
D	Hylocomium splendens	100	40.8	30	35	20	20	60	60	75	55	60	15	30	40	30
D	Peltigera aphthosa	23	0.8						1		5					5
D	Peltigera sp.	36	0.4	1	0.5								2	1		
D	Pleurozium schreberi	100	25.4	20	15	10	20	25	25	10	10	35	30	50	40	40
D	Sphagnum sp.	36	4.7			15								2	5	30
D	Tomentypnum nitens	18	3.2	30		5										
D	**Layer Total**	**100**	**7.6**	**90**	**56**	**85**	**85**	**80**	**90**	**80**	**90**	**90**	**72**	**95**	**85**	**95**

BWBSmw2
10 TB
Lt - Buckbean
13 Plots

				Plot Number and Structural Stage						
Layer	Latin Name	Presence	Mean Cover	CG12 3	CG16 3	CG21 3	CG24 3	CG29 3	CG33 3	CG37 3
A	Betula papyrifera	8	0.2							
A	Larix laricina	15	0.5							
A	Picea mariana	15	0.6							
A	**Layer Total**	**100**	**0.4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
B	Alnus incana ssp. tenuifolia	8	0.2							
B	Betula nana	100	29.2	5	30	35	35	15	50	5
B	Betula papyrifera	15	0.5							
B	Chamaedaphne calyculata	69	10.4	2	20		25	50	15	15
B	Larix laricina	92	2.8	1	1	2	5	1	1	1
B	Ledum groenlandicum	38	1.2	5						2
B	Myrica gale	77	14.8		10	60	15	15	45	
B	Picea mariana	77	5.0	10	5		5	1	1	2
B	Salix sp.	69	5.3	1	10	15	2			
B	**Layer Total**	**100**	**7.7**	**22**	**70**	**95**	**75**	**75**	**95**	**20**
C	Andromeda polifolia	8	0.8							
C	Calamagrostis canadensis	8	1.2							
C	Carex aquatilis	46	10.4					35		10
C	Carex capillaris	15	3.1							
C	Carex sitchensis	46	14.0	60	10	10			2	40

				Plot Number and Structural Stage						
Layer	Latin Name	Presence	Mean Cover	CG12 3	CG16 3	CG21 3	CG24 3	CG29 3	CG33 3	CG37 3
C	Carex sp.	31	2.2				1			
C	Carex utriculata	8	1.2							
C	Drosera anglica	8	0.4							
C	Equisetum fluviatile	8	0.8		10					
C	Equisetum sp.	8	0.1							
C	Eriophorum angustifolium	8	0.9							
C	Eriophorum chamissonis	15	0.4							2
C	Menyanthes trifoliata	8	1.2							
C	Oxycoccus oxycoccos	38	0.7	1			0.5		1	
C	Pedicularis groenlandica	8	0.2							
C	Potentilla palustris	23	0.3							
C	Potentilla sp.	23	0.4		2		2			
C	Rubus chamaemorus	23	0.2	1			1			
C	Smilacina trifolia	62	2.7	2	5				10	5
C	Trichophorum cespitosum	8	0.5							
C	Utricularia sp.	8	0.2							
C	Vaccinium vitis-idaea	23	0.4	1						
C	**Layer Total**	**100**	**1.9**	**60**	**25**	**10**	**4**	**35**	**13**	**50**
D	Aulacomnium palustre	38	5.0					30	10	
D	Calliergon sp.	15	5.0			5				
D	Drepanocladus sp.	8	2.3						30	
D	Plagiomnium sp.	8	0.2							
D	Pleurozium schreberi	8	0.4							

				Plot Number and Structural Stage						
Layer	Latin Name	Presence	Mean Cover	CG12 3	CG16 3	CG21 3	CG24 3	CG29 3	CG33 3	CG37 3
D	Sphagnum sp.	85	45.8	90	75	10	90		50	80
D	Tomentypnum nitens	8	1.5							
D	**Layer Total**	**100**	**8.6**	**90**	**75**	**15**	**90**	**30**	**90**	**80**

BWBSmw2
10 TB
Lt - Buckbean
13 Plots

Layer	Latin Name	CG08 3a	RG020 3a	RG066 3a	RG049 3b	RG063 3b	RG014 5
A	Betula papyrifera						2
A	Larix laricina		1				5
A	Picea mariana		3				5
A	**Layer Total**	**0**	**4**	**0**	**0**	**0**	**12**
B	Alnus incana ssp. tenuifolia						3
B	Betula nana	40	25	20	40	55	25
B	Betula papyrifera					1	5
B	Chamaedaphne calyculata		3			2	3
B	Larix laricina	2	7	4	5		7
B	Ledum groenlandicum		1			5	3
B	Myrica gale	7	7	4	20	10	
B	Picea mariana	1	20			5	15
B	Salix sp.	10	15		7	2	7
B	**Layer Total**	**55**	**70**	**25**	**70**	**70**	**45**
C	Andromeda polifolia			10			
C	Calamagrostis canadensis					15	
C	Carex aquatilis		12	3	45		30
C	Carex capillaris			20		20	
C	Carex sitchensis	60					

Layer	Latin Name	CG08 3a	RG020 3a	RG066 3a	RG049 3b	RG063 3b	RG014 5
C	Carex sp.		10	10			7
C	Carex utriculata				15		
C	Drosera anglica			5			
C	Equisetum fluviatile						
C	Equisetum sp.						1
C	Eriophorum angustifolium			12			
C	Eriophorum chamissonis					3	
C	Menyanthes trifoliata			15			
C	Oxycoccus oxycoccos	5				2	
C	Pedicularis groenlandica			2			
C	Potentilla palustris		1		0.5		2
C	Potentilla sp.	1					
C	Rubus chamaemorus					1	
C	Smilacina trifolia	3	4			0.5	5
C	Trichophorum cespitosum			7			
C	Utricularia sp.			3			
C	Vaccinium vitis-idaea		2			2	
C	**Layer Total**	**60**	**28**	**80**	**60**	**45**	**43**
D	Aulacomnium palustre		5			10	10
D	Calliergon sp.			60			
D	Drepanocladus sp.						
D	Plagiomnium sp.		2				
D	Pleurozium schreberi				5		

Layer	Latin Name	CG08 3a	RG020 3a	RG066 3a	RG049 3b	RG063 3b	RG014 5
D	Sphagnum sp.	25	80		15	60	20
D	Tomentypnum nitens			20			
D	**Layer Total**	**25**	**87**	**80**	**20**	**70**	**55**

BWBSmw2
00 AB
Bebb's willow - Mountain alder - Bluejoint swamp
4 Plots

				Plot Number and Structural Stage			
Layer	Latin Name	Presence	Mean Cover	RG072 3a	CG31 3b	CG65 3b	RG070 3b
A	Picea mariana	25	1.3				5
A	Populus balsamifera	50	2.3	7			2
A	Populus tremuloides	25	0.8				3
A	Salix sp.	75	27.0	3	40	65	
A	**Layer Total**	**100**	**7.8**	**10**	**40**	**65**	**8**
B	Alnus incana ssp. tenuifolia	100	30.0	45	35	5	35
B	Alnus viridis ssp. sinuata	25	6.3			25	
B	Betula papyrifera	75	3.8	3		5	7
B	Cornus stolonifera	25	1.8				7
B	Picea glauca	75	2.0	3	3	2	
B	Picea mariana	25	1.3				5
B	Populus balsamifera	25	0.5				2
B	Ribes hudsonianum	50	1.8		5	2	
B	Ribes lacustre	75	1.0	1	2		1
B	Rosa acicularis	50	1.8		2		5
B	Rubus idaeus	50	1.0	1		3	
B	Salix sp.	100	19.3	30	30	10	7
B	Viburnum edule	75	8.3		1	25	7
B	**Layer Total**	**100**	**6.0**	**80**	**65**	**70**	**70**
C	Actaea rubra	25	0.8			3	
C	Aralia nudicaulis	50	0.5			2	0.1
C	Calamagrostis canadensis	100	12.5	20	5	15	10
C	Carex sp.	25	0.8		3		
C	Circaea alpina	50	3.0	10			2
C	Cornus canadensis	50	3.3		10		3
C	Dryopteris expansa	25	3.8	15			
C	Epilobium angustifolium	25	0.5		2		
C	Equisetum arvense	50	3.3		10		3
C	Equisetum sylvaticum	50	4.5	8			10
C	Galium boreale	50	0.8	3			0.001
C	Galium triflorum	50	0.8		1	2	
C	Geum macrophyllum	25	0.0	0.1			
C	Gymnocarpium dryopteris	25	0.1	0.5			
C	Linnaea borealis	50	5.3		20		1
C	Maianthemum canadense	25	1.3			5	
C	Mertensia paniculata	75	3.3	1	5	7	
C	Mitella nuda	100	4.3	3	7	3	4
C	Petasites frigidus var. palmatus	25	0.1				0.5
C	Pyrola asarifolia	25	1.3			5	
C	Rubus pubescens	75	2.8		5	5	1
C	Thalictrum occidentale	25	1.3			5	
C	Urtica dioica	25	0.0	0.1			
C	Viola sp.	75	0.7	0.1	2		0.5
C	**Layer Total**	**100**	**2.3**	**55**	**50**	**40**	**33**
D	Calliergon sp.	25	1.3	5			
D	Dicranum sp.	25	0.5				2
D	Hylocomium splendens	25	2.5				10
D	Plagiomnium sp.	50	4.3	10			7
D	Pleurozium schreberi	25	1.3				5
D	Ptilium crista-castrensis	25	0.8				3
D	Rhizomnium sp.	25	2.5		10		
D	**Layer Total**	**100**	**1.9**	**15**	**10**	**0**	**27**

BWBSmw2
00 LR
Leatherleaf - Bog-rosemary - Sphagnum
7 Plots

				Plot Number and Structural Stage						
Layer	Latin Name	Presence	Mean Cover	CG07 3a	CG40 3a	CG72 3a	CG73 3a	RG058 3a	RG003 3b	RG064 3b
A	**Layer Total**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
B	Betula nana	33	0.3		1	1				
B	Betula papyrifera	17	0.1						0.5	
B	Chamaedaphne calyculata	100	34.2	5	65	50	50	20	15	7
B	Larix laricina	17	0.1			0.5				
B	Ledum groenlandicum	67	10.8	20			15	10	20	2
B	Myrica gale	17	0.3			2				
B	Picea mariana	100	5.1	15	2	0.5	3	3	7	1
B	Salix sp.	17	0.2						1	
B	**Layer Total**	**100**	**6.4**	**35**	**65**	**50**	**65**	**30**	**40**	**10**
C	Andromeda polifolia	33	9.2	25				30		40
C	Carex aquatilis	50	5.3			10	2		20	
C	Carex sp.	17	0.2		1					20
C	Drosera rotundifolia	17	0.2			1				
C	Eriophorum chamissonis	17	2.0					12		
C	Eriophorum sp.	67	0.9	0.5	1	1	3			
C	Oxycoccus oxycoccos	67	1.5	1		5		1	2	
C	Rubus chamaemorus	67	3.0	5			5	3	5	2
C	Smilacina trifolia	50	5.8	5		25		5		30
C	Vaccinium vitis-idaea	33	0.9	0.5					5	
C	**Layer Total**	**100**	**2.9**	**35**	**2**	**40**	**10**	**50**	**32**	**80**
D	Aulacomnium palustre	17	1.2						7	
D	Polytrichum sp.	17	0.8						5	
D	Sphagnum sp.	100	94.7	95	99	95	99	95	85	95
D	**Layer Total**	**100**	**32.2**	**95**	**99**	**95**	**99**	**95**	**95**	**95**

BWBSmw2
00 SB
Sw - Currant - Bluebell
13 Plots

				Plot Number and Structural Stage								
Layer	Latin Name	Presence	Mean Cover	CG03 3	CG34 3	CG62 3	CG69 3	CG70 3	CG56 4	RG018 4	RG068 5	CG66 6
A	Betula papyrifera	31	5.4						35		5	15
A	Picea glauca	54	15.4						20		45	30
A	Populus balsamifera	8	0.2									
A	Populus tremuloides	31	10.4							40		10
A	Salix sp.	8	0.5									
A	**Layer Total**	**100**	**6.4**	**0**	**0**	**0**	**0**	**0**	**50**	**40**	**45**	**45**
B	Alnus incana ssp. tenuifolia	85	11.7	15	25	15	40	1			17	10
B	Alnus viridis ssp. sinuata	23	1.0									5
B	Betula papyrifera	69	4.5	7	7	5	15		10		3	
B	Cornus stolonifera	46	2.2			2	2				7	5
B	Ledum groenlandicum	15	0.2		1							
B	Picea engelmannii x glauca	8	0.1	1								
B	Picea glauca	85	9.6		3	20	10	3	10	20	10	12
B	Populus balsamifera	8	0.4		5							
B	Populus tremuloides	38	2.8	5	10	5				15		
B	Ribes glandulosum	8	0.2									
B	Ribes hudsonianum	31	0.5		2	3	1	1				
B	Ribes lacustre	8	0.0									
B	Ribes sp.	8	0.1									
B	Rosa acicularis	100	10.5	3	15	10	25	1	20	5	5	10
B	Rubus idaeus	15	0.9	2		10						
B	Salix sp.	77	5.8	5		5	10	15	15	3	15	
B	Shepherdia canadensis	15	0.5							2		
B	Viburnum edule	85	7.2			7	15	2	5	7	10	10
B	**Layer Total**	**100**	**3.2**	**35**	**55**	**65**	**85**	**20**	**55**	**50**	**60**	**45**
C	Achillea millefolium	15	0.2					3				
C	Actaea rubra	15	0.5				2					5
C	Aralia nudicaulis	38	0.7				2				1	5
C	Aster ciliolatus	15	0.0									
C	Calamagrostis canadensis	62	11.5	70	5		25	25		2	5	10
C	Carex disperma	15	0.3		3							1
C	Carex sp.	8	0.2								3	
C	Cornus canadensis	92	12.5		10	3	40	2	25	7	10	15
C	Dryopteris expansa	8	0.2									
C	Elymus glaucus	8	0.1						1			
C	Epilobium angustifolium	54	1.8	5	5	10	2			1		
C	Equisetum arvense	69	12.3		15	40	15	20	5		30	10
C	Equisetum sylvaticum	38	4.4	2		5	15				20	
C	Fragaria vesca	8	0.1									
C	Fragaria virginiana	15	0.1									
C	Fragaria virginiana var. glauca	8	0.2			2						
C	Galium boreale	31	0.2						2	0.01		
C	Galium triflorum	23	0.8			5	3					
C	Geocaulon lividum	8	0.0							0.001		
C	Geum macrophyllum	23	1.0			10	1	2				
C	Gymnocarpium dryopteris	15	0.3									
C	Lathyrus ochroleucus	15	0.5					5				
C	Linnaea borealis	46	2.2							12	5	5
C	Lycopodium annotinum	15	0.5									2
C	Maianthemum canadense	8	0.0									
C	Mertensia paniculata	38	1.9			7	5		5			3
C	Mitella nuda	46	2.6		15						3	
C	Orthilia secunda	15	0.2						1			

				Plot Number and Structural Stage								
Layer	Latin Name	Presence	Mean Cover	CG03 3	CG34 3	CG62 3	CG69 3	CG70 3	CG56 4	RG018 4	RG068 5	CG66 6
C	Pedicularis labradorica	8	0.0							0.01		
C	Petasites frigidus var. palmatus	31	0.9				3				3	3
C	Poa sp.	8	0.8			10						
C	Pyrola asarifolia	8	0.0									
C	Pyrola chlorantha	8	0.1									
C	Rubus pubescens	85	5.6	3	5	5	10	7			7	10
C	Taraxacum officinale	8	0.2					3				
C	Trientalis europaea ssp. arctica	8	0.0					0.5				
C	Vaccinium vitis-idaea	31	0.7							4		
C	Vicia americana	8	0.5					7				
C	Viola sp.	54	1.2		3	5	2				0.5	2
C	**Layer Total**	**100**	**1.7**	**75**	**55**	**80**	**85**	**60**	**35**	**26**	**75**	**55**
D	Aulacomnium palustre	31	5.0	10	10			40			5	
D	Cladina rangiferina	8	0.0							0.01		
D	Cladonia sp.	8	0.0							0.1		
D	Hylocomium splendens	46	13.2						10	20	20	
D	Peltigera sp.	8	0.1							1		
D	Pleurozium schreberi	38	6.5							7	20	
D	Polytrichum sp.	8	1.2					15				
D	Ptilium crista-castrensis	46	3.2						5		5	5
D	Rhizomnium sp.	38	1.6				5				3	2
D	Sphagnum sp.	15	0.3				2	2				
D	**Layer Total**	**100**	**3.1**	**10**	**10**	**0**	**7**	**50**	**15**	**28**	**53**	**7**

BWBSmw2
00 SB
Sw - Currant - Bluebell
13 Plots

Layer	Latin Name	CG68 6	RG052 6	RG062 6	CG48 7
A	Betula papyrifera	15			
A	Picea glauca	25	30	20	30
A	Populus balsamifera		3		
A	Populus tremuloides		35	50	
A	Salix sp.	7			
A	**Layer Total**	**40**	**60**	**65**	**30**
B	Alnus incana ssp. tenuifolia	10	15	2	2
B	Alnus viridis ssp. sinuata	3		5	
B	Betula papyrifera	7		2	3
B	Cornus stolonifera	7	5		
B	Ledum groenlandicum				2
B	Picea engelmannii x glauca				
B	Picea glauca	10	7	20	
B	Populus balsamifera				
B	Populus tremuloides		1		
B	Ribes glandulosum	2			
B	Ribes hudsonianum				
B	Ribes lacustre		0.1		
B	Ribes sp.			1	
B	Rosa acicularis	10	3	5	25
B	Rubus idaeus				
B	Salix sp.	2	5		1
B	Shepherdia canadensis		4		
B	Viburnum edule	15	7	10	5
B	**Layer Total**	**50**	**40**	**40**	**30**
C	Achillea millefolium		0.001		
C	Actaea rubra				
C	Aralia nudicaulis		0.01	0.5	
C	Aster ciliolatus		0.5	0.1	
C	Calamagrostis canadensis	7			
C	Carex disperma				
C	Carex sp.				
C	Cornus canadensis	3	10	12	25
C	Dryopteris expansa	3			
C	Elymus glaucus				
C	Epilobium angustifolium		0.01		1
C	Equisetum arvense	10			15
C	Equisetum sylvaticum	15			
C	Fragaria vesca			1	
C	Fragaria virginiana		1	0.1	
C	Fragaria virginiana var. glauca				
C	Galium boreale		0.1	1	
C	Galium triflorum	2			
C	Geocaulon lividum				
C	Geum macrophyllum				
C	Gymnocarpium dryopteris	3		0.5	
C	Lathyrus ochroleucus		1		
C	Linnaea borealis		2	1	3
C	Lycopodium annotinum				5
C	Maianthemum canadense			0.5	
C	Mertensia paniculata	5			
C	Mitella nuda	5	7	1	3
C	Orthilia secunda				2

Layer	Latin Name	CG686	RG0526	RG0626	CG487
C	Pedicularis labradorica				
C	Petasites frigidus var. palmatus		3		
C	Poa sp.				
C	Pyrola asarifolia			0.01	
C	Pyrola chlorantha		1		
C	Rubus pubescens	15	1	5	5
C	Taraxacum officinale				
C	Trientalis europaea ssp. arctica				
C	Vaccinium vitis-idaea		0.1	0.5	5
C	Vicia americana				
C	Viola sp.	3		0.1	
C	**Layer Total**	**60**	**25**	**20**	**50**
D	Aulacomnium palustre				
D	Cladina rangiferina				
D	Cladonia sp.				
D	Hylocomium splendens		65	12	45
D	Peltigera sp.				
D	Pleurozium schreberi		20	7	30
D	Polytrichum sp.				
D	Ptilium crista-castrensis		10	2	15
D	Rhizomnium sp.	10	0.5		
D	Sphagnum sp.				
D	**Layer Total**	**10**	**95**	**21**	**85**

BWBSmw2
00 SS
Scrub birch - Willow - Water Sedge fen
5 Plots

				Plot Number and Structural Stage				
			Mean	CG26	RG006	RG009	RG019	RG060
Layer	Latin Name	Presence	Cover	2b	2b	2b	2b	2b
A	**Layer Total**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**
B	Betula nana	40	1.8		7	2		
B	Chamaedaphne calyculata	20	1.4		7			
B	Picea mariana	20	0.6		3			
B	Rosa acicularis	20	0.1				0.5	
B	Salix sp.	40	1.6	5		3		
B	**Layer Total**	**100**	**1.1**	**5**	**15**	**5**	**0.5**	**0**
C	Calamagrostis canadensis	40	18.0				85	5
C	Carex aquatilis	60	28.0		40	65		35
C	Carex canescens	20	2.0					10
C	Carex sitchensis	20	17.0	85				
C	Carex sp.	40	1.5			7	0.5	
C	Carex utriculata	20	9.0					45
C	Epilobium sp.	20	0.2					1
C	Equisetum arvense	20	0.4				2	
C	Equisetum fluviatile	20	0.2	1				
C	Eriophorum angustifolium	20	1.0		5			
C	Eriophorum chamissonis	20	0.4		2			
C	Mertensia paniculata	20	0.0				0.1	
C	Oxycoccus oxycoccos	20	1.0		5			
C	Potentilla norvegica	20	0.1					0.5
C	Potentilla palustris	40	1.0			3		2
C	Smilacina trifolia	20	1.0		5			
C	Thalictrum sp.	20	0.0				0.01	
C	Urtica dioica	20	0.1				0.5	
C	**Layer Total**	**100**	**4.5**	**85**	**55**	**75**	**85**	**95**
D	Aulacomnium palustre	20	12.0			60		
D	Calliergon sp.	40	1.6				3	5
D	Drepanocladus sp.	20	1.0	5				
D	Plagiomnium sp.	20	2.0				10	
D	Sphagnum sp.	20	17.0		85			
D	**Layer Total**	**100**	**6.7**	**5**	**85**	**90**	**13**	**5**

BWBSmw2
00 WB
Drummond's willow - Bluejoint low bench / swamp
7 Plots

				Plot Number and Structural Stage						
Layer	Latin Name	Presence	Mean Cover	CG22 2b	CG50 2b	CG67 2b	CG75 2b	CG39 3a	RG037 3a	RG010 3b
A	**Layer Total**	**0**	**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
B	Alnus incana ssp. tenuifolia	57	11.6		1	10			65	5
B	Betula nana	14	1.0							7
B	Larix laricina	29	0.3					1		1
B	Picea glauca	14	0.1					1		
B	Picea mariana	14	0.1							0.5
B	Populus tremuloides	14	0.1				1			
B	Rosa acicularis	14	0.1						1	
B	Rubus idaeus	14	0.3			2				
B	Salix sp.	100	19.1	10	3	1	5	50	55	10
B	**Layer Total**	**100**	**3.6**	**10**	**4**	**13**	**6**	**50**	**80**	**22**
C	Achillea millefolium	14	0.1						1	
C	Andromeda polifolia	14	0.1					1		
C	Artemisia sp.	14	0.3						2	
C	Calamagrostis canadensis	71	38.4	10	10	95	99		55	
C	Carex aquatilis	14	10.0					70		
C	Carex sitchensis	14	10.0	70						
C	Carex sp.	43	23.6		75	5				85
C	Carex utriculata	29	2.1				5	10		
C	Delphinium glaucum	14	0.3	2						
C	Epilobium angustifolium	14	0.1	1						
C	Equisetum arvense	14	5.7						40	
C	Geum macrophyllum	14	0.4			3				
C	Mertensia paniculata	14	0.7	5						
C	Polygonum sp.	14	0.1				0.5			
C	Potentilla palustris	14	0.3							2
C	Potentilla sp.	29	0.6		1				3	
C	**Layer Total**	**100**	**5.8**	**85**	**85**	**95**	**99**	**75**	**80**	**87**
D	Aulacomnium palustre	29	5.7					30		10
D	Sphagnum sp.	14	1.4					10		
D	**Layer Total**	**100**	**3.6**	**0**	**0**	**0**	**0**	**40**	**0**	**10**

APPENDIX C

Environmental Data Synthesis Tables (Appendix Formatting is not Preserved from Original Excel Format)

BWBSmw2
01 AM
SwAt - Step moss
22 Plots

Field Name	Mean	Range	CG05	CG06	CG36	CG41	CG55	CG57	CG76	RG005	CG11	CG18	CG30	CG52
Structural Stage			2	3	3	4	4	4	4	4	5	5	5	5
Elevation	443	339-706	395	470	390	450	356	368	368	434	525	510	490	477
Slope Gradient	3.8	0-14	0	10	3	0	0	10	0	4	0	0	0	0
Aspect		all	999	30	170	999	999	310	999	345	999	999	999	999
Slope Position		all	LV	LW	LW	LV	LV	MD	LV	CR	LV	LV	LV	LV
Moisture Regime	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Nutrient Regime		B-D	C	C	C	C	C	C	C	C	C	C	D	C
Surficial Terrain			zcL^{G}b	czMbr	czMb	czMb	zcL^{G}b	zcL^{G}b	zcL^{G}b	czMbr	czMb	czMb	czMb	czMb
Underlying Terrain														
Soil Drainage		m-w	m	w	m	w	m	m	w	m	m	w	w	w
Root Restricting Type			N	N	N	N	P	N	N		N	N	N	N
Root Restricting Depth							30							
NTS Map Sheet			94O.025	94O.026	94O.035	94O.068	94O.015	94O.016	94O.006	94O.026	94O.055	94O.045	94O.048	94O.029
Surveyor			C.Clement R.Kowall	C.Clement R.Kowall	C.Clement R.Kowall	C.Clement R.Kowall	C.Clement R.Kowall	C.Clement R.Kowall	C.Clement R.Kowall	R.Dalziel D.Huntley	C.Clement R.Kowall	C.Clement R.Kowall	C.Clement R.Kowall	C.Clement R.Kowall
Ecosection			FNL	FNL	FNL	FNL	FNL	FNL	FNL	FNL	MAU	MAU	FNL	FNL
UTM Zone			10	10	10	10	10	10	10	10	10	10	10	10
UTM Easting			495015	504430	495200	527865	496165	504005	507590	506346	493625	489990	527335	544432
UTM Northing			6570305	6570080	6581010	6580335	6555775	6554570	6549325	6572957	6601945	6596180	6586330	656861
Air Photo Number			97042-16 - 086	97042-16- 080	97030-12- 088	97030-12- 066	97049-22- 042	97041-22- 102	97032-25- 184	30BCC97028- 15-154	97016-3- 096	97018-6- 156	97027-9- 030	97037-19- 026

BWBSmw2
01 AM
SwAt - Step moss
22 Plots

Field Name	RG039	RG041	RG054	CG58	RG023	RG024	RG042	RG061	RG071	CG19
Structural Stage	5	5	5	6	6	6	6	6	6	7
Elevation	515	706	348	365	497	459	339	406	347	540
Slope Gradient	8	12	14	5	8	4	0	5	0	0
Aspect	280	340	60	265	270	180	999	300	999	999
Slope Position	LW	MD	TO	UP	MD	LV	LV	LV	LV	LV
Moisture Regime	4	4	4	4	4	4	4	4	4	4
Nutrient Regime	B	C	D	C	C	C	C	C	C	C
Surficial Terrain	czMb	czMbj	$czL^{G}bj$	$zcL^{G}b$	szMb	czMb	$zcL^{G}b$	czMb	$czL^{G}b$	czMb
Underlying Terrain										
Soil Drainage	m	w	m	m	m	m	m	m	m	w
Root Restricting Type	K	K	P	N	K	K	P	P	P	N
Root Restricting Depth	35	45	45		65	45	45	45	45	
NTS Map Sheet	94O.039	94O.040	94O.016	94O.016	94O.045	94O.045	94O.015	94O.005	94O.025	94O.045
Surveyor	R.Dalziel D.Huntley	R.Dalziel D.Huntley	R.Dalziel D.Huntley	C.Clement R.Kowall	R.Dalziel D.Huntley	R.Dalziel D.Huntley	R.Dalziel D.Huntley	R.Dalziel D.Huntley	R.Dalziel D.Huntley R.Kowall	C.Clement R.Kowall
Ecosection	FNL	ETP	FNL	FNL	MAU	MAU	FNL	FNL	FNL	MAU
UTM Zone	10	10	10	10	10	10	10	10	10	10
UTM Easting	538915	554689	505918	507225	488695	490636	488817	502279	493613	492570
UTM Northing	6578472	6578184	6553107	6555620	6593029	6589053	6560614	6546385	6569026	6593670
Air Photo Number	30BCC97030-13- 154	30BCC97030-13-164	30BCC97049-23-124	97041-22-104	30BCC97026-7-050	30BCC97026-8-160	30BCC97033-20-044	30BCC97057-26-122	30BCC97032-17-090	97018-6- 158

BWBSmw2
02 LL
Pl - Lignonberry - Velvet-leaved blueberry
1 Plot

Field Name	Mean	Range	RG045
Structural Stage			4
Elevation	351	351	351
Slope Gradient	3.0	3.0	3
Aspect			25
Slope Position			CR
Moisture Regime	1	1	1
Nutrient Regime	A	A	A
Surficial Terrain			sEbr
Underlying Terrain			
Soil Drainage	r	r	r
Root Restricting Type			
Root Restricting Depth			
NTS Map Sheet			94O.016
Surveyor			R.Dalziel D.Huntley
Ecosection			FNL
UTM Zone			10
UTM Easting			500664
UTM Northing			6560148
Air Photo Number			30BCC97033-20-052

BWBSmw2
04 BL
Sb - Lignonberry - Coltsfoot
13 Plots

Field Name	Mean	Range	CG44	RG022	CG14	CG47	CG59	RG011	RG015	RG028
Structural Stage			3	4	5	5	5	5	5	5
Elevation	465	288-699	328	683	670	290	352	536	637	699
Slope Gradient	16.2	0-55	0	5	5	25	45	6	12	6
Aspect		all	999	999	260	10	30	270	345	100
Slope Position		all	LV	CR	MD	LW	MD	CR	CR	LV
Moisture Regime	3.5	3-4	3	4	4	3	4	4	3	3
Nutrient Regime		B-C	B	B	C	B	B	B	C	B
Surficial Terrain			dczMbr		zsEb	czMbr	czMbr	zsF^{G}th	zsL^{G}ka	szMbt
Underlying Terrain										
Soil Drainage		m-w	w	m	w	w	w	m	w	m
Root Restricting Type			N	K	N	N	N	K	K	K
Root Restricting Depth				45				40	40	45
NTS Map Sheet			94O.025	94O.049	94O.057	94O.026	94O.017	94O.057	94O.060	94O.049
Surveyor			C.Clement R.Kowall	R.Dalziel D.Huntley	C.Clement R.Kowall	C.Clement R.Kowall	C.Clement R.Kowall	R.Dalziel D.Huntley	R.Dalziel D.Huntley	R.Dalziel D.Huntley
Ecosection			FNL	ETP	ETP	FNL	FNL	ETP	ETP	ETP
UTM Zone			10	10	10	10	10	10	10	10
UTM Easting			489740	537665	522540	507495	516620	513824	549808	540662
UTM Northing			6562925	6592693	6601220	6562285	6555600	6604501	6604196	6590919
Air Photo Number			97048-19-160	30BCC97026-7-018	97016-3-078	97048-19-148	97041-22-110	30BCC97009-2-142	30BCC97009-2-164	30BCC97026-8-192

BWBSmw2
04 BL
Sb - Lignonberry - Colts
13 Plots

Field Name	RG056	RG065	RG031	RG044	RG069
Structural Stage	5	6	7	7	7
Elevation	288	289	680	300	291
Slope Gradient	55	20	8	8	15
Aspect	20	240	230	260	60
Slope Position	MD	MD	CR	TO	MD
Moisture Regime	4	3	3	3	4
Nutrient Regime	C	C	B	C	C
Surficial Terrain	dczCbhk-Fcs	zsCb-Fc	szMbr	zsFbt	$sF^{G}v$
Underlying Terrain				sgFb	dczMb
Soil Drainage	m	w	w	w	m
Root Restricting Type			K		P
Root Restricting Depth			45		60
NTS Map Sheet	94O.018	94O.008	94O.050	94O.015	94O.025
Surveyor	R.Dalziel D.Huntley	R.Dalziel D.Huntley	R.Dalziel D.Huntley	R.Dalziel D.Huntley	R.Dalziel D.Huntley R.Kowall
Ecosection	FNL	FNL	ETP	FNL	FNL
UTM Zone	10	10	10	10	10
UTM Easting	524340	530797	552343	496548	490484
UTM Northing	6553497	6546677	6589659	6560241	6561410
Air Photo Number	30BCC97049-23-134	30BCC97019-26-194	30BCC97026-8-200	30BCC97033-20-050	30BCC97032-17-092

BWBSmw2
05 SH
Sw - Currant - Horsetail
21 Plots

Field Name	Mean	Range	CG28	CG60	CG71	RG048	CG01	RG047	RG057	CG20	CG61	RG002	RG016
Structural Stage			3	3	3	3a	4	4	4	5	5	5	5
Elevation	344	270-500	437	340	290	278	254	283	282	445	288	300	500
Slope Gradient	0.6	0-6	0	0	0	0	0	0	0	0	0	2	5
Aspect		999, 90-120	999	999	999	999	999	999	999	999	999	90	180
Slope Position		LV	LV	LV	LV	LV	LV	LV	LV	LV	LV	LV	LV
Moisture Regime	4.5	3-5	5	5	5	4	5	4	3	5	5	3	5
Nutrient Regime		C-E	D	D	D	D	D	E	D	D	D	C	D
Surficial Terrain			zsF^{A}t	zsF^{A}p	zsF^{A}p	sFbt-M	szF^{A}t	szF^{A}bt-M	sF^{A}bmt	zsFbt	zsF^{A}t	gsFbt-M	szFvt-M
Underlying Terrain													sgFb
Soil Drainage		m-r	w	m	w	r	w	w	r	m	w	r	m
Root Restricting Type			N	N	N					N	N		
Root Restricting Depth													
NTS Map Sheet			94O.046	94O.017	94O.008	94O.017	94O.025	94O.017	94O.018	94O.045	94O.017	94O.025	94O.045
Surveyor			C.Clement R.Kowall	C.Clement R.Kowall	C.Clement R.Kowall	R.Dalziel D.Huntley	C.Clement R.Kowall	R.Dalziel D.Huntley	R.Dalziel D.Huntley	C.Clement R.Kowall	C.Clement R.Kowall	R.Dalziel D.Huntley	R.Dalziel D.Huntley
Ecosection			FNL	FNL	FNL	FNL	FNL	FNL	FNL	FNL	FNL	FNL	FNL
UTM Zone			10	10	10	10	10	10	10	10	10	10	10
UTM Easting			505165	516620	530975	515424	491060	511675	526144	496560	518800	492391	496161
UTM Northing			6586075	6655600	6544620	6560145	6567265	6561841	6553326	6594705	6556815	6572008	6590908
Air Photo Number			97027-9-010	97041-22-110	97042-27-070	30BCC97033-20-060	97032-17-092	30BCC97033-20-058	30BCC97049-23-136	97018-6-160	97041-22-112	30BCC97091-15-180	30BCC97026-7-046

BWBSmw2
05 SH
Sw - Currant - Horsetail
21 Plots

Field Name	RG025	RG027	RG033	RG046	CG02	CG27	CG45	CG46	RG036	RG053
Structural Stage	5	5	5	5	6	6	6	6	6	7
Elevation	389	497	331	285		395	270	283	417	309
Slope Gradient	6	0	0	0	0	0	0	0	0	0
Aspect	220	999	999	999	999	999	999	999	999	999
Slope Position	LV	LV	LV	LV	LV	LV	LV	LV	LV	LV
Moisture Regime	5	5	3	4	5	5	5	5	5	4
Nutrient Regime	D	D	D	D	D	D	D	D	E	D
Surficial Terrain	szFbt-M	zsFbt-M	zsFbt-M	zsFbt-M	$szF^{A}pt$	szFt	$zsF^{A}t$	$zsF^{A}t$	szFbt	zsFbt-M
Underlying Terrain	sgFb	sgFb	sgFb	sgFb						sgFb
Soil Drainage	w	w	w	w	w	w	w	w	w	w
Root Restricting Type					N	N	N	N		
Root Restricting Depth										
NTS Map Sheet	94O.045	94O.048	94O.035	94O.016	94O.025	94O.045	94O.025	94O.026	94O.037	94O.015
Surveyor	R.Dalziel D.Huntley	R.Dalziel D.Huntley	R.Dalziel D.Huntley	R.Dalziel D.Huntley	C.Clement R.Kowall	C.Clement R.Kowall	C.Clement R.Kowall	C.Clement R.Kowall	R.Dalziel D.Huntley	R.Dalziel D.Huntley
Ecosection	FNL	FNL	FNL	FNL	FNL	FNL	FNL	FNL	FNL	FNL
UTM Zone	10	10	10	10	10	10	10	10	10	10
UTM Easting	494793	527347	491689	505297	493055	492350	496167	501830	512883	49706
UTM Northing	6588781	6588651	6577350	6560994	6569110	6586515	6563170	6561785	6577454	6553251
Air Photo Number	30BCC97026-8 164	30BCC97026-8 182	30BCC97030-13-124	30BCC97033-20-054	97042-16-088	97027-9-042	97048-19-154	97048-19-156	30BCC97030-13-138	30BCC97049-23-118

BWBSmw2
06 BB
Sb - Feathermoss - Bluebells
4 Plots

Field Name	Mean	Range	CG10	CG49	RG034	RG050
Structural Stage			5	5	7	7
Elevation	415	384-465	465	384	392	419
Slope Gradient	2.5	0-4	3	0	3	4
Aspect			260	999	340	340
Slope Position		LV-LW	LW	LV	LV	LV
Moisture Regime	5.3	5-6	5	6	5	5
Nutrient Regime		B-D	B	C	D	C
Surficial Terrain			uOv	zcL^{G}b	hOxv	hOv
Underlying Terrain			spF^{G}b		czMb	cL^{G}b
Soil Drainage		p-m	m	p	m	i
Root Restricting Type			N	W	K	P
Root Restricting Depth				20	45	35
NTS Map Sheet			94O.055	94O.027	94O.035	94O.019
Surveyor			C.Clement R.Kowall	C.Clement R.Kowall	R.Dalziel D.Huntley	R.Dalziel D.Huntley
Ecosection			FNL	FNL	FNL	FNL
UTM Zone			10	10	10	10
UTM Easting			489945	517175	499149	535509
UTM Northing			6502940	6562980	6577150	6561029
Air Photo Number			97016-3-098	97037-19-008	30BCC97030-13-128	30BCC97033-20-074

BWBSmw2
07 TH
Lt - Horsetail
10 Plots

Field Name	Mean	Range	RG017	RG026	RG032	RG067	CG13	CG64
ural Stage			3a	3a	3a	3b	5	5
Elevation	442	364-638	479	440	379	364	526	410
e Gradient	0.0	0.0	0	0	0	0	0	0
Aspect	999	999	999	999	999	999	999	999
e Position		LV	LV	LV	LV	LV	LV	LV
re Regime	6.8	6-8	8	7	7	7	6	7
nt Regime		B-D	B	B	C	C	B	C
ial Terrain			hOb	hOvb	hOb	euOb	czMb	hOv
ng Terrain			czMb	M-X				czMb
l Drainage		v-i	v	v	p	v	i	p
cting Type			W		W	W		
ting Depth			15	30	30	10		
Map Sheet			94O.046	94O.046	94O.035	94O.007	94O.057	94O.019
Surveyor			R.Dalziel D.Huntley	R.Dalziel D.Huntley	R.Dalziel D.Huntley	R.Dalziel D.Huntley	C.Clement R.Kowall	C.Clement R.Kowall
Ecosection			FNL	FNL	FNL	FNL	MAU	FNL
UTM Zone			10	10	10	10	10	10
UTM Easting			503447	505493	489352	518337	511440	536165
UTM Northing			6591547	6589841	6576905	6548378	6601805	6556575
Air Photo Number			30BCC97026 7-040	30BCC97026 8-168	30BCC97030 13-122	30BCC97032 25-178	97016-3-084	97041-22-122

RG013	RG035	CG54	CG63
5	5	6	7
638	419	372	390
0	0	0	0
999	999	999	999
LV	LV	LV	LV
7	6	7	6
D	C	C	C
hOxv	euOb-X	hOv	hOv
czMb	Mb	zcL^{G}b	zcL^{G}b
p	p	p	p
W		W	W
35	30	15	8
94O.058 R.Dalziel D.Huntley	94O.036 R.Dalziel D.Huntley	94O.015 C.Clement R.Kowall	94O.018 C.Clement R.Kowall
ETP	FNL	FNL	FNL
10	10	10	10
530814	506871	488985	530435
6604493	6577101	6555590	6556070
30BCC97009-2-152	30BCC97030-13-134	97049-22-046	97014-22-118

BWBSmw2
08 BS
Sb - Cloudberry - Sphagnum
15 Plots

Field Name	Mean	Range	CG15	CG25	CG38	RG001	RG008	RG038	RG055	CG09
Structural Stage			3	3	3	3	3	3	3	4
Elevation	519	360-692	645	669	417	360	435	452	366	490
Slope Gradient	1.2	0-5	0	0	0	0	0	0	0	5
Aspect			999	999	999	999	999	999	999	40
Slope Position		LV, CR	LV	LV	LV	LV	LV	LV	LV	CR
Moisture Regime	7.1	7-8	7	7	7	8	7	7	7	7
Nutrient Regime		A-B	A	A	A	A	A	A	A	A
Surficial Terrain			eOb-X	eObp	eOb	euOb	euOvb-X	euOb-X	euOvb-X	euOb-X
Underlying Terrain										
Soil Drainage		v - p	p	p	p	v	p	p	p	v
Root Restricting Type			N	N	N	W	W	Z		N
Root Restricting Depth						10	55	30	30	
NTS Map Sheet			94O.059	94O.049	94O.036	94O.025	94O.028	94O.038	94O.017	94O.028
Surveyor			C.Clement R.Kowall	C.Clement R.Kowall	C.Clement R.Kowall	RD CC RK DH	R.Dalziel D.Huntley	R.Dalziel D.Huntley	R.Dalziel D.Huntley	C.Clement R.Kowall
Ecosection			ETP	ETP	FNL	FNL	FNL	FNL	FNL	FNL
UTM Zone			10	10	10	10	10	10	10	10
UTM Easting			537750	544310	507770	495254	533101	529011	512816	528845
UTM Northing			6600870	6595030	6579445	6567872	6573251	6577753	6553299	6569530
Air Photo Number			97016-3-068	97028-6-056	97030-12-080	30BCC97032-17-088	30BCC97028-15-170	30BCC97030-13-148	30BCC97049-23-128	97031-16-124

BWBSmw2
08 BS
Sb - Cloudberry - Sphag
15 Plots

Field Name	CG32	RG004	RG007	RG021	RG029	RG030	RG051
Structural Stage	4	4	4	4	4	4	4
Elevation	692	391	409	671	684	666	438
Slope Gradient	0	2	5	0	3	3	0
Aspect	999	30	5	999	320	350	999
Slope Position	LV	LV	LV	LV	LV	LV	LV
Moisture Regime	7	7	7	7	7	7	7
Nutrient Regime	A	A	A	A	A	A	A
Surficial Terrain	euObp	eOv	eOvb-X	uhOb	euOvb-X	euOvb-X	euOvb-X
Underlying Terrain		czMb-X	czMb				
Soil Drainage	p	v	p	p	v	v	p
Root Restricting Type	N	Z	Z	W			
Root Restricting Depth		34	25	20	20	25	30
NTS Map Sheet	94O.050	94O.025	94O.027	94O.050	94O.050	94O.050	94O.019
Surveyor	C.Clement R.Kowall	R.Dalziel D.Huntley	R.Dalziel D.Huntley	R.Dalziel D.Huntley	R.Dalziel D.Huntley	R.Dalziel D.Huntley	R.Dalziel D.Huntley
Ecosection	ETP	FNL	FNL	ETP	ETP	ETP	FNL
UTM Zone	10	10	10	10	10	10	10
UTM Easting	551040	499903	519990	550735	546502	552290	543110
UTM Northing	6587405	6573006	6572856	6592983	6590661	6589570	6561244
Air Photo Number	97027-9-014	30BCC97091-15-184	30BCC97028-15-162	30BCC97026-7-010	30BCC97026-8-196	30BCC97026-8-200	30BCC97033-20-078

BWBSmw2
09 BW
Sb - Willow
13 Plots

Field Name	Mean	Range	RG012	RG059	CG42	CG43	CG51	CG74	CG17	CG23
Structural Stage			3a	3a	3	3	4	4	5	5
Elevation	500	352-708	708	451	541	655	454	368	625	547
Slope Gradient	1.1	0-10	10	0	0	0	0	0	0	0
Aspect			45	999	999	999	999	999	999	999
Slope Position		LV, MD	MD	LV	LV	LV	LV	LV	LV	LV
Moisture Regime	6.5	6-7	6	7	7	7	6	6	6	7
Nutrient Regime		A-C	C	B	A	A	A	B	B	B
Surficial Terrain			hOxv	hOvb-X	ehOv	eOb	czMb	eOvb	hOv	czMb
Underlying Terrain			szMb		czMb				czMb	
Soil Drainage		p-i	i	v	p	p	i	p	p	p
Root Restricting Type			K		N	N	N		N	N
Root Restricting Depth			35	45						
NTS Map Sheet			94O.057	94O.020	94O.039	94O.040	94O.029	94O.007	94O.060	94O.047
Surveyor			R.Dalziel D.Huntley	R.Dalziel D.Huntley	C.Clement R.Kowall	C.Clement R.Kowall	C.Clement R.Kowall	C.Clement R.Kowall	C.Clement R.Kowall	C.Clement R.Kowall
Ecosection			ETP	FNL	FNL	ETP	FNL	FNL	ETP	FNL
UTM Zone			10	10	10	10	10	10	10	10
UTM Easting			522490	546256	544410	555510	539805		554410	519460
UTM Northing			6604492	6554397	6581285	6580285	6562335	6549265	6601420	6595215
Air Photo Number			30BCC97009-2-148	30BCC97058-23-056	97030-12-056	97030-12-048	97037-19-024	97032-25-182	97016-3-056	97058-6-016

BWBSmw2
09 BW
Sb - Willow
13 Plots

Field Name	CG53	RG040	RG043	CG04	CG35
Structural Stage	5	5	5	6	7
Elevation	490	530	352	395	390
Slope Gradient	0	0	4	0	0
Aspect	999	999	999	999	999
Slope Position	LV	LV	LV	LV	LV
Moisture Regime	6	6	7	6	7
Nutrient Regime	B	C	A	B	A
Surficial Terrain	hOv	hOxv	euOvb-X	hOvb	ehOv
Underlying Terrain	czMb	czMb	$zcL^{G}b$		
Soil Drainage	p	p	p	i	p
Root Restricting Type	N	W		N	N
Root Restricting Depth		40	42		
NTS Map Sheet	94O.029	94O.039	94O.015	94O.025	94O.035
Surveyor	C.Clement R.Kowall	R.Dalziel D.Huntley	R.Dalziel D.Huntley	C.Clement R.Kowall	C.Clement R.Kowall
Ecosection	FNL	FNL	FNL	FNL	FNL
UTM Zone	10	10	10	10	10
UTM Easting		544851	494636	494983	493045
UTM Northing		6578514	6559453	6570263	6580315
Air Photo Number	97037-19-028	30BCC97030-13-158	30BCC97033-20-048	97042-16-086	97030-12-090

BWBSmw2
10 TB
Lt - Buckbean
13 Plots

Field Name	Mean	Range	CG12	CG16	CG21	CG24	CG29	CG33	CG37	CG08
Structural Stage			3	3	3	3	3	3	3	3a
Elevation	524	340-678	510	655	480	671	505	678	407	485
Slope Gradient	0.0	0.0	0	0	0	0	0	0	0	0
Aspect		999	999	999	999	999	999	999	999	999
Slope Position		LV-DP	LV	LV	LV	LV	LV	LV	DP	LV
Moisture Regime	7.5	7-8	7	7	7	8	7	8	8	7
Nutrient Regime		A-D	B	B	B	C	B	B	A	C
Surficial Terrain			eOv	eOb	euOb	euObp	eOp	eOb	euOb	euOb
Underlying Terrain			czMb							
Soil Drainage		v	v	v	v	v	v	v	v	v
Root Restricting Type			N	W	N	W	W	W		W
Root Restricting Depth				0		0	0	0		0
NTS Map Sheet			94O.056	94O.059	94O.046	94O.049	94O.	94O.050	94O.036	94O.027
Surveyor			C.Clement R.Kowall	C.Clement R.Kowall	C.Clement R.Kowall	C.Clement R.Kowall	C.Clement R.Kowall	C.Clement R.Kowall	C.Clement R.Kowall	C.Clement R.Kowall
Ecosection			MAU	ETP	FNL	ETP	FNL	ETP	FNL	FNL
UTM Zone			10	10	10	10	10	10	10	10
UTM Easting			504735	542795	505300	546050	517590	556540	501470	520490
UTM Northing			6602575	6600225	6594515	6594990	6587550	6586945	6581310	6569680
Air Photo Number			97016-3-088	97016-3-064	97058-6-006	97058-6-056	97027-9-036	97027-9-011	97030-12-084	97031-16-120

BWBSmw2
10 TB
Lt - Buckbean
13 Plots

Field Name	RG020	RG066	RG049	RG063	RG014
Structural Stage	3a	3a	3b	3b	5
Elevation	643	340	425	373	635
Slope Gradient	0	0	0	0	0
Aspect	999	999	999	999	999
Slope Position	LV	LV	LV	LV	LV
Moisture Regime	8	8	8	7	8
Nutrient Regime	D	C	D	C	D
Surficial Terrain	uhOb	euOb	euOb	ehOb	uOb
Underlying Terrain		$gsF^{G}b$-E			
Soil Drainage	v	v	v	v	v
Root Restricting Type	W	W	W	W	W
Root Restricting Depth	15	15	10	25	10
NTS Map Sheet	94O.050	94O.008	94O.018	94O.007	94O.059
Surveyor	R.Dalziel D.Huntley	R.Dalziel D.Huntley	R.Dalziel D.Huntley	R.Dalziel D.Huntley	R.Dalziel D.Huntley
Ecosection	ETP	FNL	FNL	FNL	ETP
UTM Zone	10	10	10	10	10
UTM Easting	556361	526354	527590	518168	543314
UTM Northing	6593262	6549162	6561221	6547279	6604534
Air Photo Number	30BCC97026-7-006	30BCC97032-25-172	30BCC97033-20-068	30BCC97057-26-112	30BCC9709-2-160

BWBSmw2
00 AB
Bebb's willow - Mountain alder - Bluejoint swamp
4 Plots

Field Name	Mean	Range	RG072	CG31	CG65	RG070
Structural Stage			3a	3b	3b	3b
Elevation	436	344-615	364	615	420	344
Slope Gradient	1.3	0-5	0	0	5	0
Aspect			999	999	160	999
Slope Position		LV, LW	LV	LV	LW	LV
Moisture Regime	5.25	4-6	6	6	4	5
Nutrient Regime		C-D	D	C	C	D
Surficial Terrain			hOxv	hOv	czMb	hOxv
Underlying Terrain			$czL^{G}b$	czMb		$czL^{G}b$
Soil Drainage		p-m	p	p	m	i
Root Restricting Type			W	W	N	P
Root Restricting Depth			32	20		30
NTS Map Sheet			94O.025	94O.049	94O.005	94O.025
Surveyor			R.Dalziel D.Huntley R.Kowall	C.Clement R.Kowall	C.Clement R.Kowall	R.Dalziel D.Huntley R.Kowall
Ecosection			FNL	ETP	FNL	FNL
UTM Zone			10	10	10	10
UTM Easting			498992	543070	489680	493856
UTM Northing			6568977	6581455	6544290	6567467
Air Photo Number			30BCC97032-17-088	97027-9-020	97023-27-034	30BCC97032-17-090

BWBSmw2
00 LR
Leatherleaf - Bog rosemary - Sphagnum
7 Plots

Field Name	Mean	Range	CG07	CG40	CG72	CG73	RG058	RG003
ural Stage			3a	3a	3a	3a	3a	3b
Elevation	430	368-538	490	455	374	368	399	385
e Gradient	0.0	0.0	0	0	0	0	0	0
Aspect		999	999	999	999	999	999	999
e Position		LV	LV	LV	LV	LV	LV	LV
re Regime	7.1	6-8	6	7	8	7	7	8
nt Regime		A	A	A	A	A	A	A
ial Terrain			euObv	eObp	eOb	eOb	eOb	euOvb
ng Terrain								czMb
l Drainage		v-p	v	p	p	p	v	v
cting Type			N	N	W	W	W	W
ting Depth					0	30	20	25
Map Sheet			94O.027	94O.037	94O.007	94O.007	94O.019	94O.035
Surveyor			C.Clement R.Kowall	C.Clement R.Kowall	C.Clement R.Kowall	C.Clement R.Kowall	R.Dalziel D.Huntley	R.Dalziel D.Huntley
Ecosectio n			FNL	FNL	FNL	FNL	FNL	FNL
UTM Zone			10	10	10	10	10	10
UTM Easting			512860	522255	521950	513510	536501	496692
UTM Northing			6571310	6580245	6543440	6549265	6553372	6573520
Air Photo Number			97031-16-114	97030-12-070	97042-27-076	97032-25-182	30BCC97049 23-142	30Bcc97091-15-182

RG064

3b

538

0

999

LV

7

A

eOb

v

W

20

94O.007

R.Dalziel

D.Huntley

FNL

10

522705

6546995

30BCC97019

26-200

BWBSmw2
00 SB
Sw - Currant - Bluebell
13 Plots

Field Name	Mean	Range	CG03	CG34	CG62	CG69	CG70	CG56	RG018	RG068
Structural Stage			3	3	3	3	3	4	4	5
Elevation	399	306-470	400	380	382	425	404	306	470	370
Slope Gradient	2.1	0-12	0	0	0	0	0	0	2	3
Aspect			999	999	999	999	999	999	45	280
Slope Position		LV-MD	LV	LV	LV	LW	LV	LV	LV	LV
Moisture Regime	4.8	4-6	5	4	5	5	6	5	4	5
Nutrient Regime		B-D	D	D	C	D	D	B	D	D
Surficial Terrain			zcL^{G}b	zcL^{G}b	zcL^{G}b	hOv	hOv	sFv	szFbt	czMb
Underlying Terrain						czMb		zsFt		
Soil Drainage		p-w	i	m	m	i	p	w	m	i
Root Restricting Type			P	N	N	N	W	N	K	W
Root Restricting Depth			40				22		40	35
NTS Map Sheet			94O.025	94O.035	94O.018	94O.006	94O.007	94O.015	94O.046	94O.006
Surveyor			C.Clement R.Kowall	C.Clement R.Kowall	C.Clement R.Kowall	C.Clement R.Kowall	C.Clement R.Kowall	C.Clement R.Kowall	R.Dalziel D.Huntley	R.Dalziel D.Huntley
Ecosection			FNL	FNL	FNL	FNL	FNL	FNL	FNL	FNL
UTM Zone			10	10	10	10	10	10	10	10
UTM Easting			491605	489705	524670	507566	514035	497380	512564	508139
UTM Northing			6570840	6580950	6556700	6543969	6542905	6556575	6592494	6548198
Air Photo Number			97042-16-088	97030-12-092	97041-22-114	97023-27-044	97023-27-048	97049-22-042	30BCC97026-7-036	30BCC97032-25-184

BWBSmw2
00 SB
Sw - Currant - Bluebell
13 Plots

Field Name	CG66	CG68	RG052	RG062	CG48
Structural Stage	6	6	6	6	7
Elevation	421	425	416	419	372
Slope Gradient	0	3	7	12	0
Aspect	999	90	70	260	999
Slope Position	LV	LW	MD	MD	LV
Moisture Regime	5	5	4	4	5
Nutrient Regime	D	D	D	D	D
Surficial Terrain	czMb	czMb	$zcL^{G}b$	czMbm	$zcL^{G}b$
Underlying Terrain					
Soil Drainage	m	i	m	m	i
Root Restricting Type	N	N	P	K	N
Root Restricting Depth			45	55	
NTS Map Sheet	94O.005	94O.006	94O.015	94O.006	94O.027
Surveyor	C.Clement R.Kowall	C.Clement R.Kowall	R.Dalziel D.Huntley	R.Dalziel D.Huntley	C.Clement R.Kowall
Ecosection	FNL	FNL	FNL	FNL	FNL
UTM Zone	10	10	10	10	10
UTM Easting	497755	507566	490802	510981	515065
UTM Northing	6543515	6543969	6553092	6545421	6563460
Air Photo Number	97023-27-038	97023-27-044	30BCC97049-23-114	30BCC97057-26-116	97037-19-006

BWBSmw2
00 SS
Scrub birch - Willow - Water sedge fen
5 Plots

Field Name	Mean	Range	CG26	RG006	RG009	RG019	RG060
Structural Stage			2b	2b	2b	2b	2b
Elevation	511	402-665	665	429	472	587	402
Slope Gradient	1.6	0-6	0	0	2	6	0
Aspect			999	999	230	130	999
Slope Position		LV	LV	LV	LV	LV	LV
Moisture Regime	7	5-8	7	8	8	5	7
Nutrient Regime		B-D	C	B	C	D	D
Surficial Terrain			hOb	euOb	euOb	czFbf	hOv
Underlying Terrain							zcLb
Soil Drainage		v, m	v	v	v	m	v
Root Restricting Type			W	W	W		W
Root Restricting Depth			0	15	15		20
NTS Map Sheet			94O.049	94O.026	94O.055	94O.048	94O.005
Surveyor			C.Clement R.Kowall	R.Dalziel D.Huntley	R.Dalziel D.Huntley	R.Dalziel D.Huntley	R.Dalziel D.Huntley
Ecosection			ETP	FNL	MAU	ETP	FNL
UTM Zone			10	10	10	10	10
UTM Easting			536870	510131	489919	525615	492552
UTM Northing			6595500	6572260	6603797	6592611	6546338
Air Photo Number			97028-6-060	30BCC97028-15-156	30BCC97009-2-126	30BCC97026-7-026	30BCC97057-26-128

BWBSmw2
00 WB
Drummond's willow - Bluejoint low bench / swamp
7 Plots

Field Name	Mean	Range	CG22	CG50	CG67	CG75	CG39	RG037	RG010
Structural Stage			2b	2b	2b	2b	3a	3a	3b
Elevation	433	368-480	480	436	415	368	435	440	454
Slope Gradient	0.0	0.0	0	0	0	0	0	0	0
Aspect		999	999	999	999	999	999	999	999
Slope Position		LV	LV	LV	LV	LV	LV	LV	LV
Moisture Regime	6.4	6-7	6	7	6	7	7	6	6
Nutrient Regime		C-D	D	C	D	C	D	D	D
Surficial Terrain			szF^{A}t	hOv	szF^{A}p	zcL^{G}bp	hOv	czF^{A}bp	uOvt-M
Underlying Terrain				czMb			czMb		szFb
Soil Drainage		v-i	p	v	p	p	v	i	p
Root Restricting Type				W	N	N	W	W	W
Root Restricting Depth				10			10	35	25
NTS Map Sheet			94O.047	94O.028	94O.006	94O.006	94O.037	94O.038	94O.056
Surveyor			C.Clement R.Kowall	C.Clement R.Kowall	C.Clement R.Kowall	C.Clement R.Kowall	C.Clement R.Kowall	R.Dalziel D.Huntley	R.Dalziel D.Huntley
Ecosection			FNL	FNL	FNL	FNL	FNL	FNL	MAU
UTM Zone			10	10	10	10	10	10	10
UTM Easting			511390	524910	500795	507590	514520	542160	501393
UTM Northing			6595005	6562570	6543655	6549325	6580320	6577978	6604071
Air Photo Number			97058-6-010	97037-19-012	97023-27-040	97032-25-184	97030-12-076	30BCC97030-13-144	30BCC97009-2 134